Company: San Diego Gas & Electric Company (U 902 M)
Proceeding: 2028 General Rate Case
Application: A.26-06-___
Exhibit: SDGE-08

PREPARED DIRECT TESTIMONY OF ERIKA SCHIMMEL-GUILES

(ELECTRIC DISTRIBUTION - CAPITAL)

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

June 2026

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APPENDICES

SUMMARY

ELECTRIC DISTRIBUTION CAPITAL (In 2025 $)							
Categories of Management	**2025 Adjusted-Recorded (000s)**	**Est. 2026 (000s)**	**Est. 2027 (000s)**	**Est. 2028 (000s)**	**Est. 2029 (000s)**	**Est. 2030 (000s)**	**Est. 2031 (000s)**
Total CAPITAL	**604,550**	**622,594**	**629,768**	**762,331**	**816,163**	**761,463**	**754,017**

Summary of Requests

San Diego Gas & Electric Company (SDG&E) requests adoption of its Electric Distribution Capital expenditures for the Test Year (TY) 2028 General Rate Case (GRC) ratepayer-funded forecast (Non-Collectible) in the amount of $683,569,000. This request is reasonable and represents amounts necessary for SDG&E to:

- Maintain clean, safe, and reliable operation of the electric distribution overhead (OH) and underground (UG) system;
- Provide safe, reliable, and affordable delivery of electricity to SDG&E customers;
- Enable the grid to accommodate changing customer demands and emerging technologies;
- Achieve compliance with applicable laws and regulations; and
- Increase safety by reducing risk exposure through targeted infrastructure upgrades, proactive asset replacement, and system hardening measures.

To better understand the forecasted costs, the following factors should be considered:

- SDG&E uses a three-year historical average forecast for the majority of the requests in the Customer Growth category. Given the potential for energization-related load growth not incorporated in this forecast, SDG&E requests to establish a new regulatory memorandum account to record and track incremental costs above the authorized revenue requirement associated with the Customer Growth category – *i.e.,* the Customer Growth Incremental Memorandum Account (CGIMA).
- SDG&E uses a zero-base forecast for the majority of the requests in other categories, because a large portion of the electric capital distribution projects are specific projects that are non-recurring in nature.

- SDG&E uses key project evaluation and prioritization committees to scrutinize projects for necessity, scope, and alignment with safety, reliability, and regulatory requirements.

In addition to my request to adopt SDG&E's Electric Distribution Capital TY 2028 GRC forecast, my testimony also presents the following information:

- The current status of SDG&E's Senate Bill (SB) 410 New Electric Energization Memorandum Account (NEEMA) and how SDG&E intends to satisfy the reasonableness demonstration set forth in Decision (D.) 25-10-034 via supplemental testimony to be submitted in early 2027.
- The current status of SDG&E's Rule 45 Electric Vehicle Infrastructure Memorandum Account (EVIMA) and how SDG&E intends to satisfy the reasonableness review requirement via a separate standalone application in light of the pending petition for modification to eliminate the $7.58 million cap established in D.24-12-074 (2024 GRC Decision).
- SDG&E's 2026 Staffing Analysis Pursuant to Public Utilities Code Section 935.

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PREPARED DIRECT TESTIMONY OF ERIKA SCHIMMEL-GUILES
ELECTRIC DISTRIBUTION CAPITAL

I. INTRODUCTION

A. Summary of Electric Distribution Capital Costs and Activities

My testimony supports the Test Year (TY) 2028 forecasts for capital costs associated with the Electric Distribution Capital area for SDG&E. Table EG-1 summarizes capital forecasts for 2026 through 2031. The particular in-service date for the capital expenditures that underly these forecasts is provided in workpapers. Appendix B to this testimony provides a table that illustrates the capital expenditures that are estimated to have in-service dates between 2026 and Test Year 2028. Capital expenditures that are in-service between 2026-2028 will contribute to the Test Year 2028 revenue requirement request presented in the Summary of Earnings testimony (Exhibit (Ex.) SDGE-32). Capital expenditures with in-service dates in the post-test years (*i.e.*, 2029-2031) are also included in Appendix B. The post-test year revenue requirement request is included in the Post-Test Year Ratemaking testimony (Ex. SDGE-33).

Certain forecasted activities and estimated costs were presented previously in SDG&E's 2025 RAMP Application (A.) 25-05-010/013 (consolidated) filed on May 15, 2025. Those activities and any changes that have occurred since the RAMP filing are detailed in Section V below.

TABLE EG-1
Test Year 2028 Summary of Total Costs

ELECTRIC DISTRIBUTION CAPITAL (In 2025 $)							
Capital	**2025 Adjusted-Recorded (000s)**	**Est. 2026 (000s)**	**Est. 2027 (000s)**	**Est. 2028 (000s)**	**Est. 2029 (000s)**	**Est. 2030 (000s)**	**Est. 2031 (000s)**
Non-Collectible[1]	550,013	555,457	556,977	683,569	718,683	687,085	681,276
Collectible[2]	54,537	67,137	72,791	78,762	97,480	74,378	72,741
Total CAPITAL	**604,550**	**622,594**	**629,768**	**762,331**	**816,163**	**761,463**	**754,017**

[1] Non-Collectible refers to the portion that is forecasted to be ratepayer-funded.

[2] Collectible refers to the portion anticipated to be collected from third parties.

Electric Distribution Capital is responsible for a diverse portfolio of projects and programs required to provide safe, reliable, and high-quality electric service to SDG&E customers. These investments support the continued operation of both overhead and underground distribution assets, address aging infrastructure, mitigate safety and reliability risks, and enable the grid to accommodate changing customer demands and emerging technologies. SDG&E prioritizes capital work to comply with statutory and regulatory requirements while maintaining system integrity and reliability in alignment with the Company's longstanding commitment to safety.

SDG&E's safety-first culture remains foundational to how Electric Distribution Capital investments are planned and executed. The Company's approach to safety encompasses public, customer, employee, and contractor safety, and is embedded throughout the lifecycle of its assets—from design and construction to operation and maintenance. Capital investments sponsored in this testimony reflect SDG&E's continued focus on reducing risk exposure through targeted infrastructure upgrades, proactive asset replacement, and system hardening measures.

My testimony demonstrates SDG&E's need for this portfolio of projects through individual descriptions and analysis of each project's business justification, need, and support related to the safety and reliability for the Company's customers, employees, and communities. My testimony addresses the forecasted costs associated with the electric distribution capital work SDG&E deems necessary to provide safe, reliable, and high-quality service to its customers. The electric distribution capital forecasts are grouped into nine primary categories with larger categories broken down into sub-categories:

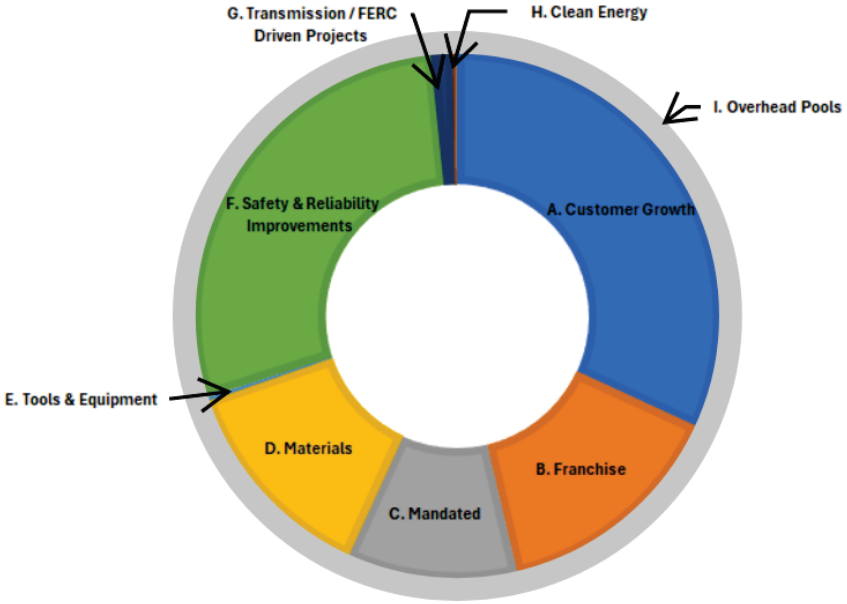
- Customer Growth
    - New Business
    - Capacity
- Franchise
- Mandated
- Materials
- Tools & Equipment
- Safety & Reliability Improvements
    - Distribution Safety & Reliability Improvements
    - Substation Safety and Reliability Improvements

- Transmission / FERC Driven Projects
- Clean Energy
- Overhead Pools

Figure EG-1 below shows each category by the percentage of the overall forecast. Values include both collectible and non-collectible costs. Each specific work category is described in greater detail in my testimony under headings corresponding to these categories.

Figure EG-1
2028 Electric Distribution Capital
Category Forecasts by Percentage of Overall Forecast

Category	TY 2028
A. Customer Growth	20%
B. Franchise	9%
C. Mandated	7%
D. Materials	8%
E. Tools & Equipment	<1%
F. Safety & Reliability Improvements	18%
G. Transmission / FERC Driven Projects	<1%
H. Clean Energy	<1%
I. Overhead Pools	37%



In preparing TY 2028 forecasts, SDG&E analyzed historical spending levels, considered underlying cost drivers, and developed an assessment of future requirements. Forecast methodologies were selected based on future expectations for the underlying cost drivers and include:

- Forecasts derived from historical averages
- Forecasts derived from the base year 2025 (BY 2025) adjusted recorded spending
- Forecasts derived from zero-based cost estimates

This testimony identifies work requirements incremental to levels of historical spending and necessary to maintain the safe and reliable operation of the distribution system. Funding

requirements for new or more extensive work elements are forecasted based on historical spending plus incremental cost requirements. Roughly 57% of the forecasts for electric distribution capital are zero-based, 35% are based on three-year historical averages, and the remainder are base year. Since a large portion of the electric capital distribution projects are specific projects that are non-recurring in nature, zero-based cost estimates or forecasts were used.

B. Organization of Testimony

My testimony is organized as follows:

- Section I: Introduction – provides a brief introduction and summarizes the overall capital electric distribution forecast.
- Section II: Affordability & Efficiency – discusses SDG&E's focus on affordability throughout the Electric Distribution Capital testimony.
- Section III: Electric Distribution Capital Project Evaluation and Prioritization – explains SDG&E's various processes for project evaluation and prioritization.
- Section IV: Electric Distribution Capital Forecasts By Category – contains the cost requested by category, the description of the associated work, our forecast methodology, and cost drivers.
- Section V: Risk Assessment and Mitigation Phase Integration – covers changes from the 2025 RAMP filing including updated Benefit Cost Ratios (BCRs).
- Section VI: Deferred Work – outlines projects previously approved in the 2024 GRC that are not anticipated for completion by 2027 and are therefore being proposed again in the 2028 GRC filing.
- Section VII: Regulatory Accounts Subject to Reasonableness Review – presents the required testimony for any accounts that require reasonableness review.
- Section VIII: Pub. Util. Code Section 935 Staffing Analysis – provides the 2026 staffing analysis required by Pub. Util. Code Section 935.
- Section IX: Conclusion – concludes the information submitted in my testimony.
- Section X: Witness Qualifications – describes my qualifications as a witness.

C. Support To and From Other Witnesses

My testimony also references the testimony and workpapers of several other SDG&E witnesses, either in support of their testimony or as support for mine, this includes:

- Electric Distribution Operation & Maintenance (O&M) testimony (Ex. SDGE-09) provides the Grid Modernization Plan as well as support for O&M activities such as Corrective Maintenance Program (CMP) inspections and some repair work, while major capital repairs and replacements are captured in my testimony.
- Wildfire Mitigation and Vegetation Management testimony (Ex. SDGE-07) is referenced where there may be programs with similar scope but divided between those aligning to the Wildfire Mitigation Plan (WMP) focus versus programs included in my testimony typically scoped to assets located outside the High Fire Threat District (HFTD), also denoted as "Non-HFTD" or "Non-WMP".
- The Information Technology (IT) testimony (Ex. SDGE-14) references my testimony where IT programs support Electric Distribution Capital projects and programs.
- Rate Base testimony by (Ex. SDGE-28) references and is referenced in my testimony as it relates to overhead pools.
- The RDF Integration testimony (Ex. SCG-02B/SDGE-02B) is referenced in my testimony as it relates to the Enterprise Risk Management (ERM) process for identifying and assessing system risk.
- The Regulatory Accounts testimony (Ex. SDGE-26) is referenced in my testimony as it relates to the addition of the Customer Growth Incremental Memorandum Account (CGIMA), continuation of the Electric Vehicle Infrastructure Memorandum Account (EVIMA) and closure following reasonableness review, and removal of one-way balancing for the overhead pools.

II. AFFORDABILITY & EFFICIENCY

SDG&E's Electric Distribution Capital program for the 2028 General Rate Case is designed to balance affordability with the obligation to provide safe, reliable, and high-quality electric service. The Company's approach emphasizes disciplined capital planning, rigorous prioritization, and continuous evaluation of cost-effective alternatives before committing to large-scale infrastructure investments. Through a multi-layered governance framework—including the Substation Equipment Assessment Team (SEA), Strategic Reliability Enhancement Team (SRET), Technical Review Council (TRC), and the Electric Transmission & Distribution Steering Committee—projects are scrutinized for necessity, scope, and alignment with safety,

reliability, and regulatory requirements. This structure enables SDG&E to discontinue, defer, or re-scope lower-value projects and helps direct the limited capital dollars toward the highest-risk and highest-benefit needs.

Affordability is further supported through SDG&E's deliberate use of lower-cost and targeted solutions wherever feasible. In the Capacity sub-category, SDG&E prioritizes operational measures such as load transfers, circuit reconfiguration, sectionalizing improvements, and field shunt capacitors to extend the usable life of existing assets and defer more expensive infrastructure expansions. These solutions often provide timely reliability and capacity benefits at a fraction of the cost of new circuits or substations. Where larger investments are required, projects are phased and right-sized based on updated planning data, reducing the risk of over-building in advance of actual customer demand. The cost of not performing this work—such as increased outage frequency, thermal overloads, or inability to serve new customer load—would ultimately result in higher long-term costs and greater customer impacts.

SDG&E keeps an affordability mindset by actively managing uncertainty and avoiding the inclusion of speculative costs in base rates. Customer-driven New Business and Capacity projects are inherently variable in timing and magnitude. Rather than embedding uncertain forecasts into the revenue requirement, SDG&E proposes the Customer Growth Incremental Memorandum Account (CGIMA) to track incremental costs above authorized levels, subject to after-the-fact reasonableness review. This approach protects ratepayers from funding costs if additional customer growth does not materialize while still allowing SDG&E a mechanism to track unanticipated costs to meet mandated energization timelines and customer service obligations without diverting funding from critical safety and reliability programs. Collectively, these measures reflect SDG&E's commitment to delivering necessary infrastructure in a cost-effective manner that supports both system reliability and customer affordability.

III. ELECTRIC DISTRIBUTION CAPITAL PROJECT EVALUATION AND PRIORITIZATION

The projects and programs presented in my testimony are developed across many different groups and departments. These projects are all reviewed, approved, and prioritized by multiple cross-functional teams and committees described in more detail below.

A. Substation Equipment Assessment (SEA) Team

The SEA Team consists of individuals from Substation Engineering and Design, Kearny Maintenance and Operations, System Protection Automation & Control Engineering (SPACE), Distribution Planning, and Transmission Planning groups. The SEA Team examines transmission and distribution substations and equipment for potential risks and potential failures. The team has developed a forum for assessing reliability risk related to substation equipment and criteria for evaluating and prioritizing the equipment for repairs and/or replacement. In some cases, larger scale projects are created to address the issues identified by the SEA Team and the needs identified by the planning groups. In support of daily operations, the Kearny Maintenance and Operations group maintains a database to track and process key operating information that is then discussed with the SEA team. The SEA Team analyzes historical data, monitors how substation equipment impacts reliability indices, reviews trends related to equipment failure rates, and evaluates the amount of spare equipment in inventory. These factors are used to assess risk when discussed at the SEA Team meetings. Approved projects are prioritized by the team, and those that exceed a dollar threshold require a second presentation and approval by the Technical Review Council (TRC) in order to proceed.

B. Strategic Reliability Enhancement Team (SRET)

The Strategic Reliability Enhancement Team (SRET), formerly known as the Reliability Assessment Team (RAT), is comprised of technical leaders from various groups in the Company, including Distribution Operations, Electric Reliability, Distribution Planning, System Protection & Maintenance (SPM), Electric Regional Operations (ERO), and Electric Distribution Engineering (EDE). The team also consults with Substation Engineering and Design, System Protection Automation & Control Engineering (SPACE), and Kearny Maintenance and Operations. The SRET focuses primarily on providing strategy and guidance for continuously improving distribution system reliability performance, providing integrated planning support, and overseeing program costs for approved reliability improvement projects.

Proposals for reliability improvement projects are presented to the SRET in the form of a circuit analysis. The circuit analysis considers the reliability risks for the individual circuit, options for reliability enhancements, reliability benefits for each mitigation option, and a recommended approach to enhancing reliability on the circuit. After the project presentation, the SRET either requests further analysis or approves the project. Approved projects are prioritized

by the team, and those that exceed a dollar threshold require a second presentation and approval by the Technical Review Council (TRC) in order to proceed.

C. Technical Review Council (TRC)

Electric infrastructure capital projects or programs that meet established criteria or have unique technical requirements are reviewed by the Technical Review Council (TRC). The TRC serves as a council of technical experts that assess the technical merits of transmission, substation, and distribution infrastructure projects and programs. The TRC is made up of representatives from Electric Transmission Planning, Electric Distribution Planning, Electric Distribution Engineering, Civil & Structural Engineering, Substation Engineering & Design, SPACE, Transmission Engineering & Design, Distribution Design, Reliability and Distributed Energy Resources. The TRC meets bi-weekly to review and approve projects. The main purpose of the TRC is to perform the following tasks:

- Review and approve the technical merits of the scoping, feasibility and assumptions of the project;
- Determine whether project alternatives have been thoroughly described and assessed;
- Determine whether project risks are reasonable and whether mitigation plans have been developed to minimize project risks related to delays or project alternatives;
- Assess whether project drivers and customer impacts have been addressed within the project scope.

All proposed projects that are reviewed by the TRC use the guidance noted above. Proposed projects that do not satisfy this guidance are either eliminated from further consideration or the department is directed to explore changes or additional alternatives and bring the project back to the TRC for further discussion. TRC is not an approval for funding. Once projects are approved by TRC, they move to the Electric Transmission & Distribution Steering Committee for the next stage of review.

D. Electric Transmission & Distribution Steering Committee

All projects approved by the technical teams identified above are reviewed and prioritized by the Electric Transmission & Distribution Capital Steering Committee (ET&D Committee) for capital budget allocations. The ET&D Committee is comprised of Directors from the following functional areas: Portfolio & Project Management, Electric Engineering, Electric System Planning & Grid Modernization, Construction Management, Electric Regional

Operations, Kearny Maintenance & Operations, Customer Project Management, and Financial & Business Planning. The primary role of the ET&D Committee is to establish priorities among the internal project requests within their areas of expertise to allocate the proper funding necessary to complete the highest priority work aligned with the funding authorization and Company goals. Projects are first classified as Responsive, Proactive, or Strategic as follows:

- Responsive projects are those where SDG&E has limited or no control over the initiation, scope, schedule, and/or other aspects of the project such as service restoration, reactive cable replacement, and new business. Also included is anything mandated by law or regulatory decision. For example, programs mandated by the CPUC are included in this category.
- Proactive projects are related to routine and planned work required to proactively maintain system operations necessary to provide safe and reliable electric service.
- Strategic projects are those where the utility has flexibility to determine if the project is completed. There is no specific law, regulatory directive, or operational requirement that requires the project to be completed at a specific time or at all. However, there can be significant benefits from these projects that provide sufficient justification for their implementation.

There is a validation process where the ET&D Directors review and can "challenge" the categorization of specific projects or programs across different functional areas and business units. Once these challenge sessions are completed, projects categorized as "Responsive" are funded in alignment with historical spend as well as future year forecasts. For "Proactive" and "Strategic" capital projects, SDG&E currently uses a software application called Copperleaf to document each project's business purpose, description, scope, schedule, justification, and estimated cost. Copperleaf assists with the prioritization of these projects submitted by project managers based upon the approved risk metrics. This cross-functional prioritization is further scrutinized by the ET&D Directors to refine the allocation based on several additional factors including but not limited to project driver, stage gate (i.e., where the project is at in its lifecycle), other funding considerations, and project risk and complexity. Project drivers are divided into four main groups below:

1. Safety and Compliance: Fire risk reduction projects, like overhead conductor replacement and strategic undergrounding projects, and compliance programs like the Corrective

Maintenance Program (CMP) mandated by General Order (GO) 165, and customer new business or related capacity upgrades

2. Regulatory Commitment: Projects and programs committed to at a regulatory, state, or federal level above and beyond or outside of the GRC, such as California Independent System Operator (CAISO) Transmission Planning Process (TPP) projects
3. Customer-Driven: Projects initiated and completed at the request of third parties, such as customers, developers, and municipalities. Includes new business, customer relocations, requested conversion projects, or related capacity upgrades, etc.
4. Reliability: Planned work that proactively enhances system reliability or supports continuity of service to customers

Beyond establishing the annual funding allocations by project or program, the ET&D Committee also monitors the monthly status of its portfolio of approved projects. Priorities are adjusted depending on whether risks are adequately being addressed, if new risks materialize based on new data, and on overall funding status of the portfolio to maintain alignment with authorized levels and company priorities. A project manager is assigned to each project or program within the portfolio and is responsible for the documentation submitted for review. Each capital project or program is assigned a unique accounting, budget code number. While many projects are "individual" or "specific" projects, there are also "blanket" programs that continue from year to year and encompass many related, smaller capital projects. For additional details and context around the various projects and programs, please see Section IV of my testimony.

E. Project Approval Process

Following identification and prioritization through SDG&E's established capital planning and governance forums, Electric Distribution capital projects are subject to a standardized Project Approval Process to support prudent funding authorization and provide consistency with authorized costs. This process provides a structured, stage-gated framework for documenting project need, scope, cost, schedule, and technical requirements prior to full funding and execution. Depending on project size and complexity, projects advance through defined approval stages, including Initiation, Preliminary Design, Final Design, and Pre-Construction, and Construction with required deliverables developed at each stage to demonstrate project readiness and alignment with Company policies.

The Project Approval Process serves as the formal funding control for discrete capital projects that meet established threshold criteria, complementing SDG&E's broader portfolio-level prioritization processes described above, and aligns with SDG&E's internal capital funding policies. The required deliverables for the Project Approval Process include a Business Case and Project Charter. These documents support management review and approval of capital project budgets by clearly articulating project justification, cost estimates that are aligned with design maturity, and key implementation considerations.

IV. ELECTRIC DISTRIBUTION CAPITAL FORECASTS BY CATEGORY

SDG&E Electric Distribution system includes capital projects to construct or modify facilities for the distribution of electricity at 12 kilovolts (12 kV) and below, projects to construct or modify facilities that transform energy from transmission voltage levels to distribution voltage levels, and projects necessary to improve safety, reliability, and operational performance of the electric distribution system. These projects can include protective relaying, circuit breakers, substation switchgear, and associated equipment installed at distribution substations and on the 12 kV and below system. For an overall description of the electric distribution system, please see the Electric Distribution O&M testimony (Ex. SDGE-09).

Electric Distribution Capital projects are driven by several primary factors, including safety and risk management, system reliability, capacity needs, and customer- or system-driven requirements. These drivers include, but are not limited to, compliance with applicable laws and regulations, mitigation of identified safety and reliability risks, accommodation of customer growth and electrification, and replacement or reinforcement of aging infrastructure. As customer requests are received or system needs are identified, SDG&E evaluates resource requirements and reviews proposed work for prudence and prioritization. If approved, projects are grouped into categories of similar work based on their principal drivers, such as capacity expansion, reliability improvement, or new business.

For SDG&E's TY 2028 GRC, SDG&E's Electric Distribution Capital forecasts reflect a continued emphasis on providing affordable service while maintaining safe and reliable service and responding to evolving system conditions and policy objectives. Key elements of the 2028 forecast period include:

- Disciplined capital planning and governance, incorporating lessons learned from prior GRC cycles and continued focus on affordability, efficiency, and risk-based prioritization.
- New Business and Capacity investments to support Customer Growth and transportation electrification.
- Sustained investment in safety and risk mitigation, including replacement of aging or obsolete equipment and continued alignment with SDG&E's enterprise safety and asset management frameworks.
- Reliability and resiliency improvements to address an aging asset base, increased system utilization, and the operational impacts of more frequent extreme weather events.

The Electric Distribution Capital forecasts presented in this section are organized into the following major categories: Customer Growth; Franchise; Mandated; Materials; Equipment and Tools; Safety & Reliability Improvements; Transmission/FERC-Driven Projects; Clean Energy; and Overhead Pools. Each category is described in greater detail below, including a summary of forecasted costs, a description of the underlying activities, the applicable forecast methodology, and the primary cost drivers. Table EG-2 summarizes the total capital forecasts for 2026 through 2031 by Category.

TABLE EG-2
Capital Expenditures Summary of Costs

Categories of Management	2025 Adjusted-Recorded (000s)	Est. 2026 (000s)	Est. 2027 (000s)	Est. 2028 (000s)	Est. 2029 (000s)	Est. 2030 (000s)	Est. 2031 (000s)
A. Customer Growth	128,211	130,842	141,239	152,378	158,455	161,930	165,677
B. Franchise	27,337	57,130	61,506	69,359	99,268	60,705	54,511
C. Mandated	59,216	50,361	50,361	50,302	50,158	50,254	50,271
D. Materials	84,367	61,369	61,855	62,403	65,517	68,855	72,206
E. Tools & Equipment	847	1,113	1,113	1,113	1,113	1,113	1,113
F. Safety & Reliability Improvements	71,604	72,412	69,375	136,293	126,502	127,930	126,319
G. Transmission / FERC Driven Projects	7,144	6,007	4,990	6,683	7,778	7,323	5,118

H. Clean Energy	34	1,131	939	1,017	1,051	1,150	600
I. Overhead Pools	225,790	242,229	238,390	282,783	306,321	282,203	278,202
Total	**604,550**	**622,594**	**629,768**	**762,331**	**816,163**	**761,463**	**754,017**
Non-Collectible	550,013	555,457	556,977	683,569	718,683	687,085	681,276
Collectible	54,537	67,137	72,791	78,762	97,480	74,378	72,741

A. Customer Growth

TABLE EG-3
Capital Expenditures Summary of Costs

A. Customer Growth (In 2025 $)							
	2025 Adjusted-Recorded (000s)	**Est. 2026 (000s)**	**Est. 2027 (000s)**	**Est. 2028 (000s)**	**Est. 2029 (000s)**	**Est. 2030 (000s)**	**Est. 2031 (000s)**
New Business	95,000	90,764	88,837	98,551	99,018	99,632	100,235
Capacity	33,211	40,078	52,402	53,827	59,437	62,298	65,442
Total	**128,211**	**130,842**	**141,239**	**152,378**	**158,455**	**161,930**	**165,677**
Non-Collectible	95,212	107,996	118,393	129,539	135,630	139,095	142,840
Collectible	32,999	22,846	22,846	22,839	22,825	22,835	22,837

1. Category Introduction

The Customer Growth category consists of two sub-categories: New Business and Capacity, both related to customer requested projects. Customer Growth encompasses customer-driven requests for new or expanded electric service and the related infrastructure necessary to support these connections. New Business projects consist of requests for new or expanded electric service, typically from the secondary distribution system, to support residential, commercial, industrial, and public sector development. These projects are initiated by customer decisions and generally require SDG&E to design, construct, and energize service laterals, secondary conductors, transformers, and other distribution facilities before load can be served. Capacity projects are the related upstream distribution system upgrades required to reliably support this secondary-level New Business activity. These projects may include primary distribution facilities, circuits, substations, or other upstream infrastructure necessary to provide sufficient capacity, reliability, and safety as new or expanded customer load is connected.

For TY 2028, SDG&E requests to establish a new regulatory memorandum account to record and track incremental costs above the authorized revenue requirement associated with the Customer Growth category – *i.e.,* the Customer Growth Incremental Memorandum Account

(CGIMA). SDG&E proposes to determine incremental spending eligible for recovery via the CGIMA at the Customer Growth category level (not the sub-category level, program level, or individual workpaper level). SDG&E specifies in testimony below each workpaper in the Customer Growth category that would be included in the CGIMA. Refer to the Regulatory Accounts testimony (Ex. SDGE-26) for additional information regarding this memorandum account.

The CGIMA is intended to address the unique challenges associated with customer-driven New Business projects and the related upstream capacity upgrades. California's electrification and decarbonization policies[3] are expected to accelerate long-term growth in electric service requests, including those for new residential, commercial, and industrial developments. These policies are likely to increase the volume, size, and complexity of new business projects over the subject time period. As load growth continues, capacity improvements and new or larger equipment may be required to support the increased electric grid needs depending on current infrastructure. However, the timing and scale of customer adoption remain highly uncertain. Customers initiate projects based on their own schedules, economic conditions, and market dynamics; all of which are factors outside of SDG&E's control. This uncertainty makes it difficult to forecast costs related to energization with precision and creates challenges in aligning infrastructure investments with actual need. A prudent and flexible planning approach is therefore essential to allow SDG&E to meet customer expectations for timely service.

SDG&E's requested revenue requirement for Customer Growth related activities is intentionally grounded in historical experience and is forecast primarily using a three-year average of recorded spending. This approach reflects the level of customer demand growth that has historically been accommodated within base rates and avoids embedding speculative or accelerated growth assumptions into the forecast. The revenue requirement therefore does not

[3] SB (Senate Bill) 100 (DeLeón, 2018), *available at*: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180SB100; AB (Assembly Bill) 1279 (Muratsuchi, 2022), *available at*: https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=202120220AB1279; California Energy Commission (CEC), 2025 Building Energy Efficiency Standards for Residential and Nonresidential Buildings: Title 24, Part 6, and Associated Administrative Regulations in Part 1, *available at*: http://energy.ca.gov/publications/2025/2025-building-energy-efficiency-standards-residential-and-nonresidential.

include incremental costs associated with customer growth that materially exceed historical trends. Instead, SDG&E proposes the CGIMA as a narrowly tailored mechanism to address circumstances in which actual customer demand growth surpasses what has been observed historically. In this way, CGIMA serves as a backstop so that cost recovery is aligned with demonstrated, incremental growth impacts, while protecting customers from paying in advance for growth that may not occur.

State law now requires utilities to meet defined energization timelines and provide transparency and reporting on energization performance; compliance depends on having sufficient funding to complete utility-controlled work even when the volume or complexity of requests exceeds planned expectations. In September 2024, the CPUC established statewide energization timing targets and reporting requirements to implement SB 410 (Powering Up Californians) and AB 50, focusing specifically on steps under IOU control for Rule 15 (distribution line extensions), Rule 16 (service extensions), and EV infrastructure rules (Rule 45).[4] More recently, in its March 19, 2026 Assigned Commissioner's Amended Phase 2 Scoping Memo and Ruling in R.24-01-018, the Commission expanded the scope of the energization proceeding to consider the adoption of remedial actions necessary to achieve energization targets and the development of an enforcement policy that may include penalties for failure to comply with these targets. These developments underscore the increasing obligation for SDG&E to meet energization timelines. SDG&E must respond to these requests promptly to support economic development and maintain reliability, yet the unpredictable nature of these projects complicates resource planning. Additionally, new business projects may require upstream capacity upgrades with long lead times and significant capital investment, further increasing the need for a mechanism that aligns recovery with actual costs incurred. For upstream capacity upgrades, the funding request in this 2028 GRC reflects outputs from the 2024–2025 distribution planning cycle (and prior) and is based on the most current forecasts available. Because customer energization is dynamic and ongoing, SDG&E must maintain flexibility to provide upstream capacity when needed to enable timely service for new and expanding loads.

In its most recent General Rate Case Decision addressing Southern California Edison Company's Transportation Electrification Grid Readiness (TEGR) forecast, the Commission

[4] Decision (D.) 24-09-020, Ordering Paragraph (OP) 1 at 91-93.

recognized that electrification-driven load growth is increasingly influenced by evolving statutory mandates, regulatory initiatives, and customer adoption behavior, all of which introduce forecasting limitations that cannot be fully resolved in advance. In that decision, the Commission authorized SCE to establish a memorandum account to track and record capital expenditures above the authorized amounts, subject to after-the-fact reasonableness review.[5] The Commission's authorization of a memorandum account reflects a balanced regulatory approach that preserves oversight while allowing utilities to respond prudently to uncertain, policy-driven demand, which is precisely why SDG&E is requesting the CGIMA here.

The circumstances underlying the Commission's TEGR determination closely parallel those applicable to customer-driven new business projects. While SDG&E has developed reasonable forecasts to establish a baseline level of funding, actual New Business activity may exceed adopted assumptions. Authorizing a memorandum account to track incremental costs above authorized forecast levels is therefore consistent with recent Commission precedent and established ratemaking practice.

Establishing the CGIMA recognizes these unique challenges and allows SDG&E to more effectively manage uncertainty, timely support customer energization requests, and advance California's policy objectives for electrification. This approach facilitates customers' receipt of timely service while safeguarding ratepayer interests through prudent investment and cost-recovery consistent with CPUC practices. It also allows for costs beyond current forecasts to be tracked separately while not disrupting SDG&E's ability to perform necessary reliability and safety projects that are critical for grid stability.

The CGIMA is prudent and justified given the uncertainty in project timing and volume. Customer-driven new business projects are inherently variable: projects are triggered by independent decisions of builders, businesses, and public entities, and can vary due to local permitting cycles, macroeconomic shifts, or incentive programs. The CPUC's energization proceeding explicitly recognized that timely connections depend on IOU performance in utility-controlled steps, but that overall timing is affected by factors outside the utility's control.[6] A memorandum account to record the above-authorized costs is prudent to enable continued

[5] D.25-09-030 at 240-242.

[6] D.24-09-020 at 56.

execution of other capital distribution workstreams while not disrupting the need to deliver timely customer projects.

California statutes and CPUC decisions are accelerating electrification but the pace and mix of projects are not perfectly predictable, as the CPUC itself noted when approving EV infrastructure tariffs and associated Memorandum Accounts through Resolution (Res.) E-5167: *"We are unable to estimate the total cost impact, since it is difficult to estimate the rate of EV charger deployment and the number of customers that will take service..."*[7]

A memorandum account to track incremental costs is a proven tool that balances flexibility with ratepayer protection when addressing potential cost uncertainty. Paired with a forecast based on historical spend, this mechanism balances the risk of insufficient funding that could jeopardize compliance with statutory energization timelines. Any expenditures above authorized are subject to after-the-fact reasonableness review before they are approved for rate recovery, further protecting ratepayers.

This flexibility is critical now that California has adopted strict energization timeline requirements. SDG&E must have the ability to scale resources to meet these targets as actual new business projects and related upstream upgrades materialize. A memorandum account allows SDG&E to respond promptly to customer requests without creating backlogs or delaying projects that support economic development and clean energy goals.

Equally important, this mechanism aligns cost recovery with prudency. By tracking actual expenditures that exceed the forecasted revenue requirement, the memorandum account promotes fairness and transparency, providing Commission oversight while enabling SDG&E to maintain reliability while meeting California's electrification objectives.

SDG&E's request to implement the CGIMA is necessary, prudent, and consistent with CPUC policy. It directly supports compliance with statewide energization timelines (Powering Up Californians Act) by allowing utility-controlled steps to be resourced and executed as actual workload materializes, and it protects customers by aligning cost recovery with actual costs. This longstanding mechanism embodies the Commission's regulatory principles of fairness, transparency, and reasonableness of utility expenditures that are ultimately recovered in electric rates. Approving SDG&E's request will help prevent backlogs, provide greater certainty to

[7] Res. E-5167 (October 7, 2021) at 2 (emphasis added).

markets, maintain reliability, and advance California's electrification and decarbonization objectives while safeguarding ratepayer interests.

2. New Business

TABLE EG-4
Capital Expenditures Summary of Costs[8]

Customer Growth - New Business (In 2025 $)							
	2025 Adjusted-Recorded (000s)	**Est. 2026 (000s)**	**Est. 2027 (000s)**	**Est. 2028 (000s)**	**Est. 2029 (000s)**	**Est. 2030 (000s)**	**Est. 2031 (000s)**
Non-Collectible	62,001	67,918	65,991	75,712	76,193	76,797	77,398
Collectible	32,999	22,846	22,846	22,839	22,825	22,835	22,837
Total	**95,000**	**90,764**	**88,837**	**98,551**	**99,018**	**99,632**	**100,235**

a. Sub-Category Introduction

The New Business Sub-Category of Customer Growth consists of ongoing programs that are expected to continue through the GRC cycle. These forecasted capital expenditures support customer requests for upgrades, new services, relocations and conversions.

Costs for Rule 20 projects will be balanced and recorded in a regulatory balancing account in accordance with OP 12 of D.21-06-013. The R20BA is a one-way balancing account to track the difference between the actual and authorized capital expenditures and expenses associated with completing overhead to underground conversion projects as required by the Rule 20 program, with sub-accounts for parts A, B and C.

Most capital expenditures associated with New Business budget codes are a direct result of customer requests. Those requests can be for new services, upgraded services, new distribution systems for commercial and residential developments, system modifications to accommodate new customer load, customer requested relocations, rearrangements, removals and the conversion of existing overhead lines to underground. All work and cost responsibilities are governed by applicable tariffs, which typically place the bulk of the cost on the utility. This category of work also has some budget codes with collectible components.

[8] Please refer to my capital workpapers, Ex. SDGE-CWP-08, for additional information about the activities described herein. Each capital workpaper includes a Summary of Adjustments to Forecast section and workpaper details that separate the portion that is forecasted to be ratepayer-funded (Non-Collectible) and the portion anticipated to be collected from third parties (Collectible), if applicable. The Collectible portion is necessary for calculating the proper allocation of overhead amounts to these projects, but the fully loaded Collectible amounts are not included in the requested revenue requirement.

New Business work is subject to a quick turnaround, as it is in direct response to customer requests. New customers seeking service from SDG&E submit requests with time frames based on their own needs, the urgency of which will vary. The New Business forecasts are developed in most cases based on historical 3-year average spend. Due to the unpredictable nature of New Business work, SDG&E proposes that all costs incremental to the authorized revenue requirement be tracked in the CGIMA to allow for a mechanism to continue moving work forward, while not disrupting other critical workstreams.

Select New Business budget codes have a "collectible" component, where some funds are received from customers prior to construction through a mechanism called Contributions in Aid of Construction (CIAC). The total project cost to do the work, independent from any collectible portion, is included in each individual budget code.

New Business work is completed in accordance with the "Rules for the Sale of Electric Energy" filed with and approved by the CPUC, as electric facilities must be provided to qualified applicants.[9]

Additional details including description, forecast method, and cost drivers can be found in each workpaper and below.

b. 002040 – Electric Distribution Easements

i. Description

Electric Distribution Easements is an ongoing program that is expected to continue through the GRC cycle. Additional information can be found in the capital workpapers. See Ex. SDGE-08-CWP, WP #002040 – Electric Distribution Easements.

This program provides funding to obtain new electric distribution easements necessary to provide service to new customers, accommodate street and highway relocations, underground conversions, and other capital improvement projects to improve electrical service. SDG&E performs necessary surveys and mapping functions, document research, document preparation, and negotiations with private and governmental property owners for the acquisition of real property rights to allow the installation of new electrical distribution facilities on private property or public lands. The program also allows for the acquisition of real property easement rights to

[9] See, e.g., Electric Rule 15, *available at*: https://www.sdge.com/sites/default/files/elec_elec-rules_erule15.pdf, and Electric Rule 16, *available at*: https://www.sdge.com/sites/default/files/elec_elec-rules_erule16.pdf.

install new business electric facilities on private property to provide service for new customer loads. There is no reasonable alternative to this program if the Company must install or maintain electric facilities on, under, or over private property or public lands.

As discussed in the Customer Growth category introduction, incremental costs related to this program will be eligible for recording in the CGIMA. Refer to the Regulatory Accounts testimony (Ex. SDGE-26) for additional information regarding this memorandum account.

ii. Forecast Method

The forecast method developed for this cost category is a base year forecast. SDG&E selected 2025 actuals as they provide the most accurate representation of current operational conditions and resource requirements. This approach aligns with the anticipated scope of work moving forward. This method is also grounded in recent, representative data while remaining consistent with historical trends.

iii. Cost Drivers

The underlying cost driver for this workpaper is related to the number of New Business requests received from customers and the requirement to operate and maintain existing and new electric distribution system and services.

c. 002150 – Overhead Residential New Business

i. Description

Overhead Residential New Business is an ongoing program that is expected to continue through the GRC cycle. Additional information can be found in capital workpapers. See Ex. SDGE-08-CWP, WP #002150 – OH Residential New Business.

This workpaper provides funding for the portion of expenditures to be borne by ratepayers associated with the extension of new overhead electric distribution systems to new residential electric customers requesting service from SDG&E. This program includes third wire bring ups (bringing in a neutral to a two-phase circuit) and transmission underbuilds to serve new residential customers.

As discussed in the Customer Growth category introduction above, incremental costs related to this program will be eligible for recording in the CGIMA. Refer to the Regulatory Accounts testimony (Ex. SDGE-26) for additional information regarding this memorandum account.

ii. Forecast Method

The forecast method developed for this cost category is a three-year average based on historical spend. This is the most appropriate methodology, as workload can vary from year to year. The three-year average levels out the peaks and valleys in this workpaper over an appropriate period of time to forecast the necessary level of funding for the work that falls within this workpaper while accounting for recent changes in the program.

The volume of future overhead residential line extension work can be very difficult to predict, as customer requests for overhead line extensions can be sporadic. They can also vary dramatically in size and complexity. The three-year historical average is being used as the costs reflected in more recent years are a closer reflection of future costs due to ongoing increases in labor and material costs.

iii. Cost Drivers

The underlying cost driver for this program is residential customer growth related to the number of New Business requests received from customers related to residential overhead electric facilities. This budget code includes the installation of overhead service drops for new homes, as well as the installation and removal of temporary power poles used to provide service during residential construction. Costs also reflect work associated with permanent climbable, customer-owned service and meter poles, including coordination, inspection, and installation of utility-owned service and metering equipment. Additional cost drivers include storm-safe service drop attachments intended to enhance system resiliency and reduce outage risk, as well as overhead-to-underground service conversions when residential service originates from an overhead distribution source.

d. 002160 – Overhead Non-Residential New Business

i. Description

Overhead Non-Residential New Business is an ongoing program that is expected to continue through the GRC cycle. Additional information can be found in capital workpapers. See Ex. SDGE-08-CWP, WP #002160 – OH Non-Residential NB.

This workpaper provides funding for the portion of expenditures to be borne by ratepayers associated with the extension of new overhead electric distribution systems to new non-residential electric customers requesting service from SDG&E. This program provides for

the extension of the overhead distribution system, including third wire bring ups (bringing in a neutral to a two-phase circuit) and transmission underbuilds, that serve new non-residential customers.

As discussed in the Customer Growth category introduction above, incremental costs related to this program will be eligible for recording in the CGIMA. Refer to the Regulatory Accounts testimony (Ex. SDGE-26) for additional information regarding this memorandum account.

ii. Forecast Method

The forecast method developed for this cost category is a three-year average based on historical spend. This is the most appropriate methodology, as workload can vary from year to year. The three-year average levels out the peaks and valleys in this workpaper over an appropriate period of time to forecast the necessary level of funding for the work that falls within this workpaper while accounting for recent changes in the program.

The volume of future overhead non-residential line extension work can be very difficult to predict, as customer requests for overhead line extensions can be sporadic. The three-year historical average is being used as the costs reflected in more recent years are a closer reflection of future costs due to ongoing increases in labor and material costs.

iii. Cost Drivers

The underlying cost driver for this program is non-residential customer growth related to the number of New Business requests received from customers related to non-residential overhead electric facilities. This budget code includes costs related to customer-initiated commercial and industrial development and the need to design and construct overhead service facilities that meet higher load, clearance, and reliability requirements than typical residential service. Cost variability is influenced by facility size, service length, and coordination requirements with customers and local jurisdictions. Additional costs include messenger-supported center span services and mid-span service installations, which are often required for larger facilities or when standard service configurations are not feasible. The budget code also includes overhead in-line power regulator transformer installations needed to support voltage regulation and load management for non-residential customers with higher or more variable demand profiles. Overall, expenditures reflect the complexity, capacity requirements,

and customized design solutions necessary to serve new overhead non-residential electric load in compliance with applicable safety and construction standards.

e. 002170 – Underground Residential New Business

i. Description

Underground Residential New Business is an ongoing program that is expected to continue through the GRC cycle. Additional information can be found in capital workpapers. See Ex. SDGE-08-CWP, WP# 002170 – UG Residential NB.

This workpaper provides funding for the portion of expenditures to be borne by ratepayers associated with extending new underground electric distribution systems to new residential electric customers requesting service from SDG&E.

As discussed in the Customer Growth category introduction above, incremental costs related to this program will be eligible for recording in the CGIMA. Refer to the Regulatory Accounts testimony (Ex. SDGE-26) for additional information regarding this memorandum account.

ii. Forecast Method

The forecast method developed for this cost category is a three-year average based on historical spend. This is the most appropriate methodology, as workload can vary from year to year. The three-year average levels out the peaks and valleys over an appropriate period of time to forecast the necessary level of funding for the work that falls within this workpaper.

The volume of future underground residential new business work can be very difficult to predict and can vary in size and complexity. The three-year historical average is being used as the costs reflected in more recent years are a closer reflection of future costs due to ongoing increases in labor and material costs.

iii. Cost Drivers

The underlying cost driver for this program is residential customer growth, driving the number of customer New Business requests related to residential underground electric facilities. This budget includes requests for underground residential line extension work associated with the Rule 15 requirement that all new residential developments be served by underground electric systems. The scope also includes customer-requested conversions from overhead to underground service and the provision of temporary construction power delivered via

underground facilities. In addition, the program reflects costs associated with design review and inspection of customer-owned conduit bends and risers at the building interface. Costs are driven by the volume and complexity of the residential New Business requests and associated underground construction requirements.

f. 002180 – Underground Non-Residential New Business

i. Description

Underground Non-Residential New Business is an ongoing program that is expected to continue through the GRC cycle. Additional information can be found in capital workpapers. See Ex. SDGE-08-CWP, WP# 002180 – UG Non- Residential NB.

This workpaper provides funding for the portion of expenditures to be borne by ratepayers associated with extending new underground electric distribution systems to new non-residential electric customers requesting service from SDG&E.

As discussed in the Customer Growth category introduction above, incremental costs related to this program will be eligible for recording in the CGIMA. Refer to the Regulatory Accounts testimony (Ex. SDGE-26) for additional information regarding this memorandum account.

ii. Forecast Method

The forecast method developed for this cost category is a three-year average based on historical spend. This is the most appropriate methodology, as workload can vary from year to year. The three-year average levels out the peaks and valleys over an appropriate period of time to forecast the necessary level of funding.

The volume of future underground non-residential new business work can be very difficult to predict and can vary in size and complexity, therefore a historical average provides the most appropriate forecast of costs for this program. The three-year historical average is being used as the costs reflected in more recent years are a closer reflection of future costs due to ongoing increases in labor and material costs.

iii. Cost Drivers

The underlying cost driver for this program is non-residential customer growth, driving the number of customer New Business requests for non-residential underground electric facilities. This budget code includes customer requests for non-residential line extension work

due to Rule 15 as all new non-residential developments are required to be served by underground electric systems. This program includes costs associated with the installation of underground service laterals for commercial and industrial customer sites, as well as the construction of primary and secondary voltage underground distribution systems. These facilities are necessary to provide safe, reliable, and compliant electric service to non-residential customers and often involve site-specific engineering, trenching, conduit installation, and coordination with customer construction schedules.

g. 002190 – New Business Infrastructure

i. Description

New Business Infrastructure is an ongoing program that is expected to continue through the GRC cycle. Additional information can be found in capital workpapers. See Ex. SDGE-08-CWP at section 002190 – New Business Infrastructure.

This workpaper provides funding for the portion of expenditures to be borne by ratepayers associated with the installation of facilities for new electric customers to be served from both the overhead and underground distribution system and facilitates various future development needs.

As discussed in the Customer Growth category introduction above, incremental costs related to this program will be eligible for recording in the CGIMA. Refer to the Regulatory Accounts testimony (Ex. SDGE-26) for additional information regarding this memorandum account.

ii. Forecast Method

The forecast method developed for this cost category is a three-year average based on historical spend. This is the most appropriate methodology, as workload can vary from year to year. The three-year average levels out the peaks and valleys in this workpaper over an appropriate period of time to forecast the necessary level of funding.

Projects under this program provide infrastructure support consistent with activities in the other line extension categories, including overhead and underground, residential and non-residential as needed. Some projects in this program can be very large and can take a long time to complete, which makes the timing of customer payments inconsistent with the timing of the work. As such, the net expenditures vary from year to year, sometimes significantly, and

therefore a historical average is being used as the costs reflected in more recent years are a closer reflection of future costs due to ongoing increases in labor and material costs.

iii. Cost Drivers

The underlying cost driver for the New Business Infrastructure program is the volume and complexity of customer-requested New Business projects requiring extensions or upgrades to the electric distribution system. This program funds the installation of new electric infrastructure, including distribution transformers, associated hardware such as brackets, and power regulators necessary to serve new or expanded customer load. Program costs also include the construction of new secondary and service cable connections required to interconnect customer facilities with the utility's system, as well as the provision of overhead electric power supply to support cathodic protection stations. Expenditures are driven by the number of projects requiring new infrastructure, the size and configuration of customer load, and site-specific design and safety requirements.

h. 002240 – New Service Installations

i. Description

New Service Installations is an ongoing program that is expected to continue through the GRC cycle. Additional information can be found in capital workpapers. See Ex. SDGE-08-CWP at section 002240 – New Service Installations.

This workpaper provides funding for the portion of expenditures to be borne by ratepayers associated with delivering electric service to new customers from new or existing electric distribution systems and facilitates the installation of new overhead and underground electric services for new customers. The installation of distribution facilities is to be installed on Budgets Codes 215, 216, 217, 218, or 219.

As discussed in the Customer Growth category introduction, incremental costs related to this program will be eligible for recording in the CGIMA. Refer to the Regulatory Accounts testimony (Ex. SDGE-26) for additional information regarding this memorandum account.

ii. Forecast Method

The forecast method developed for this cost category is a three-year average based on historical spend. This is the most appropriate methodology, as workload can vary from year to

year. The three-year average levels out the peaks and valleys in this workpaper over an appropriate period of time to forecast the necessary level of funding. The three-year historical average is being used as the costs reflected in more recent years are a closer reflection of future costs due to ongoing increases in labor and material costs.

iii. Cost Drivers

The underlying cost driver for the New Service Installations program is the number of customer-requested service connections required to support new or modified electric service. This program funds the installation of new overhead and underground service drops necessary to connect customer premises to the distribution system. The scope also includes meter panel installations and the installation of service lateral conduits, including those required to support temporary power. In addition, the program provides temporary electric service for construction sites, which entails additional design, installation, and removal activities. Program costs are driven by the volume of service requests, the mix of overhead and underground installations, and site-specific construction requirements.

i. 002250 – Customer Requested Upgrades & Services

i. Description

Customer Requested Upgrades and Services is an ongoing program that is expected to continue through the GRC cycle. Additional information can be found in capital workpapers. See Ex. SDGE-08-CWP at section 002250 – Customer Requested Upgrades and Services.

This workpaper provides funding for the portion of expenditures to be borne by ratepayers to replace, relocate, rearrange, or remove existing electric distribution and service facilities as requested by customers.

As discussed in the Customer Growth category introduction above, incremental costs related to this program will be eligible for recording in the CGIMA. Refer to the Regulatory Accounts testimony (Ex. SDGE-26) for additional information regarding this memorandum account.

ii. Forecast Method

The forecast method developed for this cost category is a three-year average based on historical spend. This is the most appropriate methodology, as workload can vary from year to year. The three-year average levels out the peaks and valleys in this workpaper over an appropriate period of time to forecast the necessary level of funding. The three-year historical

average is being used as the costs reflected in more recent years are a closer reflection of future costs due to ongoing increases in labor and material costs.

iii. Cost Drivers

The underlying cost driver for the Customer Requested Upgrades and Services program is the volume of customer-initiated requests to modify existing electric service to meet changing load, safety, or siting requirements. This program supports panel rewires, upgrades, and relocations, including meter panel upgrades necessary to accommodate increased electric demand or changes to customer facilities. The scope also includes the replacement or enlargement of service lateral conduits due to service relocations or increased load, customer-requested conversions from overhead to underground service, and upgrades to service drops and conduit risers to meet current design standards. In addition, the program includes rearrangement work involving service relocations or upgrades. Program costs are driven by the number and complexity of customer requests and the extent of infrastructure modification required to safely and reliably serve customer load.

j. 002350 – Transformer & Meter Installations

i. Description

Transformer and Meter Installations is an ongoing program that is expected to continue through the GRC cycle. Additional information can be found in my capital workpapers. See Ex. SDGE-08-CWP at section 002350 – Transformers & Meter Installations.

This workpaper provides funding for the portion of expenditures to be borne by ratepayers associated with new or existing customer installations and the handling and salvage of scrapped distribution line equipment, specifically involving the installation and/or removal of transformers and meters.

As discussed in the Customer Growth category introduction, SDG&E proposes that costs incremental to authorized, for this workpaper, be tracked in the CGIMA. Refer to the Regulatory Accounts testimony (Ex. SDGE-26) for additional information regarding this memorandum account.

ii. Forecast Method

The forecast method developed for this cost category is a three-year average based on historical spend. This is the most appropriate methodology, as workload can vary from year to

year. The three-year average levels out the peaks and valleys in this workpaper to provide the necessary level of funding. The three-year historical average is being used as the costs reflected in more recent years are a closer reflection of future costs due to ongoing increases in labor and material costs.

iii. Cost Drivers

The underlying cost driver for this program is New Business customer growth. This program encompasses the installation and removal of transformers and meters, as well as the handling and salvage of retired distribution equipment necessary to support customer-initiated service requests and load growth. Program costs vary based on the volume and complexity of customer demand and associated infrastructure requirements.

k. 212520 – Conversion from Overhead to Underground Rule 20B

i. Description

Conversion from Overhead to Underground Rule 20B is an ongoing program that is expected to continue through the GRC cycle. Additional information can be found in capital workpapers. See Ex. SDGE-08-CWP at section 212520 – Conversion from OH-UG Rule 20B New Business.

Costs for Rule 20B projects will be balanced and recorded in a regulatory balancing account in accordance with OP 12 of D.21-06-013. The R20BA is a one-way balancing account that tracks the difference between the actual and authorized capital expenditures and expenses associated with completing overhead to underground conversion projects as required by the Rule 20 program, with a sub-account for Rule 20B.

This workpaper provides funding for the portion of expenditures to be borne by ratepayers to convert existing electric overhead distribution lines to underground distribution lines upon customer request. This program reflects SDG&E's portion of the costs for installing new underground facilities to replace existing overhead facilities for projects meeting the criteria for Rule 20B projects associated with New Business and not associated with Franchise.

ii. Forecast Method

The forecast method developed for this cost category is a three-year average based on historical spend. This is the most appropriate methodology, as workload can vary from year to

year. The three-year average levels out the peaks and valleys in this workpaper over an appropriate period of time to forecast the necessary level of funding.

Various aspects of new business, such as permits mandating conversions for developers or a customer seeking to have overhead lines in their neighborhood removed, make it challenging to predict the volume of future conversion work; therefore, the three-year historical average is being used as the costs reflected in more recent years are a closer reflection of future costs due to ongoing increases in labor and material costs.

iii. Cost Drivers

The underlying cost driver for this program is customer growth, driving the number of customer New Business requests related to overhead to underground conversion of electric facilities under Rule 20B and the size and complexity of the requested projects.

l. 212530 – Conversion from Overhead to Underground Rule 20C

i. Description

Conversion from Overhead to Underground Rule 20C is an ongoing program that is expected to continue through the GRC cycle. Additional information can be found in capital workpapers. See Ex. SDGE-08-CWP at section 212530 – Conversion from OH-UG Rule 20C.

Costs for Rule 20C projects are balanced and recorded in a regulatory balancing account in accordance with OP 12 of D.21-06-013. The R20BA is a one-way balancing account to track the difference between the actual and authorized capital expenditures and expenses associated with completing overhead to underground conversion projects as required by the Rule 20 program, with a sub-account for Rule 20C.

This workpaper provides funding for the portion of expenditures to be borne by ratepayers to convert existing electric overhead distribution lines to underground distribution lines upon customer request. This program reflects SDG&E's portion of the costs for installing new underground facilities to replace existing overhead facilities for projects meeting the criteria for Rule 20C.

ii. Forecast Method

The forecast method developed for this cost category is a three-year average based on historical spend. This is the most appropriate methodology, as workload can vary from year to

year. The three-year average levels out the peaks and valleys in this workpaper over an appropriate period of time to forecast the necessary level of funding.

Various aspects of new business, such as permits mandating conversions for developers or a customer seeking to have overhead lines in their neighborhood removed, make it challenging to predict the volume of future conversion work, therefore the three-year historical average provides the most appropriate forecast of costs for this program. The three-year historical average is being used as the costs reflected in more recent years are a closer reflection of future costs due to ongoing increases in labor and material costs.

iii. Cost Drivers

The underlying cost driver for this program is customer growth, driving the number of customer New Business requests related to overhead to underground conversion of electric facilities under Rule 20C and the size and complexity of the requested projects.

m. 212590 – EV Infrastructure Rule

i. Description

EV Infrastructure Rule is an ongoing program that is expected to continue through the GRC cycle. Additional information can be found in capital workpapers. See Ex. SDGE-08-CWP at section 212590 – EV Infrastructure Rule. Through Advice Letter 4705-E, submitted on August 22, 2025, SDG&E has requested modifications to the EV Infrastructure Rule that include revisions to Electric Rule 45 and Electric Vehicle Infrastructure Memorandum Account (EVIMA) pursuant to D.24-12-074. These revisions, which are pending approval, would suspend the EV Infrastructure Rule by discontinuing acceptance of new applications and terminating Rule 45 contracts for projects that have not yet received a Notice to Proceed (NTP). SDG&E has requested these revisions because the EVIMA has reached the cost cap authorized in the 2024 GRC Decision.[10]

The EV Infrastructure Rule is an optional new service rule for separately-metered EV charging sites, with the exception of single-family homes, established by the Commission through Resolution 5167-E. SDG&E is required to install, own, and rate base the electrical distribution infrastructure and associated construction at these sites between the distribution

[10] D.24-12-074 (2024 GRC Decision) at 555-557.

system and utility meter, which is collectively referred to as the utility-side make-ready. The customer or site host bears the cost of the make-ready beyond the utility meter and the cost of the EV Supply Equipment.

SDG&E opened the EV Infrastructure Rule to customers in April 2022 and, consistent with Commission Res. E-5167 and D.24-12-074, recorded associated costs incurred since April 2022 in its EVIMA. For the 2028 GRC cycle, SDG&E seeks to include these costs in base business. To the extent that incurred costs exceed the authorized costs set forth in a decision in this proceeding, those excess costs for this workpaper would be eligible for recording in the CGIMA. SDG&E therefore intends to close the EVIMA following the completion of a reasonableness review of EVIMA costs in a future application, as discussed further in Section VII.B. Refer to the Regulatory Accounts testimony (Ex. SDGE-26) for additional information regarding this memorandum account.

ii. Forecast Method

The forecast method developed for this cost category is the zero-base method. This method is most appropriate because SDG&E opened the EV Infrastructure Rule to customer enrollment on April 7, 2022 and requested to suspend the program on August 22, 2025 via Advice Letter (AL) 4705-E, Revision to Electric Rule 45 and Electric Vehicle Infrastructure Rule memorandum Account Pursuant to D.24-12-074. The suspension halted new enrollment to incoming customer inquiries, as well as determining that 163 projects (89% of the active portfolio) would be required to pursue alternative energization paths outside of Rule 45 or be cancelled. As a result, there remains no robust record of historic cost for comparison. As such, and despite interest from customers and EV industry participants,[11] the future participation rates in the EV Infrastructure Rule remain uncertain. To develop the forecast for the EV infrastructure rule workpaper, SDG&E evaluated expected customer demand using customer inquiries and applications received prior to the suspension, transportation electrification trends, and the distribution infrastructure needed to serve anticipated customer-requested sites. Forecasted costs reflect the labor, materials, and construction activities required to support these customer-driven installations using current unit cost assumptions.

[11] *See* A.22-05-015/016 (cons.), Petition for Modification of Decision 24-12-074 of the Joint Petitioners (November 25, 2025).

SDG&E believes that the cost of the EV Infrastructure Rule will increase in the future as more eligible customers opt to take electrical service under the Rule. The overall cost of the EV Infrastructure Rule will be driven by the number of sites that take service under the Rule, which in turn is dependent on the pace of transportation electrification in California.

iii. Cost Drivers

The overall cost of the EV Infrastructure Rule is driven by customer demand. As of the date of this filing, it is difficult to estimate this cost as the program was suspended in August 2025 due to the cap.

The underlying cost drivers for implementing the EV Infrastructure Rule relate to the cost of designing, installing, and maintaining the utility-side make-ready at participating sites. These costs include but are not limited to electrical equipment, conduit, trenching and repaving, and associated construction costs.

n. 231310 - Customer Relocation External

i. Description

Customer Relocation External Program is an ongoing program that is expected to continue through the GRC cycle. The costs of this program are borne by the requestor. The specific details regarding Customer Relocation External Program are found in my capital workpapers. See Ex. SDGE-08-CWP, WP #231310.

These forecasted capital expenditures support customer requested relocations of existing electric transmission and associated distribution facilities, including both overhead and underground, that conflict with infrastructure improvement projects or are relocated due to legal rulings or settlements with private property owners. Forecasting these projects is inherently challenging due to the uncertain timing and scope of relocation requests that fall under this workpaper as they are driven by external requests and legal obligations rather than discretionary utility work.

ii. Forecast Method

The forecast method developed for the Customer Relocation External Program is base year. The expenditures for 2025 reflect recent changes in this program and are the best representation of the starting point for 2026-2031 forecasted costs. This program has grown as it is now consolidating multiple projects previously considered separately into one single program.

SDG&E is aligning projects with similar drivers under one cost category for ease of management and to reduce administrative costs. This consolidation will also provide distinction between like projects and long-term maintainability of financial and project data supporting improved tracking and reporting.

iii. Cost Drivers

The underlying cost drivers for this capital project relate to the labor and non-labor components (material and construction) to perform the scope of work requested by the customer to relocate the electric facilities. Documentation of these cost drivers are included as supplemental capital workpapers. See Ex. SDGE-08-CWP.

3. Capacity

TABLE EG-5
Capital Expenditures Summary of Costs

Customer Growth - Capacity (In 2025 $)							
	2025 Adjusted-Recorded (000s)	Est. 2026 (000s)	Est. 2027 (000s)	Est. 2028 (000s)	Est. 2029 (000s)	Est. 2030 (000s)	Est. 2031 (000s)
Total	33,211	40,078	52,402	53,827	59,437	62,298	65,442

a. Sub-Category Introduction

The Capacity sub-category of Customer Growth supports upstream distribution infrastructure upgrades necessary to enable customer load growth.

Each year, SDG&E conducts its Distribution Planning Process (DPP) to identify upstream distribution infrastructure upgrade needs in the Capacity sub-category. The DPP evaluates requests for load additions ("known loads") and forecast load growth to determine where upgrades to existing or planned infrastructure are required to mitigate thermal overloads, maintain acceptable voltage, and provide system capacity. The process identifies cost-effective solutions, which typically include new capacitors, circuit extensions, reconductoring, new circuits, and substation expansions or additions. These projects are managed collectively to allocate capital efficiently and timely deliver safe and reliable service.

The DPP focuses on planning needs and solutions within a five-year horizon[12] while maintaining a forward-looking view for long lead-time infrastructure projects, such as substation expansions or new substation construction. Once forecasts are approved and disaggregated to the circuit and bank level, SDG&E's planning engineers perform detailed studies. These studies incorporate forecast distributed generation additions and operational impacts as well as contingency scenarios under which the largest generator (or group of generators subject to a common limitation (e.g., cloud cover)) is assumed off-line. The studies are performed under peak load conditions which assume 1-year-in-10 adverse weather conditions.

Power flow modeling is used to assess system performance and determine whether grid modifications are required. Potential solutions include system reconfiguration, construction of new facilities, and equipment upgrades. Substation bank evaluations enable compliance with thermal limits, voltage standards under Rule 2, and manufacturer ratings for transformers and other equipment. When considering substation bank expansions, SDG&E evaluates available space within the existing substation, overall capacity across the load pocket, and operational flexibility requirements (e.g., the ability to transfer load to an adjacent circuit). The planning engineers evaluate and identify the most cost-effective solutions to resolve the violations, including determining whether non-wires alternatives, such as battery energy storage systems, could serve as viable options.

SDG&E's 2028 GRC incorporates data from the most recently completed planning cycle (2024–2025 DPP). The 2024 – 2025 DPP uses load forecasts from the CEC-adopted 2023 Integrated Energy Policy Report (IEPR) Local Reliability Scenario. This scenario includes the system-level baseline demand forecast, Additional Achievable Energy Efficiency (AAEE) scenario 2, Additional Achievable Fuel Substitution (AAFS) scenario 4, and Additional Achievable Transportation Electrification (AATE) scenario 3 for the SDG&E distribution service area.[13] On August 15, 2025, SDG&E published the results of the 2024–2025 DPP in its Grid Needs Assessment (GNA) and Distribution Upgrade Project Reports (DUPR).

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[12] Beginning with the 2025-2026 DPP, the planning horizon will be extended to 10 years for circuits and banks.

[13] In a joint letter with PG&E and SCE, SDG&E submitted these demand scenarios to the Energy Division in June 2024 for use in the 2024–2025 DPP cycle, requesting approval prior to cycle initiation. The filing also proposed early implementation of pending loads by supplementing AATE

While the DPP provides a structured annual process, it is inherently dynamic. SDG&E responds to emerging capacity-driven needs that arise outside the formal planning cycle. To enable this responsiveness, the workpapers in the Capacity sub-category also fund DPP projects identified in previous DPP cycles, in between cycles (customer driven projects that were received after the conclusion of the last DPP cycle), and fast-turnaround distribution projects that are not strictly tied to the annual DPP. These projects often address urgent capacity concerns or unforeseen load additions and may not appear in the GNA or DUPR reports. In some cases, they involve low-cost, no-upgrade solutions, such as load transfers and circuit balancing, that do not require reporting in the DUPR. On-going responsiveness to emerging grid needs allows SDG&E to maintain system capacity and customer service in the event of unforeseen conditions.

Distribution capital requirements are driven by customer growth, new service requests, and forecast load increases. However, year-over-year capital needs do not always align proportionally with load growth due to the location-specific nature of upgrades, the design standards which SDG&E employs to provide economies of scale in material and construction costs, and construction challenges in both rural and urban areas. In addition, each capacity upgrade is unique in scope, with varying permitting requirements and construction complexities, making precise cost estimates years ahead of time difficult. This uncertainty underscores the importance of flexibility through the proposed memorandum account, which enables SDG&E to respond to evolving system needs while maintaining cost accountability.

As discussed in the Customer Growth category introduction, SDG&E proposes incremental costs related to those forecasted in workpapers in this sub-category be eligible for recording in the CGIMA. Refer to the Regulatory Accounts testimony (Ex. SDGE-26) for additional information regarding this memorandum account.

Additional details including description, forecast method, and cost drivers can be found for each workpaper below.

Scenario 3 with SDG&E Medium- and Heavy-Duty transportation electrification forecasts. The Energy Division approved this proposal in August 2024.

b. 002090 – Field Shunt Capacitors

i. Description

Field Shunt Capacitors is an ongoing program that is expected to continue through the GRC cycle. The specific details regarding Field Shunt Capacitors are found in my capital workpapers. *See* Ex. SDGE-08-CWP, WP #002090.

These forecast capital expenditures support the installation of shunt capacitors on electric distribution circuits to increase system capacity and maintain reliable service for growing customer demand. Shunt capacitors provide enhanced voltage control on the distribution circuits and buses that they are connected to. This is critical for maintaining service quality as load grows and distributed energy resources increase. Additionally, shunt capacitors improve power factor, which reduces reactive power flow and lowers ampere loading on distribution circuits, substation transformers, and other equipment. By reducing current flow, capacitors free up capacity on existing infrastructure, allowing the system to serve additional load while maintaining proper voltage levels.

SDG&E identifies the need for these upgrades through its annual DPP or by dynamically responding to customer service requests, providing timely capacity and voltage support in areas experiencing rapid load growth.

As discussed in the Customer Growth category introduction, SDG&E proposes that costs incremental to authorized, for this workpaper, be recorded in the CGIMA. Refer to the Regulatory Accounts testimony (Ex. SDGE-26) for additional information regarding this memorandum account.

ii. Forecast Method

The forecast method used for field shunt capacitors is zero-based. SDG&E selected the current 2026 forecast and unit quantity as the baseline, as they provide the most accurate representation of current project needs. For 2027 and beyond, SDG&E assumes incremental costs equivalent to one capacitor every two years, reflecting anticipated load growth driving additional voltage support needs. This approach aligns with the expected scope of work going forward. This method is grounded in recent, representative data while remaining consistent with long-term trends.

iii. Cost Drivers

The underlying cost drivers for projects within this program relate to providing voltage support and maintaining power quality to sustain capacity on the circuits to which the capacitors are connected.

c. 012950 – Load research/DLP Elec Metering Project

i. Description

Load research/DLP Elec Metering Project is an ongoing project that is expected to continue through the GRC cycle. The specific details regarding Load research/DLP Elec Metering Project are found in my capital workpapers. See Ex. SDGE-08-CWP, WP 012950

These forecasted capital expenditures support the Company's goal of excellent service to its customers. Solar generation data has been gathered by the Load Research team via a sample size of sub-meters for over ten years, supporting strategic efforts, long-term forecasting models, electric energy and capacity procurement, and has also been utilized by the California Energy Commission (CEC) and in Net Energy Metering (NEM) Reform proceedings. Accurate forecasts that incorporate solar production minimize under and over procurement, as well as contribute to setting appropriate rates. The solar generation data gathered by the existing sub-meters is a crucial input to SDG&E's dynamic load profile models, mandated by the CPUC, which is used for CAISO settlement by Energy Service Providers (ESPs) and Community Choice Aggregators (CCAs), in addition to being used internally to support strategic analysis efforts.

It is necessary to supplement this sample periodically due to an evolving and growing population, as well as sample deterioration. Attrition has led to a continuously reduced number of rooftop solar measuring sub-meters versus what was originally installed, mainly driven by panel upgrades and customer requests to have the research meter removed. Additionally, SDG&E has a very limited number of electric vehicle isolated sub-meters, thus limiting the data available for multiple electric vehicle analysis, including the statewide IOU EV load study, electrification analysis support, forecasted demands, and others. Electric vehicle adoption has had a significant impact on SDG&E grid, driving some circuit peaks, and creating operation and grid planning concerns. Understanding the impact of growing EV loads, driven by State goals, is crucial in providing reliability and optimizing the grid. A previously unmetered end-use which is key to Utility and State electrification goals, are electric heat pumps, which have the potential

to change customer electric demands and load profiles. SDG&E Load Research team plans on installing a representative sample of this technology, and incorporating it into its Dynamic Load Profile models, improving their accuracy of customer electric load behavior.

ii. Forecast Method

The forecast method developed for this cost category is zero based. This method is most appropriate because historical units are not representative of the sample size of installations needed for this program to obtain valuable information. The unit costs for the materials are based on the most recent metering projects that use the same materials.

iii. Cost Drivers

The underlying cost driver associated with this project is the need for sufficient data for researching, analyzing, and concluding impacts on SDG&E's electric grid and rates from rooftop solar and electric vehicle charging. The costs include hardware such as meters, adapters, and wiring, as well as the installation labor. Documentation of these cost drivers are included as supplemental capital workpapers. See Ex. SDGE-08-CWP.

d. 212760 – Circuit and Bank Capacity Projects

i. Description

Circuit and Bank Capacity Projects is a portfolio of ongoing projects and programs that are expected to continue through the GRC cycle. These forecast capital expenditures support a broad range of capacity-driven projects at both the circuit and bank levels. This workpaper encompasses multiple budget codes that collectively support and fund capacity upgrade projects necessary to serve customer load growth.

The specific details regarding Circuit and Bank Capacity Projects are found in my capital workpapers. *See* Ex. SDGE-08-CWP, WP #212760.

Most budget codes under this workpaper are specific large-scale projects identified and initiated through completed DPP cycles.[14] This workpaper also includes budget codes (00208 and 20247) for small- to mid-scale projects, which fund projects already initiated, while providing flexibility to respond quickly to unforeseen conditions such as unexpected customer load additions or localized capacity constraints. In addition, one budget code (21276) serves as a

[14] See the full list of budget codes and associated costs in the Workpaper.

proxy for future large-scale projects. These future large-scale projects will be fully scoped in upcoming DPP cycles. Projects requiring specific budget codes can only be developed after completion of the annual planning cycle and only when sufficient data is available to substantially scope and initiate the individual circuit or bank project.

Projects funded under this workpaper vary significantly in scope and complexity. Small-scale efforts often involve operational solutions such as load transfers and circuit reconfigurations to rebalance circuit loading. Mid-scale projects include reconstruction, extension, and cutover of overhead and underground distribution facilities to replace overloaded conductors and address primary voltage issues. Large-scale projects include new circuit development or the upgrade/addition of substation transformers. Typical physical work may involve installation or replacement of switches, circuit breakers, and cable/conductors; trenching and conduit installation; and, in some cases, installation of voltage-regulating devices to improve voltage support. For bank-level capacity projects, work may involve upgrading or replacing substation transformers to expand bank capacity under growing load conditions.

ii. Forecast Method

The forecast method developed for this workpaper is zero-based. The forecast is based on cost estimates that were developed based on the anticipated scope of work for projects that would need to be funded by this workpaper. While historic-based data (e.g., an applicable unit cost) may be utilized to develop the forecasts, total historical spending cannot be reliably used to forecast future spending.

For the majority of the budget codes, the forecast reflects project-specific estimates for work already underway based on the specific scope and requirements for each project.

For two blanket budget codes, forecasts begin in 2026 and reflect aggregated, project-specific estimates. Forecasts for years beyond 2026 apply a 5 percent annual growth factor to account for anticipated increases in project activity driven by electrification, system expansion, and growing customer demand. This growth factor is forward-looking and not derived from historical expenditures.

Finally, one budget code includes high-level estimates for projects that have not been initiated. These forecasts are developed using identified system needs and anticipated project requirements.

As discussed in the Customer Growth category introduction, SDG&E proposes that costs incremental to authorized, for this workpaper, be recorded in the CGIMA. Refer to the Regulatory Accounts testimony (Ex. SDGE-26) for additional information regarding this memorandum account.

iii. Cost Drivers

The underlying cost driver for this workpaper relates to circuit and bank upgrade projects driven by customer energization requests and capacity needs. There is an upward trend for projects within this workpaper. The associated costs are primarily driven by construction and materials. Material costs are driven by the procurement and installation of new substation transformers, as well as reconductoring existing lines and installing new conductors to accommodate increased load.

iv. Supplemental Information

The TY 2024 GRC Decision, D.24-12-074, directed SDG&E to report, in its next GRC, the number of planned investment projects (Budget Code 20247) and future capacity projects (Budget Code 21276) started and completed annually since 2023, along with their unit costs. The additional requested information can be found in my supplemental workpapers. *See* Ex. SDGE-08-CWP, WP #212760.

e. 972480 – Distribution System Capacity Improvement

i. Description

Distribution System Capacity Improvement is an ongoing program that is expected to continue through the GRC cycle. The specific details regarding Distribution System Capacity Improvement are found in my capital workpapers. *See* Ex. SDGE-08-CWP, WP# 972480.

These forecast capital expenditures support projects that provide additional capacity and sectionalizing capability. These projects improve tie capacity by reducing high customer counts, adding tie switches for operational flexibility, and upgrading equipment to meet SDG&E's current design standards. Projects within this program are generally low-cost, have quick turnaround times, and often involve minor modifications or upgrades to the distribution system. They are typically identified either during load energization efforts as additional scope or by SDG&E's operational groups during daily operations.

Construction activities may include feeder and branch reconductoring, installation of appropriate switches, and other equipment necessary to increase tie capacity and sectionalizing, thereby providing system capacity improvement.

As discussed in the Customer Growth category introduction, SDG&E proposes that costs incremental to authorized, for this workpaper, be recorded in the CGIMA. Refer to the Regulatory Accounts testimony (Ex. SDGE-26) for additional information regarding this memorandum account.

ii. Forecast Method

The forecast method developed for the Distribution System Capacity Improvement category is base year. SDG&E selected 2025 actuals as they provide the most accurate representation of current operational conditions and resource requirements. This approach reflects normalized spending levels and aligns with the anticipated scope of work moving forward. Additionally, the five-year average closely aligns with 2025 actuals, reinforcing the reasonableness of the base year approach. This method is grounded in recent, representative data while remaining consistent with long-term trends.

iii. Cost Drivers

The underlying cost driver for this budget code and program is the need to add sectionalizing capability on the distribution system, including reducing high customer counts by installing additional switches. The associated costs are primarily driven by construction and materials. Material costs are mainly driven by the procurement and installation of new switches, as well as reconductoring existing lines and installing new conductors to accommodate increased load.

f. New Substation Capacity Projects

TABLE EG-6
Capital Expenditures Summary of Costs

New Substation Capacity Projects (In 2025 $)									
	Est. 2026 (000s)	**Est. 2027 (000s)**	**Est. 2028 (000s)**	**Est. 2029 (000s)**	**Est. 2030 (000s)**	**Est. 2031 (000s)**	**Est. 2032 000s)**	**Est. 2033 (000s)**	**Est. 2034 (000s)**
Downtown Area Substation	375	603	4,483	1,058	1.450	46,106	11,782	9,508	949
Calavera Substation	200	1,320	1,120	880	4,680	10,940	23,720	6,111	291
Total	**575**	**1,923**	**5,603**	**1,938**	**6,130**	**57,046**	**35,502**	**15,619**	**1,240**

i. Description

SDG&E plans to construct and place in service two new capacity driven distribution substations, the Calavera Substation Project and the new Downtown Area Substation Project, with forecasted in-service years of 2032 and 2033 respectively. Because of their respective in-service dates, the costs in Table EG-6 are not included in SDG&E's revenue requirement request in this proceeding. Although these projects are expected to be energized beyond the current GRC cycle, as shown in Table EG-6, SDG&E expects to spend capital costs during this GRC cycle. Accordingly, SDG&E is providing this information to inform the Commission of their significance to the future system needs and long-term infrastructure planning.

The Calavera Substation Project is a capacity-driven project intended to address forecasted deficiencies in the Oceanside Load Pocket, where demand in the area is projected to reach approximately 85 percent of existing load-pocket capacity by 2029. SDG&E evaluated expansion alternatives at existing substations within the load pocket; however, physical site constraints, existing transformer configurations, and limited available footprint preclude further expansion. As a result, development of a new greenfield substation represents the only feasible long-term solution. Upon completion, the Calavera Substation will provide incremental capacity to serve existing load, support electrification-driven growth, and enhance operational flexibility by improving load transfer capability and reducing reliance on heavily loaded facilities. Engineering feasibility studies are currently underway to further refine the project scope, design and cost.

The Downtown Area Substation Project is a capacity-driven project intended to address forecasted deficiencies in the Downtown San Diego Load Pocket, where demand in the area is projected to reach approximately 85 percent of existing load-pocket capacity by 2032, reducing flexibility under maintenance and contingency conditions. The project includes construction of a new 69/12 kV substation with an initial buildout of three 69/12kV transformer banks with related transmission and distribution upgrades. In addition to meeting future load growth, the project will provide operational flexibility to relieve existing substations and support future rebuild activities, improving reliability for customers in the Downtown and Barrio Logan areas.

These new substations represent capacity-driven projects with long construction periods that span multiple GRC cycles.[15] Because these substations are base electric distribution capital work, SDG&E intends to seek recovery in a future GRC that aligns the expected in-service date with the applicable GRC cycle. Until then, SDG&E will incur the capital costs, which will be considered construction work-in-progress (CWIP) until the assets are operational. SDG&E is seeking project approval in this instant proceeding as the intent is to move forward with construction and capital spending during this GRC cycle.

B. Franchise

TABLE EG-7
Capital Expenditures Summary of Costs[16]

B. Franchise (In 2025 $)							
	2025 Adjusted-Recorded (000s)	**Est. 2026 (000s)**	**Est. 2027 (000s)**	**Est. 2028 (000s)**	**Est. 2029 (000s)**	**Est. 2030 (000s)**	**Est. 2031 (000s)**
Non-Collectible	5,799	12,952	11,674	13,549	24,726	9,275	4,720
Collectible	21,538	44,178	49,832	55,810	74,542	51,430	49,791
Total	**27,337**	**57,130**	**61,506**	**69,359**	**99,268**	**60,705**	**54,511**

1. Category Introduction

The Franchise Category consists of ongoing programs that are expected to continue through the GRC cycle.

Costs for Rule 20B projects will continue to be balanced and recorded in a regulatory balancing account in accordance with OP 12 of D.21-06-013. The R20BA is a one-way balancing account to track the difference between the actual and authorized capital expenditures and expenses associated with completing overhead to underground conversion projects as required by the Rule 20 program, with sub-accounts for parts A, B and C.

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[15] Both substations will require regulatory filings pursuant to GO 131-E including necessary California Environmental Quality Act review.

[16] Please refer to my capital workpapers, Ex. SDGE-CWP-08, for additional information about the activities described herein. Each capital workpaper includes a Summary of Adjustments to Forecast section and workpaper details that separate the portion that is forecasted to be ratepayer-funded (Non-Collectible) and the portion anticipated to be collected from third parties (Collectible), if applicable. The Collectible portion is necessary for calculating the proper allocation of overhead amounts to these projects, but the fully loaded Collectible amounts are not included in the requested revenue requirement.

The Franchise category of projects is required to perform municipal requested work in accordance with SDG&E's franchise agreements. The two categories of projects in the franchise category are (i) those devoted to conversion of overhead distribution systems to underground and (ii) street and highway relocations due to improvements by governmental agencies.

Rule 20A conversion projects are funded through allocations established under Electric Rule 20 and are implemented in coordination with cities and counties. Rule 20B conversion projects sponsored by local governments are partially funded by ratepayers in the form of credits equal to cost of a new equivalent overhead system and the cost of removing the overhead system being converted. Street and highway relocations are also included in this category and performed at ratepayer expense in accordance with Franchise Agreements.

SDG&E also has a Franchise Agreement with the City of San Diego, which imposes a surcharge on ratepayers within the city limits. The proceeds from this surcharge are used by the City of San Diego to fund overhead-to-underground conversion projects within the city limits. *See* 002130 – City of San Diego Surcharge Program (20SD) below.

Franchise budget codes have a "collectible" component, where some funds are received from customers prior to construction through a mechanism called Contributions in Aid of Construction (CIAC). The total project cost to do the work, independent from any collectible portion is included in each individual budget code. Rate base modeling performed on these values still credits the collectible portion so that ratepayer impact is unchanged from the way SDG&E has demonstrated the cost of collectible projects.

Additional details including description, forecast method, and cost drivers can be found in each workpaper below.

2. 002050 – Electric Street & Highway Relocations

a. Description

Electric Distribution Street & Highway Relocations is an ongoing program that is expected to continue through the GRC cycle. Additional information can be found in capital workpapers. See Ex. SDGE-08-CWP at section 002050 – Electric Dist. Street/Hwy Relocations.

This budget code provides funding for the relocation of existing electric distribution facilities for public improvements under the terms of franchise agreements with municipalities and the provisions of the street and highway codes with respect to state highways. It also funds relocations for Metropolitan Transit System, North County Transit District, and the Port of San

Diego. This budget code covers relocations of electric distribution facilities, including both overhead and underground, that conflict with public street and highway improvements and other infrastructure improvement projects having rights superior to those of SDG&E.

b. Forecast Method

The forecast method developed for the Electric Distribution Street & Highway cost category is a three-year average based on historical spend. This is the most appropriate methodology, as workload can vary from year to year. The three-year average levels out the peaks and valleys in this workpaper over an appropriate period of time to forecast the necessary level of funding for the work that falls within this budget code while accounting for recent changes in the program. The three-year historical average is being used as the costs reflected in more recent years are a closer reflection of future costs due to ongoing increases in labor and material costs.

c. Cost Drivers

The underlying cost drivers for the various capital projects are dictated by and dependent on various governmental agencies (e.g., cities, counties, or the state).

3. 002100 – Conversion of Overhead to Underground Rule 20A

a. Description

Conversion of Overhead to Underground Rule 20A is an ongoing program that is expected to continue through the GRC cycle. Additional information can be found in capital workpapers. See Ex. SDGE-08-CWP at section 002100 – Conversion of Overhead to Underground Rule 20A.

Costs for Rule 20A projects will be balanced and recorded in a regulatory balancing account in accordance with OP 12 of D.21-06-013. The R20BA is a one-way balancing account to track the difference between the actual and authorized capital expenditures and expenses associated with completing overhead to underground conversion projects as required by the Rule 20 program, with a sub-account for part A (Rule 20A).

This budget code provides funding to convert overhead facilities to underground based on requirements of SDG&E's Rule 20A conversion program, a CPUC-mandated program defined in case 8209 dated 09-27-67 (effective 01-01-68) and franchise agreements with the cities of San Diego and Chula Vista. Additional customers who participate in the program are the cities of:

Carlsbad, Coronado, Dana Point, Del Mar, El Cajon, Encinitas, Escondido, Imperial Beach, Laguna Beach, Laguna Hills, Laguna Niguel, La Mesa, Lemon Grove, Mission Viejo, National City, Oceanside, Poway, Solana Beach, San Clemente, San Juan Capistrano, San Marcos, Santee and the Counties of Orange and San Diego.

This program provides for replacement of existing overhead electric facilities with new comparable underground electric facilities at the request of the governing body in the city or county in which such electric facilities are located as long as the conversion area selected by the governing body meets the criteria as set forth in Rule 20A. Total program allocations are based on the San Diego Franchise Agreement, with each other city/county receiving an amount proportional to their electric meter count in accordance with the methodology specified in Rule 20A. Expenditures in San Diego are also mandated by the Undergrounding Memorandum of Understanding (MOU).[17]

b. Forecast Method

The forecast method developed for this cost category is zero-based. While historic-based data (e.g., an applicable unit cost) may be utilized to develop the forecast, use of historic total dollars spent is not applicable for this item. The forecast is based on cost estimates developed from the scope of work for specific projects identified by local Cities and Counties. SDG&E develops cost estimates based on construction labor rates, material costs, contract pricing/quotes, and other project specific details, as applicable.

c. Cost Drivers

The underlying cost drivers of this budget code are the requests from local Cities and Counties to underground existing overhead facilities as mandated by CPUC Rule 20(A) prior to the CPUC mandated sunset of the program by December 31, 2033.[18]

4. 002130 – City of San Diego Surcharge Program (20SD)

a. Description

City of San Diego Surcharge Program (20SD) is an ongoing program that is expected to continue through the GRC cycle. The costs of this project are borne by the requestor (City of

[17] City Council of San Diego Ordinance Number O-21440 (final passage on March 9, 2022), *available at:* https://www.sandiego.gov/sites/default/files/o-21440_0.pdf.

[18] *See* D.23-06-008, Conclusions of Law (COL) 17 at 33-34.

San Diego). Additional information can be found in capital workpapers. See Ex. SDGE-11-CWP at section 002130 – City of San Diego Surcharge Program (20SD).

This budget code provides funding, at the City of San Diego's expense, to replace existing overhead electric facilities with comparable new underground electric facilities. Replacement is implemented at the request of the City of San Diego. This is a separate and distinct program from and unrelated to the Rule 20A Undergrounding Program, Workpaper 002100 – Conversion from OH to UG Rule 20A. This program is associated with SDG&E's Franchise Agreement with the City of San Diego and is required by that Agreement. All expenditures associated with this program will be reimbursed to SDG&E by the City from the proceeds of a surcharge collected from each electric meter account in the City of San Diego. This surcharge program is revenue and rate base neutral, since all surcharge funds collected are turned over to the City, and all related SDG&E construction expenditures are reimbursed by the City. While there are timing differences that result in an initial cost for the conversion, no net capital or O&M expenditures are anticipated.

b. Forecast Method

The forecast method developed for this cost category is zero-based. While historic-based data (e.g., an applicable unit cost) may be utilized to develop the forecast, use of historic total dollars spent is not applicable for this item. The forecast is based on cost estimates developed from the scope of work for specific projects identified by the City of San Diego. SDG&E develops cost estimates based on construction labor rates, material costs, contract pricing/quotes, and other project specific details, as applicable.

c. Cost Drivers

The underlying cost driver for this budget is the City of San Diego's schedule for requesting conversion work be performed to underground existing electric distribution and transmission facilities within the bounds of their territory.

5. 202570 – Conversion from Overhead to Underground Rule 20B

a. Description

Conversion from Overhead to Underground Rule 20B is an ongoing program that is expected to continue through the GRC cycle. Additional information can be found in capital workpapers. See Ex. SDGE-08-CWP at section 202570 – Conversion from OH to UG Rule 20B.

Costs for Rule 20B projects will be balanced and recorded in a regulatory balancing account in accordance with OP 12 of D.21-06-013. The R20BA is a one-way balancing account to track the difference between the actual and authorized capital expenditures and expenses associated with completing overhead to underground conversion projects as required by the Rule 20 program, with a sub-account for Rule 20B.

This workpaper provides funding for the portion of expenditures to be borne by ratepayers associated with projects (not related to New Business) replacing existing overhead electric facilities with new comparable underground electric facilities as stipulated by the requirements of Rule 20B and using established SDG&E standards and processes; the criteria for Rule 20B are typically applied when a project is not eligible for Rule 20A. Replacement is implemented at the request of the governing body in the city or county in which the electric facilities are located, and the conversion area selected by the governing body meets the criteria as set forth in Rule 20B.

Rule 20B projects are municipally-driven with primary funding by a local government that is typically supported by community involvement. SDG&E coordinates closely with local municipalities in scheduling and prioritizing projects according to available funds, community support, and a variety of other factors affecting scope and schedule.

b. Forecast Method

The forecast method developed for this cost category is zero-based. While historic-based data (e.g., an applicable unit cost) may be utilized to develop the forecast, use of historic total dollars spent is not applicable for this item. The forecast is based on cost estimates developed from the scope of work for the project. SDG&E develops cost estimates based on construction labor rates, material costs, contract pricing/quotes, and other project specific details, as applicable.

c. Cost Drivers

The underlying cost driver for this workpaper is dictated by the governing body of the city or county in which the electric facilities are located and proposed to be converted to underground under Rule 20B.

6. 231300 - Customer Relocation Internal

a. Description

Customer Relocation Internal is an ongoing program that is expected to continue through the GRC cycle. The specific details regarding Customer Relocation Internal are found in my capital workpapers. See Ex. SDGE-08-CWP, WP #231300.

These forecasted capital expenditures support customer requested relocations of existing electric transmission and associated distribution facilities for public improvements under the terms of agreements with municipalities and the provisions of the street, highway, railway and/or public transportation requirements. It can also address resolution of unclear/disputed easements, rights of way and legal rulings or arbitration settlements with private property owners. Forecasting these projects is inherently challenging due to the uncertain timing and scope of relocation requests that fall under this workpaper as they are driven by external requests and legal obligations rather than discretionary utility work.

b. Forecast Method

The forecast method developed for this cost category is base year. The expenditures for 2025 reflect recent changes in this program and is the best representation of the starting point for 2026-2031 forecasted costs.

c. Cost Drivers

The underlying cost drivers for this capital project relate to the labor and non-labor components (material and construction) to perform the scope of work requested by the municipality under the franchise agreement to relocate the electric facilities. Documentation of these cost drivers are included as supplemental capital workpapers. Documentation of these cost drivers are included as supplemental capital workpapers. See Ex. SDGE-08-CWP, WP #231300.

C. Mandated

TABLE EG-8
Capital Expenditures Summary of Costs

C. Mandated (In 2025 $)							
	2025 Adjusted-Recorded (000s)	Est. 2026 (000s)	Est. 2027 (000s)	Est. 2028 (000s)	Est. 2029 (000s)	Est. 2030 (000s)	Est. 2031 (000s)
Total	59,216	50,361	50,361	50,302	50,158	50,254	50,271

1. Category Introduction

The specific details regarding Mandated projects are found in my capital workpapers. *See* SDG&E-08-CWP, at section C. Mandated.

Mandated projects are capital projects required by the CPUC and other regulatory agencies. These programs promote public and employee safety, protect SDG&E's capital investments in overhead and underground electric distribution facilities, maintain quality of service to customers, and prevent degradation of system reliability due to aging infrastructure.

This category includes, but is not limited to, capital work associated with SDG&E's CMP for both overhead and underground facilities. These programs are driven primarily by CPUC GO 165, which governs inspection and maintenance requirements for electric distribution facilities in support of compliance with GO 95 (Rules for Overhead Electric Line Construction) and GO 128 (Rules for Construction of Underground Electric Supply and Communications Systems).

GO 165 requires routine inspection of electric distribution facilities and correction of identified infractions within established timeframes. SDG&E's CMP compliance plan, submitted to the CPUC in July 1997 and effective January 1, 1998, requires that conditions identified during inspections—representing deviations from GO 95 and GO 128 and SDG&E standards—be cleared within specified timeframes depending on the severity of the condition, the risk posed, and the location (e.g. (High Fire-Threat District (HFTD)). Please note that capital repair costs associated with SDG&E CMP related to overhead electric distribution facilities in the HFTD that support wildfire mitigation are not included in the 002290 CMP workpaper and are included in SDG&E-07, Testimony of Jonathan Woldemariam.

The capital programs included in the Mandated category represent the investments necessary to remediate the conditions identified through these inspection programs and meet CPUC mandated regulatory obligations. These programs support safety, reliability, and compliance objectives and are integral to maintaining the integrity of the electric distribution system. Additional details regarding scope, forecast methodology, and cost drivers are provided in the individual workpapers discussions that follow.

2. 002290 - RAMP - Corrective Maintenance Program (CMP)

a. Description

SDG&E's Electric Distribution CMP is mandated by GO 165 and SDG&E standards and is an ongoing program that is expected to continue through the GRC cycle. Additional information can be found in the capital workpapers. See Ex. SDGE-08-CWP at section 002290 – RAMP - Corrective Maintenance Program (CMP). This workpaper supports capital investments required to correct inspection-identified conditions on SDG&E's overhead and underground electric distribution system in accordance with CPUC GO 165, 95 and 128. This workpaper does not include capital investments for overhead electric distribution facilities located in the HFTD that are included in Ex. SDGE-07. The CMP is designed to promote public, employee, and contractor safety, maintain compliance with applicable construction standards, protect SDG&E's electric distribution assets, and support safe and reliable electric service.

The CMP provides funding for capital corrective work resulting from required inspections of electric distribution facilities. Inspections are performed on a cyclical basis and identify conditions that deviate from SDG&E construction standards and the requirements of GO 95 (Rules for Overhead Electric Line Construction) and GO 128 (Rules for Construction of Underground Electric Supply and Communications Systems). Conditions requiring correction may include deteriorated, damaged, or obsolete equipment; facilities nearing failure; and infrastructure that presents potential safety risks to employees, contractors, or the public. Imminent hazards identified during inspections are addressed as soon as possible.

For underground facilities, this program includes capital work to restore the structural and operational integrity of subsurface distribution structures such as manholes, handholes, and vaults that house electric distribution equipment. These structures are essential to system integrity and safe operation of the underground distribution system. Over time, structural degradation or damage to equipment may occur due to age, environmental conditions, traffic loading, or other external factors. Conditions can limit operational flexibility, increase the likelihood of equipment failure, and create safety risks. This program funds capital repairs necessary to return these facilities to a condition that supports continued safe and reliable operation and compliance with applicable standards.

While inspections and certain minor repairs are addressed through O&M funding requests included in the Electric Distribution O&M testimony (Ex. SDGE-09), this workpaper

supports the capital repairs and replacements required to remediate more significant conditions identified through the CMP inspection processes. The CMP has been in place since January 1998 pursuant to GO 165 and remains a core regulatory compliance program necessary to maintain the integrity of SDG&E's overhead and underground electric distribution system.

The investments supported by this program address inspection-driven corrective work that, if left uncorrected, could increase safety risk, degrade reliability, and result in non-compliance with CPUC requirements. This program is necessary to fulfill SDG&E's ongoing regulatory obligations and to maintain safe, reliable, and high-quality electric service.

Additional information can be found in the capital workpapers. *See* Ex. SDGE-08-CWP at section 002290 – RAMP – Corrective Maintenance Program (CMP). The Corrective Maintenance Program mitigates safety risks identified in the 2025 RAMP Report.

b. Description of RAMP Mitigations

This program mitigates safety risks identified in the 2025 RAMP Report: Electric Infrastructure Integrity (EII) – C212 GO165 Corrective Maintenance Program Underground and Electric Infrastructure Integrity (EII) – C251 GO165 Corrective Maintenance Program Overhead. Accordingly, this workpaper in its entirety aligns with the RAMP activities in table EG-9 below. Activities that are compliance or mandated by CPUC or other agencies are listed in bold; and Table EG-42 provides the details regarding these mandates for each control.

TABLE EG-9
RAMP and GRC Risk Control/Mitigation Activities - Capital

RAMP - 229 - Corrective Maintenance Program				
ID	**Control/Mitigation Name**	**2025 RAMP 2028-2031 In 2024 $ (000s)**	**2028 GRC 2028-2031 In 2025 $ (000s)**	**Change ($000s)**
C212	**GO165 Corrective Maintenance Program Underground**	88848	81248	(7600)
C251	**GO165 Corrective Maintenance Program Overhead**	85612	113817	28205

c. Description of Selection and Prioritization of RAMP Risk Mitigations

The Company's selection and prioritization of this RAMP mitigation activity considered many factors when determining if these risk mitigation activities are an effective and worthwhile investment. The Enterprise Risk Management (ERM) process for identifying and assessing system risk is described in the RDF Integration testimony (Ex. SCG-02B/SDGE-02B).

The CMP mitigation selection and prioritization process is designed to maintain continued compliance with applicable regulatory requirements while proactively preventing the escalation of safety, reliability, and compliance risks. CMP mitigations are driven by electric distribution inspection findings conducted pursuant to GO 165, which identify conditions that require corrective action to maintain system integrity and compliance. Once deficiencies are identified, SDG&E evaluates potential mitigation options using a structured, engineering-based review. Safety, severity, asset condition, compliance, system constraints, customer impacts, constructability, cost-effectiveness, and operational feasibility, as well as other considerations, are all used to determine the appropriate scope of repair. Through this process, SDG&E confirms the appropriate corrective action (e.g., repair versus replacement) and prioritizes projects to address the highest-risk and most compliance-critical conditions first.

If SDG&E did not perform CMP capital repairs and replacements, inspection-identified conditions on overhead and underground distribution facilities would remain in place or be deferred, increasing the likelihood that deteriorated or obsolete equipment will continue to worsen over time. Deferral would elevate public and worker safety risk, increase the probability of equipment failures and unplanned outages, and reduce operational flexibility needed to safely operate and restore the distribution system. In addition, because CMP is mandated by GO 165 and is implemented to maintain compliance with applicable construction standards (including GO 95 and GO 128), not completing needed capital corrective work could lead to sustained non-compliance exposure and a shift from planned, risk-based remediation to more disruptive and potentially higher-cost emergency response. Ultimately, the alternative of not performing CMP capital corrective work would not eliminate the underlying need; it would defer and compound it, resulting in greater customer impacts and higher long-term costs as conditions deteriorate and repairs become more urgent and result in higher consequence failures.

d. Forecast Method

The forecast method used for CMP is a three-year average based on historical data. This is the most appropriate methodology, as volume and scope of inspection-driven repair work can vary from year to year. The three-year average normalizes annual variability while reflecting recent conditions, including increased replacement needs associated with aging infrastructure.

e. Cost Drivers

The primary cost drivers for CMP are the capital replacement, repair and restoration costs needed to remedy overhead and underground conditions identified during inspections mandated by GO 165 and SDG&E's CMP, with the exception of those costs related to overhead electric capital replacement and repair costs described in SDGE-07 that support SDG&E's wildfire mitigation inspection and repair initiatives. Costs vary based on the type and severity of conditions identified; the scope of replacement or structural restoration required to return assets to compliant condition; access and constructability constraints; and labor, material, and contractor costs. Capital corrective maintenance work also includes support costs necessary to scope, plan, design, schedule, permit, inspect, and close out field work safely and efficiently. These support activities include engineering and design, project and construction management, environmental and permitting support, materials coordination, field oversight, and related administrative functions required to track and execute capital repairs and replacements in compliance with applicable standards and regulatory requirements.

3. 17262 – Streetlight Modernization

a. Description

Street Light Modernization is an ongoing program that is expected to continue through the GRC cycle. Additional information can be found in the capital workpapers. See Ex. SDGE-08-CWP at section 172620 – Street Light Modernization.

This project targets modernizing the street lighting system owned by SDG&E by proactively converting the system to light emitting diodes (LEDs). In addition, based on the location and current condition of the associated poles, pole replacement might be required when the lighting system is being replaced. Pursuant to AB 719, SDG&E filed Advice Letter 3263-E-B, which was approved July 2, 2019 and effective July 29, 2019, by the CPUC, stating that SDG&E was adopting LED technology as a standard for LS-1 lights and was embarking on a

LED conversion program of LS-1 lights. The current scope will cover locations within SDG&E's service territory where SDG&E owns the street lights and proactively replaces the street lights on a block by block approach rather than the existing plan of replacing upon failure.

b. Forecast Method

The forecast method developed for this cost category is a three-year average based on historical spend. This is the most appropriate methodology, as workload can vary from year to year. The three-year average levels out the peaks and valleys in this workpaper over an appropriate period of time to forecast the necessary level of funding for the work that falls within this workpaper while accounting for recent changes in the program. The three-year historical average is being used as the costs reflected in more recent years are a closer reflection of future costs due to ongoing increases in labor and material costs.

c. Cost Drivers

The underlying cost drivers for the program are the activities associated with converting existing streetlights to LED technology. These costs include the resources required to remove legacy infrastructure, install new LED fixtures, and perform upgrades necessary to support the new technology.

4. 102650 – RAMP - Avian Protection Program

a. Description

Avian Protection Program is an ongoing program that is expected to continue through the GRC cycle. Additional information can be found in the capital workpapers. See Ex. SDGE-08-CWP at section 102650 – RAMP - Avian Protection Program.

These forecasted capital expenditures support funding for identifying and retrofitting, rearranging, or building-to-standard distribution poles in SDG&E's service territory outside the HFTD to prevent electrocution of birds and to facilitate compliance with the following Federal and State Laws: Migratory Bird Treaty Act (16 USC §§ 703-712), Bald and Golden Eagle Protection Act (16 USC Sections (§§) 668-668d), and the California Fish and Game Code (Cal Fish and Game Code §§ 3503, 3503.5, 3511, 3513).

The program will also harden the system and reduce fire risk associated with avian electrocutions, improve SDG&E reliability and customer service, and align with Avian Power Line Interaction Committee Guidelines. The plan will primarily address known bird

contacts, in which case we will identify and resolve potential avian risk. The specific details regarding Avian Protection Program are found in the capital workpapers. See SDG&E-08-CWP, WP #102650 – Avian Protection Program.

b. Description of RAMP Mitigations

The Avian Protection Program mitigates safety risks identified in the 2025 RAMP Report: Electric Infrastructure Integrity (EII) – C240 Avian Protection Program. Accordingly, this workpaper in its entirety aligns with a RAMP activity. By performing this activity, fire, reliability, and avian electrocution risk is reduced by installing avian protection on infrastructure with known bird contacts. Activities that are compliance or mandated by CPUC or other agencies are listed in bold; and Table EG-42 provides the details regarding these mandates for each control.

TABLE EG-10
RAMP and GRC Risk Control/Mitigation Activities - Capital

102650 – RAMP - Avian Protection Program				
ID	**Control/Mitigation Name**	**2025 RAMP 2028-2031 In 2024 $ (000s)**	**2028 GRC 2028-2031 In 2025 $ (000s)**	**Change ($000s)**
C240	**Avian Protection Program**	84	92	8

c. Description of Selection and Prioritization of RAMP Risk Mitigations

The RAMP risk mitigation efforts outlined here and in all RAMP sections below are associated with specific actions, such as programs, projects, processes, and utilization of technology and are designed to address a specific safety and/or reliability risk. The Company's selection and prioritization of these RAMP mitigation activities considered many factors when determining if these risk mitigation activities are an effective and worthwhile investment. The Enterprise Risk Management (ERM) process for identifying and assessing system risk is described in the RDF Integration testimony (Ex. SCG-02B/SDGE-02B).

The Avian Protection Program is selected as a targeted mitigation to address safety, reliability, wildfire, and compliance risks associated with known avian interactions on SDG&E's distribution system outside of the HFTD. This risk-based approach is selected to balance risk and affordability and prioritize locations with known contacts. From a customer perspective,

these investments are prudent because they support safe and reliable electric service, reduce restoration events caused by avian contacts, and balance financial impacts with risk mitigation.

d. Forecast Method

The forecast method developed for this cost category is zero-based. While historic-based data (e.g., an applicable unit cost) may be utilized to develop the forecast, use of historic total dollars spent is not applicable for this item. The forecast is based on cost estimates developed from the scope of work for the project. SDG&E develops cost estimates based on construction labor rates, material costs, contract pricing/quotes, and other project specific details, as applicable. This program selects specific projects to be addressed each year. Historical data is used for applicable unit costs along with the specific scope of the projects selected to develop forecasts.

e. Cost Drivers

The underlying cost driver for this capital project is the need to reduce the potential for avian electrocutions on SDG&E's overhead distribution system and maintain compliance with Federal and State wildlife protection requirements. Laws such as the Migratory Bird Treaty Act, the Bald and Golden Eagle Protection Act, and the California Fish and Game Code impose strict liability for avian take, creating a need for proactive mitigation to avoid violations, penalties, or enforcement actions.

Additional cost drivers include the ongoing identification of poles with documented bird contact events. Costs are influenced by field-identified pole configurations that require retrofits, the materials and labor needed to install avian-safe equipment, and the work necessary to rebuild pole tops to meet Avian Power Line Interaction Committee (APLIC) spacing guidelines. These investments also support broader system-hardening efforts by reducing ignition risk and improving reliability.

D. Materials

TABLE EG-11
Capital Expenditures Summary of Costs

D. Materials (In 2025 $)							
	2025 Adjusted-Recorded (000s)	Est. 2026 (000s)	Est. 2027 (000s)	Est. 2028 (000s)	Est. 2029 (000s)	Est. 2030 (000s)	Est. 2031 (000s)
Total	84,367	61,369	61,855	62,403	65,517	68,855	72,206

1. Category Introduction

The Materials category supports SDG&E's ability to provide safe, reliable, and timely electric service by funding essential electric distribution system components, primarily distribution transformers and electric meters, that are required to serve new and existing customers and to replace failed or obsolete equipment. These investments are inherently customer-driven and operationally necessary, with material requirements directly linked to Customer Growth (New Business & Capacity), Mandated, and Safety & Reliability Improvements work activities. Maintaining adequate material availability is therefore critical to meeting energization timelines, supporting reliable system operations, and allowing higher-priority safety, reliability, and compliance work to be executed efficiently without delay.

Additional details including description, forecast method, and cost drivers can be found for each workpaper below.

2. 002140 - Transformers

a. Description

Transformers is an ongoing program that is expected to continue through the GRC cycle. The specific details regarding Transformers are found in my capital workpapers. See Ex. SDGE-08-CWP, WP #002140.

These forecasted capital expenditures support purchasing distribution transformers necessary to operate and maintain the electric distribution system. SDG&E purchases the new transformers, supplies new and replacement equipment, and maintains inventory at each electric distribution service center.

b. Forecast Method

The forecast method developed for this cost category is zero-based. While historic based data (*e.g.*, applicable unit cost) may be utilized to develop the forecast, use of historic total dollars spent is not applicable for this item. SDG&E starts by looking at material usage over the past three years and works to confirm previous forecasts, current consumption, and upcoming projects. When a project has reached the design phase, material needs are based on specific job material lists; if not, they rely on three-year historical averages to estimate demand. Each transformer type is finalized and then combined into an overall forecast, using historical averages for any unassigned or limited demand transformers. Cost estimates reflect forecasted quantities, current material costs, contract pricing and quotes, forecasted demand, and existing inventory levels. A contingency was applied to transformer unit forecasts to mitigate the risk of potential increases in unit costs, as well as to account for uncertainty in demand projections and potential changes to forecast assumptions. This approach provides sufficient material reserves for flexibility so that adequate supply is maintained to meet customer needs and support planned and emergent project requirements.

c. Cost Drivers

The underlying cost driver for this capital program relates to the required need of transformers related to the various work being performed. The forecasted direct costs reflect the expected demand for units to support capital work and emergency replacements to meet reliability and electrification goals. There is additional pricing included for the inspection of transformers so that they are built in alignment with SDG&E requirements and meet all safety standards. Unit prices have increased due to increased costs driven by rising raw materials costs, supply chain and manufacturing constraints, and tariff implementations. *See* Ex. SDGE-08-CWP.

d. Supplemental Information

The TY 2024 GRC Decision, D.24-12-074, directed SDG&E to report, in its next GRC, the age of transformers in service, the number of new installations and replacements per year, and other reliability data that may impact transformer maintenance, including data required by D.16-01-008.

Of the transformers that can be directly traced to a specific install date, SDG&E has an average transformer age of about 21 years and has issued the following amount of transformers

to projects by year (provided in the table below). In SDG&E's database, transformer installs are tied to workorders that are not categorized as new or replacement. Due to this limitation, it is infeasible for SDG&E to categorize the number of installs as requested. Instead, the total number of transformers installed by year is provided, which is made up of all of the new and replacement transformers.

Audited system reliability data provided in accordance with D.16-01-008 is limited to primary outages only. Most transformer outages result in secondary outages only and are not reflected in the System SAIDI results reported in the Annual Electric Reliability Report. Therefore, the reliability provided in the table below may not correlate with transformer replacements as expected. Despite this, SDG&E provides the System SAIDI for transformer failures that caused an outage on the primary system in the table below.

TABLE EG-12
Transformers Historical Data

Year	2021	2022	2023	2024	2025
Transformers Installed	6,011	4,701	4,512	5,018	5,208
Transformer Failures Resulting in Primary Outages	201	222	215	202	182
Transformer SAIDI Impact	1.002	0.758	1.037	0.834	2.975 (Note 1)

Note 1 - Significant increase (year to year) in 2025 is due to a single outage that resulted in nearly 2 minutes of System SAIDI. Due to extreme weather conditions the outage resulted in an upstream trip and required full patrol of the segment before power could be restored.

3. 002020 - Electric Meters

a. Description

Electric Meters is an ongoing program that is expected to continue through the GRC cycle. The specific details regarding Electric Meters are found in my capital workpapers. See Ex. SDGE-08-CWP, WP #002020.

These forecasted capital expenditures support funding to purchase new watt-hour meters and regulators used to service the electric distribution customers. Inventory levels for the meters and regulators are maintained at each of the electric distribution service centers. The forecasts discussed in this section reflect base business activities necessary to sustain SDG&E's electric

metering infrastructure. These activities include support for new business growth, non-residential metering requirements, and previously authorized base business meter replacement programs. No incremental or accelerated failure-based programs are included beyond what has already been approved. SDG&E will continue to align meter support activities with the underlying meter technologies deployed during this period, consistent with Commission direction and approved programs.

b. Forecast Method

The forecast method developed for this cost category is zero-based. While historic based data (e.g., applicable unit cost) may be utilized to develop the forecast, use of historic total dollars spent is not applicable for this item. This approach is appropriate because electric meters and regulators are based on historical material usage trends, projected work scope, authorized meter replacements, and expected customer growth. The meter forecast assumes the 2024 GRC Decision for the period from 2026 through June 2027, prior to the planned deployment of Smart Meter 2.0. Forecasted meter quantities for 2027 and beyond reflect a reduction associated with the transition to Smart Meter 2.0, which is forecasted and requested through the separately filed Smart Meter 2.0 program. Cost estimates are developed based on forecasted quantities, current unit material costs, applicable contract pricing, and vendor quotations.

c. Cost Drivers

The underlying cost drivers for this capital project are new business growth and projected replacement needs that require the installation of meters and regulators. Documentation of these cost drivers are included as supplemental capital workpapers. *See* Ex. SDGE-08-CWP.

E. Tools & Equipment

TABLE EG-13
Capital Expenditures Summary of Costs

E. Tools & Equipment (In 2025 $)							
	2025 Adjusted-Recorded (000s)	**Est. 2026 (000s)**	**Est. 2027 (000s)**	**Est. 2028 (000s)**	**Est. 2029 (000s)**	**Est. 2030 (000s)**	**Est. 2031 (000s)**
1. Tools & Equipment	847	1,113	1,113	1,113	1,113	1,113	1,113
Total	**847**	**1,113**	**1,113**	**1,113**	**1,113**	**1,113**	**1,113**

1. Category Introduction

Tools & Equipment is an ongoing program that is expected to continue through the GRC cycle. The specific details regarding Tools & Equipment are found in my capital workpapers. *See* Ex. SDGE-08-CWP at section E. Tools & Equipment.

The Tools & Equipment category supports the electric distribution system by funding the tools and equipment required for field operations, maintenance activities, and capital project execution. These assets are essential for field personnel to perform work in accordance with established safety standards, engineering requirements, and operating practices, and are necessary to support both day-to-day system operations and planned capital and maintenance activities. Tools and Equipment capital expenditures include electric distribution tools and equipment and electric substation tools and equipment, which are deployed across the service territory to support construction, maintenance, inspection, testing, and restoration activities. Having appropriate tools and equipment is necessary to support safe operations, maintain system reliability, and facilitate compliance with applicable regulatory and safety requirements.

Additional details including description, forecast method, and cost drivers can be found for each workpaper below.

2. 002060 – Electric Distribution Tools/Equipment Program

a. Description

Electric Distribution Tools/Equipment Program is an ongoing program that is expected to continue through the GRC cycle. The specific details regarding the Electric Distribution Tools/Equipment Program are found in the capital workpapers. See Ex. SDGE-08-CWP, WP # 002060 – Electric Distribution Tools/Equipment Program.

These forecasted capital expenditures provide funding to purchase new electric distribution tools and equipment required by field personnel to safely construct, inspect, operate, and maintain the electric distribution system. Standard tools and equipment will be acquired to maintain compliance with safety regulations and promote optimal performance. In addition, tools and equipment will be purchased to evaluate the latest technological advancements. All purchases will be in accordance with individual user needs and compliance requirements. When new work methods or pieces of equipment are introduced onto the system, new tools are required to perform the necessary operational tasks.

b. Forecast Method

The forecast method developed for this cost category is a three-year average based on historical expenditure. This is the most appropriate methodology, as workload can vary from year to year. The 3-year average levels out the peaks and valleys of work over an appropriate period to forecast the necessary level of funding that falls within this program.

c. Cost Drivers

The underlying cost driver for this capital project is the need to purchase new electric distribution tools and equipment required by field personnel to safely construct, inspect, operate and maintain the electric distribution system. These tools and equipment are required to meet safety and compliance standards, support day-to-day operational needs, and accommodate new work methods or technologies introduced into field operations. In addition, tools must be routinely refreshed due to normal wear, manufacturer updates, and lifecycle replacement requirements to provide continued safe and reliable performance.

3. 001060 - Electric Substation Tools & Equipment

a. Description

Electric Substation Tools & Equipment is an ongoing program that is expected to continue through the GRC cycle. The specific details regarding Electric Substation Tools & Equipment are found in my capital workpapers. See Ex. SDGE-08-CWP, WP #001060

These forecasted capital expenditures support purchasing specialized tools and testing equipment which are necessary to properly inspect and operate substation facilities consisting of transmission and distribution pieces of equipment. The tools purchased through this program are allocated between FERC and CPUC, however the forecasted costs provide funding for the distribution component. Failure to replace deteriorated or obsolete tools and testing equipment will decrease productivity, create exposure to accidents, and forgo benefits associated with improved technologies for equipment condition monitoring or diagnosis.

b. Forecast Method

The forecast method developed for this cost category is base year. The expenditures for 2025 reflect recent changes in this program and provide the best representation of the starting point for 2026-2028 forecasted costs.

c. Cost Drivers

The underlying cost drivers for this capital project relate to supporting tool purchases for ongoing construction and maintenance activities on the substation and transmission system. As regulatory rules change, new tools are required to maintain the highest level of safety and compliance. Acquisition of new types or additional tools will enable flexibility necessary for completing maintenance and construction goals. The alternative is to rent or lease tools, if they are available, and prolong the use of outdated or deteriorated tools currently in inventory. If no tools are available, there is no practical alternative. *See* Ex. SDGE-08-CWP.

F. Safety & Reliability Improvements

TABLE EG-14
Capital Expenditures Summary of Costs

F. Safety & Reliability Improvements (In 2025 $)							
	2025 Adjusted-Recorded (000s)	**Est. 2026 (000s)**	**Est. 2027 (000s)**	**Est. 2028 (000s)**	**Est. 2029 (000s)**	**Est. 2030 (000s)**	**Est. 2031 (000s)**
Distribution	44,930	47,141	50,484	100,219	94,992	91,313	94,275
Substation	26,674	25,271	18,891	36,074	31,510	36,617	32,044
Total	**71,604**	**72,412**	**69,375**	**136,293**	**126,502**	**127,930**	**126,319**

1. Category Introduction

Customer expectations about the availability of service continue to increase. SDG&E has been proactive in trying to address this increased expectation and aging infrastructure. SDG&E has been recognized for having a very reliable electric system. From 2005 through 2025, SDG&E has been ranked "Best in the West" in reliability by PA Consulting Group, earning their regional ReliabilityOne® award twenty consecutive years. Delaying responsive action could ultimately result in a decline in reliability and an increased number of customer complaints, regulatory fines, and higher long-term repair costs.

SDG&E continues with its effort to improve reliability through the proactive replacement of end-of-life substation distribution circuit breakers, transformers, UG tee-connectors, and UG cable, along with other advanced technologies. With modern circuit breakers, additional fault indicating, sectionalizing, and circuit automation devices, the ability to restore customers' service improves and outage times can be reduced. In 2025, UG tee-connectors contributed

13.73 minutes to SAIDI, while UG cable contributed 8.91 minutes. This category is broken into two sub-categories, Distribution Safety & Reliability Improvements and Substation Safety & Reliability Improvements. Additional details including description, forecast method, and cost drivers can be found in each workpaper below.

2. Distribution Safety & Reliability Improvements

TABLE EG-15
Capital Expenditures Summary of Costs

Distribution Safety & Reliability Improvements (In 2025 $)							
	2025 Adjusted-Recorded (000s)	**Est. 2026 (000s)**	**Est. 2027 (000s)**	**Est. 2028 (000s)**	**Est. 2029 (000s)**	**Est. 2030 (000s)**	**Est. 2031 (000s)**
Total	44,930	47,141	50,484	100,219	94,992	91,313	94,275

a. Sub-Category Introduction

The specific details regarding distribution safety and reliability improvements are found in my capital workpapers. *See* Ex. SDGE-08-CWP.

The Distribution Safety & Reliability Improvements sub-category supports targeted investments necessary to maintain the safe and reliable operation of SDG&E's electric distribution system as it continues to age, operate under increasingly complex conditions, and serve evolving customer needs. These activities are foundational to SDG&E's obligation to deliver safe, dependable electric service and are focused on mitigating operational risk, addressing asset condition issues, and improving system performance.

Investments included in this sub-category are informed by a risk- and condition-based planning framework that prioritizes assets and locations with the highest safety and reliability exposure. This includes equipment replacements, system hardening, and targeted upgrades identified through inspections, performance metrics, and operational experience. By focusing resources where they provide the greatest risk reduction and reliability benefit, SDG&E seeks to proactively address emerging issues before they result in service interruptions, safety incidents, or more costly corrective actions.

b. 002260 – RAMP - Management of Overhead Distribution Service

i. Description

Management of Overhead Distribution Service is an ongoing program that is expected to continue through the GRC cycle. The forecasted capital expenditures address electric overhead distribution system infrastructure by responding to system deterioration, unsafe conditions, and voltage conditions. The overall objective is to maintain continuity of safe and reliable service. These construction activities are urgent in nature, targeting engineering, design, and construction within one year and include:

- Replacing thermally overloaded overhead facilities (e.g., wires, transformers exceeding emergency ratings) and correcting voltage conditions
- Making emergency repairs not associated with ongoing outages
- Replacing overhead facilities that are non-compliant with overhead safety and reliability standards
- Repairing or replacing deteriorated or unsafe equipment not found through the Corrective Maintenance Program

The specific details regarding Management of Overhead Distribution Service are found in my capital workpapers. See Ex. SDGE-08-CWP, WP #002260 – RAMP – Management of Overhead Distribution Service.

ii. Description of RAMP Mitigations

This program mitigates safety risks identified in the 2025 RAMP Report: Electric Infrastructure Integrity (EII) – C252 Management of Overhead Distribution Service (Non-CMP). Accordingly, this workpaper in its entirety aligns with a RAMP activity.

TABLE EG-16
RAMP and GRC Risk Control/Mitigation Activities - Capital

002260 – RAMP - Management of Overhead Distribution Service				
ID	**Control/Mitigation Name**	**2025 RAMP 2028-2031 In 2024 $ (000s)**	**2028 GRC 2028-2031 In 2025 $ (000s)**	**Change ($000s)**
C252	Management of Overhead Distribution Service (Non-CMP)	44672	43382	(1290)

iii. Description of Selection and Prioritization of RAMP Risk Mitigations

The Management of Overhead Distribution Service program is a reactive, compliance-driven program that enables SDG&E to meet its obligation to serve customers by promptly addressing urgent overhead distribution conditions that cannot be deferred without increasing safety, reliability, or service quality risk. Mitigations are initiated in response to identified system deterioration, unsafe or non-compliant conditions, thermal overloads, voltage issues, or emergency repair needs, and are prioritized based on regulatory compliance requirements, severity of customer and public safety risk, system operating constraints, and potential service impacts. To minimize customer cost and disruption, SDG&E primarily implements in-kind replacements and targeted corrective actions that restore facilities to a compliant and reliable condition rather than expand system capacity or scope.

iv. Forecast Method

The forecast method developed for this cost category is a three-year average based on historical spend. This is the most appropriate methodology, as workload can vary from year to year due to distribution system conditions. The three-year average levels out the peaks and valleys in work scope due to unsafe conditions found in the field and in response to customer concerns.

v. Cost Drivers

The underlying cost driver for this program is the responsive need to make overhead equipment repairs and upgrades necessary to maintain continuity of safe and reliable electric service to SDG&E customers.

c. 002270 - RAMP – Management of Underground Distribution Service

i. Description

Management of Underground Distribution Service is an ongoing program that is expected to continue through the GRC cycle. The forecasted capital expenditures address electric underground distribution system infrastructure by responding to system deterioration, unsafe conditions, and voltage conditions. The overall objective is to maintain continuity of safe and reliable service. These construction activities are urgent in nature, targeting engineering, design, and construction within one year and include:

- Replacing overloaded underground facilities and correcting voltage conditions
- Making emergency repairs not associated with ongoing outages
- Replacing underground facilities that are non-compliant with safety and reliability standards
- Repairing or replacing deteriorated or unsafe equipment and underground transformers not found through the Corrective Maintenance Program

The specific details regarding Management of Underground Distribution Service are found in my capital workpapers. See Ex. SDGE-08-CWP, WP #002270 – RAMP – Management of Underground Distribution Service.

ii. Description of RAMP Mitigations

This program mitigates safety risks identified in the 2025 RAMP Report: Electric Infrastructure Integrity (EII) – C256 Management of Underground Distribution Service (Non-CMP). Accordingly, this workpaper in its entirety aligns with a RAMP activity.

TABLE EG-17
RAMP and GRC Risk Control/Mitigation Activities – Capital

002270 - RAMP – Management of Underground Distribution Service				
ID	**Control/Mitigation Name**	**2025 RAMP 2028-2031 In 2024 $ (000s)**	**2028 GRC 2028-2031 In 2025 $ (000s)**	**Change ($000s)**
C256	Management of Underground Distribution Service (Non-CMP)	18852	22672	3820

iii. Description of Selection and Prioritization of RAMP Risk Mitigations

The Management of Underground Distribution Service program is a reactive, compliance-driven program that supports SDG&E's obligation to serve customers by promptly addressing urgent underground distribution conditions that cannot be deferred without increasing safety, reliability, or service quality risk. Program activities are initiated in response to identified system deterioration, unsafe or non-compliant underground facilities, thermal overloads, voltage issues, and emergency repair needs, and are prioritized based on regulatory compliance requirements, the severity of potential customer and public safety impacts, underground system constraints, and the risk of service disruption. To control costs and minimize customer impacts, SDG&E primarily implements in-kind replacements and focused corrective actions that restore underground facilities to a compliant and reliable operating condition rather than expanding scope or capacity.

iv. Forecast Method

The forecast method developed for this cost category is a three-year average based on historical spend. This is the most appropriate methodology, as workload can vary from year to year due to distribution system conditions. The three-year average levels out the peaks and valleys in work scope due to unsafe conditions found in the field and response to customer concerns.

v. Cost Drivers

The underlying cost driver for this program is the responsive need to make underground equipment repairs and upgrades necessary to maintain continuity of safe and reliable electric service to SDG&E customers.

d. 002300 - RAMP - Replacement of Underground Cables

i. Description

Replacement of Underground Cables is an ongoing program that is expected to continue through the GRC cycle. This program facilitates the replacement of underground cable that has failed or has operated outside of its intended threshold of rated operation. The forecasted costs support labor and non-labor expenditures for failed lateral and feeder cable 200-amp and 600-amp systems.

The specific details regarding Replacement of Underground Cables are found in my capital workpapers. See Ex. SDGE-08-CWP, at section 002300 – RAMP – Replacement of Underground Cables.

ii. Description of RAMP Mitigations

This program mitigates safety risks identified in the 2025 RAMP Report: Electric Infrastructure Integrity (EII) – C254 Underground Cable Replacement Program -Reactive. Accordingly, this workpaper in its entirety aligns with a RAMP activity.

TABLE EG-18
RAMP and GRC Risk Control/Mitigation Activities – Capital

002300 - RAMP - Replacement of Underground Cables				
ID	**Control/Mitigation Name**	**2025 RAMP 2028-2031 In 2024 $ (000s)**	**2028 GRC 2028-2031 In 2025 $ (000s)**	**Change ($000s)**
C254	Underground Cable Replacement Program - Reactive	28468	27237	(1231)

iii. Description of Selection and Prioritization of RAMP Risk Mitigations

The Replacement of Underground Cables program is a reactive, risk-driven program that enables SDG&E to meet its obligation to serve customers by restoring service and system integrity following underground cable failures or conditions where cables have operated outside their intended ratings. Program activities are initiated in response to failed or severely degraded underground feeder and lateral cables, including 200-amp and 600-amp systems, that cannot continue to operate without increasing the risk of customer outages, safety hazards, or prolonged service interruptions. Projects are prioritized based on the immediacy of service restoration needs, the severity of customer impacts, public and worker safety considerations, and the risk of repeat failures. To minimize costs and customer disruption, SDG&E primarily performs in-kind cable replacements to restore facilities to a reliable and compliant operating condition rather than expand capacity or scope beyond what is required to address the failure.

iv. Forecast Method

The forecast method developed for this cost category is a three-year average based on historical expenditure. This is the most appropriate methodology, as workload can vary from year to year due to distribution system conditions. The three-year average levels out the peaks and valleys in work scope due to unsafe conditions found in the field and in response to customer concerns.

v. Cost Drivers

The underlying cost driver for this program is the responsive need to make underground equipment repairs and upgrades necessary to maintain continuity of safe and reliable electric service to SDG&E customers. Primary cost drivers affecting this program include increases observed in the price of commodities (steel, copper, aluminum, etc.) impacting procurement costs for conductors, as well as increased costs for conduit, vaults, concrete encasement slurry, and other required capital equipment such as switches and transformers which lead to increased project cost. Increased costs for contracted labor and services may also have an impact on overall project forecasts.

e. 002360 - RAMP – Capital Restoration of Service

i. Description

Capital Restoration of Service is an ongoing program that is expected to continue through the GRC cycle. The forecasted capital expenditures address electric repair and replacement of distribution facilities to restore electric service to customers in a timely manner. The primary work scope is to restore electric service due to system interruptions caused by severe inclement weather conditions, fires, equipment failures, vandalism, and damage caused by a third party. It also provides for the reconstruction of existing overhead and underground distribution facilities as necessary to restore electric service to customers during outages. The funds within this program cover all costs associated with:

- Storm damage (*e.g.*, rain/wind/fire);
- Damage to electric distribution facilities by others (*e.g.*, car/equipment contacts)
- Emergency replacements of major units of property that are required for service restoration (*e.g.*, poles, wires, cables, switches, tees, and/or other equipment failures).

The specific details regarding Restoration of Service are found in my capital workpapers. See Ex. SDGE-08-CWP, at section 002360 – RAMP – Capital Restoration of Service.

ii. Description of RAMP Mitigations

This program mitigates safety risks identified in the 2025 RAMP Report: Electric Infrastructure Integrity (EII) – C253 Restoration of Service. Accordingly, this workpaper in its entirety aligns with a RAMP activity.

TABLE EG-19
RAMP and GRC Risk Control/Mitigation Activities – Capital

002360 - RAMP – Capital Restoration of Service				
ID	**Control/Mitigation Name**	**2025 RAMP 2028-2031 In 2024 $ (000s)**	**2028 GRC 2028-2031 In 2025 $ (000s)**	**Change ($000s)**
C253	Restoration of Service	40116	43114	2998

iii. Description of Selection and Prioritization of RAMP Risk Mitigations

The Capital Restoration of Service program is a reactive, event-driven program that enables SDG&E to meet its obligation to serve customers by restoring electric service in a timely manner following unplanned system interruptions. Program activities are initiated in response to outages and damage caused by severe weather, fires, third-party impacts, vandalism, and equipment failures that require prompt repair or replacement of overhead and underground distribution facilities to safely and reliably restore service. Projects are prioritized based on the urgency of outage restoration, the magnitude of customer impacts, public and worker safety considerations, and regulatory compliance requirements. To mitigate customer costs and limit disruption, SDG&E primarily performs in-kind repairs and replacements of existing distribution facilities, restoring assets to their pre-event operating condition rather than expanding capacity or scope beyond what is required for service restoration.

iv. Forecast Method

The forecast method developed for this cost category is a three-year average based on historical expenditure. This is the most appropriate methodology, as workload can vary from year to year due to distribution system conditions. The three-year average levels out the peaks

and valleys in work scope due to unsafe conditions found in the field and in response to customer concerns.

v. Cost Drivers

The underlying cost driver for this program is the responsive need to make equipment repairs and replacements necessary to maintain continuity of safe and reliable electric service to SDG&E customers.

f. 002380 – RAMP - UG Cable Replacement Program

i. Description

UG Cable Replacement Program is an ongoing program that is expected to continue through the GRC cycle.

This program takes a proactive approach by replacing underground cable that has been identified to have a high failure rate or consequence based on electric reliability circuit analysis and cable failure data. It also provides quality customer service and reliability to existing customers by proactively replacing cable in the underground system before it fails and an unplanned outage occurs.

In the event of an unplanned outage and in the absence of a physical or other system indicator of the location of the failure, the fault-finding process can place undue stress on adjacent components. Through a process colloquially known as "thumping", the electrical components are exposed to voltage surges. This process helps crews identify the failed cable. Unfortunately, this process also exposes additional cable runs (i.e., adjacent cable runs that have not failed) to voltage surges. Repeated voltage surges may weaken the insulation of the cable. Ultimately, the stress imposed through the fault-finding process may prematurely age adjacent, non-faulted components, reducing their expected service life. Through proactive replacement of underground cable, weakened cables can be replaced in a methodical and efficient manner, thus avoiding unplanned outages.

Compared to an unplanned outage, planned outages can be resolved more quickly (by removing the time needed to find the faulted cable) and more targeted in their scope, reducing the overall burden on customers. Furthermore, planned outages are communicated in advance to customers, reducing the impact on their daily activities. See Ex. SDGE-08-CWP, WP #002380 – RAMP – UG Cable Replacement – Planned.

ii. Description of RAMP Mitigations

The Replacement of Underground Cable mitigates safety risks identified in the 2025 RAMP Report: Electric Infrastructure Integrity (EII) – C202 Underground Cable Replacement Program (Proactive). Accordingly, this workpaper in its entirety aligns with a RAMP activity. By performing this activity, reliability risk is reduced by proactively replacing underground cable that has been identified to have a high failure rate or consequence based on electric reliability circuit analysis and cable failure data. The increase in costs and the number of units forecasted for completion in 2028–2031 reflects a strategic prioritization toward high impact risk reduction programs. This approach focuses resources on programs that deliver the greatest reliability and safety benefits and provide the highest value to customers.

TABLE EG-20
RAMP and GRC Risk Control/Mitigation Activities - Capital

002380 – RAMP - UG Cable Replacement Program				
ID	**Control/Mitigation Name**	**2025 RAMP 2028-2031 In 2024 $ (000s)**	**2028 GRC 2028-2031 In 2025 $ (000s)**	**Change ($000s)**
C202	Underground Cable Replacement Program (Proactive)	20876	23896	3020

iii. Description of Selection and Prioritization of RAMP Risk Mitigations

The purpose of the Underground Cable Replacement Program is to address the reliability risk associated with underground cable failures. To mitigate asset-specific risks such as underground cable failure, SDG&E employs an asset management approach that focuses on replacing equipment prior to failure. The objective is to replace underground cable assets as close to the end of their useful life as practicable, while avoiding in service failures that would adversely affect system reliability. This approach allows SDG&E to balance affordability with safety and reliability by targeting the highest-risk assets before failures occur. Key factors used to prioritize underground cable replacements include the age of the cable, cable type and construction, historical failure performance, operating environment, customer impact, and system configuration or operational constraints. From a customer perspective, these investments

are worthwhile because they reduce outage frequency and duration, avoid higher long-term costs associated with reactive repairs and emergency replacements, and prevent the accumulation of future system reliability risk.

iv. Forecast Method

The forecast method developed for this cost category is zero-based. While historic-based data (e.g., an applicable unit cost) may be utilized to develop the forecast, use of historic total dollars spent is not applicable for this item. The forecast is based on cost estimates developed from the scope of work for the project. SDG&E develops cost estimates based on construction labor rates, material costs, contract pricing/quotes, and other project specific details, as applicable. This program selects specific projects to be addressed each year. Historical data is used for applicable unit costs along with the specific scope of the projects selected to develop forecasts.

v. Cost Drivers

The underlying cost drivers for this capital project relate to proactive/planned replacement of underground cable. This includes increases observed in the price of commodities including UG cable and connectors that impact procurement cost and lead to increased project cost. Additionally, increased costs for contracted labor and services may also impact the overall project costs. Documentation of these cost drivers are included as supplemental capital workpapers. *See* Ex. SDGE-08-CWP, WP #002380 – RAMP – UG Cable Replacement – Planned.

g. 002900 – RAMP - UG Switch Replacement Program

i. Description

UG Switch Replacement Program is an ongoing program that is expected to continue through the GRC cycle. The specific details regarding the UG Switch Replacement Program are found in the capital workpapers. *See* Ex. SDGE-08-CWP, WP #002900 – RAMP – UG Switch Replacement Program.

These forecasted capital expenditures aim to systematically replace underground switches that are deemed unsafe for energized operation of the internal mechanical units. SDG&E utilizes inspection programs to identify these switches. These inspections include visual inspections, infrared (IR) inspection to detect points of potential overheating, measurement of switch

lubrication, and physical exercising. Upon inspection, if a switch is found to not be safe for continued operation, field experts will make the determination to replace the switch with an appropriately superior or equivalent asset, depending on field conditions and reliability impact.

In addition, distribution switch inoperability during an outage can extend the impact of the outage to the next upstream protection device, causing a prolonged and expanded outage. Use of the upstream device adds customers to the outage, i.e., those customers between the DOE switch and the next upstream device. Replacement of these switches allows for a reduced customer impact when isolation devices are needed during planned and unplanned outages.

Additional information can be found in the capital workpapers. See Ex. SDGE-08-CWP at section 002900 – RAMP – UG Switch Replacement Program.

ii. Description of RAMP Mitigations

The Replacement of UG Switches mitigates safety and reliability risks identified in the 2025 RAMP Report: Electric Infrastructure Integrity (EII) – C210 DOE Switch Replacement Underground. Accordingly, this workpaper in its entirety aligns with a RAMP activity. By performing this activity, safety and reliability risk is reduced by proactively replacing underground switches that that are deemed unsafe for energized operation of the internal mechanical units. The increase in costs and the number of units forecasted for completion in 2028–2031 reflects a strategic prioritization toward high impact risk reduction programs. This approach focuses resources on programs that deliver the greatest reliability and safety benefits and provide the highest value to customers.

TABLE EG-21
RAMP and GRC Risk Control/Mitigation Activities - Capital

002900 – RAMP - UG Switch Replacement Program				
ID	**Control/Mitigation Name**	**2025 RAMP 2028-2031 In 2024 $ (000s)**	**2028 GRC 2028-2031 In 2025 $ (000s)**	**Change ($000s)**
C210	DOE Switch Replacement Underground	18904	24813	5909

iii. Description of Selection and Prioritization of RAMP Risk Mitigations

The purpose of the UG Switch Replacement Program is to address the reliability risk associated with underground or pad-mounted switch failures. To mitigate asset-specific risks such as underground switch failure, SDG&E employs an asset management approach that focuses on replacing equipment prior to failure. The objective is to replace underground switch assets as close to the end of their useful life as practicable, while avoiding in service failures that would adversely affect system reliability. This approach allows SDG&E to balance affordability with safety and reliability by targeting the highest risk assets before failures occur. Key factors used to prioritize underground switch replacements include the age of the switch, switch type and construction, historical failure performance, operating environment, customer impact, and system configuration or operational constraints. From a customer perspective, these investments are worthwhile because they reduce outage frequency and duration, avoid higher long-term costs associated with reactive repairs and emergency replacements, and prevent the accumulation of future system reliability risk.

iv. Forecast Method

The forecast method developed for this cost category is zero-based. While historic-based data (e.g., an applicable unit cost) may be utilized to develop the forecast, use of historic total dollars spent is not applicable for this item. The forecast is based on cost estimates developed from the scope of work for the project. SDG&E develops cost estimates based on construction labor rates, material costs, contract pricing/quotes, and other project specific details, as applicable. This program selects specific projects to be addressed each year. Historical data is used for applicable unit costs along with the specific scope of the projects selected to develop forecasts.

v. Cost Drivers

The underlying cost driver(s) for this capital program are tied to increases observed in the price of commodities (steel, copper, aluminum) that impact procurement cost for switches, transformers, cable, and steel poles which lead to increased project cost. Additionally, increased costs for contracted labor and services may also impact overall project forecasts.

h. 172550 – RAMP - Tee Modernization Program

i. Description

Tee Modernization Program is an ongoing program that is expected to continue through the GRC cycle.

The main purpose of this program is to remove and replace at-risk 600A Tee connectors. Targeted upgrades of these devices may also be deployed in strategic areas to improve reliability. The specific details regarding the Tee Modernization Program are found in the capital workpapers. *See* Ex. SDGE-08-CWP, WP #172550 – RAMP – Tee Modernization Program.

Tee connector failures are now one of the largest contributors to system SAIDI and SAIFI. These tees are installed on the main feeder cable and when they fail, the circuit breaker is often the isolating device, taking all or many customers on the circuit out for a sustained outage.

In the event of an unplanned outage and in the absence of a physical or other system indicator of the location of the failure, the fault-finding process can place undue stress on adjacent components. Through a process colloquially known as "thumping", the electrical components are exposed to voltage surges. This process helps crews identify the failed 600-amp tee. Unfortunately, this process also exposes additional electrical components (i.e., adjacent tee connectors that have not failed) to voltage surges. Repeated voltage surges may increase the likelihood of a future failure. Ultimately, the stress imposed through the fault-finding process may prematurely age adjacent, non-faulted components, reducing their expected service life. Through proactive replacement of 600-amp tees, weakened tees can be replaced in a methodical and efficient manner, thus avoiding unplanned outages.

This proactive replacement improves service to existing customers by proactively replacing 600-amp tees in the underground system before an unplanned outage occurs. Planned outages can be resolved more quickly and more targeted in their scope, reducing the overall burden on customers compared to an unplanned outage.

ii. Description of RAMP Mitigations

The Tee Modernization program mitigates safety risks identified in the 2025 RAMP Report: Electric Infrastructure Integrity (EII) – C206 Tee Modernization Program. Accordingly, this workpaper in its entirety aligns with a RAMP activity. By performing this activity, safety and reliability risk is reduced by proactively replacing tee connectors. The increase in costs and the number of units forecasted for completion in 2028–2031 reflects a strategic prioritization

toward high impact risk reduction programs. This approach focuses resources on programs that deliver the greatest reliability and safety benefits and provide the highest value to customers.

TABLE EG-22
RAMP and GRC Risk Control/Mitigation Activities - Capital

172550 – RAMP - Tee Modernization Program				
ID	**Control/Mitigation Name**	**2025 RAMP 2028-2031 In 2024 $ (000s)**	**2028 GRC 2028-2031 In 2025 $ (000s)**	**Change ($000s)**
C206	Tee Modernization Program	9676	13860	4184

iii. Description of Selection and Prioritization of RAMP Risk Mitigations

The purpose of the Tee Modernization Program is to address the reliability risk associated with tee failures. To mitigate asset-specific risks such as tee failure, SDG&E employs an asset management approach that focuses on replacing equipment prior to failure. The objective is to replace tees as close to the end of their useful life as practicable, while avoiding in-service failures that would adversely affect system reliability. This approach allows SDG&E to balance affordability with safety and reliability by targeting the highest risk assets before failures occur. Key factors used to prioritize tee replacements include the age of the tee, the tee type and construction, historical failure performance, operating environment, customer impact, and system configuration or operational constraints. From a customer perspective, these investments are worthwhile because they reduce outage frequency and duration, avoid higher long-term costs associated with reactive repairs and emergency replacements, and prevent the accumulation of future system reliability risk.

iv. Forecast Method

The forecast method developed for this cost category is a 3-year average based on historical expenditure. This is the most appropriate methodology, as it is a programmatic budget, and workload can vary from year to year. The 3-year average levels out the peaks and valleys of work over an appropriate period to forecast the necessary level of funding that falls within this program.

v. Cost Drivers

The underlying cost drivers for this capital project relate to the need to replace aging underground electric tee infrastructure to reduce SAIDI and SAIFI impacts to customers. Primary cost drivers to complete this work include internal and external labor required to pre-field identified tee locations to verify project scope, engineering services required to create construction packages, verification of municipal, environmental and permitting requirements, procurement of materials, contract construction labor to replace the tees, and final QA/QC labor to validate installation was performed to specifications.

i. 172610 – RAMP - OH Switch Replacement Program

i. Description

OH Switch Replacement Program is an ongoing program that is expected to continue through the GRC cycle.

SDG&E's Distribution OH Switch Replacement program aims to replace overhead distribution switches that have shown signs of emerging corrosion or other degraded conditions that may lead to catastrophic switch failure.

SDG&E has identified high-risk or inoperable switches that can be removed in the near term to avoid failure and limit outage impact. For example, SDG&E's engineering analyses of failed overhead switches have determined that various switches often fail due to excessive corrosion of major components. Switches have failed in as little as eight years of operation along the dense salt fog coast. Distribution switches have a higher propensity for failure and/or inoperability in high corrosion areas, for example, in the area SDG&E identifies as "Contamination District One" (which includes assets within two miles of the coast). While switches within Contamination District One experience the highest rate of failure, failures can and do occur across the service territory.

Distribution switch inoperability during an outage can extend the impact of an outage to the next upstream protection device, causing a prolonged and expanded outage. Use of the next upstream device adds customers to the outage, i.e., those customers between the corroded switch and the next upstream device. Replacement of these switches allows for a reduced customer impact when isolation devices are needed during planned and unplanned outages.

Antiquated single phase disconnect switches are targeted to be replaced with 1) newer model disconnects with superior material specifications, 2) three-phase gang-operated switches

(mitigating ferro resonance over-voltages and flashovers), or 3) three-phase remote operable switches. Switch replacements may also require simultaneous or subsequent upgrades to relevant equipment such as poles, crossarms, wires, guys, and other hardware.

Additional information can be found in the capital workpapers. See Ex. SDGE-08-CWP at section 172610 – RAMP – OH Switch Replacement Project.

ii. Description of RAMP Mitigations

The OH Switch Replacement program mitigates reliability risks identified in the 2025 RAMP Report: Electric Infrastructure Integrity (EII) – C236 Distribution Overhead Switch Replacement Program. Accordingly, this workpaper in its entirety aligns with a RAMP activity. By performing this activity, reliability risk is reduced by proactively replacing overhead switches. The increase in cost is due to minor adjustments of estimated project costs based on recent historical information.

TABLE EG-23
RAMP and GRC Risk Control/Mitigation Activities - Capital

172610 – RAMP - OH Switch Replacement Program				
ID	**Control/Mitigation Name**	**2025 RAMP 2028-2031 In 2024 $ (000s)**	**2028 GRC 2028-2031 In 2025 $ (000s)**	**Change ($000s)**
C236	Distribution Overhead Switch Replacement Program	2716	3487	771

iii. Description of Selection and Prioritization of RAMP Risk Mitigations

The purpose of the OH Switch Replacement Program is to address the reliability risk associated with overhead switch failures. To mitigate asset-specific risks such as overhead switch failure, SDG&E employs an asset management approach that focuses on replacing equipment prior to failure. The objective is to replace overhead switches as close to the end of their life as practicable, while avoiding in-service failures that would adversely affect system reliability. This approach allows SDG&E to balance affordability with safety and reliability by targeting the highest risk assets before failures occur. Key factors used to prioritize overhead

switch replacements include the age of the switch, switch type and construction, historical failure performance, operating environment, customer impact, and system configuration or operational constraints. From a customer perspective, these investments are worthwhile because they reduce outage frequency and duration, avoid higher long-term costs associated with reactive repairs and emergency replacements, and prevent the accumulation of future system reliability risk.

iv. Forecast Method

The forecast method developed for this cost category is zero-based. While historic-based data (e.g., an applicable unit cost) may be utilized to develop the forecast, use of historic total dollars spent is not applicable for this item. The forecast is based on cost estimates developed from the scope of work for the project. SDG&E develops cost estimates based on construction labor rates, material costs, contract pricing/quotes, and other project specific details, as applicable. This program selects specific projects to be addressed each year. Historical data is used for applicable unit costs along with the specific scope of the projects selected to develop forecasts.

v. Cost Drivers

The underlying cost drivers for this program are the reduction of employee safety risk and the improvement of overall operational reliability. Increases have been observed in the price of commodities (steel, copper, aluminum) that are likely to lead to increased project costs. Additionally, increased costs for contracted labor and services may also impact overall project forecasts.

j. 202880 – RAMP – Non-HFTD Wireless Fault Indicators

i. Description

Non-HFTD Wireless Fault Indicators is an ongoing program that is expected to continue through the GRC cycle.

This program installs wireless fault indicators and necessary network devices and software to strengthen and modernize the low power communication network coverage and reliability on SDG&E's electric distribution system outside of the High Fire-Threat District (HFTD). This sensing capability is foundational to SDG&E's ability to monitor and sense faults and normal loading on its system, providing enhanced situational awareness. These installations may also require simultaneous or subsequent upgrades to relevant equipment such as poles and

other hardware to conform to existing construction standards. Wireless fault indicators are a proven technology that help narrow the search area to determine where a system failure has occurred, enabling SDG&E to quickly identify a search area and dispatch crews to find system failures. In instances where large areas are de-energized due to protective relay settings, wireless fault indicators are used to concentrate focus on a much smaller portion of the electric circuit, which allows for a faster response to the site; and a greater chance of determining and correcting a fault cause (when damage on the overhead electric system is not immediately obvious).

Additional information can be found in the capital workpapers. *See* Ex. SDGE-08-CWP, WP #202280 – RAMP – Non-HFTD Wireless Fault Indicators.

ii. Description of RAMP Mitigations

The Non-HFTD WFI program mitigates reliability risks identified in the 2025 RAMP Report: Electric Infrastructure Integrity (EII) – C263 Non-HFTD Wireless Fault Indicator. Accordingly, this workpaper in its entirety aligns with a RAMP activity. By performing this activity, reliability risk is reduced by narrowing the search areas of system failures so SDG&E can quickly identify faults and dispatch crews.

TABLE EG-24
RAMP and GRC Risk Control/Mitigation Activities - Capital

202880 – RAMP – Non-HFTD Wireless Fault Indicators				
ID	**Control/Mitigation Name**	**2025 RAMP 2028-2031 In 2024 $ (000s)**	**2028 GRC 2028-2031 In 2025 $ (000s)**	**Change ($000s)**
C263	Non-HFTD Wireless Fault Indicator	1282	5693	4411

iii. Description of Selection and Prioritization of RAMP Risk Mitigations

From a risk mitigation perspective, this program reduces reliability risk by enabling faster crew dispatch, narrowing fault search areas, and improving situational awareness during outage events. From a customer perspective, these investments are prudent because they reduce outage duration, avoid prolonged patrols and operational inefficiencies, and lower long-term costs associated with reactive restoration efforts. This mitigation was selected due to its cost-effectiveness and ability to mitigate or reduce outage duration relative to capital and installation

costs. Wireless fault indicators are a lower-cost solution compared to physical system hardening or conductor replacement and can be deployed incrementally across multiple circuits to achieve reliability benefits.

iv. Forecast Method

The forecast method developed for this cost category is zero-based. While historic-based data (e.g., an applicable unit cost) may be utilized to develop the forecast, use of historic total dollars spent is not applicable for this item. The forecast is based on cost estimates developed from the scope of work for the project. SDG&E develops cost estimates based on construction labor rates, material costs, contract pricing/quotes, and other project specific details, as applicable. This program selects specific projects to be addressed each year. Historical data is used for applicable unit costs along with the specific scope of the projects selected to develop forecasts.

v. Cost Drivers

The underlying cost driver for this program is the need to enhance system restoration times and overall system reliability by employing wireless communication technologies to remotely monitor line faults. Historical spend for this project was related to a ramp up of the program and the forecasted spend represents a higher production level.

k. 202410 – RAMP - Proactive Overhead Conductor Program

i. Description

Proactive Overhead Conductor Program is an ongoing program that is expected to continue through the GRC cycle.

The purpose of SDG&E's Proactive Overhead Conductor Program is to systematically upgrade existing overhead electric infrastructure. Failure of the assets could put the public at risk of energized contact with a fallen conductor and result in a significant unplanned outage. The deteriorated assets may also not have the original load carrying capabilities as designed. Further, this proactive replacement of overhead conductors builds on SDG&E's commitment to support electrification goals by providing capacity for expanding electric services delivered to downstream customers.

To identify and prioritize those locations where an overhead conductor upgrade is necessary, this program considers 1) historical data collected from actual wire-down events and

CMP Records, 2) a review of those spans that lack protection, 3) environmental factors including high winds and accelerated corrosion in coastal areas, 4) frequency of wire downs in adjacent or similar locations, and 5) electric load on the conductor relative to its capacity, which not only indicates the need for capacity upgrades but can also be an indicator of mechanical stress (cyclic heating/cooling) and/or premature aging of the conductors (ohmic heating).

This program replaces existing assets with assets that have been designed to current, upgraded construction standards. The assets targeted in this scope (typically small wire copper spans) were designed and constructed decades ago. Current standards call for stronger (i.e., higher tensile strength) and/or covered conductor. The designs may also deploy advanced protection and/or fault detection schemes. The existing assets are replaced with those designed to current construction standards, providing the benefit of improved design techniques.

This program is also intended to proactively replace high-risk overhead conductors prone to wire-down events measured by failure rates, historic wire-down events, CMP records and lack of protection (fuse or advanced technology) that are in proximity to the public (e.g., schools, freeways, high profile areas) that could put the public at risk of energized contact. SDG&E utilizes new construction standards, such as stronger (i.e., higher tensile strength) and/or covered conductor, to decrease the likelihood of a wire-down event, and designs risk mitigation strategies for each circuit with the intent of achieving the greatest risk reduction for energized wire-down events by reconductoring and deploying advanced protection and/or detection schemes. Altogether, this decreases the likelihood of an energized wire-down event while also promoting sufficient capacity of the system.

In other areas, where small-capacity wire may not feasibly be replaced, at-risk connectors, sleeves, and single-phase spans of small wire (i.e., commonly known failure points) are replaced as needed.

Additional information can be found in the capital workpapers. *See* Ex. SDGE-08-CWP, WP #202410 – RAMP – Proactive Overhead Conductor Program.

ii. Description of RAMP Mitigations

The Proactive Overhead Conductor program mitigates safety and reliability risks identified in the 2025 RAMP Report: Electric Infrastructure Integrity (EII) – C201 Proactive Overhead Conductor Program. Accordingly, this workpaper in its entirety aligns with a RAMP activity. By performing this activity, safety and reliability risk is reduced by proactively

replacing overhead conductor prone to wire-down events. The increase in cost and number of units forecasted to be completed in 2028-31 is to address qualified projects associated with risk reduction. The TY 2024 GRC focused on the overhead conductor replacements where the risk of public contact with an energized wire down required mitigation. As seen by the change in scope in the TY 2028 GRC, SDG&E has reoriented the budget to emphasize reliability and capacity improvements, in addition to public safety. The request for additional funding reflects the expanded benefits considered under this program.

TABLE EG-25
RAMP and GRC Risk Control/Mitigation Activities - Capital

202410 – RAMP - Proactive Overhead Conductor Program				
ID	**Control/Mitigation Name**	**2025 RAMP 2028-2031 In 2024 $ (000s)**	**2028 GRC 2028-2031 In 2025 $ (000s)**	**Change ($000s)**
C201	Proactive Overhead Conductor Program	32244	100583	68339

iii. Description of Selection and Prioritization of RAMP Risk Mitigations

The purpose of the Proactive Overhead Conductor Program is to address the reliability risk associated with overhead conductor failures. To mitigate asset-specific risks such as overhead conductor failure, SDG&E employs an asset management approach that focuses on replacing equipment prior to failure. The objective is to replace overhead conductors as close to the end of their useful life as practicable, while avoiding in-service failures that would adversely affect system reliability. This approach allows SDG&E to balance affordability with safety and reliability by targeting the highest risk assets before failures occur. Key factors used to prioritize overhead conductor replacements include the age of the overhead conductor, overhead conductor type and construction, historical failure performance, operating environment, customer impact, and system configuration or operational constraints. From a customer perspective, these investments are worthwhile because they reduce outage frequency and duration, avoid higher long-term costs associated with reactive repairs and emergency replacements, and prevent the accumulation of future system reliability risk.

iv. Forecast Method

The forecast method developed for this cost category is zero-based. While historic-based data (e.g., an applicable unit cost) may be utilized to develop the forecast, use of historic total dollars spent is not applicable for this item. The forecast is based on cost estimates developed from the scope of work for the project. SDG&E develops cost estimates based on construction labor rates, material costs, contract pricing/quotes, and other project specific details, as applicable. This program selects specific projects to be addressed each year. Historical data is used for applicable unit costs along with the specific scope of the projects selected to develop forecasts.

v. Cost Drivers

The underlying cost drivers for this capital program are tied to increases observed in the price of commodities (steel, copper, aluminum, etc.) that impact procurement cost for steel poles, conductors, guy cables, and other required capital equipment such as switches and transformers which lead to increased project cost. Additionally, increased costs for contracted labor and services may also impact overall project forecasts.

l. 232460 – Pole Loading Remediation Program

i. Description

Pole Loading Remediation Program is an ongoing program that is expected to continue through the GRC cycle.

This program remediates poles found to be non-compliant based on pole loading and clearance analysis (e.g., overloaded structurally or insufficient clearance). Poles are flagged for remediation when engineering evaluations determine they are either structurally overloaded or do not meet required clearance standards, and when there is no existing capital project already planned to address the deficiency. Poles identified are prioritized based on safety and reliability risk. Additional information can be found in the capital workpapers. See Ex. SDGE-08-CWP, WP #232460 Pole Loading Remediation Program.

ii. Forecast Method

The forecast method developed for this cost category is zero-based. While historic-based data (e.g., an applicable unit cost) may be utilized to develop the forecast, use of historic total dollars spent is not applicable for this item. The forecast is based on cost estimates developed

from the scope of work for the project. SDG&E develops cost estimates based on construction labor rates, material costs, contract pricing/quotes, and other project specific details, as applicable. This program selects specific projects to be addressed each year. Historical data is used for applicable unit costs along with the specific scope of the projects selected to develop forecasts.

iii. Cost Drivers

The underlying cost drivers for this capital program are distribution poles identified as non-compliant through pole loading analyses, including poles that are structurally overloaded or do not meet required clearance standards. This capital program is also affected by increases observed in the price of commodities (steel, copper, aluminum, etc.) impacting procurement costs for steel poles, conductors, guy cables, and other required capital equipment such as switches and transformers which lead to increased project cost. Additionally, increased costs for contracted labor and services may also impact overall project forecasts. This program will ramp up to address existing identified remediation needs and to remediate newly identified non-compliant poles on an ongoing basis.

m. 932400 – RAMP - Distribution Circuit Reliability Program

i. Description

Distribution Circuit Reliability is an ongoing program that is expected to continue through the GRC cycle.

This program provides funding for the addition of equipment necessary to improve service reliability of electric customers and maintain corporate reliability standards. The electric service reliability will deteriorate in the absence of comprehensive remedial solutions offered by these projects, and electric reliability performance is negatively impacted by system deficiencies and an aging infrastructure. This program funds projects identified through consistent review of distribution circuits that mitigate existing electric system deficiencies and improve system performance.

Improvements to the system through additional switching infrastructure within or between circuits are intended to reduce both the extent and duration of unplanned outages. Through the addition of switches within a circuit, the number of customers deenergized for repair can be limited. Additionally, switches and additional relevant equipment such as wire, cable, poles, and other infrastructure, can be added to create a tie between two circuits. In the

event of an unplanned outage on one of the two tied circuits, the identified failure can be isolated while the breaker and the tie switch can be used as two sources to restore service to as many customers as possible. Additional tie switches provide operational flexibility and can reduce the extent of the outage, i.e., the customers on the failed circuit would otherwise go without power until the repairs were made.

Additional information can be found in the capital workpapers. *See* Ex. SDGE-08-CWP, WP #932400 Distribution Circuit Reliability Program.

ii. Description of RAMP Mitigations

The Distribution Circuit Reliability program mitigates reliability risks identified in the 2025 RAMP Report: Electric Infrastructure Integrity (EII) – C269 Distribution Circuit Reliability. Accordingly, this workpaper in its entirety aligns with a RAMP activity. By performing this activity, reliability risk is reduced by proactively installing tie switches to support operational flexibility and outage impacts. The increase in costs and the number of units forecasted for completion in 2028–2031 reflects a strategic prioritization toward high impact risk reduction programs. This approach focuses resources on programs that deliver the greatest reliability and safety benefits and provide the highest value to customers.

TABLE EG-26
RAMP and GRC Risk Control/Mitigation Activities - Capital

932400 – RAMP - Distribution Circuit Reliability Program				
ID	**Control/Mitigation Name**	**2025 RAMP 2028-2031 In 2024 $ (000s)**	**2028 GRC 2028-2031 In 2025 $ (000s)**	**Change ($000s)**
C269	Distribution Circuit Reliability	7836	21111	13275

iii. Description of Selection and Prioritization of RAMP Risk Mitigations

The purpose of the Distribution Circuit Reliability Program is to address reliability risk associated with failures of multiple asset types whose impacts are exacerbated by insufficient isolation and switching infrastructure. The objective is to address these system deficiencies, thereby limiting the occurrence and extent of future outages. Key factors used to identify circuits requiring remediation include the age of the assets, historical outage performance, customer

impact, system configuration, and operational constraints. From a customer perspective, these investments are worthwhile because the enhancements mitigate the occurrence, extent, and duration of future outages.

iv. Forecast Method

The forecast method developed for this cost category is zero-based. While historic-based data (e.g., an applicable unit cost) may be utilized to develop the forecast, use of historic total dollars spent is not applicable for this item. The forecast is based on cost estimates developed from the scope of work for the project. SDG&E develops cost estimates based on construction labor rates, material costs, contract pricing/quotes, and other project specific details, as applicable. This program selects specific projects to be addressed each year. Historical data is used for applicable unit costs along with the specific scope of the projects selected to develop forecasts.

v. Cost Drivers

The underlying cost drivers for this capital project relate to mitigating existing electric system deficiencies and projects for system performance improvements. In the past funds were shifted to emergent and/or higher priority projects and the forecasts account for that reduced historical work done as well as allowing SDG&E to meet future targets/demands. Additional cost drivers for this capital program are tied to increases observed in the price of commodities (steel, copper, aluminum, etc.) that impact procurement cost for conductor, enclosures, terminations, and other required capital equipment such as switches and transformers which lead to increased project cost. Additionally, increased costs for contracted labor and services may also impact overall project forecasts.

n. C02990 – Electric Asset Management Program

i. Description

The specific details regarding Electric Asset Management Program are found in my capital workpapers. *See* Ex. SDGE-08-CWP, WP # C02990 – Electric Asset Management Program.

Electric Engineering is building upon the previously established enterprise Asset Management Program to establish an Electric Asset Management Program in alignment with the International Organization for Standardization's ISO 55000. This provides a structured approach

to managing assets throughout their lifecycle. This program will specifically address the design, installation, and maintenance of electric assets. The primary purpose of the Electric Asset Management Program is to maximize the performance and reliability of critical electric assets while ensuring safety and regulatory compliance. More specifically, the program would support Compliance and Maintenance GO, Risk and Climate Order Instituting Rulemakings (OIR), and WMP. The key benefits of this holistic approach include:

- Improved asset performance by utilizing data and analytics to improve decision-making and operational efficiency
- Increased reliability by leveraging data insights to enable proactive maintenance, planned replacements, and strategic enhancements to programs such as:
  - Underground Cable Replacement Program
  - Overhead Conductor Replacement Program
  - Tee Modernization Program
  - OH and UG Switch Replacement Programs
- Better compliance by improving records of asset conditions and maintenance activities.
- Increased affordability by optimizing maintenance activities and schedules.

The Electric Asset Management Program implements a strategic and foundational process of managing the physical assets and infrastructure involved in delivering electric services. It provides cost-effective and systematic methods for managing all stages of the equipment lifecycle. This process is crucial to address challenges such as aging infrastructure, regulatory compliance, environmental concerns, customer safety and satisfaction, and electrification. By implementing a comprehensive Electric Asset Management Program, the company can improve reliability, optimize operational activities, and enhance electric infrastructure.

The Electric Asset Management Program would employ a comprehensive approach to optimize the lifecycle of electrical assets. It contains three main components: Electric Asset Management Strategy, Electric Asset Management Plan, and Asset Data & Analytics; all working cohesively to enable a data-driven and risk-informed approach to improve employee, customer, and asset safety and reliability. This program will use the principles previously

established by the enterprise program to develop and apply a foundational framework, processes, standards, and technologies specifically to address the management of electric assets.

- Electric Asset Management Strategy is a comprehensive strategy that optimizes the lifecycle of electrical infrastructure. By using operational and business insights, subject matter expertise, and leveraging Asset Data and Analytics visual reporting and analytics tools, the strategy defines the roadmap to manage electrical assets in alignment with company objectives. This acts as the overarching design to which the tactical efforts are defined, which are articulated in the Electric Asset Management Plan.
- Electric Asset Management Plan details the operational approach to managing electrical infrastructure. Using data points from various source systems, and leveraging data and analytics, the plan identifies the approach to maintaining and replacing critical assets.
- Asset Data and Analytics establishes the accessibility and usability of data related to electric assets. This includes developing data governance and management standards and processes, creating shared semantic and structured data models from various sources, designing business intelligent reports and insights, generating analytical models, automating processes, and deploying technology to support strategy, planning, and situational awareness.

ii. Forecast Method

The forecast method used for Electric Asset Management is zero-based. While historic-based data may be utilized to develop the forecast, use of historic total dollars spent is not applicable for this item. The forecast is based on cost estimates developed from the scope of work for the project. SDG&E develops cost estimates based on construction labor rates, material costs, contract pricing/quotes, and other project-specific details, as applicable.

iii. Cost Drivers

The underlying cost drivers for this capital project relate to developing a data-informed, systematic approach to managing electric infrastructure to enhance safety and reliability. This would also support the requirements of Compliance and Maintenance GO, Risk and Climate OIRs, and WMP. Documentation of these cost drivers are included as supplemental capital workpapers. *See* Ex. SDGE-08-CWP WP# C02990 – Electric Asset management Program.

o. B02990 – EDO SCADA Modernization

i. Description

The specific details regarding EDO SCADA Modernization are found in my capital workpapers. See Ex. SDGE-08-CWP, WP # B02990 – EDO SCADA Modernization.

EDO SCADA Modernization will replace existing hardware, licensing, support, and operating systems originally purchased in 2018 which are starting to experience hardware failures and operating systems that are on a limited extended lifecycle support. Technical equipment for the distribution control center used for situational awareness is also at end of life with no support and needs to be modernized under this project.

These forecasted capital expenditures support cybersecurity compliance and reliability continuity of a tier one application with the new Operational Technology Vulnerability Assessment which requires regular review of supported vendor software and no end of life/end of support systems or applications as part of cybersecurity controls and validation. This puts EDOT on a regular schedule of upgrades for the distribution SCADA system for both hardware and software applications.

ii. Forecast Method

The forecast method developed for this cost category is zero-based. Historic-based data (e.g., an applicable unit cost) is not applicable for this item due to the fact that when the system was new and placed in service minimal work was required to maintain the system. The forecast is based on cost estimates developed from the scope of work for the project. SDG&E develops cost estimates based on construction labor rates, material costs, contract pricing/quotes, and other project specific details, as applicable.

iii. Cost Drivers

The underlying cost drivers for this capital project relate to replacing aging hardware, licensing, support, and operating systems. Retaining aging infrastructure leads to higher total cost of ownership through increased downtime, energy consumption, and support requirements. Older computing equipment increasingly cannot support modern security updates, making it vulnerable to cyberattacks and increasing compliance risk. Documentation of these cost drivers are included as supplemental capital workpapers. *See* Ex. SDGE-08-CWP WP# B02990 – EDO SCADA Modernization.

p. A02990 - Grounding Bank Monitors

i. Description

SDG&E plans to build and place in service grounding bank monitors by the Test Year.

The purpose of this project is to install remote monitors to continuously verify the integrity of distribution grounding banks. Grounding banks were applied for many decades to enable less costly connection of new underground residential subdivisions in areas lacking a primary neutral conductor. It is critical that these grounding bank installations remain in service to optimize the performance of circuit protection equipment, such as fuses and protective relays, and to meet compliance with GO 95, Rule 33.2. Grounding banks can trip off-line and not directly affect service to customers; as a result, they can be overlooked, increasing the risk to the system when there are faults. Remote monitoring will mitigate this risk by minimizing the time grounding banks are off-line. Maintaining the accuracy and responsiveness of protection systems and devices is critical to ensuring public safety, compliance, and system integrity.

By remotely monitoring the grounding banks, their status (on-line or off-line) will be obvious to system operators, who will direct field employees to patrol the grounding banks as needed to verify status, and make arrangements to test, re-energize, or replace as needed.

Additional information can be found in the capital workpapers. See Ex. SDGE-08-CWP, WP #A02990 Grounding Bank Monitors.

ii. Forecast Method

The forecast method developed for this cost category is zero-based. This is a new program with no historical cost. The forecast is based on cost estimates developed from the scope of work for the project paired with mitigating the risk in the SDG&E territory within the next five years. SDG&E develops cost estimates based on construction labor rates, material costs, contract pricing/quotes, and other project specific details, as applicable.

iii. Cost Drivers

The underlying cost drivers for this capital project relate to costs for design, equipment, testing, and commissioning. This includes equipment to enable data communications. This is a new program with no historical costs. Details on the costs can be found in Ex. SDGE-08-CWP, WP#A02990 Grounding Bank Monitors.

3. Substation Safety & Reliability Improvements

TABLE EG-27
Capital Expenditures Summary of Costs

Substation Safety & Reliability Improvements (In 2025 $)							
	2025 Adjusted-Recorded (000s)	**Est. 2026 (000s)**	**Est. 2027 (000s)**	**Est. 2028 (000s)**	**Est. 2029 (000s)**	**Est. 2030 (000s)**	**Est. 2031 (000s)**
Total	26,674	25,271	18,891	36,074	31,510	36,617	32,044

a. Sub-Category Introduction

The specific details regarding Substation Safety & Reliability Improvements are found in my capital workpapers. *See* Ex. SDGE-08-CWP.

The Substation Safety & Reliability Improvements sub-category supports targeted investments necessary to maintain the safe, reliable, and resilient operation of SDG&E's electric substations, which serve as critical nodes connecting the transmission system to the distribution network. These facilities are essential to system reliability, public and worker safety, and the delivery of electric service to customers. The activities included in this sub-category focus on sustaining the performance of existing substation infrastructure and mitigating operational risk.

Investments in this sub-category are driven by a risk- and condition-based planning framework that evaluates asset age, condition, performance history, and safety exposure. Substation equipment such as transformers, breakers, protection and control systems, and auxiliary infrastructure is subject to increasing operational stress as assets age and system demands evolve. Targeted replacements, refurbishments, and upgrades are prioritized where they provide the greatest safety and reliability benefit, reduce the likelihood of forced outages, and address conditions that could otherwise result in service disruptions or safety incidents.

b. 002030 – RAMP – Distribution Substation Reliability

i. Description

RAMP – Distribution Substation Reliability is an ongoing program that is expected to continue through the GRC cycle.

This program provides funding for reactive replacement of failed substation equipment that can result in extended customer outages. As the grid continues to age and manufacturer lead time lengthens, some equipment failures are unavoidable, despite ongoing proactive asset

replacement efforts. Accordingly, reactive corrective actions remain necessary to maintain system reliability. The program enables timely equipment replacement by supporting rapid response to failures, reducing outage durations, improving restoration capability, and minimizing customer disruption while maintaining safe and reliable substation operations.

The specific details regarding *RAMP – Distribution Substation Reliability* are found in my capital workpapers. *See* Ex. SDGE-08-CWP, WP # 002030 – RAMP – Distribution Substation Reliability.

ii. Description of RAMP Mitigations

The Distribution Substation Reliability Projects mitigate safety and reliability risks identified in the 2025 RAMP Report: Electric Infrastructure Integrity (EII) – C257 Distribution Substation Responsive Asset Replacement. Accordingly, this workpaper in its entirety, aligns with a RAMP activity. By performing this activity, safety and reliability risk is reduced by executing safety-related improvements and replacement of failed/obsolete equipment. Due to the broad range of work activities included in this category, it is not feasible to determine an exact cost upfront; therefore, an average based on three years of historical data was applied across years, which led to a cost variance between GRC and RAMP.

TABLE EG-28
RAMP and GRC Risk Control/Mitigation Activities - Capital

002030 – RAMP – Distribution Substation Reliability				
ID	**Control/Mitigation Name**	**2025 RAMP 2028-2031 In 2024 $ (000s)**	**2028 GRC 2028-2031 In 2025 $ (000s)**	**Change ($000s)**
C257	Distribution Substation Responsive Asset Replacement	13,451	5,206	(8,425)

iii. Description of Selection and Prioritization of RAMP Risk Mitigations

The Distribution Substation Reliability program provides funding for responsive mitigations selected to address reliability risks associated with substation equipment failures that can result in extended customer outages. Mitigations are based on a risk-informed evaluation that considers potential customer impact, restoration time risk, the criticality of affected

substations, operating constraints, and cost effectiveness relative to prolonged outages and customer disruption. Despite ongoing efforts to proactively replace aging substation assets, the growing population of end-of-life transformers, breakers, disconnects, and related equipment combined with extended lead times makes equipment failures unavoidable. As a result, reactive corrective actions remain a necessary component of maintaining system reliability. This program provides a prudent and flexible mechanism to manage these risks by ensuring funding is available when failures occur, enabling timely repairs or replacements. By reducing outage duration and improving restoration resilience, the program helps minimize customer disruption while maintaining safe and reliable substation operations.

iv. Forecast Method

The forecast method developed for this cost category is a 3-year average based on historical spend. This is the most appropriate methodology, as it is a reactive budget and workload can vary from year to year. The 3-year average levels out the peaks and valleys of work over an appropriate period of time to forecast the necessary level of funding that falls within this program.

v. Cost Drivers

The underlying cost drivers for this program relate to service required to replace failed equipment to allow restoration of service to impacted customers, improve system reliability and mitigate distribution system deficiencies.

Documentation of these cost drivers are included as supplemental capital workpapers. *See* Ex. SDGE-08-CWP WP # 002030 – RAMP – Distribution Substation Reliability.

c. 062540 – RAMP – Substation Emergency Equipment Purchase

i. Description

RAMP – Substation Emergency Equipment Purchase is an ongoing program that is expected to continue through the GRC cycle.

This program provides funding to support the restoration of service to the Company's distribution customers following outages caused by substation equipment failures by purchasing additional emergency spare and mobile equipment. The number of aging transformers, circuit breakers, disconnects, and other ancillary substation equipment on SDG&E's system is at a level that additional failures are expected despite efforts to replace the equipment before failure. Lead

times for replacement units continue to be extended farther out every year. SDG&E's existing mobile transformers are frequently utilized for routine maintenance and construction activities due to the high loading of its substations, and this program includes refurbishment of these mobile units.

The specific details regarding *RAMP – Substation Emergency Equipment Purchase* are found in my capital workpapers. See Ex. SDGE-08-CWP at section 062540 – RAMP – Emergency Equipment Purchase.

ii. Description of RAMP Mitigations

The Substation Emergency Equipment Purchase mitigates risks identified in the 2025 RAMP Report: Electric Infrastructure Integrity (EII) – C258: Emergency Equipment Purchase. Accordingly, this workpaper in its entirety aligns with a RAMP activity. By performing this activity, reliability risk is reduced by proactively purchasing emergency spare equipment. An average based on three years of historical data was applied across years, which led to a cost variance between GRC and RAMP.

TABLE EG-29
RAMP and GRC Risk Control/Mitigation Activities - Capital

062540 – RAMP – Substation Emergency Equipment Purchase				
ID	**Control/Mitigation Name**	**2025 RAMP 2028-2031 In 2024 $ (000s)**	**2028 GRC 2028-2031 In 2025 $ (000s)**	**Change ($000s)**
C258	Emergency Equipment Purchase	6,372	6,409	(37)

iii. Description of Selection and Prioritization of RAMP Risk Mitigations

The Substation Emergency Equipment Program offers a prudent and flexible mechanism to rapidly replace critical substation equipment in the event of inadvertent failures, thereby reducing outage duration and strengthening system restoration resilience. Despite ongoing efforts to proactively replace aging substation assets, the growing population of aging transformers, breakers, disconnects, and related equipment, coupled with extended manufacturer lead times, makes additional failures unavoidable.

iv. Forecast Method

The forecast method developed for this cost category is a three-year average based on historical spend. This is the most appropriate methodology, as workload can vary from year to year. The three-year average levels out the peaks and valleys in this workpaper over a longer period of time to forecast the necessary level of funding for the work that falls within this workpaper while accounting for recent changes in the program. The three-year historical average is being used as the costs reflected in more recent years are a closer reflection of future costs due to ongoing increases in labor and material costs.

v. Cost Drivers

The underlying cost drivers for this program relate to the procurement of spare equipment with longer lead time that can be utilized during equipment failure to allow restoration of service to impacted customers, improve system reliability and mitigate distribution system deficiencies.

d. 082530 – Substation Capacitor Bank Upgrades

i. Description

Substation Capacitor Bank Upgrades is an ongoing program that is expected to continue through the GRC cycle.

These forecasted capital expenditures support SDG&E's goal of delivering high-quality service to customers. The program focuses on replacing substation capacitors that are out of service due to failure or obsolescence. Key objectives include:

- Improving load power factor at substations
- Upgrading obsolete equipment
- Enhancing transmission voltage profiles during heavy load conditions
- Improving overall customer power quality

Projects are prioritized based on reactive power deficiencies identified by Electric Grid Operations during system studies, which are primarily caused by poor power factor at distribution substations. Contributing factors include substation and distribution line capacitors being out of service or operating improperly.

Program actions include:

- Adding new substation capacitor banks
- Replacing obsolete capacitor banks

- Implementing monitoring for capacitor banks

These measures improve system performance by:

- Enhancing transmission voltage profiles, reducing or eliminating the need for transmission capacitors
- Improving customer power quality through a two-step configuration (2 × 3600 kVAR) instead of a single-step 6000 kVAR configuration

Replacing existing single-step capacitor banks with higher-capacity banks and adding switched capacitor banks will correct substation power factor, control reactive power flow, and increase transmission voltages under heavy load conditions.

The specific details regarding Substation Capacitor Bank Upgrades are found in my capital workpapers. See Ex. SDGE-08-CWP, WP #082530 – Substation Capacitor Bank Upgrades.

ii. Forecast Method

The forecast method developed for this cost category is zero-based. While historic-based data (e.g., an applicable unit cost) may be utilized to develop the forecast, use of historic total dollars spent is not applicable for this item. The forecast is based on cost estimates developed from the scope of work for the project. SDG&E develops cost estimates based on construction labor rates, material costs, contract pricing/quotes, and other project specific details, as applicable. This program selects specific projects to be addressed each year. Historical data is used for applicable unit costs along with the specific scope of the projects selected to develop forecasts.

iii. Cost Drivers

The underlying cost driver for this capital program is the replacement of substation single-step capacitor banks where the power factor is below minimum requirements. Additionally, in the past funds were shifted to emergent and/or higher priority projects and the forecasts account for that reduced historical work done as well as ensuring SDG&E can meet future targets/demands. Documentation of these cost drivers are included as supplemental capital workpapers. *See* Ex. SDGE-08-CWP WP#082530 – Substation Capacitor Bank Upgrades.

e. 172690 – RAMP – 4kV Reliability Program

i. Description

4kV Reliability Program is an ongoing program that is expected to continue through the GRC cycle.

The purpose of SDG&E's 4kV Reliability Program is to systematically improve the reliability for customers currently serviced by 4kV circuits. The scope of the program focuses on removing 4kV packages or "unit" substations, modernizing other aging substation infrastructure as needed, and providing new step-down transformers as appropriate. To further improve reliability, customers may be cutover from 4kV to 12kV as part of the redesign and rearrangement of the 4kV Circuit. Where necessary, the scope of the program will also include replacing small and aging wire and replacing or upgrading to modern 12kV standards where appropriate.

Currently, the 4kV system represents over 20% of SDG&E's distribution circuits by count, supplies approximately 5% of system load, and accounts for 5% of overall distribution system length. Half of the 4kV substations are more than 50 years old, effectively removing replacement components from the readily available market. Operating these substations poses safety concerns due to a shortage of qualified crews familiar with their outdated design and operation. Maintenance costs are unusually high and continue to rise.

The 4kV substations also present reliability and safety risks for customers, including higher failure rates and limited options to transfer load to adjacent circuits. These factors increase the likelihood of more frequent and longer outages.

Additionally, 4kV overhead circuits are more prone to wire-down events compared to 12kV circuits because of smaller, more fragile conductors (e.g., #6 and #4 copper), aging infrastructure, and reduced conductor spacing clearances. SDG&E's reliability plan addresses all aspects of 4kV substation and distribution infrastructure removal and upgrades.

Many 4kV substations are old "package units," where transformers and circuit breakers are enclosed in a single metal-clad structure with no available replacement parts—especially for breakers. A component failure requires de-energizing the entire enclosure, causing an outage for all customers served by that substation. In contrast, modern designs allow isolation and replacement of individual components, minimizing customer impact.

Finally, most 4kV circuits lack ties to adjacent circuits, limiting the ability to offload customers during failures. This further contributes to reliability challenges and extended outage durations.

The scope of the program includes removing the 4kV package unit substations, modernizing other aging substation infrastructure as needed, cutting over existing 4kV assets to 12kV assets, replacing small and aging wire, and completely rebuilding, if deemed necessary, based on the asset.

Additional information can be found in the capital workpapers. *See* Ex. SDGE-08-CWP, WP #172690 – RAMP – 4kV Reliability Program.

ii. Description of RAMP Mitigations

The 4kV Modernization program mitigates reliability risks identified in the 2025 RAMP Report: Electric Infrastructure Integrity (EII) – C234 4kV Reliability Program. Accordingly, this workpaper in its entirety aligns with a RAMP activity. By performing this activity, reliability risk is reduced by proactively removing 4kV package or "unit" substations, modernizing other aging substation infrastructure, and installing new step-down transformers, or cutover from 4kV to 12kV where appropriate. The unit of measure has been updated from miles to number of substations to more accurately reflect the scope of the program. Due to this change, there are variances between the RAMP and GRC costs and number of units.

TABLE EG-30
RAMP and GRC Risk Control/Mitigation Activities - Capital

172690 – RAMP – 4kV Reliability Program				
ID	**Control/Mitigation Name**	**2025 RAMP 2028-2031 In 2024 $ (000s)**	**2028 GRC 2028-2031 In 2025 $ (000s)**	**Change ($000s)**
C234	4kV Reliability Program	1,824	31,852	30,028

iii. Description of Selection and Prioritization of RAMP Risk Mitigations

The 4kV Reliability Program is selected as a targeted mitigation to address persistent safety and reliability risks associated with SDG&E's aging 4kV distribution system. SDG&E's distribution planning, engineering, and asset management organizations evaluate the 4kV system based on asset age, failure history, safety concerns, maintenance costs, customer impact, and

system configuration limitations to determine appropriate modernization actions. Mitigations are prioritized where 4kV facilities present the highest risk of in-service failure, extended outages, or safety hazards, particularly at package unit substations with obsolete designs and limited to no availability of replacement components in the marketplace, limited load transfer capability, and high outage consequence to customers.

The modernization approach—including removal of 4kV package substations, upgrades to modern 12kV standards, replacement of small and aging conductors, and selective cutover of customers from 4kV to 12kV—is selected based on cost effectiveness, long-term reliability benefits, operational feasibility, and the ability to reduce both outage frequency and duration. Given the high proportion of 4kV assets exceeding 50 years of age, increased failure rates, elevated maintenance costs, and reduced workforce familiarity with outdated equipment, this program provides the most prudent and comprehensive means to mitigate ongoing reliability and safety risks. From a customer perspective, these investments are warranted because they reduce the likelihood of widespread outages, improve restoration flexibility through modern circuit design and ties, and avoid the escalating costs and risks associated with continued operation of obsolete 4kV infrastructure.

iv. Forecast Method

The forecast method developed for this cost category is zero-based. While historic-based data (e.g., an applicable unit cost) may be utilized to develop the forecast, use of historic total dollars spent is not applicable for this item. The forecast is based on cost estimates developed from the scope of work for the project. SDG&E develops cost estimates based on construction labor rates, material costs, contract pricing/quotes, and other project specific details, as applicable. This program selects specific projects to be addressed each year. Historical data is used for applicable unit costs along with the specific scope of the projects selected to develop forecasts.

v. Cost Drivers

The underlying cost driver for this program is the need to increase reliability, improve overall operational flexibility, reduce safety risk, and obtain environmental benefits. Strategic cost drivers additionally include reduced long-term operational and maintenance costs, added capacity for distributed energy resources, reduced energy losses (improved energy efficiency), and opportunities to repurpose land. Increases have also been observed in the price of

commodities (steel, copper, aluminum) that impact transformers, cable and steel poles. These are likely to lead to increased project cost.

f. 242520 – RAMP – Substation Rebuild Program

i. Description

SDG&E plans to build and place in service multiple substation rebuilds by the Test Year. The specific details regarding the Substation Rebuild Program are found in my capital workpapers. See Ex. SDGE-08-CWP, WP #242520 – RAMP – Substation Rebuild Program.

These capital investments focus on rebuilding and modernizing critical electrical substation infrastructure to enhance system reliability, safety, and operational flexibility. The work involves upgrading aging infrastructure and implementing the most current design standards. These improvements address vulnerabilities that have historically contributed to extended outages and operational limitations, including insufficient redundancy and lack of remote monitoring capabilities. By implementing modern protection systems, improved control features, and enhanced communications, these projects will reduce outage impacts, improve situational awareness, and support faster restoration efforts. These rebuilds will also provide additional capacity to serve existing area load and future customer-driven electrical load growth and enhance the distribution and power network to minimize the potential for service disruptions to existing customers. Collectively, these efforts strengthen the overall distribution network, minimize service disruptions, and position the system to meet evolving operational and environmental requirements.

SDG&E's Electric Distribution capital investment strategy balances targeted equipment replacements with full substation rebuilds. Individual equipment upgrades remain a viable option when they effectively address reliability and operational needs. Substation rebuilds are pursued only when technical requirements and long-term financial prudence justify a holistic approach. Technical requirements may include when multiple assets are obsolete, fault-duty and protection limitations are driven by the overall substation configuration, physical site constraints prevent safe or practical phased construction, and modernization of protection, control, and monitoring systems requires an integrated, substation-wide design that cannot be achieved through incremental upgrades.

This verifies that resources are allocated strategically, modernizing infrastructure where necessary, improving reliability, enabling remote monitoring, and supporting future load growth while maintaining cost efficiency.

ii. Description of RAMP Mitigations

The Substation Rebuild Program mitigates safety risks identified in the 2025 RAMP Report: Electric Infrastructure Integrity (EII) – C227 Streamview Substation Rebuild, C247 North Valley Substation Rebuild and C260 Urban Substation Rebuild. Accordingly, these budget codes align with RAMP activities. The difference in forecasted costs between the RAMP and GRC filings reflects the delays in project activities from the forecast years.

TABLE EG-31
RAMP and GRC Risk Control/Mitigation Activities - Capital

242520 – RAMP – Substation Rebuild Program				
ID	**Control/Mitigation Name**	**2025 RAMP 2028-2031 In 2024 $ (000s)**	**2028 GRC 2028-2031 In 2025 $ (000s)**	**Change $ (000s)**
C227	Streamview Substation Rebuild	$0	$0	$0
C247	North Valley Substation Rebuild	$0	$0	$0
C260	Urban Substation Rebuild	$0	$0	$0

iii. Description of Selection and Prioritization of RAMP Risk Mitigations

The Substation Rebuild mitigations associated with RAMP IDs C227, C247, and C260 were evaluated, selected, and prioritized pursuant to the compliance and governance requirements established in SDG&E's Risk Assessment and Mitigation Phase (RAMP) framework. Consistent with the Enterprise Risk Management structure set forth in the 2025 RAMP and prior RAMP cycles, the department identified candidate mitigation activities directly linked to electric infrastructure integrity risks and screened them to confirm alignment with defined RAMP risk drivers, mitigation eligibility criteria, and accountability requirements. In selecting mitigations, the department considered, in priority order, the severity of potential safety and reliability consequences, asset condition and age, indicators of likelihood of failure, the expected effectiveness of the mitigation in reducing risk, and execution feasibility. While cost-effectiveness is considered to validate that mitigation strategies are reasonably designed,

this assessment is qualitative and mitigation selection is not driven by standalone economic optimization, but by the degree to which an activity materially reduces identified risk exposure.

Mitigation activities are advanced where they provide meaningful and durable risk reduction and are discarded where they present excessive cost relative to achievable risk reduction, would result in extreme or impractical operational disruption, or would leave residual risk unacceptably high. Projects are prioritized based on relative risk exposure and mitigation effectiveness, with higher-risk substations advanced earlier while accounting for design durations, materials lead times, construction sequencing, outage coordination, and system dependencies. Full substation rebuilds under C227, C247, and C260 were selected not only to reduce current risk but to prevent the increase of future risk by replacing obsolete configurations, restoring assets to current standards, and addressing root causes of degradation rather than deferring risk through incremental or temporary measures.

iv. Forecast Method

The forecast method developed for this cost category is zero-based. While historic based data (e.g., applicable unit cost) may be utilized to develop the forecast, use of historic total dollars spent is not applicable for this item. The forecast is based on cost estimates developed from the scope of work for the project. SDG&E develops cost estimates based on construction labor rates, material costs, contract pricing/quotes, and other project specific details, as applicable.

v. Cost Drivers

The underlying cost drivers for this capital project relate to the union labor, vendor services, and materials required to rebuild and modernize aging substation infrastructure to enhance system reliability and safety. Project costs are driven by final engineering, materials procurement, and construction activities associated with below grade and above grade substation modifications and related distribution system connections. Upgrades to key substation components including switchgear, transformers, capacitors, and protection systems which are necessary to replace aging equipment, improve situational awareness, and support reliable service to surrounding communities.

Documentation of these cost drivers are included as supplemental capital workpapers. See Ex. SDGE-08-CWP.

g. 252600 – RAMP - Substation Distribution Circuit Breaker Program

i. Description

Substation Distribution Circuit Breaker Program is an ongoing program that is expected to continue through the GRC cycle. The specific details regarding *Substation Distribution Circuit Breaker Program* are found in my capital workpapers. *See* Ex. SDGE-08-CWP, WP #252600 – RAMP – Substation Distribution Circuit Breaker Program.

The program primarily addresses the replacement of distribution circuit breakers, both open-air and metal-clad switchgear.

Currently there are 168 distribution circuit breakers operating beyond the manufacturer-recommended service life. Proactive planning is essential for replacing equipment that has exceeded its recommended service life, taking into account corrective maintenance history, spare part availability and reliability impacts. Timely replacement allows the distribution system to operate at optimal conditions, maintain reliability, reduce outage durations, and enhance operational flexibility.

ii. Description of RAMP Mitigations

The Substation Distribution Circuit Breaker Program mitigates reliability risks identified in the 2025 RAMP Report: Electric Infrastructure Integrity (EII) – C250 Substation Reliability for Distribution Components. By performing this activity, reliability risk is reduced by proactively replacing circuit breakers prone to failure. This mitigation is being split into two separate asset replacement programs and work papers, and therefore, there is a change in unit of measure and costs across both programs.

TABLE EG-32
RAMP and GRC Risk Control/Mitigation Activities - Capital

252600 – RAMP - Substation Distribution Circuit Breaker Program				
ID	**Control/Mitigation Name**	**2025 RAMP 2028-2031 In 2024 $ (000s)**	**2028 GRC 2028-2031 In 2025 $ (000s)**	**Change ($000s)**
C250	Substation Reliability for Distribution Components	48,106	N/A	N/A
C250A	Substation Distribution Circuit Breaker Program	N/A	35,860	N/A

iii. Description of Selection and Prioritization of RAMP Risk Mitigations

The Distribution Circuit Breaker Replacement Program reduces reliability risk by proactively replacing high-risk circuit breakers near the end of their useful life, preventing in-service failures while balancing affordability, safety, and system reliability. SDG&E's substation engineering and operations groups evaluate distribution circuit breakers based on age, corrective maintenance history, reliability performance, spare part availability, operational criticality, and potential customer impact to identify assets at highest risk of failure. Timely replacement improves system reliability by reducing forced outages, minimizing outage duration through reliable fault clearing, and supporting safer and more flexible substation operations. From a customer perspective, these investments are warranted because they help prevent avoidable outages, improve restoration performance, and mitigate the growing risks associated with aging and increasingly unreliable breaker populations.

iv. Forecast Method

The forecast method developed for this cost category is zero-based. While historic-based data (e.g., an applicable unit cost) may be utilized to develop the forecast, use of historic total dollars spent is not applicable for this item. The forecast is based on cost estimates developed from the scope of work for the project. SDG&E develops cost estimates based on construction labor rates, material costs, contract pricing/quotes, and other project specific details, as applicable. This program selects specific projects to be addressed each year. Historical data is used for applicable unit costs along with the specific scope of the projects selected to develop forecasts.

v. Cost Drivers

The underlying cost driver for this project is the improvement of reliability by replacing existing aging substation circuit breakers; with no mitigation plan there will be 314 breakers past life expectancy by 2031 and 628 breakers by 2035.

h. 252610 – RAMP - Substation Distribution Power Transformer Program

i. Description

Substation Distribution Power Transformer Program is an ongoing program that is expected to continue through the GRC cycle. The specific details regarding *Substation*

Distribution Power Transformer Program are found in my capital workpapers. *See* Ex. SDGE-08-CWP, WP #252610 – RAMP – Substation Distribution Power Transformer Program.

This program focuses on the replacement of distribution transformers. Currently there are 39 distribution transformers beyond their manufacturer-recommended life. Asset age, condition, reliability, environmental and safety impacts are taken into consideration when planning for replacement. Proactive planning and timely replacement allow for the operation of the distribution system at optimal conditions, maintains reliability, reduces outage durations, and enhances operational flexibility.

ii. Description of RAMP Mitigations

The Substation Distribution Power Transformer Program mitigates reliability risks identified in the 2025 RAMP Report: Electric Infrastructure Integrity (EII) – C250 Substation Reliability for Distribution Components. By performing this activity, reliability risk is reduced by proactively replacing circuit breakers prone to failure. This mitigation is being split into two separate asset replacement programs and work papers, and therefore, there is a change in unit of measure and costs across both programs.

TABLE EG-33
RAMP and GRC Risk Control/Mitigation Activities - Capital

252610 – RAMP - Substation Distribution Power Transformer Program				
ID	**Control/Mitigation Name**	**2025 RAMP 2028-2031 In 2024 $ (000s)**	**2028 GRC 2028-2031 In 2025 $ (000s)**	**Change ($000s)**
C250	Substation Reliability for Distribution Components	48,106	N/A	N/A
C250B	Substation Distribution Power Transformer Program	N/A	20,946	N/A

iii. Description of Selection and Prioritization of RAMP Risk Mitigations

The Substation Distribution Power Transformer Program reduces reliability risk by proactively replacing high-risk transformers near the end of their useful life, preventing in-service failures while balancing affordability, safety, and system reliability. SDG&E's substation engineering and operations organizations evaluate transformers using a risk-based approach that considers asset age, condition, historical performance, potential customer

consequences and environmental and safety impacts to identify candidates for replacement. Proactive planning and timely replacement are selected as the most prudent and cost-effective mitigation compared to continued reactive maintenance or failure-based replacement, as they reduce the risk of unplanned outages, support reliable system operations, and enhance operational flexibility. From a customer perspective, these investments are justified because they improve system reliability, reduce outage frequency and duration, and avoid the higher costs and disruptions associated with transformer failures and emergency replacements.

iv. Forecast Method

The forecast method developed for this cost category is zero-based. While historic-based data (e.g., an applicable unit cost) may be utilized to develop the forecast, use of historic total dollars spent is not applicable for this item. The forecast is based on cost estimates developed from the scope of work for the project. SDG&E develops cost estimates based on construction labor rates, material costs, contract pricing/quotes, and other project specific details, as applicable. This program selects specific projects to be addressed each year. Historical data is used for applicable unit costs along with the specific scope of the projects selected to develop forecasts.

v. Cost Drivers

The underlying cost driver for this project is the improvement of reliability by replacing existing aging substation transformers; with no mitigation plan there will be 43 transformers past life expectancy by 2031 and 72 transformers by 2035.

i. 942410 –RAMP - Distribution Power Quality Program

i. Description

Distribution Power Quality Program is an ongoing program that is expected to continue through the GRC cycle.

The forecasted costs provide funding for the distribution component of this program, which provides funding for the expansion of the substation PQ monitoring systems (PQ Nodes), field & customer PQ monitoring, associated communication systems, and for the replacement of aging and failed PQ devices. The replacement strategy identifies condition and performance by providing a health index, probability of failure, and prioritization score for each PQ monitoring

device. Expected useful life of early PQ devices is 15 years and newer PQ devices is 20 years. PQ monitors provide the following system improvements:

- Distribution system health information. System parameters including RMS voltage, voltage & current transient events, system harmonics (including spectra), real & reactive power flow, power factor, flicker, etc.
- Event logging and notification for events occurring on transmission, distribution and customer systems that are perceptible at the distribution substation.
- Advanced analytics processes, system monitoring and notification for pre-established conditions, pre-fault analytics and location of existing or incipient faults, and anticipation and advanced fault locating.
- A data source with analytics for historical events and steady state trends.
- An increase of data collected which results in a more effective grid reliability assessment.

The benefit of using PQ monitors connected to the network is that SDG&E engineers, technicians and maintenance personnel can obtain real-time data, view the analysis, and make timely decisions to protect equipment assets from premature failure and extend the life of the asset. The PQ monitoring system also provides system monitoring and notification for pre-established conditions, pre-fault analytics and location of existing or incipient faults. SDG&E's objective is to connect all monitors to the network to eliminate the need to visit substation sites to download this information.

Additional information can be found in the capital workpapers. *See* SDG&E-08-CWP, WP #942410 Distribution Power Quality Program.

ii. Description of RAMP Mitigations

The Power Quality Program - Distribution program mitigates reliability risks identified in the 2025 RAMP Report: Electric Infrastructure Integrity (EII) – C261 Power Quality Monitor Deployment and Replacement. Accordingly, this workpaper in its entirety aligns with a RAMP activity. By performing this activity, reliability risk is reduced by proactively installing PQ monitors and replacing aging or failed units. The unit of measure changed from number of substations in RAMP to number of meters installed in GRC. Costs and units are updated to reflect this change.

TABLE EG-34
RAMP and GRC Risk Control/Mitigation Activities - Capital

942410 – RAMP - Distribution Power Quality Program				
ID	**Control/Mitigation Name**	**2025 RAMP 2028-2031 In 2024 $ (000s)**	**2028 GRC 2028-2031 In 2025 $ (000s)**	**Change ($000s)**
C261	Power Quality Monitor Deployment and Replacement	5085	2260	(2825)

iii. Description of Selection and Prioritization of RAMP Risk Mitigations

The RAMP mitigation activities for the Distribution Power Quality Program were selected and prioritized through SDG&E's established Enterprise Risk Management (ERM) framework, as described in the RDF Integration testimony (Ex. SCG-02B/SDGE-02B). The Distribution Power Quality Program mitigates reliability risks associated with Electric Infrastructure Integrity (EII), specifically C261 – Power Quality Monitor Deployment and Replacement, as identified in the 2025 RAMP Report. The program represents a proactive approach to identifying deteriorating system conditions, emerging failure modes, and incipient faults by expanding and sustaining a network of power quality monitoring assets across the distribution system.

For the Distribution Power Quality Program, the mitigation is a continuation and expansion of an existing, proven program that integrates field monitoring, advanced analytics, and asset condition assessment. The decision to continue and enhance this program reflects observed system performance benefits, increasing reliance on data-enabled grid operations, and the growing importance of power quality to customers and connected technologies.

While the Distribution Power Quality Program is not driven by a single prescriptive mandate, it directly supports SDG&E's obligations to operate and maintain a safe, reliable electric distribution system and aligns with Commission expectations for grid modernization and risk-informed planning.

Cost effectiveness was evaluated primarily in terms of risk reduction per dollar invested, rather than through the benefit-cost ratio (BCR) methodology described in the RDF Integration

testimony (Ex. SCG-02B/SDGE-02B). For this program, effectiveness was assessed based on the mitigation's ability to:

- Detect abnormal system conditions before failure occurs,
- Reduce the likelihood and duration of power quality disturbances,
- Enable earlier intervention to prevent equipment damage or cascading outages,
- Improve situational awareness and decision-making during system events.

From a customer perspective, this investment is worthwhile because it improves service quality, reduces the frequency and severity of voltage disturbances, and supports faster and more accurate resolution of customer power quality complaints. Power quality monitoring is increasingly important as customers deploy sensitive electronic equipment, distributed energy resources, and electric vehicles that are more susceptible to voltage disturbances and harmonics. By enabling real-time access to data and analytics, the program supports timely operational decisions that minimize customer disruptions and long-term service degradation.

A mitigation is considered worthwhile if it demonstrably reduces current or future reliability risk, supports informed asset management decisions, and can be implemented at a reasonable lifecycle cost without undue disruption to operations or customers.

The Distribution Power Quality Program is particularly effective at preventing the increase of future risk. By expanding network-connected PQ monitors, SDG&E increases the volume and quality of data available for advanced analytics, historical trend analysis, and pre-fault detection. This enables early identification of incipient failures, supports targeted maintenance and capital planning, and reduces the likelihood that unnoticed power quality issues evolve into larger reliability events. As such, the program not only mitigates current risk but also strengthens SDG&E's ability to manage emerging risks associated with an increasingly complex and modernized electric grid.

iv. Forecast Method

The forecast method developed for this cost category is zero-based. While historic-based data (e.g., an applicable unit cost) may be utilized to develop the forecast, use of historic total dollars spent is not applicable for this item. The forecast is based on cost estimates developed from the scope of work for the project. SDG&E develops cost estimates based on construction labor rates, material costs, contract pricing/quotes, and other project specific details, as applicable. This program selects specific projects to be addressed each year. Historical data is

used for applicable unit costs along with the specific scope of the projects selected to develop forecasts.

v. Cost Drivers

The underlying cost drivers for the Distribution Power Quality Program are primarily associated with expanding substation and field-installed power quality monitoring infrastructure needed to mitigate identified reliability risks and support SDG&E's objectives. As an ongoing program, annual forecasted costs vary based on the number of devices installed or replaced, asset condition assessments, and the specific scope of work selected for each year.

A significant portion of program costs is driven by the procurement of new PQ monitoring devices and associated components. This includes the installation of additional PQ nodes at substations and other targeted locations, as well as replacement of aging or failed devices that have reached or are approaching the end of their expected useful life.

Labor, construction, and design activities required to install, replace, test, and commission PQ monitoring devices represent another key cost driver. These costs are influenced by construction labor rates, design fees, site-specific conditions, coordination with substation operations, and safety requirements.

Ongoing costs are incurred to support advanced analytics processes and data storage. The increasing volume of PQ data collected enhances SDG&E's ability to perform historical trend analysis, pre-fault detection, and system performance evaluation, but also requires investment in supporting systems and tools to enable data usability and reliability.

j. 152430 – RAMP - Distribution Protection & Control Modernization Program

i. Description

Distribution Protection & Control Modernization Program is an ongoing program that is expected to continue through the GRC cycle.

This program will provide funding for the engineering, design, equipment procurement and installation of both protective relay and SCADA equipment within SDG&E's distribution substations as a means of replacing aging infrastructure which has reached its end of useful life. Aging infrastructure installed and/or replaced as a part of this program includes protective relays, controllers, RTUs, auxiliary equipment, and associated substation communication systems. Obsolete electro-mechanical relays and controls along with early-microprocessor equipment

comprise the majority of infrastructure replaced, as vintages in these categories are either end-of-life, have antiquated protective capabilities, or have little to no SCADA functionality.

Expected useful relay life depends on the type of relay and has been based on SDG&E's experiences and information on failure rates available in industry. Numerous electromechanical relays have served reliably for more than 50 years but offer limited features, have settings that can drift, and can fail silently without alarm notification to system control operators. Solid-state relays, referred to as "lost generation" relays, have a 20-year expected useful life and are being phased out at most electrical utilities. Solid-state relays have high failure rates and are known to experience false trips. Microprocessor relays are the currently preferred type of relay to install, but these potentially have a shorter (20 years) expected life than electromechanical relays and early generations have known operational issues.

The benefits of installing/upgrading SCADA equipment include faster faulted circuit identification, faster isolation of faulted electric distribution circuits, faster load restoration after system disturbances and improved system performance by mitigating electric system deficiencies. These SCADA system upgrades, including replacement of protective relays, result in reduced risk of unplanned failures, interruptions, and outages, along with minimizing the number of customers impacted by loss of electric service.

Additional information can be found in the capital workpapers. *See* Ex. SDGE-08-CWP, WP #152430 Distribution Protection & Control Modernization Program.

ii. Description of RAMP Mitigations

The Distribution Protection & Control Modernization Program mitigates reliability risks identified in the 2025 RAMP Report: Electric Infrastructure Integrity (EII) – C262 Distribution Substation SCADA Expansion. Accordingly, this workpaper in its entirety, aligns with a RAMP activity. By performing this activity, reliability risk is reduced by proactively replacing or installing protective relays and SCADA equipment in substations. The unit of measure changed from number of relays in RAMP to number of substations in the GRC. Costs and units are updated to reflect this change.

TABLE EG-35
RAMP and GRC Risk Control/Mitigation Activities - Capital

152430 – RAMP - Distribution Protection & Control Modernization Program				
ID	**Control/Mitigation Name**	**2025 RAMP 2028-2031 In 2024 $ (000s)**	**2028 GRC 2028-2031 In 2025 $ (000s)**	**Change ($000s)**
C262	Distribution Substation SCADA Expansion	4176	11783	7607

iii. Description of Selection and Prioritization of RAMP Risk Mitigations

SDG&E utilizes a structured equipment lifecycle assessment process to identify, select, and prioritize mitigation activities associated with the Distribution Protection & Control Modernization Program. This process is designed to proactively manage reliability risk associated with aging and obsolete protection and SCADA infrastructure while ensuring that investments are reasonable, justified, and aligned with the Company's risk tolerance and operational needs.

As part of this process, SDG&E applies a calculated Risk Index to protection assets within distribution substations. The Risk Index represents an indication of the relative risk posed by each protective relay if it is not replaced. The Risk Index is calculated as a weighted composite score derived from multiple criteria, including, but not limited to:

- Asset age,
- Technology type (e.g., electromechanical, solid-state, early-generation microprocessor),
- Observed and industry-informed failure rates,
- Availability of redundancy or backup protection, and
- Customer impact, including the number of customers affected and the potential duration of outages.

These criteria are evaluated holistically to reflect both the likelihood of asset failure and the consequence of that failure on system reliability and customer service. Based on the calculated Risk Index, protection assets and substations are prioritized for replacement, with higher-risk assets advanced for mitigation. This risk-based prioritization enables SDG&E to

focus investments on locations where replacement yields the greatest reliability benefit and risk reduction.

The equipment lifecycle assessment supports a 20- to 25-year moving replacement window, which accounts for expected mean time between failures (MTBF), technology obsolescence, manufacturer end-of-life considerations, and the calculated Risk Index. This approach enables aging infrastructure to be addressed before failure risk materially increases, while also avoiding premature replacement of assets that continue to perform reliably and meet operational requirements.

In selecting mitigation activities, SDG&E first considers compliance-driven and mandated requirements, including obligations established by CPUC directives and applicable reliability standards. Beyond compliance, SDG&E evaluates a range of technical and operational factors, including system constraints, constructability, outage coordination requirements, and the extent to which a proposed mitigation improves protection dependability, security, and SCADA visibility.

While cost effectiveness is considered as part of the evaluation, it is distinguished from the benefit-cost ratio (BCR) framework discussed in the RDF Integration testimony (Ex. SCG-02B/SDGE-02B). In this context, cost effectiveness refers to whether the mitigation provides a reasonable and proportional reduction in identified reliability risk over the asset's remaining life, rather than an economic optimization exercise. Mitigations that are excessively costly relative to the incremental risk reduction achieved, or that would result in extreme disruption to operations for limited reliability benefit, may be deferred or excluded from the program.

From the customer perspective, these investments are justified by their contribution to improved reliability outcomes, including reduced frequency and duration of outages, faster fault identification and isolation, and improved restoration performance following system disturbances. Projects are prioritized to maximize customer benefit by targeting substations and protection schemes where failures would result in the greatest customer impact or prolonged restoration times.

Activities implemented under this program are also intended to prevent the growth of future risk. By replacing obsolete protection and SCADA equipment before end-of-life conditions are reached, SDG&E reduces exposure to increasing failure rates, loss of vendor support, limited spare parts availability, and diminished operational visibility. The calculated

Risk Index methodology establishes that multiple contributing factors are assessed and collectively considered, allowing SDG&E to achieve an appropriate balance between investment value and acceptable risk tolerance while establishing a modernized protection baseline for the future.

iv. Forecast Method

The forecast method developed for this cost category is zero-based. While historic-based data (e.g., an applicable unit cost) may be utilized to develop the forecast, use of historic total dollars spent is not applicable for this item. The forecast is based on cost estimates developed from the scope of work for the project. SDG&E develops cost estimates based on construction labor rates, material costs, contract pricing/quotes, and other project specific details, as applicable. This program selects specific projects to be addressed each year. Historical data is used for applicable unit costs along with the specific scope of the projects selected to develop forecasts.

v. Cost Drivers

The underlying cost drivers for this capital project relate to the relays and relay panels required to perform this scope of work. This program assesses aging infrastructure and outdated technology that is end of life, and provides for the communication, observation, and control of the electric system to be maintained effectively, which drive the cost necessity for replacement of the capital investments over the lifecycle of the products.

k. 992820 – RAMP – Distribution Substation Proactive Asset Program

i. Description

RAMP – Distribution Substation Proactive Asset Program is an ongoing program that is expected to continue through the GRC cycle. The specific details regarding *RAMP – Distribution Substation Proactive Asset Program* are found in my capital workpapers. *See* Ex. SDGE-08-CWP, WP #992820 – RAMP – Distribution Substation Proactive Asset Program.

This program provides funding to improve safety and reliability related to the replacement of obsolete and problematic substation equipment, such as disconnects, batteries, and enhanced grounding. The Substation Equipment Assessment (SEA) Team will develop alternatives to replace or remove obsolete and problematic equipment and strategically prioritize projects. A condition assessment process, evaluation criteria, and prioritization analysis have

been created using probability and risk analysis, financial impacts, and present value analysis to evaluate projects. Equipment that is truly obsolete, such as equipment that cannot be maintained (due to no available spare parts), or that poses a safety risk will be replaced under this program.

ii. Description of RAMP Mitigations

The Distribution Substation Proactive Asset Program mitigates safety risks identified in the 2025 RAMP Report: Electric Infrastructure Integrity (EII) – C226 Distribution Substation Proactive Asset Program. By performing this activity, safety and reliability risk is reduced by replacing obsolete and problematic substation equipment. Due to the broad range of work activities included in this category, it is not feasible to determine an exact cost upfront; therefore, an average based on three years of historical data was applied across years which led to a cost variance between GRC and RAMP.

TABLE EG-36
RAMP and GRC Risk Control/Mitigation Activities - Capital

992820 – RAMP – Distribution Substation Proactive Asset Program				
ID	**Control/Mitigation Name**	**2025 RAMP 2028-2031 In 2024 $ (000s)**	**2028 GRC 2028-2031 In 2025 $ (000s)**	**Change ($000s)**
C226	Distribution Substation Proactive Asset Program	11646	6701	(4945)

iii. Description of Selection and Prioritization of RAMP Risk Mitigations

The purpose of the Distribution Substation Proactive Asset Program is to address the reliability risk associated with equipment failures by focusing on replacing substation equipment such as disconnects and batteries prior to failure. The objective is to replace assets as close to the end of their useful life as practicable, while avoiding in service failures that would adversely affect system reliability. Mitigations are selected for projects through the SEA team analysis and prioritization. From a customer perspective, these investments are warranted because they reduce the likelihood of equipment failures, support reliable grid operations, and avoid the higher safety, reliability, and financial consequences associated with unplanned substation outages.

iv. Forecast Method

The forecast method developed for this cost category is a three-year average based on historical spend. This is the most appropriate methodology, as workload can vary from year to year. The three-year average levels out the peaks and valleys in this program over a longer period of time to forecast the necessary level of funding for the work that falls within this program. The three-year historical average is being used as the costs reflected in more recent years are a closer reflection of future costs due to ongoing increases in labor and material costs.

v. Cost Drivers

The underlying cost drivers for this program relate to services required to replace aging infrastructure, improve system reliability, improve system restoration, and mitigate distribution system deficiencies.

G. Transmission / FERC Driven Projects

TABLE EG-37
Capital Expenditures Summary of Costs

G. Transmission / FERC Driven Projects (In 2025 $)							
	2025 Adjusted-Recorded (000s)	Est. 2026 (000s)	Est. 2027 (000s)	Est. 2028 (000s)	Est. 2029 (000s)	Est. 2030 (000s)	Est. 2031 (000s)
Total	7,144	6,007	4,990	6,683	7,778	7,323	5,118

1. Category Introduction

This category covers transmission projects with a distribution component. Many transmission lines have distribution underbuild facilities, such as a 69kV transmission line with a 12kV distribution circuit on a second level below or under the transmission infrastructure. When transmission capital work is done on a transmission line, the distribution facilities often need to be modified or replaced in conjunction with the transmission work. The same scenario applies to substations containing distribution facilities. When a new transmission substation is being built, or an existing transmission substation is being modified, there is often a distribution component in the work.

The FERC costs for the transmission portion of the work are recovered through the FERC ratemaking process. The distribution component of transmission projects is included in the overall request within this GRC. For most of the FERC projects with CPUC components, the

percentage of CPUC costs is low. Additional details including description, forecast method, and cost drivers can be found in each workpaper below.

2. 071440 – Fiber Optic Relay Protect & Telecom Program

a. Description

Fiber Optic Relay Protect & Telecom Program is an ongoing program that is expected to continue through the GRC cycle.

The forecasted costs provide funding for the distribution component of this transmission/FERC driven program. This funding is for the upgrade and expansion of SDG&E's fiber optic communication system for system protection control and automation of transmission and distribution lines. The fiber optic infrastructure build continues to increase quality of service to support safety and reliability to all operational equipment.

Additional information can be found in the capital workpapers. *See* Ex. SDGE-08-CWP, WP #071440 Fiber Optic Relay Protect & Telecom Program.

b. Forecast Method

The forecast method developed for this cost category is zero-based. While historic-based data (e.g., an applicable unit cost) may be utilized to develop the forecast, use of historic total dollars spent is not applicable for this item. The forecast is based on cost estimates developed from the scope of work for the project. SDG&E develops cost estimates based on construction labor rates, material costs, contract pricing/quotes, and other project specific details, as applicable. This program selects specific projects to be addressed each year. Historical data is used for applicable unit costs along with the specific scope of the projects selected to develop forecasts.

c. Cost Drivers

The underlying cost drivers of this program are associated labor and non-labor components (materials and construction) to install all dielectric self-supporting fiber in order to maintain and enhance reliability by installing critical highspeed communications infrastructure. Documentation of these cost drivers are included as supplemental workpapers. Costs vary based on specific commodities and manufacturing factors of the cable, structures, or structural attachments required to install or replace the cable, qualified labor required for the installation, and site-specific environmental, permitting, or construction means and methods. At times, the

analysis performed on the assets needed to support the installation of cable will also uncover structural need to upgrade or replace the structures to safely install the cable.

3. 201260 – Transmission Corrective Maintenance Program

a. Description

The Transmission Corrective Maintenance Program is an ongoing program that is expected to continue through the GRC cycle.

This program provides funding for the forecasted distribution component of electric transmission line compliance projects in the non-HFTD, complying with the safety and reliability requirements of GO 95, AB 1890, AB 1017, NERC, and CAISO maintenance requirements. This program provides funds for the replacement of poles, insulators, conductor, and other electric infrastructure when compliance issues are identified.

Additional information can be found in the capital workpapers. *See* Ex. SDGE-08-CWP, WP #201260 Transmission Corrective Maintenance Program.

b. Forecast Method

The forecast method developed for this cost category is zero-based. While historic-based data (e.g., an applicable unit cost) may be utilized to develop the forecast, use of historic total dollars spent is not applicable for this item. The forecast is based on cost estimates developed from the scope of work for the project. SDG&E develops cost estimates based on construction labor rates, material costs, contract pricing/quotes, and other project specific details, as applicable. This program selects specific projects to be addressed each year. Historical data is used for applicable unit costs along with the specific scope of the projects selected to develop forecasts.

c. Cost Drivers

The underlying cost drivers for this capital program relate to labor and non-labor components (materials and construction) to replace transmission poles and associated distribution underbuild in order to comply with SDG&E's obligation to serve and to meet safety requirements set by applicable General Orders and other regulations, as detailed above. Costs vary based on the material and equipment needed to remediate compliance issues, the cost of the qualified labor resources to perform the work, and site-specific environmental, permitting, or construction means and methods.

4. 211350 – Electric Transmission Small Reliability Jobs (Non-WMP) Program

a. Description

The Electric Transmission Small Reliability Jobs (Non-WMP) Program is an ongoing program that is expected to continue through the GRC cycle.

This program provides funds for the replacement of poles, insulators, conductor, and other electric infrastructure when reliability issues are identified. These projects comply with SDG&E's obligation to serve and meet safety and reliability requirements.

Additional information can be found in the capital workpapers. *See* Ex. SDGE-08-CWP, WP #211350 Electric Transmission Small Reliability Jobs (Non-WMP) Program.

b. Forecast Method

The forecast method developed for this cost category is zero-based. While historic-based data (e.g., an applicable unit cost) may be utilized to develop the forecast, use of historic total dollars spent is not applicable for this item. The forecast is based on cost estimates developed from the scope of work for the project. SDG&E develops cost estimates based on construction labor rates, material costs, contract pricing/quotes, and other project specific details, as applicable. This program selects specific projects to be addressed each year. Historical data is used for applicable unit costs along with the specific scope of the projects selected to develop forecasts.

c. Cost Drivers

The underlying cost drivers of this program relate to labor and non-labor (material and construction) to replace transmission poles and associated distribution underbuild to improve system reliability. Documentation of these cost drivers are included as supplemental workpapers. Costs vary based on the material and equipment, qualified labor resources to perform the work, and site-specific environmental, permitting, or construction means and methods.

5. 251480 - CAISO TPP Projects

a. Description

CAISO Transmission Planning Process (TPP) projects are system upgrades or new facilities identified and approved through the California Independent System Operator’s annual Transmission Planning Process so that the electric grid continues to meet reliability standards

and state energy policy objectives over the long term. Through this process, CAISO evaluates future system conditions using resource portfolios developed by the CPUC and demand forecasts from the California Energy Commission and determines whether additional transmission infrastructure is needed to reliably serve load, accommodate planned generation and storage resources, and support compliance with greenhouse gas reduction and clean energy mandates.

Currently, SDG&E has one project within its CAISO TPP portfolio that requires CPUC base funding, planning to build and place in service Valley Center Improvement Project by the Test Year. The Valley Center System Improvement project is a reliability transmission solution that will address several thermal overloads in the 69kV transmission system around the Valley Center area due to the charging and discharging of Valley Center energy storage. The current project scope outlines the installation of a new 5-mile double circuit 69kV line with 136 MVA normal rating, reconductor an underground section of the existing TL99901 & TL689E with 136 MVA normal rating, and de-energizing TL681A. Projects will install distribution underbuild as needed.

The specific details regarding CAISO TPP Projects are found in my capital workpapers. See Ex. SDGE-08-CWP, WP #251480.

These forecasted capital expenditures support reliability. This project is a reliability driven project that mitigates potential overloads in the 69kV transmission system around Valley Center area due to the charging and discharging of Valley Center energy storage.

b. Forecast Method

The forecast method developed for this cost category is zero-based. While historic based data (e.g., applicable unit cost) may be utilized to develop the forecast, use of historic total dollars spent is not applicable for this item. The forecast is based on cost estimates developed from the scope of work for the project. SDG&E develops cost estimates based on construction labor rates, material costs, contract pricing/quotes, and other project specific details, as applicable.

c. Cost Drivers

The underlying cost driver(s) for this capital project relate to engineering, design, and long lead procurement, and the initial stages of construction for the distribution underbuild scope. Approximately 90% of these expenditures are allocated to planned construction work. Given the project's early stage and the limited information currently available, the cost reflects

inherent uncertainties associated with permitting requirements, route definition, and potential constructability challenges. Additional unknowns include land acquisition requirements, which will vary depending on the final design.

6. 211560 - Generation Interconnection Projects

a. Description

SDG&E plans to build and place in service Generation Interconnection Projects by the Test Year. This workpaper tracks the generation interconnection projects SDG&E plans to build and place in service. These projects are approved by CAISO through Large Generator Interconnection Agreements (LGIA). The specific details regarding Generation Interconnection Projects are found in my capital workpapers. *See* Ex. SDGE-08-CWP, WP #211560.

These forecasted capital expenditures support the construction and energization of generation interconnection projects approved and authorized by the CAISO through executed LGIAs; specifically, the forecasted costs are specific to the relocation of distribution assets tied to the Q1806 Captiva Energy Storage project.

b. Forecast Method

The forecast method developed for this cost category is zero-based. While historic based data (e.g., applicable unit cost) may be utilized to develop the forecast, use of historic total dollars spent is not applicable for this item. The forecast is based on cost estimates developed from the scope of work for the project. SDG&E develops cost estimates based on construction labor rates, material costs, contract pricing/quotes, and other project specific details, as applicable.

c. Cost Drivers

The underlying cost drivers for this capital project relate to the engineering, design, long lead procurement and construction necessary for timely relocation of distribution assets tied to the Q1806 Captiva Energy Storage project. The major cost drivers for the project include removal of approximately 0.4 miles of distribution overhead line and installation of approximately 0.2 miles of distribution overhead line as part of the "Distribution Upgrades" tied to the Q1806 Captiva Energy Storage transmission generation interconnection project.

These costs and scope are defined in the LGIA between CAISO, SDG&E, and the interconnection customer for the Q1806 Captiva Energy Storage project (executed in May 2022). The costs are stable as the scope is defined in the LGIA for the Q1806 Captiva Energy Storage

project. The overall project timeline is driven by the generation interconnection customer. Changes in future forecasts could be driven by escalation in cost to complete scope (timing driven by overall interconnection customer schedule) or changes in scope, which would be captured in an amendment to the LGIA. *See* SDG&E-CWP-211560.

H. Clean Energy

TABLE EG-38
Capital Expenditures Summary of Costs

H. Clean Energy (In 2025 $)							
	2025 Adjusted-Recorded (000s)	**Est. 2026 (000s)**	**Est. 2027 (000s)**	**Est. 2028 (000s)**	**Est. 2029 (000s)**	**Est. 2030 (000s)**	**Est. 2031 (000s)**
Non-Collectible	34	1,018	826	904	938	1,037	487
Collectible	0	113	113	113	113	113	113
Total	**34**	**1,131**	**939**	**1,017**	**1,051**	**1,150**	**600**

1. Category Introduction

The specific details regarding Clean Energy are found in my capital workpapers. *See* Ex. SDG&E-08-CWP, at section H. Clean Energy.

In the Test Year 2024 General Rate Case, SDG&E presented a broad Clean Energy Innovations proposal. In its final decision, the Commission substantially disallowed Clean Energy activities from base rate recovery, finding that many proposed programs were more appropriately addressed outside the GRC framework.

In response to the Commission's guidance, SDG&E has significantly narrowed its Clean Energy request in this 2028 General Rate Case. SDG&E seeks base rate recovery for Sustainable Communities Program (SCP) Removal, an activity directly tied to core electric distribution responsibilities and necessary to safely and responsibly remove legacy clean energy infrastructure from communities. This category also includes the work paper for PYD Pilot Relocations/Removal program with costs fully collectable from the requestor.

All other clean energy initiatives are excluded from this GRC and will be pursued, as appropriate, through separate filings or Commission-directed proceedings. This focused approach supports regulatory clarity and prioritizes customer affordability.

2. 202810 – Sustainable Communities Removal

a. Description

Sustainable Communities Program Removal is an ongoing program that is expected to remove SDG&E-owned solar photovoltaic (PV) arrays and small batteries on customer sites throughout San Diego County through 2031. The identified customer sites, mainly municipal buildings, schools, non-profit and commercial buildings, are scheduled for their lease terms to end and will exercise their right to remove the PV arrays and/or battery storage. Additionally, identified customer sites, upon termination of their lease terms will exercise their right to purchase the on-site asset(s). SDG&E has and will continue to submit a Public Utilities Code Section 851 and GO 173 requesting authorization to sell SCP asset(s) to interested customers.[19]

The specific details regarding the Sustainable Community Removal project are found in my capital workpapers. *See* Ex. SDGE-08-CWP, WP202810.

b. Forecast Method

The forecasted method developed for this cost category is zero-based. The forecast is based on cost estimates that were developed based on the specific scope of work for the project. Specifically, the scope of work has been identified to consist of the following items for each site location: decommission and lockout of the PV system, removal of the PV panels and inverters, removal of the PV related conduit systems as well as racking off the roof, capping of the AC feeder to the inverter, and the transportation of the discarded materials to a proper recycling facility.

c. Cost Drivers

The underlying cost drivers for this capital project relate to the number of customer sites that are identified for decommissioning at the end of their respective lease and the above-identified costs necessary to decommission each PV array. Documentation of these cost drivers are included as supplemental capital workpapers. *See* Ex. SDGE-CWP-20281A.

[19] SDG&E AL 4829-E, dated April 8, 2026.

3. 232530 – PYD Pilot Relocations and Removal

a. Description

Power Your Drive Removal is an ongoing program that is expected to continue through the GRC cycle.

This program supports customer-requested relocation or removal of utility-owned EV charging infrastructure installed under the Power Your Drive programs and other approved EV infrastructure projects located on customer property. Work includes design, engineering, permitting, and associated removal or termination activities required to discontinue or relocate existing facilities in accordance with the Power Your Drive program terms and conditions, as set forth in customer agreements.

Additional details are provided in my capital workpapers. *See* Ex. SDGE-08-CWP-232530.

b. Forecast Method

The forecast method developed for this cost category is a three-year average based on historical spend. This is the most appropriate methodology, as workload is driven by external factors, including customer requests, and can vary from year to year. The three-year average smooths year-to-year fluctuations over an appropriate period to forecast expected costs for this program.

c. Cost Drivers

The underlying cost drivers for this program relate to labor and non-labor components, including design, engineering, permitting, and removal or termination costs, required to perform customer-requested removal or relocation of utility-owned EV charging infrastructure located on customer property.

I. Overhead Pools

TABLE EG-39
Capital Expenditures Summary of Costs

I. Overhead Pools (In 2025 $)							
	2025 Adjusted-Recorded (000s)	Est. 2026 (000s)	Est. 2027 (000s)	Est. 2028 (000s)	Est. 2029 (000s)	Est. 2030 (000s)	Est. 2031 (000s)
Total	225,790	242,229	238,390	282,783	306,321	282,203	278,202

1. Category Introduction

The Overhead Pools (OH Pools) reflect the costs that originate from divisions supporting the electric distribution portfolio. Activities recorded to overhead pools include engineering capacity studies, reliability analysis, preliminary design work, and project management (among others). SDG&E uses the overhead pools method because it is an efficient way of charging these types of activities compared to direct charging. These activities are referred to as "pooled costs," which are functionalized and allocated to capital projects as overheads during construction. There are four workgroups that make up OH Pools within my testimony: (a) Local Engineering – Electric Distribution Pool; (b) Local Engineering – Substation Pool; (c) Department Overhead Pool Electric; and (d) Contract Administration (CA) Pool – Electric. These four pools collect costs performed by various functions including planners, designers, engineers, support personnel, managers, supervisors, dispatchers, field employees, clerical employees, and contract administrators that support electric distribution and wildfire mitigation capital.

SDG&E's pool accounting practices apply accounting concepts and procedures outlined in the Code of Federal Regulations (CFR) for Overhead construction costs.[20] In prior decisions, the Commission recognized the relationship between OH pool costs and level of capital expenditures. In the TY 2019 and TY 2024 GRC, the Commission affirmed SDG&E's OH Pools procedure for charging costs to capital projects. In conjunction with this affirmation, the Commission concluded that SDG&E should reduce its forecast of OH Pools based on the amount of capital projects that are being authorized as opposed to its forecasts. For example, if 80 percent of SDG&E's capital projects requested were authorized, then the forecast for Overhead Pools should also be reduced to 80 percent of the original forecast.[21]

Accordingly, the Commission directed SDG&E to develop a more comprehensive and accurate Overhead Pools model and incorporate that improved model into future versions of the RO models to reduce the need for enhanced calculations. For the 2028 GRC, SDG&E incorporated a simplified modeling approach into the RO model that directly links the overhead

[20] 18 CFR § 101, Electric Plant Instructions at Paragraph 4 (Overhead Construction Costs).

[21] D.19-09-051 at 287.

forecasts to the authorized capital.[22] As such, an increase or decrease to SDG&E's capital request will result in a corresponding increase/decrease to projected pool costs.

The TY 2019 GRC established one-way balancing account treatment to the funding authorized for OH Pools (Overhead Pools Balancing Account, OPBA). In the TY 2024 GRC, the Commission reaffirmed the one-way balancing account treatment. The stated reason why the Commission imposed one-way balancing account treatment on OH Pools was to ensure that central activities related to specific capital projects that might be cancelled or postponed are not reassigned to other areas.[23] In this TY 2028 GRC, SDG&E requests that the Commission again authorize its OH Pools forecasts as reasonable, but without balancing account treatment. SDG&E is requesting that the OPBA be closed, as requested in SDG&E's Regulatory Accounts testimony (Ex. SDGE-26). As detailed below, the balancing account treatment for the OH Pools should be removed for the following reasons: (a) SDG&E has robust accounting controls, policies and procedures in place that prevent costs associated with cancelled projects from being reassigned to active projects, ensuring that only costs supporting completed and useful plant are capitalized; (b) balancing account treatment unduly constrains SDG&E's ability to responsively and efficiently manage capital projects; and (c) to better align SDG&E with peer utilities.

a. Accounting for overhead pools and costs associated with cancelled project costs

D.19-09-051 established a one-way balancing account to track the spending of authorized funding in the Overhead Pools so that overhead costs for cancelled or postponed projects are not re-assigned to other areas. One-way balancing account treatment is unnecessary, however, because SDG&E maintains accounting policies and procedures that address cancelled or postponed project costs so that they are not reassigned to other areas as noted in the Rate Base testimony (Ex. SDGE-28). SDG&E's accounting policies and procedures are independent from the balancing treatment. In other words, the one-way balancing treatment does not by itself fulfill the stated purpose – ensuring costs for cancelled or postponed projects are not re-assigned to other areas.

[22] Refer to Ex. SDGE-32 (Summary of Earnings), Section V – RO Model Enhancements.

[23] D.19-09-051 at 287; 2024 GRC Decision at 417-18.

Indirect costs (also referred to as overheads) are accumulated in overhead pools and subsequently allocated to capital projects during the construction period. If a construction project is cancelled or abandoned, all construction costs incurred, including overheads previously capitalized to the project from overhead pools, are expensed. This methodology also applies to engineering costs recorded to FERC Account 183 (Preliminary Survey & Engineering) when construction is not pursued. Both direct and indirect costs are written off or expensed, and indirect costs previously capitalized are not returned to overhead pools for allocation to other projects.

SDG&E's overhead pools are comparable in nature to overhead costs included in the capital forecasts of other California utilities that the Commission has previously accepted; the primary distinction is the manner in which those costs are presented in the filing. For example, SCE's direct capital expenditure forecasts include divisional overhead costs that encompass similar administrative and professional activities supporting capital projects prior to and during construction. SDG&E separately identifies these similar project-enabling costs through its overhead pools, but they nonetheless remain integral components of the total costs associated with planning, executing, and completing capital projects.

Additionally, costs charged to overhead pools are not presumed to be entirely capital-related. SDG&E conducts periodic time-and-activity studies to determine the appropriate allocation of labor and related costs between capital and non-capital functions, based on the actual activities and projects supported by the employees and contractors charging to the pools. As a result, a portion of overhead costs is allocated to O&M or functionalized accordingly and excluded from the capital request. This allocation methodology further mitigates concerns that OH pool costs could be inappropriately reassigned or shifted among cost categories.

Given the accounting practices and controls already in place, one-way balancing account treatment alone does not ensure that costs related to cancelled or postponed projects are accounted for appropriately, which was the stated purpose for implementation. Rather, the balancing account treatment caps portions of the overall project lifecycle costs. For example, the OPBA inherently limits funding for engineering activities that are critical at the beginning stages of a project. This is an unintended consequence of one-way balancing of these costs. Accordingly, elimination of one-way balancing for overhead pools would preserve existing

accounting practices that prevent re-assignment of costs while restoring the flexibility necessary to manage capital projects prudently and consistent with Commission precedent.

b. One-Way Balancing Unduly Constrains SDG&E's Ability to Manage its Capital Portfolio

Overhead pool costs are subject to the same management controls and authorization discipline as direct capital costs, such that—provided overall capital spending remains within Commission-authorized levels—imposing one-way balancing or additional constraints on indirect overhead pools is neither necessary nor reasonable. The Commission approves capital expenditures as forecasted budgets by functional area, not as binding line-item authorizations. This principle underlies the CPUC's long-standing acceptance of SDG&E's ability to redirect capital toward higher-risk areas or emergent infrastructure needs as conditions evolve. However, the one-way balancing treatment limits SDG&E's ability to manage its electric distribution portfolio holistically and to shift resources in response to real-time system, customer, and compliance demands.

The OPBA effectively imposes a cap on discrete components of a project lifecycle (e.g., preliminary design, construction crew dispatching), even though the obligation to execute and complete authorized capital projects remains unchanged. As a result, SDG&E bears the risk of costs above the cap and, upon reaching that cap, faces constraints that can limit the timely advancement of work across the electric distribution capital portfolio.

For example, as discussed in Customer Growth testimony, customer-driven New Business projects and related upstream capacity upgrades present unique planning challenges due to their volume-driven and customer-timing-dependent nature. Recent growth in New Business activity required SDG&E to establish and scale a dedicated contract workforce to meet high volumes of customer service requests and work orders. In 2024, SDG&E implemented new processes and engaged additional contractors to improve customer service performance and to align with energization timelines later formalized by the CPUC through the Energization OIR. These actions were necessary to comply with evolving regulatory expectations and customer demand, yet the associated costs were not fully forecasted in the 2024 GRC. Under a one-way balancing framework, SDG&E bears the risk of these compliance-driven investments, despite having limited ability to defer or avoid them. This experience illustrates why elimination of

one-way balancing is necessary to avoid penalizing SDG&E for proactively meeting customer needs and Commission-mandated requirements.

Additionally, the OPBA limits SDG&E's ability to manage its capital portfolio efficiently by imposing caps on discrete stages of a project lifecycle (e.g., preliminary design, construction crew dispatch), rather than evaluating performance at the portfolio or functional-area level consistent with CPUC authorization practice. Isolating specific activities solely for accounting purposes does not provide a measurable customer or system benefit, nor does it advance the Commission's original intent of prudent cost control.

For example, SDG&E may remain within its overall GRC-authorized capital limits while exceeding OPBA caps on certain project phases due to timing, sequencing, or execution requirements. In such cases, the OPBA does not signal overspending or imprudence, but instead constrains SDG&E's ability to prudently deploy authorized capital in the most effective manner.

c. Alignment with other CA utilities

As noted above, SDG&E's overhead pools are comparable in nature to overhead costs included in other California utilities' direct capital forecasts. For example, SCE's Direct Capital Expenditure forecasts include divisional overheads compromising similar administrative and professional functions that support capital projects both prior to and during construction. Subjecting SDG&E's overhead pools to one-way balancing would therefore impose undue and incremental constraints not applied to comparable peer utilities. Importantly, eliminating one-way balancing for overhead pools would better align SDG&E's treatment with the other CA utilities and broader Commission practice of portfolio-level accountability. The resulting constraints associated with one-way balancing account treatment of OH Pools impact key activities necessary to execute Commission-authorized capital projects, including construction project design development, permitting or rights of way coordination, construction personnel management, and other essential administrative functions.

Limiting funding for these functions through one-way balancing of overhead pools restricts SDG&E's ability to prudently and efficiently execute capital projects approved by the Commission. Accordingly, the continued application of one-way balancing to SDG&E's overhead pools reflects a regulatory constraint not imposed on other California utilities, despite the comparable nature of these costs and consistent portfolio-level oversight.

2. E09010 – Local Engineering Pool – ED Pool

a. Description

Local Engineering – ED Pool is an ongoing program that is expected to continue through the GRC cycle.

This workpaper provides funding for the Local Engineering – ED Pool, which consists of planners, designers, and engineers, and support personnel who research, analyze, and design the facilities needed to serve customers. These persons address the engineering needs for new services, facilities relocations, overhead-to-underground conversions, capacity, and safety & reliability projects. This pool includes the costs that will be allocated to electric distribution capital activities. Typical activities included in this account are:

- Communicating with internal and external customers to collect information necessary to prepare a work order package for construction;
- Performing load and sizing studies to determine the design characteristics to apply to a construction project;
- Developing a design for the construction project that meets the customer needs for service and the overall system design requirements. This design identifies the material, labor and equipment requirements necessary to complete the construction project;
- Coordination of the permitting and rights of way requirements;
- Preparing cost estimates per the line extension rules and presenting these estimates to the internal or external customer for their approval;
- Preparing contracts and processing fees for new business construction projects;
- Preparing work order packages and transmitting them to the internal and external groups; and
- Project management and oversight functions necessary to coordinate engineering, permitting, and construction activities associated with electric distribution capital projects.

Local Engineering activities see a project from inception to completion. Due to the volume of capital work that takes place on the distribution system, the most effective and efficient way to allocate the planning and engineering activities is using the overhead pools. It is

not feasible to charge directly for each electric distribution job due to the tremendous volume of work orders.

Additional information can be found in the capital workpapers. See Ex. SDGE-11-CWP-R at section E09010 – Local Engineering Pool – ED Pool.

b. Forecast Method

The forecast method developed for this cost category is zero-based. While historic-based data was utilized to develop the forecast, use of historic dollars spent or historical averages alone does not account for the pool's relationship to capital. The forecast for this pool is a function of the capital work directly supported by the activities in the pool. Historically, as the capital base has expanded or contracted, the pool activity has followed accordingly. To determine the ratio between the capital base and associated overhead pools, SDG&E applied a three-year average historical ratio of pool costs to eligible capital base. That ratio is then used to estimate the projected pool forecast for each year based on the requested capital base.

The capital base is directly aligned with the capital requested in this filing for projects directly supported by the activities in the pool. Accordingly, changes to capital requests will result in proportional changes to the pool forecast. Additionally, this method reduces the need for enhanced calculations and incorporates the pool forecast into the RO model as directed in the 2024 GRC Decision. This is the most appropriate forecasting methodology as it aligns the pool activity with the direct costs that drive it.

c. Cost Drivers

The underlying cost driver in the growth of expenditures for this pool is an increasing capital program, along with industry trends increasing the use of detailed engineering studies or designs, instead of relying solely on standards.

3. E09040 – Local Engineering Pool – Substation Pool

a. Description

Local Engineering – Substation Pool is an ongoing program that is expected to continue through the GRC cycle.

This workpaper provides funding for the Local Engineering – Substation Pool. This pool consists of planners, designers, engineers and support personnel who research, analyze, and design the facilities needed to serve customers. These persons address the engineering needs for substation projects. These persons also address the interaction with internal and external

customers in preparing a work order package for construction. This pool includes the costs that will be allocated to electric distribution and transmission substation capital activities. Typical activities included in this account are:

- Communicating with internal and external customers to collect information necessary to prepare a work order package for construction;
- Performing load and sizing studies to determine the design characteristics to apply to a construction project;
- Developing a design for the construction project that meets the customer needs for service and the overall system design requirements. This design identifies the material, labor and equipment requirements necessary to complete the construction project;
- Coordinating the permitting and rights of way requirements;
- Preparing cost estimates according to the line extension rules and presenting these estimates to the internal or external customer for their approval;
- Preparing contracts and processing fees for new business construction projects; and
- Preparing work order packages and transmitting them to the internal and external groups.

Local Engineering activities are required to see a project from inception to completion. Due to the volume of capital work that takes place on the distribution system, the most effective and efficient way to allocate the planning and engineering activities is using the overhead pools. It is not feasible to charge directly for each electric distribution/substation job due to the tremendous volume of work orders. In the case of the Local Engineering – Substation Pool, only the related substation activities are charged to this project.

Additional information can be found in the capital workpapers. See Ex. SDGE-11-CWP-R at section E09040 – Local Engineering Pool – Substation Pool Elec.

b. Forecast Method

The forecast method developed for this cost category is zero-based. While historic-based data was utilized to develop the forecast, use of historic dollars spent or historical averages alone does not account for the pool's relationship to capital. The forecast for this pool is a function of the capital work directly supported by the activities in the pool. Historically, as the capital base

has expanded or contracted, the pool activity has followed accordingly. To determine the ratio between the capital base and associated overhead pools, SDG&E applied a three-year average historical ratio of pool costs to eligible capital base. That ratio is then used to estimate the projected pool forecast for each year based on the requested capital base.

The capital base is directly aligned with the capital requested in this filing for projects directly supported by the activities in the pool. Accordingly, changes to capital requests will result in proportional changes to the pool forecast. Additionally, this method reduces the need for enhanced calculations and incorporates the pool forecast into the RO model as requested in the 2024 GRC Decision. This is the most appropriate forecasting methodology as it aligns the pool activity with the direct costs that drive it.

c. Cost Drivers

The underlying cost driver for the growth of expenditures for this pool is an increasing capital program, along with industry trends increasing the use of detailed engineering studies or designs, instead of relying solely on standards.

4. E09050 – Department Overhead Pool – Electric

a. Description

Department Overhead Pool – Electric is an ongoing program that is expected to continue through the GRC cycle.

This workpaper provides funding for Department Overheads. Costs included in this workpaper are for supervision and administration of crews in the SDG&E Construction and Operation (C&O) districts. Department Overhead is charged for expenditures that are not attributable to one project, but benefit many projects, or the C&O districts. C&O managers, construction managers, construction supervisors, dispatchers, operations assistants and other clerical C&O employees charge to this account.

Construction field employees charge this account when meeting on multiple projects. The non-labor piece consists of administrative expenditures, such as office supplies, telephone expenses, mileage, employee uniforms and professional dues. This pool includes the costs that will be allocated to distribution electric capital activities. Typical activities included in this account are:

- Management and supervision of construction personnel;
- Scheduling, material ordering, and dispatching for construction personnel; and

- Project coordination and oversight functions necessary to manage construction activities across multiple electric distribution capital projects.

Additional information can be found in the capital workpapers. See Ex. SDGE-11-CWP-R at section E09050 – Department Overhead Pool – Elec.

b. Forecast Method

The forecast method developed for this cost category is zero-based. While historic-based data was utilized to develop the forecast, use of historic dollars spent or historical averages alone does not account for the pool's relationship to capital. The forecast for this pool is a function of the capital work directly supported by the activities in the pool. Historically, as the capital base has expanded or contracted, the pool activity has followed accordingly. To determine the ratio between the capital base and associated overhead pools, SDG&E applied a three-year average historical ratio of pool costs to eligible capital base. That ratio is then used to estimate the projected pool forecast for each year based on the requested capital base.

The capital base is directly aligned with the capital requested in this filing for projects directly supported by the activities in the pool. Accordingly, changes to capital requests will result in proportional changes to the pool forecast. Additionally, this method reduces the need for enhanced calculations and incorporates the pool forecast into the RO model as requested in the 2024 GRC Decision. This is the most appropriate forecasting methodology as it aligns the pool activity with the direct costs that drive it.

c. Cost Drivers

The underlying cost drivers in the Department Overhead Pool align with the costs in the other capital categories.

5. E09060 – Contract Administration Pool – Electric

a. Description

Contract Administration (CA) Pool – Electric is an ongoing program that is expected to continue through the GRC cycle.

This workpaper provides funding for the CA Pool and consists of those expenditures necessary for the administration of projects that are performed by contractors at SDG&E. The expenditures to this pool consist of labor for CA, Field Construction Advisors and support personnel, as well as the associated non-labor support costs such as office and field supplies.

This pool includes the costs that will be allocated to contracted work. Typical activities included in this account are:

- Working with contractors to develop fixed price bids for construction projects;
- Overseeing the contractor work to remove obstacles and verify work is completed and complies with company standards;
- Approving contractor invoices for completed work; and
- Developing and administering contract units for unit priced contracts.

The CA Pool consists of those expenditures necessary for the administration of projects that are performed by contractors for SDG&E. Due to the volume of capital work that takes place on the electric distribution system, the most effective and efficient way to allocate the contract administration costs is using the CA Pool. It is not feasible to charge directly for each electric distribution job due to the tremendous volume of work orders.

Additional information can be found in the capital workpapers. See Ex. SDGE-11-CWP-R at section E09060 – Contract Administration Pool.

b. Forecast Method

The forecast method developed for this cost category is zero-based. While historic-based data was utilized to develop the forecast, use of historic dollars spent or historical averages alone does not account for the pool's relationship to capital. The forecast for this pool is a function of the capital work directly supported by the activities in the pool. Historically, as the capital base has expanded or contracted, the pool activity has followed accordingly. To determine the ratio between the capital base and associated overhead pools, SDG&E applied a three-year average historical ratio of pool costs to eligible capital base. That ratio is then used to estimate the projected pool forecast for each year based on the requested capital base.

The capital base is directly aligned with the capital requested in this filing for projects directly supported by the activities in the pool. Accordingly, changes to capital requests will result in proportional changes to the pool forecast. Additionally, this method reduces the need for enhanced calculations and incorporates the pool forecast into the RO model as requested in the 2024 GRC Decision. This is the most appropriate forecasting methodology as it aligns the pool activity with the direct costs that drive it.

c. Cost Drivers

The underlying cost drivers for this pool align with the cost drivers described in all other capital categories.

V. RISK ASSESSMENT AND MITIGATION PHASE (RAMP) INTEGRATION

A. GRC Risk Controls/Mitigations and Benefit Cost Ratios

As previously discussed, certain costs supported in this testimony are for Control/Mitigation activities described in SDG&E's May 15, 2025 RAMP Report[24] for activities designed to reduce risk. Specifically, the controls and mitigations in this testimony were included in: SDGE-Risk-05 Electric Infrastructure Integrity. As further reference, a roadmap matching controls and mitigations to both the 2025 RAMP and the TY 2028 GRC testimony is appended to Ex. SCG-02B/SDGE-02B. Table EG-40 below summarizes the Control/Mitigation BCRs based on the costs[25] in this testimony and estimated in the 2025 RAMP with the associated BCRs. Controls/Mitigations that are mandated by CPUC or other agencies are listed in bold in the table below and are listed in Table EG-42, providing the details regarding the respective mandates for each Control/Mitigation. Appendix C provides a GRC workpaper breakdown for the RAMP controls and mitigations sponsored in this testimony.

TABLE EG-40
Comparison of RAMP and GRC Risk Control/Mitigation –
Benefit Cost Ratios
Electric Distribution Capital

ID	Control/ Mitigation Name	2025 RAMP Direct, In 2024 $ 2028-2031			2028 GRC Direct, In 2025 $ 2028-2031		
		BCR Societal	BCR Hybrid	BCR WACC	BCR Societal	BCR Hybrid	BCR WACC
C201	Proactive Overhead Conductor Program	0.40	0.16	0.12	7.85	2.95	2.19
C202	Underground Cable Replacement Program (Proactive)	16.82	7.89	6.08	30.64	11.13	8.21
C206	Tee Modernization Program	8.59	3.36	2.52	13.10	4.23	3.07
C210	DOE Switch Replacement	5.83	2.78	2.10	26.73	9.54	7.01

[24] A.25-05-013, Application of SDG&E to Submit Its RAMP Report.

[25] Post-test year forecasts can be found in the detailed workpapers (see Ex. SDGE-33-WP-Post-Test Year Ratemaking).

C212	**GO165 Corrective Maintenance Program – Underground**	7.83	3.64	2.83	11.66	5.20	3.97
C226	Distribution Substation Proactive Asset Program	1.18	0.51	0.38	4.40	2.66	2.20
C234	4 kV Reliability Program	5.26	2.25	1.70	1.16	0.41	0.31
C236	Distribution Overhead Switch Replacement Program	113.84	46.55	34.37	100.65	37.80	28.04
C240	**Avian Protection Program**	0.98	0.39	0.30	1.35	0.51	0.38
C250 A	Substation Reliability for Distribution Components	-	-	-	2.09	0.95	0.74
C250 B	Substation Reliability for Distribution Components	0.30	0.13	0.10	0.29	0.13	0.10
C251	**GO165 Corrective Maintenance Program – Overhead**	3.02	1.12	0.94	1.47	0.66	0.50
C261	Power Quality Monitor Deployment and Replacement	182.85	129.21	108.78	92.97	66.14	56.14
C262	Distribution Substation SCADA Expansion	50.95	36.69	30.48	11.35	7.98	6.74
C263	Wireless Fault Indicator	136.22	98.61	81.47	30.30	21.12	17.89
C269	Distribution Circuit Reliability	86.15	41.06	31.12	21.26	7.72	5.69

B. Justification For Proposed Mitigations with BCRs <1

The RDF prescribes a methodology for calculation of Benefit Cost Ratios under three discount rates as detailed in the table above. Certain of these calculations result in a BCR that is less than one. SDG&E justifies the selection of these mitigations based on a thorough analysis of operational considerations. Details regarding the justification for each mitigation are provided in the table below and are compiled with all mitigations in SCG-02B-/SDGE-02B, RDF Integration testimony. A list of compliance drivers is shown in Table EG-42 below.

TABLE EG-41
Control BCR < 1 Justification

ID	Control Name	Justification
C234	4kV Reliability Program	The 4kV system makes up 20% of SDG&Es circuits by count, supplies 5% of system load, and accounts for 5% of overall distribution system length.

		The BCR is low because the calculation methodology, which incorporates outage history, does not capture the growing risk of the package unit substations. Half of the 4kV substations are over 50 years old, rendering replacement components unavailable. Therefore, the scope of the program focuses on removing 4kV packages or "unit" substations, which are capital intensive but have limited immediate reliability benefit. However, without modernizing this aging substation infrastructure, the reliability risk will increase as outages become more frequent and with potentially longer durations as the equipment continues to age.
C240	**Avian Protection Program**	This is a compliance driven program, see Table EG-42.
C250A	Substation Distribution Circuit Breaker Program	While substations are generally reliable, failures of distribution circuit breakers can result in disproportionate customer and societal impacts due to the large number of customers affected. Proactive replacement of an increasingly aging circuit breaker population is necessary to maintain system reliability and support safe operation.
C250B	Substation Distribution Power Transformer Program	While a substation transformer outage may not always result in immediate customer interruptions, it reduces system redundancy and resiliency, increasing the risk and potential severity of customer outages during subsequent contingencies. As the transformer population continues to age, proactive replacement is necessary to preserve system resiliency, manage high-consequence risk, and maintain safe and reliable substation operations.
C251	**GO165 Corrective Maintenance Program - Overhead**	This is a compliance driven program, see Table EG-42.

TABLE EG-42
Control Compliance Drivers

ID	Control/Mitigation Name	Justification
C212	GO165 Corrective Maintenance Program - Underground	GO-165
C240	Avian Protection Program	Migratory Bird Treaty Act, Bald and Golden Eagle Protection Act, California Fish and Game Code
C251	GO165 Corrective Maintenance Program - Overhead	GO-165

C. Changes From 2025 RAMP Report

Since the timing of the filing of the 2025 RAMP Report in May 2025 some circumstances may have changed that impact the control/mitigation scope – including units, costs, and other factors that influence the forecast. In addition, updates may have occurred affecting the underlying assumptions used to calculate the BCRs and are described in the RDF Integration testimony (Ex. SCG-02B/SDGE-02B). Key changes impacting the forecasts include:

- C201 – Proactive Overhead Conductor Program
  - Units and costs both increased aligning with the expansion of scope from a safety only focus to a safety and reliability focus.
  - Increase in BCR due to two changes: scope was adjusted to high-risk wire in non-HFTD areas and effectiveness was updated to properly address that a per-unit replacement needs to reflect the number of phases on a line.
- C202 – UG Cable Replacement Program
  - No significant changes in units, costs, or BCR
- C206 – Tee Modernization Program
  - No significant changes in units, costs, or BCR
- C210 – UG Switch Replacement Program
  - Increase in BCR due to adjusting the focus on the program to underground switches providing a higher reliability benefit.
- C212 – GO165 Corrective Maintenance Program – Underground
  - No significant changes in units, costs, or BCR
- C226 – Distribution Substation Proactive Asset Program
  - Mitigation type shifted from prevention to preservation
  - The scope of the program now focuses on specific equipment including disconnects, batteries, grounding updates and civil site enhancements.
- C234 – 4kV Reliability Program
  - Units for this program have been adjusted from miles to number of transformers. This aligns with SDG&E's change in focus to installing new step-down transformers.
  - Increase in costs aligns with a clearer vision based on SDG&E's change in focus of scope. Previous costs would never have addressed the amount of risk still

present on the system. The updated costs better address the 4kV safety and reliability risk.

- C236 – Distribution Overhead Switch Replacement Program
  - No significant changes in units, costs, or BCR
- C240 – Avian Protection Program
  - No significant changes in units, costs, or BCR
- C250 – Substation Reliability for Distribution Components
  - This control was split into two controls to have individual asset-based programs that provide a transparent view. C250A is Substation Distribution Circuit Breaker Program and C250B is Substation Distribution Power Transformer Program.
- C251 – GO165 Corrective Maintenance Program – Overhead
  - Increase in expected units is reflected in the cost increase.
  - The BCR is slightly lower due to a refinement in the methodology.
- C261 – Distribution Power Quality Program
  - Reduced cost and units in 2028-2031 to reflect work accelerated into 2025
  - The BCR was reduced due to a change in methodology expanding the scope of devices considered.
- C262 – Distribution Protection & Control Modernization
  - Units for this program have been adjusted from Other to number of Substations. This aligns with SDG&E's asset plan to address distribution protection & control equipment at the substation level.
  - Increased costs to reflect the needed replacement period to maintain reliable protection equipment.
- C263 – Non-HFTD Wireless Fault Indicators
  - Increased units and cost to align with the updated WFI plan finalized after 2025 RAMP submittal
  - The BCR was reduced due to the increased cost.
- C269 – Distribution Circuit Reliability
  - Increased costs reflect a strategic prioritization of high benefit reliability controls.
  - The BCR was reduced due to the increased costs

D. Feedback from Safety Policy Division and Parties

The Commission's Safety Policy Division (SPD) issued their assessment report on October 10, 2025 regarding the Companies' 2025 RAMP Reports. Parties subsequently served opening and reply comments on November 17, 2025 and December 1, 2025 respectively. Appendix B in the RDF Integration testimony (Ex. SCG-02B/SDG&E-02B), appends a summary of the feedback and recommendations received and the Companies' responses.

E. CAVA Integration

Pursuant to Commission decisions in the Climate Adaptation OIR (R.18-04-019),[26] SDG&E performed a Climate Adaptation Vulnerability Assessment (CAVA) focused on years 2030, 2050, and 2070, with the aim of identifying asset and operational vulnerabilities to climate hazards across the SDG&E system. Some of the climate hazards that will have short- and long-term ramifications in the Southern California region include extreme temperatures, wildfire, inland flooding, coastal flooding and erosion, and landslides. Climate change is recognized as a factor that can drive, trigger, or exacerbate multiple RAMP risks. Implementing climate change adaptation measures and integrating climate vulnerability considerations into RAMP controls and mitigations can enhance system infrastructure longevity and reduce the severity of long-term negative climate impacts. The controls and mitigations described in further detail in this chapter, as shown below, align with the goal of increasing SDG&E's physical and operational resilience to the increasing frequency and intensity of climate hazards.

TABLE EG-43
CAVA Integration

Potential Climate Hazard(s)	Relevant ID	Relevant Control / Mitigation	Risk Chapter
Wildfires	C202	Underground Cable Replacement Program (Proactive)	Electric Infrastructure Integrity
Extreme Temperatures; Inland Flooding; Coastal Flooding	C250	Substation Reliability for Distribution Components	
Extreme Temperatures; Wildfires; Inland Flooding; Coastal Flooding	C253	Restoration of Service	
Wildfires	C254	Underground Cable Replacement Program (Reactive)	

[26] D.19-10-054; D.20-08-046.

Wildfires	C262	Distribution Substation SCADA Expansion	
Extreme Temperatures	C263	Wireless Fault Indicator	
Extreme Temperatures	C269	Distribution Circuit Reliability	

VI. DEFERRED WORK

The Commission has consistently acknowledged that a utility may reprioritize funds that were authorized in the prior GRC.[27] D.24-12-074 requires that for the 2028 GRC, if SDG&E requests funding for work that was authorized in the TY 2024 GRC but not yet performed, SDG&E must use a Deferred Work Framework (DWF) that shows the deferred work related to safety and reliability at the program level. The DWF and principles are described in Ex. SCG-30/SDGE-36 (Compliance testimony). This testimony requests funds for the qualifying deferred work projects or activities listed in Table EG-44. In Section IV, this testimony describes the costs and activities, the forecast method, cost drivers and the customer benefits associated with this project/these projects. The circumstances that caused the delay and any changes in scope are described below.

TABLE EG-44
DEFERRED WORK

Deferred Work Program/Activity	**TY2024 GRC Exhibit**	**TY2024 Authorized Funding In 2021 $ (000s)**	**TY2028 Funding Request In 2025 $ (000s)**
A. 002090 - Field Shunt Capacitors	SDGE-11 - 209 – Field Shunt Capacitors	$695	$1,206
B. 972480 - Distribution System Capacity Improvement	SDGE-11 - 972480 - Distribution System Capacity Improvement	$2,277	$1,588
C. 102650 – RAMP – Avian Protection Program	SDGE-11 - 10265 – Avian Protection (Non-HFTD)	$187	$23

[27] *See* D.24-12-074 at OP 11 and D.20-01-002 at 38.

D. 002060 - Electric Distribution Tools/Equipment	SDGE-11 - 206 – Electric Distribution Tools & Equipment	$2,099	$717
E. 001060 - Electric Substation Tools/Equipment	SDGE-11 - 106 – Electric Transmission Tools & Equipment	$443	$396
F. 002380 – UG Cable Replacement Program	SDGE-11 - 238 – Planned Cable Replacements	$3,431	$5,981
G. 172610 – RAMP – OH Switch Replacement Program	SDGE-11 - 17261 – High Risk Switch Replacement	$832	$872
H. 202880 – RAMP – Non-HFTD Wireless Fault Indicators	SDGE-11 - 20288 – Non-HFTD Wireless Fault Indicators	$1,243	$2,123
I. 202410 – RAMP – Proactive Overhead Conductor Program	SDGE-11 - 20241 – Overhead Public Safety (OPS)	$6,725	$25,147
J. 932400 – RAMP – Distribution Circuit Reliability Program	SDGE-11 - 93240 – Distribution Circuit Reliability	$4,124	$5,279
K. 172690 – RAMP – 4kV Reliability Program	SDGE-11 - 17269 – 4kV Modernization	$6,542	$12,781
L. 152430 – RAMP – Distribution Protection & Control Modernization	SDGE-11 - 15243 – Substation SCADA Expansion – Distribution	$1,776	$2,948

M. 211350 – Electric Transmission Small Reliability Jobs (Non-WMP) Program	SDGE-11 - 21135 – Electric Transmission Small Reliability Jobs (Non-HFTD)	$825	$556

A. **002090 - Field Shunt Capacitors**

a. Activity Scope: The authorized scope of this activity has not changed and the description of this activity scope in Section IV above aligns with the TY 2024 GRC.

b. Reason(s) for Deferral: Field shunt capacitor installations are driven by circuit load and voltage conditions; therefore, installation locations and upgrade needs depend on the where load growth occurs along the distribution segment. Based on the current number of capacitors installed, fewer capacitor units have been installed than authorized in the 2024 GRC to date.

B. **972480 - Distribution System Capacity Improvement**

b. Activity Scope: The authorized scope of this activity has not changed and the description of this activity scope in Section IV above aligns with the TY 2024 GRC.

c. Reason(s) for Deferral: The 2024 GRC was authorized based on a 3-year average, in 2024 and 2025 there were less reconductoring and switch installations intended to improve tie capacity and operational flexibility completed than forecasted. This reduction aligns with the reduction in the TY 2028 GRC request.

C. **102650 – RAMP – Avian Protection Program**

a. Activity Scope: The authorized scope of this activity has been updated. The revised scope focuses on addressing non-HFTD poles with known bird contacts, reflecting a strategic shift toward prioritizing the highest-risk assets where avian interactions have been documented.

b. Reason(s) for Deferral: The scope of this program has been updated with resulting costs and units that are below the levels authorized in the 2024 GRC. SDG&E

continuously evaluates the necessity of these investments, prioritizing customer affordability while maintaining safe and reliable service. This is demonstrated by the significant reduction in the TY 2028 GRC request.

D. **002060 - Electric Distribution Tools/Equipment**

a. Activity Scope: The authorized scope of this activity has not changed and the description of this activity scope in Section IV above aligns with the TY 2024 GRC.

b. Reason(s) for Deferral: The 2024 GRC authorization was based on a 3-year average methodology, which is consistent with the approach used for the TY 2028 GRC. There were fewer purchases of tools and equipment than forecasted. SDG&E continuously evaluates the necessity of these investments, prioritizing customer affordability while maintaining safe and reliable service. This reduction aligns with the reduction in the TY 2028 GRC request.

E. **001060 - Electric Substation Tools/Equipment**

a. Activity Scope: The authorized scope of this activity has not changed and the description of this activity scope in Section IV above aligns with the TY 2024 GRC.

b. Reason(s) for Deferral: This work is required on an annual basis and is identified as deferred when actual spending in the authorized period is below forecast. Based on the current forecast, not all authorized funding will be utilized during the 2024–2027 period. SDG&E continuously evaluates the necessity of these investments, prioritizing customer affordability while maintaining safe and reliable service. This outcome is consistent with and reflected in the reduced funding request in the TY 2028 GRC.

F. **002380 – UG Cable Replacement Program**

a. Activity Scope: The authorized scope of this activity has not changed and the description of this activity scope in Section IV above aligns with the TY 2024 GRC.

b. Reason(s) for Deferral: A portion of these funds were reprioritized from this program in accordance with the Company's capital allocation process.

G. **172610 – RAMP – OH Switch Replacement Program**

a. Activity Scope: The authorized scope of this activity has not changed and the description of this activity scope in Section IV above aligns with the TY 2024 GRC.

b. Reason(s) for Deferral: This work is part of an asset-based, programmatic effort intended to be ongoing to support system safety and reliability. When forecasted expenditures are below authorized levels from one GRC cycle to the next, these programs may appear as deferred. A portion of these funds were reprioritized from this program in accordance with the Company's capital allocation process.

H. **202880 – RAMP – Non-HFTD Wireless Fault Indicators**

a. Activity Scope: The authorized scope of this activity has not changed and the description of this activity scope in Section IV above aligns with the TY 2024 GRC.

b. Reason(s) for Deferral: Work was deferred due to an upgrade made by the incumbent vendor, which made the solution incompatible with SDG&E's communications network. SDG&E paused the program to evaluate alternative solutions fully compatible with our communications network. New equipment has been identified and successfully lab tested for compatibility.

I. **202410 – RAMP – Proactive Overhead Conductor Program**

a. Activity Scope: The authorized scope of this activity has changed. The TY 2024 GRC focused on the overhead conductor replacements where the risk of public contact with an energized wire down required mitigation. As seen by the change in scope in the TY 2028 GRC, SDG&E has reoriented the budget to emphasize reliability and capacity improvements, in addition to public safety.

b. Reason(s) for Deferral: Funds were reprioritized from this program in accordance with the Company's capital allocation process. This reprioritization reflects the diminishing returns through the originally approved scope as described in the TY

2024 GRC. To clarify, SDG&E found a substantial portion of the wire down risk was mitigated through previously completed work. The request for additional funding reflects the expanded benefits considered under this program.

J. **932400 – RAMP – Distribution Circuit Reliability Program**

a. Activity Scope: The authorized scope of this activity has not changed and the description of this activity scope in Section IV above aligns with the TY 2024 GRC.

b. Reason(s) for Deferral: A portion of these funds were reprioritized from this program in accordance with the Company's capital allocation process.

K. **172690 – RAMP – 4kV Reliability Program**

a. Activity Scope: The authorized scope of this activity has changed. The unit of measure has been updated to reflect number of transformers. This change more accurately reflects the refocusing of this program to address package "unit" substations in addition to 4kV modernization to 12kV where appropriate.

b. Reason(s) for Deferral: The 2024 GRC authorized scope planned for conversion of 4kV circuits to 12kV. These conversions require significant expenditure, due to the significant number of pole replacements, need for conductor upgrades, and substation reconfiguration. While working to identify more cost-effective alternatives, SDG&E has paused funding temporarily and will resume in 2028. As seen by the change in scope in the TY 2028, GRC SDG&E has changed direction causing the 4kV reliability program to appear as deferred.

L. **152430 – RAMP – Distribution Protection & Control Modernization**

a. Activity Scope: The authorized scope of this activity has not changed and the description of this activity scope in Section IV above aligns with the TY 2024 GRC.

b. Reason(s) for Deferral: This program is a continuation from previous filings. SDG&E identified dependent engineering work, which when bundled together enables economies of scale benefits in design and deployment to prudently reduce

overall cost to the rate payer. Other reasons for deferred work are delays due to staffing shortages addressing the ability to commission designs as originally scheduled or scope change discovered upon site walk and verification after initial in-office scoping.

M. **211350 – Electric Transmission Small Reliability Jobs (Non-WMP) Program**

a. Activity Scope: The authorized scope of this activity has not changed and the description of this activity scope in Section IV above aligns with the TY 2024 GRC.

b. Reason(s) for Deferral: These projects were expected to begin between 2023-2024; however, SDG&E's prioritization of CPUC project funding resulted in the deferral of these projects to later years. The transmission structures in scope were analyzed and determined that the risk of deferring projects 2-5 years was low compared to other project needs. SDG&E continuously evaluates the necessity of these investments, prioritizing customer affordability while maintaining safe and reliable service.

VII. REGULATORY ACCOUNTS SUBJECT TO REASONABLENESS REVIEW IN GRC

A. New Electric Energization Memorandum Account (SB 410)

D.25-10-034 authorized SDG&E to establish a new memorandum account called the New Electric Energization Memorandum Account (NEEMA) to record energization costs that are (1) incremental to the energization costs authorized in SDG&E's 2024 GRC, and (2) related to projects that are placed in service after January 1, 2024, but before January 1, 2027.[28] Per D.25-10-034, costs are only eligible for recovery from customers once the associated projects are placed in service.[29] SDG&E was authorized to record a total of $51.188 million of incremental costs to the NEEMA as follows: $10.561 million in 2024, $20.793 million in 2025, and $19.834 million in 2026. In order to recover the amounts tracked in NEEMA from customers, SDG&E was authorized to annually transfer eligible costs recorded in the NEEMA into the Electric

[28] D.25-10-034 at 46.

[29] *Id*. at 7.

Distribution Fixed Cost Account (EDFCA) for immediate recovery from customers. The costs recorded in the NEEMA and recovered from customers are subject to a reasonableness review in the GRC. Any costs the CPUC does not find to be just and reasonable will be refunded to customers.

D.25-10-034, OP 4 provides the following specific guidance as to SDG&E's reasonableness demonstration required in the GRC:

> 4. In its next General Rate Case Application, San Diego Gas & Electric Company (SDG&E) shall include the following information for any costs recorded to the Electric Energization Memorandum Account:
> a. The General Rate Case category and subcategory (i.e., workpaper) for those costs.
> b. For the project associated with the recorded spending: the current status of the project (e.g., completed, in progress, cancelled); the date the project was placed in service; and, the average cost for comparable projects SDG&E completed in the last four years.[30]

As of the date of filing of the TY 2028 GRC, SDG&E has not yet recorded any incremental costs that are eligible for recovery in the NEEMA given (1) the "in service" timing requirement set forth in D.25-10-034, and (2) the multi-step accounting evaluation needed to determine whether direct energization costs incurred exceed authorized direct costs approved in the TY 2024 GRC.

With respect to the "in service" requirement, many of the energization related capital costs incurred to date are associated with projects that are not yet in service but may be in service by the end of 2026. Therefore, SDG&E will not be able to determine which portion of the energization costs incurred to date (and incurred through the end of 2026) are eligible to record in the NEEMA until the end of the year, when those projects are actually in service.

With respect to the multi-step accounting evaluation, once the amount of eligible "in service" project costs has been established, SDG&E will first need to isolate the incurred direct energization costs (per subcategory) and compare those to the direct costs that were approved in the TY 2024 GRC. Once the actual direct energization costs exceed the authorized costs in the TY 2024 GRC, SDG&E will then need to compare the revenue requirement to the authorized

[30] D.25-10-034, OP 4; see also at 50-51 (Section 8. Reasonableness Demonstrations in Future General Rate Cases).

revenue requirement approved in the TY 2024 GRC. Only after SDG&E has determined that the actual revenue requirement exceeds the authorized revenue requirement will an entry be made in the NEEMA for purpose of cost recovery.

To be clear, SDG&E has incurred direct energization capital costs that are incremental to the energization costs amounts authorized in the TY 2024 GRC. However, as explained above, SDG&E will not be able to identify which portion of those capital costs relate to projects that are "in-service," and thus eligible for recovery from customers, until the end of 2026 pursuant to the timing restrictions imposed by D.25-10-034.

Given the fact that SDG&E has not yet recorded any energization capital costs to the NEEMA (and no costs have been recovered from customers), and that SDG&E will not be able to determine which portion of the energization costs reflected in the table above are eligible for recovery via the NEEMA until the end of 2026, SDG&E is unable to present its reasonableness demonstration at the time of this filing. However, SDG&E will supplement this testimony to provide the reasonableness demonstration required in D.25-10-034 in early 2027, after it has determined and recorded eligible entries into the NEEMA and has pursued cost recovery from ratepayers.

B. Electric Vehicle Infrastructure Memorandum Account (EVIMA)

D.24-12-074 ordered SDG&E to record costs incurred from Electric Vehicle Rule 45 in the Electric Vehicle Infrastructure Memorandum Account (EVIMA) until the TY 2028 GRC cycle.[31] The decision further set a capital funding level of $7.58 million for the memorandum account and ordered that a reasonableness review of these costs would take place in the next GRC cycle.[32]

The EVIMA records costs associated with providing new service of separately-metered electric vehicle charging sites, excluding single-family residences, as authorized by the Commission through Res. 5167-E. Under this framework, SDG&E is required to install, own, and rate base the electrical distribution infrastructure necessary to serve these sites, including associated design and construction between the distribution system and utility meter (collectively

[31] 2024 GRC Decision at 562-564.

[32] *Id*., at 563-564.

"the utility-side make-ready"). The customer or site host bears the cost of the make-ready beyond the utility meter and the cost of the EV Supply Equipment.

SDG&E began offering service under Electric Rule 45 to customers in April 2022 and, consistent with Commission Res. E-5167 and D.24-12-074, recorded applicable costs incurred since April 2022 in its EVIMA. However, because SDG&E reached the $7.58 million cap set by D.24-12-074, SDG&E requested to suspend the program on August 22, 2025 through AL 4705-E, *Revision to Electric Rule 45 and Electric Vehicle Infrastructure Rule memorandum Account Pursuant to Decision 24-12-074*. SDG&E halted new enrollment to incoming customer inquiries and determined that 163 projects (89% of the active portfolio) would be required to pursue alternative energization pathways outside of Electric Rule 45 or be cancelled.

At the time the Commission established the EVIMA funding level and ordered a future reasonableness review, the account had no recorded expenditures, reflecting inherent uncertainty regarding customer participation, project complexity, and the pace of adoption of Electric Vehicle Rule 45 service. Since program launch, however, demand for separately-metered EV charging infrastructure accelerated significantly. By 2024 and 2025, both the volume of applications and complexity of projects materially exceeded initial expectations, resulting in utility-side make-ready costs surpassing the authorized $7.58 million capital funding level established in D.24-12-074.

On November 25, 2025, ten intervening parties filed a Petition for Modification of D.24-12-074, seeking to strike the funding cap on EVIMA so that Rule 45 could remain open to all eligible applications through at least the current rate case cycle.[33] This Petition for Modification remains pending before the Commission.

Because EVIMA costs already exceed the authorized $7.58 million capital funding level and could further exceed this level if the pending Petition for Modification is granted and SDG&E is able to reopen Rule 45 applications in the current 2024 to 2027 GRC cycle, SDG&E intends to file a separate application for reasonableness review of EVIMA costs rather than seek reasonableness review at this time in this GRC. Filing a separate application following the Commission's decision on the pending Petition for Modification will provide additional

[33] A.22-05-015/016 (cons.), Petition for Modification of Decision 24-12-074 of the Joint Petitioners (November 25, 2025) at 5-6.

clarification and certainty around Rule 45 funding levels and would allow SDG&E to seek recovery of all eligible EVIMA costs in one application, rather than seek recovery of the current cap of $7.58 million now and face the potential need to file a separate application to recover additional costs in the event the cap is removed. This approach will promote efficiency and reduce the administrative burden on the Commission that would result from multiple proceedings addressing these costs.

VIII. PUB. UTIL. CODE SECTION 935 STAFFING ANALYSIS

Public Utilities Code Section 935(a) requires that "in each general rate case application, each electrical corporation shall include a detailed analysis of its current qualified staffing level and future required qualified staffing level for each job classification needed to be consistent with the findings and achieve the policies and requirements of this article [*i.e.*, SB 410 Powering Up Californians]." Attached to this testimony as Appendix D is SDG&E's Section 935 2026 Staffing Analysis.

IX. CONCLUSION

The Electric Distribution Capital forecasts and demonstrates that the requested expenditures are reasonable and necessary to meet customer demands and maintain the safe, reliable, and efficient operation of the electric distribution system.

The proposed capital program supports the continued operation of both overhead and underground distribution assets and addresses aging infrastructure, reliability needs, and customer-driven growth, consistent with SDG&E's obligation to provide high-quality electric service while responding to evolving system demands.

As in prior General Rate Cases, many of the core activities included in this request remain substantially consistent with those previously reviewed and authorized, including in the 2024 GRC, with forecast changes driven by updated planning data, observed customer demand, and incremental cost drivers, rather than expansion of scope or speculative assumptions.

This testimony reflects SDG&E's continued focus on affordability and cost control, including the prioritization of lower-cost solutions, incremental upgrades, and phased investments to maximize the use of existing assets and defer or avoid more expensive infrastructure where feasible. This approach mitigates near-term rate impacts while reducing the risk of higher long-term costs associated with deferred investment, increased outages, or constrained customer service.

Recognizing the inherent uncertainty associated with the Customer Growth category to meet New Business and related upstream capacity needs, SDG&E proposes targeted regulatory mechanisms, including the CGIMA, to track incremental costs above authorized levels subject to after-the-fact reasonableness review. This approach avoids embedding uncertain costs in base rates, preserves Commission oversight, and protects ratepayers while allowing SDG&E to meet statutory energization and service obligations.

For these reasons, SDG&E respectfully requests that the Commission adopt the proposed Test Year 2028 Electric Distribution Capital forecasts and approve the associated regulatory mechanisms described in this testimony. Approval will enable SDG&E to continue providing safe, reliable, and high-quality electric service in a manner that responsibly manages costs and aligns with Commission direction and California's long-term energy policy objectives.

This concludes my prepared direct testimony.

X. WITNESS QUALIFICATIONS

My name is Erika Schimmel-Guiles, and my business address is 8306 Balboa Avenue, San Diego, CA 92123. I am employed by SDG&E as Director of Portfolio and Project Management. I have been employed by SDG&E for eighteen years, holding numerous positions within electric operations, customer operations and support services.

My present responsibilities include providing leadership to a team of portfolio, project management, and project controls professionals responsible for the planning, execution, and delivery of electric and gas infrastructure projects across the SDG&E service territory. As part of these duties, we provide oversight of project scope, schedule, and cost performance, while ensuring alignment with safety objectives, environmental stewardship, regulatory requirements, and customer commitments.

I hold a Bachelor of Business Administration from the University of San Diego and a master's degree in business administration from San Diego State University. I sponsor the TY 2028 General Rate Case Testimony for SDG&E's Electric Distribution Capital spending plan, and I have not previously testified before the Commission.

APPENDIX A – Glossary of Terms

APPENDIX A – Glossary of Terms

ACRONYM	DEFINITION
AC	Alternating Current
BC	Budget Code
BCR	Benefit Cost Ratio
BY	Base Year
C&O	Construction and Operations
CA	Contract Administration
CAVA	Climate Adaptation Vulnerability Assessment
CAISO	California Independent System Operator
CEC	California Energy Commission
CIAC	Contribution in Aid of Construction
CMP	Corrective Maintenance Program
CPUC	California Public Utilities Commission
CWP	Capital Workpaper
DC	Direct Current
DOE	Do Not Operate Energized
DWF	Deferred Work Framework, a Commission-required framework used to identify, track, and request funding for work authorized in a prior General Rate Case that was not completed and is proposed for inclusion in a subsequent General Rate Case
ED	Electric Distribution
EDOT	Electric Distribution Operations Technology
EII	Electric Infrastructure Integrity
ERO	Electric Regional Operations
ET&D	Electric Transmission and Distribution
FERC	Federal Energy Regulatory Commission
GO	General Order
GRC	General Rate Case
HFTD	High Fire-Threat District
IEEE	Institute of Electrical and Electronics Engineers
IT	Information Technology
kV	Kilovolt
LED	Light Emitting Diode
MVA	Mega-Volt Ampere
NEM	Net Energy Metering
NERC	North American Electric Reliability Corporation
OH	Overhead
OSHA	Occupational Safety and Health Administration
PQ	Power Quality
PYD	Power Your Drive
RAMP	Risk Assessment Mitigation Phase
RFS	Remove From Service

ACRONYM	DEFINITION
RSE	Risk Spend Efficiency
RTU	Remote Terminal Unit
SAIDI	System Average Interruption Duration Index
SAIFI	System Average Interruption Frequency Index
SCADA	Supervisory Control and Data Acquisition
SDG&E	San Diego Gas & Electric Company
SEA	Substation Equipment Assessment
SoCalGas	Southern California Gas Company
SPACE	System Protection, Automation, and Control Engineering
SPD	Safety Policy Division
SPM	System Protection and Maintenance
TL	Transmission Line
TRC	Technical Review Council
UG	Underground

APPENDIX B – Capital Expenditures

San Diego Gas Electric Company
Capital Expenditures
(In Thousands of 2025 $)

Electric Distribution	2026	2027	2028	2029	2030	2031
Total Capital	**622,594**	**629,768**	**762,331**	**816,163**	**761,463**	**754,017**
2026 - 2028 Capital Request	622,392	629,566	760,968	-	-	-
Post-Test Year Capital Forecast	202	202	1,363	816,163	761,463	754,017

San Diego Gas Electric Company
Capital Expenditures
(In Thousands of 2025 $)

Electric Distribution
2026 - 2028 Capital Request

Category	Workpaper Sub	Workpaper Description	In-Service Date	2026	2027	2028
Customer Growth	**002040.001**	ELECTRIC DISTRIBUTION EASEMENTS	Routine	6,330	5,290	4,268
	002090.001	FIELD SHUNT CAPACITORS	Routine	905	1,056	1,206
	002150.001	OH RESIDENTIAL NB	Routine	1,725	1,725	1,725
	002150.002	OH RESIDENTIAL NB	Routine	771	771	771
	002160.001	OH NON-RESIDENTIAL NB	Routine	1,113	1,113	1,112
	002160.002	OH NON-RESIDENTIAL NB	Routine	152	152	152
	002170.001	UG RESIDENTIAL NB	Routine	10,850	10,850	10,849
	002170.002	UG RESIDENTIAL NB	Routine	3,029	3,029	3,029
	002180.001	UG NON-RESIDENTIAL NB	Routine	10,016	10,016	10,015
	002180.002	UG NON-RESIDENTIAL NB	Routine	3,255	3,255	3,254
	002190.001	NEW BUSINESS INFRASTRUCTURE	Routine	3,331	3,331	3,331
	002190.002	NEW BUSINESS INFRASTRUCTURE	Routine	1,435	1,435	1,434
	002240.001	NEW SERVICE INSTALLATIONS	Routine	10,289	10,289	10,287
	002240.002	NEW SERVICE INSTALLATIONS	Routine	1,017	1,017	1,017
	002250.001	CUSTOMER REQUESTED UPGRADES AND SERVICES	Routine	15,583	15,583	15,578
	002250.002	CUSTOMER REQUESTED UPGRADES AND SERVICES	Routine	9,157	9,157	9,154
	002350.001	TRANSFORMER & METER INSTALLATIONS	Routine	7,513	7,513	7,492
	002350.002	TRANSFORMER & METER INSTALLATIONS	Routine	956	956	954
	012950.001	LOAD RESEARCH/DLP ELEC. METERING PROJECT	Routine	325	325	324
	212520.001	CONVERSION FROM OH-UG RULE 20B NEW BUSIN	Routine	603	603	603
	212530.001	CONVERSION FROM OH-UG RULE 20C	Routine	281	281	281
	212530.002	CONVERSION FROM OH-UG RULE 20C	Routine	2,311	2,311	2,311
	212590.001	EV RULE 45 INSTALLATIONS	Routine	887	-	10,774
	212760.001	CIRCUIT AND BANK CAPACITY PROJECTS	Routine	37,258	49,431	50,709
	231310.001	CUSTOMER RELOCATION PROJECTS - EXTERNAL	Routine	160	160	160
	972480.001	DISTRIBUTION SYSTEM CAPACITY IMPROVEMENT	Routine	1,590	1,590	1,588
Customer Growth Total				**130,842**	**141,239**	**152,378**
Franchise	**002050.001**	ELECTRIC DIST. STREET/HWY RELOCATIONS	Routine	3,296	3,296	3,296
	002050.002	ELECTRIC DIST. STREET/HWY RELOCATIONS	Routine	2,046	2,046	2,046
	002100.001	CONVERSION FROM OH TO UG RULE 20A	Routine	8,686	5,605	5,629
	002100.002	CONVERSION FROM OH TO UG RULE 20A	Routine	457	295	296
	002130.001	CITY OF SAN DIEGO SURCHARGE PROG (20SD)	Routine	39,423	40,605	41,823
	202570.001	CONVERSION FROM OH TO UG RULE 20B	Routine	875	2,678	4,529
	202570.002	CONVERSION FROM OH TO UG RULE 20B	Routine	2,252	6,886	11,645
	231300.001	CUSTOMER RELOCATION PROJECTS - INTERNAL	Routine	95	95	95
Franchise Total				**57,130**	**61,506**	**69,359**
Mandated	**002290.001**	RAMP - CORRECTIVE MAINTENANCE PROGRAM (CMP)	Routine	28,538	28,538	28,488
	002290.002	RAMP - CORRECTIVE MAINTENANCE PROGRAM (CMP)	Routine	20,366	20,366	20,334
	102650.001	RAMP - AVIAN PROTECTION PROGRAM	Routine	-	-	23
	172620.001	STREET LIGHT MODERNIZATION	Routine	1,457	1,457	1,457
Mandated Total				**50,361**	**50,361**	**50,302**
Materials	**002020.001**	ELECTRIC METERS & REGULATORS	Routine	5,809	3,516	1,147
	002140.001	TRANSFORMERS	Routine	55,560	58,339	61,256

San Diego Gas Electric Company
Capital Expenditures
(In Thousands of 2025 $)

Category	Workpaper Sub	Workpaper Description	In-Service Date	2026	2027	2028
Materials Total				**61,369**	**61,855**	**62,403**
Tools & Equipment	**001060.001**	ELECTRIC SUBSTATION TOOLS & EQUIPMENT	Routine	396	396	396
	002060.001	ELECTRIC DISTRIBUTION TOOLS/EQUIPMENT	Routine	717	717	717
Tools & Equipment Total				**1,113**	**1,113**	**1,113**
Safety & Reliability Improvements	**002030.001**	RAMP - DISTRIBUTION SUBSTATION RELIABILITY	Routine	1,306	1,306	1,303
	002260.001	RAMP - MANAGEMENT OF OVERHEAD DISTRIBUTION SERVICE (NON-CMP)	Routine	10,882	10,882	10,860
	002270.001	RAMP - MANAGEMENT OF UNDERGROUND DISTRIBUTION SERVICE (NON-CMP)	Routine	5,685	5,685	5,675
	002300.001	RAMP - UNDERGROUND CABLE REPLACEMENT PROGRAM	Routine	6,845	6,845	6,824
	002360.001	RAMP - RESTORATION OF SERVICE	Routine	10,836	10,836	10,802
	002380.001	RAMP - UG CABLE REPLACEMENT - PLANNED	Routine	1,734	1,893	5,981
	002900.001	RAMP - UG SWITCH REPLACEMENT PROGRAM	Routine	1,154	1,139	6,206
	062540.001	RAMP - EMERGENCY EQUIPMENT PURCHASE	Routine	1,603	1,603	1,603
	082530.001	SUBSTATION CAPACITOR BANK UPGRADES	Routine	920	2,602	4,725
	152430.001	RAMP - DISTRIBUTION PROTECTION & CONTROL MODERNIZATION	Routine	461	590	2,948
	172550.001	RAMP - TEE MODERNIZATION PROGRAM	Routine	3,469	3,469	3,467
	172610.001	RAMP - OH SWITCH REPLACEMENT PROGRAM	Routine	484	484	872
	172690.001	RAMP - 4KV RELIABILITY PROGRAM	Routine	-	-	12,781
	202410.001	RAMP - PROACTIVE OVERHEAD CONDUCTOR PROGRAM	Routine	-	1,461	25,147
	232460.001	POLE LOADING REMEDIATION	Routine	1,165	3,235	3,832
	242520.001	RAMP - SUBSTATION REBUILD PROGRAM	6/30/2027	6,725	889	-
	242520.002	RAMP - SUBSTATION REBUILD PROGRAM	8/31/2027	6,443	2,075	-
	242520.003	RAMP - SUBSTATION REBUILD PROGRAM	12/31/2027	870	478	-
	252600.001	RAMP - SUBSTATION DISTRIBUTION CIRCUIT BREAKER PROGRAM	Routine	3,711	5,054	6,970
	252610.001	RAMP - SUBSTATION DISTRIBUTION POWER TRANSFORMER PROGRAM	Routine	1,643	2,617	4,068
	932400.001	RAMP - DISTRIBUTION CIRCUIT RELIABILITY	Routine	1,946	2,780	5,279
	942410.001	RAMP - DISTRIBUTION POWER QUALITY PROGRAM	Routine	537	471	730
	992820.001	RAMP - DISTRIBUTION SUBSTATION PROACTIVE ASSET PROGRAM	Routine	1,589	1,677	1,676
	202880.001	RAMP - WIRELESS FAULT INDICATORS	Routine	-	-	2,123
	A02990.001	Grounding Bank Montitors	Routine	-	-	368
	B02990.001	EDO SCADA Modernization	Routine	2,404	1,304	1,304
	C02990.001	Electric Asset Management Program	Routine	-	-	10,749
Safety & Reliability Improvements Total				**72,412**	**69,375**	**136,293**
Transmission / FERC Driven Projects	**071440.001**	FIBER OPTIC FOR RELAY PROTECT & TELECOM	Routine	1,142	554	1,454
	201260.001	TRANSMISSION CORRECTIVE MAINTENANCE PROGRAM	Routine	3,975	3,429	3,310
	211350.001	ELCT TRANS SMALL REALIBLTY JOBS- NON WMP	Routine	688	755	556
	211560.001	GENERATION INTERCONNECTION PROJECTS	1/31/2028	-	50	-
Transmission / FERC Driven Projects Total				**5,805**	**4,788**	**5,320**
Clean Energy	**202810.001**	SUSTAINABLE COMMUNITIES SYSTEM REMOVALS	Routine	1,018	826	904
	232530.001	PYD PILOT RELOCATIONS/REMOVAL	Routine	113	113	113
Clean Energy Total				**1,131**	**939**	**1,017**
Overhead Pools	**E09010.001**	Local Engineering Pool - ED Pool	Routine	177,820	175,421	210,950
	E09040.001	Local Engineering Pool - Substation Pool	Routine	7,626	7,888	8,611
	E09050.001	Department Overhead Pool	Routine	44,926	43,360	49,077
	ED9060.001	Contract Administration Pool - Elec	Routine	11,857	11,721	14,145
Overhead Pools Total				**242,229**	**238,390**	**282,783**
Grand Total				**622,392**	**629,566**	**760,968**

San Diego Gas Electric Company
Capital Expenditures
(In Thousands of 2025 $)

Electric Distribution
Post-Test Year Capital Forecast

Category	Workpaper Sub	Workpaper Description	In-Service Date	2026	2027	2028	2029	2030	2031
Customer Growth	**002040.001**	ELECTRIC DISTRIBUTION EASEMENTS	Routine	-	-	-	4,264	4,267	4,267
	002090.001	FIELD SHUNT CAPACITORS	Routine	-	-	-	1,356	1,507	1,658
	002150.001	OH RESIDENTIAL NB	Routine	-	-	-	1,724	1,724	1,724
	002150.002	OH RESIDENTIAL NB	Routine	-	-	-	771	771	771
	002160.001	OH NON-RESIDENTIAL NB	Routine	-	-	-	1,112	1,112	1,112
	002160.002	OH NON-RESIDENTIAL NB	Routine	-	-	-	152	152	152
	002170.001	UG RESIDENTIAL NB	Routine	-	-	-	10,846	10,847	10,848
	002170.002	UG RESIDENTIAL NB	Routine	-	-	-	3,028	3,029	3,029
	002180.001	UG NON-RESIDENTIAL NB	Routine	-	-	-	10,013	10,014	10,015
	002180.002	UG NON-RESIDENTIAL NB	Routine	-	-	-	3,253	3,254	3,254
	002190.001	NEW BUSINESS INFRASTRUCTURE	Routine	-	-	-	3,330	3,331	3,331
	002190.002	NEW BUSINESS INFRASTRUCTURE	Routine	-	-	-	1,434	1,434	1,434
	002240.001	NEW SERVICE INSTALLATIONS	Routine	-	-	-	10,284	10,287	10,286
	002240.002	NEW SERVICE INSTALLATIONS	Routine	-	-	-	1,016	1,016	1,017
	002250.001	CUSTOMER REQUESTED UPGRADES AND SERVICES	Routine	-	-	-	15,570	15,575	15,576
	002250.002	CUSTOMER REQUESTED UPGRADES AND SERVICES	Routine	-	-	-	9,149	9,153	9,153
	002350.001	TRANSFORMER & METER INSTALLATIONS	Routine	-	-	-	7,457	7,481	7,485
	002350.002	TRANSFORMER & METER INSTALLATIONS	Routine	-	-	-	949	952	953
	012950.001	LOAD RESEARCH/DLP ELEC. METERING PROJECT	Routine	-	-	-	324	324	324
	212520.001	CONVERSION FROM OH-UG RULE 20B NEW BUSIN	Routine	-	-	-	603	603	603
	212530.001	CONVERSION FROM OH-UG RULE 20C	Routine	-	-	-	281	281	281
	212530.002	CONVERSION FROM OH-UG RULE 20C	Routine	-	-	-	2,310	2,311	2,311
	212590.001	EV RULE 45 INSTALLATIONS	Routine	-	-	-	11,312	11,878	12,473
	212760.001	CIRCUIT AND BANK CAPACITY PROJECTS	Routine	-	-	-	56,172	58,880	61,873
	231310.001	CUSTOMER RELOCATION PROJECTS - EXTERNAL	Routine	-	-	-	160	160	160
	972480.001	DISTRIBUTION SYSTEM CAPACITY IMPROVEMENT	Routine	-	-	-	1,585	1,587	1,587
Customer Growth Total				**-**	**-**	**-**	**158,455**	**161,930**	**165,677**
Franchise	**002050.001**	ELECTRIC DIST. STREET/HWY RELOCATIONS	Routine	-	-	-	3,295	3,296	3,296
	002050.002	ELECTRIC DIST. STREET/HWY RELOCATIONS	Routine	-	-	-	2,046	2,046	2,046
	002100.001	CONVERSION FROM OH TO UG RULE 20A	Routine	-	-	-	10,101	4,017	545
	002100.002	CONVERSION FROM OH TO UG RULE 20A	Routine	-	-	-	532	211	29
	002130.001	CITY OF SAN DIEGO SURCHARGE PROG (20SD)	Routine	-	-	-	43,078	44,371	45,702
	202570.001	CONVERSION FROM OH TO UG RULE 20B	Routine	-	-	-	11,235	1,867	784
	202570.002	CONVERSION FROM OH TO UG RULE 20B	Routine	-	-	-	28,886	4,802	2,014
	231300.001	CUSTOMER RELOCATION PROJECTS - INTERNAL	Routine	-	-	-	95	95	95
Franchise Total				**-**	**-**	**-**	**99,268**	**60,705**	**54,511**
Mandated	**002290.001**	RAMP - CORRECTIVE MAINTENANCE PROGRAM (CMP)	Routine	-	-	-	28,401	28,459	28,469
	002290.002	RAMP - CORRECTIVE MAINTENANCE PROGRAM (CMP)	Routine	-	-	-	20,277	20,315	20,322
	102650.001	RAMP - AVIAN PROTECTION PROGRAM	Routine	-	-	-	23	23	23
	172620.001	STREET LIGHT MODERNIZATION	Routine	-	-	-	1,457	1,457	1,457
Mandated Total				**-**	**-**	**-**	**50,158**	**50,254**	**50,271**
Materials	**002020.001**	ELECTRIC METERS & REGULATORS	Routine	-	-	-	1,199	1,321	1,295
	002140.001	TRANSFORMERS	Routine	-	-	-	64,318	67,534	70,911
Materials Total				**-**	**-**	**-**	**65,517**	**68,855**	**72,206**
Tools & Equipment	**001060.001**	ELECTRIC SUBSTATION TOOLS & EQUIPMENT	Routine	-	-	-	396	396	396

San Diego Gas Electric Company
Capital Expenditures
(In Thousands of 2025 $)

Category	Workpaper Sub	Workpaper Description	In-Service Date	2026	2027	2028	2029	2030	2031
Tools & Equipment	**002060.001**	ELECTRIC DISTRIBUTION TOOLS/EQUIPMENT	Routine	-	-	-	717	717	717
Tools & Equipment Total				**-**	**-**	**-**	**1,113**	**1,113**	**1,113**
Safety & Reliability Improvements	**002030.001**	RAMP - DISTRIBUTION SUBSTATION RELIABILITY	Routine	-	-	-	1,299	1,302	1,302
	002260.001	RAMP - MANAGEMENT OF OVERHEAD DISTRIBUTION SERVICE (NON-CMP)	Routine	-	-	-	10,822	10,848	10,852
	002270.001	RAMP - MANAGEMENT OF UNDERGROUND DISTRIBUTION SERVICE (NON-CMP)	Routine	-	-	-	5,657	5,669	5,671
	002300.001	RAMP - UNDERGROUND CABLE REPLACEMENT PROGRAM	Routine	-	-	-	6,786	6,811	6,816
	002360.001	RAMP - RESTORATION OF SERVICE	Routine	-	-	-	10,741	10,782	10,789
	002380.001	RAMP - UG CABLE REPLACEMENT - PLANNED	Routine	-	-	-	5,963	5,975	5,977
	002900.001	RAMP - UG SWITCH REPLACEMENT PROGRAM	Routine	-	-	-	6,199	6,204	6,204
	062540.001	RAMP - EMERGENCY EQUIPMENT PURCHASE	Routine	-	-	-	1,602	1,602	1,602
	082530.001	SUBSTATION CAPACITOR BANK UPGRADES	Routine	-	-	-	4,718	4,723	3,322
	152430.001	RAMP - DISTRIBUTION PROTECTION & CONTROL MODERNIZATION	Routine	-	-	-	2,942	2,946	2,947
	172550.001	RAMP - TEE MODERNIZATION PROGRAM	Routine	-	-	-	3,462	3,465	3,466
	172610.001	RAMP - OH SWITCH REPLACEMENT PROGRAM	Routine	-	-	-	871	872	872
	172690.001	RAMP - 4KV RELIABILITY PROGRAM	Routine	-	-	-	6,349	6,360	6,362
	202410.001	RAMP - PROACTIVE OVERHEAD CONDUCTOR PROGRAM	Routine	-	-	-	25,143	25,146	25,147
	232460.001	POLE LOADING REMEDIATION	Routine	-	-	-	3,931	4,031	4,130
	252600.001	RAMP - SUBSTATION DISTRIBUTION CIRCUIT BREAKER PROGRAM	Routine	-	-	-	7,781	12,143	8,966
	252610.001	RAMP - SUBSTATION DISTRIBUTION POWER TRANSFORMER PROGRAM	Routine	-	-	-	5,145	5,866	5,867
	932400.001	RAMP - DISTRIBUTION CIRCUIT RELIABILITY	Routine	-	-	-	5,276	5,278	5,278
	942410.001	RAMP - DISTRIBUTION POWER QUALITY PROGRAM	Routine	-	-	-	488	531	511
	992820.001	RAMP - DISTRIBUTION SUBSTATION PROACTIVE ASSET PROGRAM	Routine	-	-	-	1,674	1,675	1,676
	202880.001	RAMP - WIRELESS FAULT INDICATORS	Routine	-	-	-	1,650	1,180	740
	A02990.001	Grounding Bank Montitors	Routine	-	-	-	490	551	551
	B02990.001	EDO SCADA Modernization	Routine	-	-	-	2,604	804	4,604
	C02990.001	Electric Asset Management Program	Routine	-	-	-	4,909	3,166	2,667
Safety & Reliability Improvements Total				**-**	**-**	**-**	**126,502**	**127,930**	**126,319**
Transmission / FERC Driven Projects	**071440.001**	FIBER OPTIC FOR RELAY PROTECT & TELECOM	Routine	-	-	-	1,828	1,829	1,829
	201260.001	TRANSMISSION CORRECTIVE MAINTENANCE PROGRAM	Routine	-	-	-	3,180	2,707	2,401
	211350.001	ELCT TRANS SMALL REALIBLTY JOBS- NON WMP	Routine	-	-	-	569	584	598
	251480.001	CAISO TPP PROJECTS	7/31/2031	202	202	1,363	2,201	2,203	290
Transmission / FERC Driven Projects Total				**202**	**202**	**1,363**	**7,778**	**7,323**	**5,118**
Clean Energy	**202810.001**	SUSTAINABLE COMMUNITIES SYSTEM REMOVALS	Routine	-	-	-	938	1,037	487
	232530.001	PYD PILOT RELOCATIONS/REMOVAL	Routine	-	-	-	113	113	113
Clean Energy Total				**-**	**-**	**-**	**1,051**	**1,150**	**600**
Overhead Pools	**E09010.001**	Local Engineering Pool - ED Pool	Routine	-	-	-	229,193	207,682	205,536
	E09040.001	Local Engineering Pool - Substation Pool	Routine	-	-	-	9,341	10,304	9,997
	E09050.001	Department Overhead Pool	Routine	-	-	-	52,295	48,711	48,480
	ED9060.001	Contract Administration Pool - Elec	Routine	-	-	-	15,492	15,506	14,189
Overhead Pools Total				**-**	**-**	**-**	**306,321**	**282,203**	**278,202**
Grand Total				**202**	**202**	**1,363**	**816,163**	**761,463**	**754,017**

APPENDIX C – RAMP Activities Sorted by Workpaper

Area: ELECTRIC DISTRIBUTION CAPITAL

Witness: Erika L. Schimmel-Guiles

GRC - RAMP Integration

GRC Workpaper	GRC Wkp Description	RAMP WKP	RAMP Wkp Description	RAMP Unit Measure	TOTAL (in 000s)							UNITS						
					2025	2026	2027	2028	2029	2030	2031	2025	2026	2027	2028	2029	2030	2031
002030.001	RAMP - DISTRIBUTION SUBSTATION RELIABILITY FORECAST	1CR05 C257	SDG&E-Risk-5 Electric Infrastructure Integrity Distribution Substation Responsive Asset Replacement	No feasible units	1,333	1,306	1,306	1,303	1,299	1,302	1,302	0	0	0	0	0	0	0
002260.001	Mgmt of OHD Dist Service Non-CMP	1CR05 C252	SDG&E-Risk-5 Electric Infrastructure Integrity Management of Overhead Distribution Service (Non-CMP)	Jobs completed	10,481	10,882	10,882	10,860	10,822	10,848	10,852	796	735	735	735	735	735	735
002270.001	002270 - RAMP - Management of Underground Distribution Services	1CR05 C256	SDG&E-Risk-5 Electric Infrastructure Integrity Management of Underground Distribution Serv (Non-CMP)	Jobs completed	6,461	5,685	5,685	5,675	5,657	5,669	5,671	440	508	508	508	508	508	508
002290.001	RAMP - CORRECTIVE MAINTENANCE PROGRAM (CMP) - OVERHEAD	1CR05 C251	SDG&E-Risk-5 Electric Infrastructure Integrity GO165 Corrective Maintenance Program OH	Jobs completed	28,538	28,538	28,538	28,488	28,401	28,459	28,469	1,824	1,824	1,824	1,824	1,824	1,824	1,824

Note: Totals may include rounding differences. Total amounts preceded by a double asterisk (**) are in millions ($MM). Unit values preceded by a single asterisk (*) are displayed in thousands (000s).

Area: ELECTRIC DISTRIBUTION CAPITAL

Witness: Erika L. Schimmel-Guiles

GRC - RAMP Integration

GRC Workpaper	GRC Wkp Description	RAMP WKP	RAMP Wkp Description	RAMP Unit Measure	TOTAL (in 000s)							UNITS						
					2025	2026	2027	2028	2029	2030	2031	2025	2026	2027	2028	2029	2030	2031
002290.002	RAMP - CORRECTIVE MAINTENANCE PROGRAM (CMP) - UNDERGROUND	1CR05 C212	SDG&E-Risk-5 Electric Infrastructure Integrity GO165 Corrective Maintenance Program Underground	Jobs completed	20,366	20,366	20,366	20,334	20,277	20,315	20,322	1,932	1,932	1,932	1,932	1,932	1,932	1,932
002300.001	Underground Cable Replacement Program	1CR05 C254	SDG&E-Risk-5 Electric Infrastructure Integrity Underground Cable Replacement Program - Reactive	Jobs completed	5,791	6,845	6,845	6,824	6,786	6,811	6,816	284	293	293	293	293	293	293
002360.001	Restoration of Service	1CR05 C253	SDG&E-Risk-5 Electric Infrastructure Integrity Restoration of Service	Jobs completed	9,369	10,836	10,836	10,802	10,741	10,782	10,789	1,382	1,428	1,428	1,428	1,428	1,428	1,428
002380.001	238 RAMP UG Cable	1CR05 C202	SDG&E-Risk-5 Electric Infrastructure Integrity Underground Cable Replacement Program (Proactive)	Miles	2,286	1,734	1,893	5,981	5,963	5,975	5,977	2	11	12	38	38	38	38
002900.001	RAMP - UG Switch Replacement Program	1CR05 C210	SDG&E-Risk-5 Electric Infrastructure Integrity DOE Switch Replacement	Switches Replaced	1,536	1,154	1,139	6,206	6,199	6,204	6,204	1	8	8	45	45	45	45

Note: Totals may include rounding differences. Total amounts preceded by a double asterisk (**) are in millions ($MM). Unit values preceded by a single asterisk (*) are displayed in thousands (000s).

GRC - RAMP Integration

GRC Workpaper	GRC Wkp Description	RAMP WKP	RAMP Wkp Description	RAMP Unit Measure	TOTAL (in 000s)							UNITS						
					2025	2026	2027	2028	2029	2030	2031	2025	2026	2027	2028	2029	2030	2031
062540.001	Emergency equipment	1CR05 C258	SDG&E-Risk-5 Electric Infrastructure Integrity Emergency Equipment Purchase	No feasible units	2,332	1,603	1,603	1,603	1,602	1,602	1,602	0	0	0	0	0	0	0
102650.001	Avian Protection Program	1CR05 C240	SDG&E-Risk-5 Electric Infrastructure Integrity Avian Protection Program	Poles	-2	0	0	23	23	23	23	0	0	0	12	12	12	12
152430.001	Distribution Protection & Control Modernizatio n	1CR05 C262	SDG&E-Risk-5 Electric Infrastructure Integrity Distribution Substation SCADA Expansion	Substations	636	461	590	2,948	2,942	2,946	2,947	2	1	1	5	5	5	5
172550.001	Tee moderniztion	1CR05 C206	SDG&E-Risk-5 Electric Infrastructure Integrity Tee Modernizatio n Program	Terminators replaced	2,903	3,469	3,469	3,467	3,462	3,465	3,466	132	158	158	158	158	158	158
172610.001	RAMP - OH Switch Replacement Program	1CR05 C236	SDG&E-Risk-5 Electric Infrastructure Integrity Distribution Overhead Switch Replacement Program	Switches Replaced	28	484	484	872	871	872	872	0	10	10	18	18	18	18

Note: Totals may include rounding differences. Total amounts preceded by a double asterisk (**) are in millions ($MM). Unit values preceded by a single asterisk (*) are displayed in thousands (000s).

Area: ELECTRIC DISTRIBUTION CAPITAL

Witness: Erika L. Schimmel-Guiles

GRC - RAMP Integration

GRC Workpaper	GRC Wkp Description	RAMP WKP	RAMP Wkp Description	RAMP Unit Measure	TOTAL (in 000s)							UNITS						
					2025	2026	2027	2028	2029	2030	2031	2025	2026	2027	2028	2029	2030	2031
172690.001	4 k reliability	1CR05 C234	SDG&E-Risk-5 Electric Infrastructure Integrity 4kV Reliability Program	Miles	3	0	0	12,781	6,349	6,360	6,362	0	0	0	2	1	1	1
202410.001	Proactive OHD cond	1CR05 C201	SDG&E-Risk-5 Electric Infrastructure Integrity Proactive Overhead Conductor Program	Miles	-56	0	1,461	25,147	25,143	25,146	25,147	0	0	1	17	17	17	17
202880.001	Non-HFTD Wireless Fault Indicators	1CR05 C263	SDG&E-Risk-5 Electric Infrastructure Integrity Wireless Fault Indicator	Wireless fault indicators installed	0	0	0	2,123	1,650	1,180	740	0	0	0	225	175	125	75
242520.001	Streamview Substation	1CR05 C227	SDG&E-Risk-5 Electric Infrastructure Integrity Streamview Substation Rebuild	No feasible units	0	6,169	854	0	0	0	0	0	0	0	0	0	0	0
242520.002	Urban Substation Rebuild	1CR05 C260	SDG&E-Risk-5 Electric Infrastructure Integrity Urban Substation Rebuild	No feasible units	0	6,443	2,075	0	0	0	0	0	0	0	0	0	0	0

Note: Totals may include rounding differences. Total amounts preceded by a double asterisk (**) are in millions ($MM). Unit values preceded by a single asterisk (*) are displayed in thousands (000s).

Area: ELECTRIC DISTRIBUTION CAPITAL

Witness: Erika L. Schimmel-Guiles

GRC - RAMP Integration

GRC Workpaper	GRC Wkp Description	RAMP WKP	RAMP Wkp Description	RAMP Unit Measure	TOTAL (in 000s)							UNITS						
					2025	2026	2027	2028	2029	2030	2031	2025	2026	2027	2028	2029	2030	2031
242520.003	North Valley Substation Rebuild	1CR05 C247	SDG&E-Risk-5 Electric Infrastructure Integrity North Valley (Morro Hill) Substation Rebuild	No feasible units	0	870	478	0	0	0	0	0	0	0	0	0	0	0
252600.001	Sub Distribution	1CR05 C250	SDG&E-Risk-5 Electric Infrastructure Integrity Substation Reliability for Distribution Components	Breakers replaced	4,756	3,711	5,054	6,970	7,781	12,143	8,966	4	25	23	19	7	21	7
252610.001	Substation Distribution Power Transformer Program	1CR05 C250	SDG&E-Risk-5 Electric Infrastructure Integrity Substation Reliability for Distribution Components	Transformers replaced	781	1,643	2,617	4,068	5,145	5,866	5,867	1	0	1	1	0	0	2
932400.001	Distribution Circuit Reliability	1CR05 C269	SDG&E-Risk-5 Electric Infrastructure Integrity Distribution Circuit Reliability	Switches	951	1,946	2,780	5,279	5,276	5,278	5,278	3	7	10	19	19	19	20
942410.001	Dist Power Quality Program	1CR05 C261	SDG&E-Risk-5 Electric Infrastructure Integrity Power Quality Monitor Deployment and Replacement	Power Quality Meters	2,203	537	471	730	488	531	511	6	119	109	126	36	40	38

Note: Totals may include rounding differences. Total amounts preceded by a double asterisk (**) are in millions ($MM). Unit values preceded by a single asterisk (*) are displayed in thousands (000s).

Area: ELECTRIC DISTRIBUTION CAPITAL

Witness: Erika L. Schimmel-Guiles

GRC - RAMP Integration

GRC Workpaper	GRC Wkp Description	RAMP WKP	RAMP Wkp Description	RAMP Unit Measure	TOTAL (in 000s)							UNITS						
					2025	2026	2027	2028	2029	2030	2031	2025	2026	2027	2028	2029	2030	2031
992820.001	Distribution Substation Proactive Asset Program	1CR05 C226	SDG&E-Risk-5 Electric Infrastructure Integrity Distribution Substation Proactive Asset Program	No feasible units	563	1,589	1,677	1,676	1,674	1,675	1,676	0	0	0	0	0	0	0

Note: Totals may include rounding differences. Total amounts preceded by a double asterisk (**) are in millions ($MM). Unit values preceded by a single asterisk (*) are displayed in thousands (000s).

APPENDIX D – Pub. Util. Code Section 935 Staffing Analysis

San Diego Gas & Electric Company's
2026 Analysis of Current and Future Qualified Staffing Levels Pursuant to Public Utilities Code Section 935

A. Executive Summary

Pursuant to Public Utilities Code Section 935, San Diego Gas & Electric Company (SDG&E) submits this staffing analysis to provide a comprehensive evaluation of the company's workforce strategy, current staffing structure, and projected staffing resource needs as it relates to energization.[1] This analysis is intended to inform stakeholders of SDG&E's approach to aligning workforce capabilities with operational demands while maintaining compliance with applicable tariff rules and service obligations. The analysis provides a focused assessment of the staffing required to plan, design, engineer, and construct customer-driven electric distribution energization work requests, including but not limited to, those projects with jobs across Electric Rules 2,13,15, 16, 45, 46[2] and other requests such as Main Panel Upgrades (MPUs), coordination with Rule 21 projects and customer requested outages; or any combination to meet a customer's project needs.

Within the Electrification Distribution Workforce[3] that supports customer energization requests and the 8-steps of energization as adopted in D.24-09-020,[4,5] SDG&E currently has 457 full-time employees (FTE) and 341 contractors inclusive of current vacancies. It should be noted that SDG&E does not have dedicated resources for energization requests so, to varying degrees, the functions and departments included in this analysis also support work beyond customer energization requests. As SDG&E currently does not track

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1 "Energization" is defined in Public Utilities Code Section 931as connecting customers to the electrical distribution grid and establishing adequate electrical distribution capacity or upgrading electrical distribution or transmission capacity to provide electrical service for a new customer, or to provide upgraded electrical service to an existing customer.

2 SDG&E requested to establish Rule 46 via Advice Letter 4774-E, submitted December 17, 2025. This advice letter is pending disposition.

3 Electrification Distribution Workforce is defined by the staffing required to energize residential, commercial, and government customers for tariff work pursuant electric Rules 2,13,15, 16, 45, 46 and other requests such as MPUs, coordination with Rule 21 projects and customer requested outages; or any combination of such therein to meet a customer's project needs.

4 Decision Establishing Target Energization Time Periods and Procedure for Customers to Report Energization Delays, at Section 7.

5 The Electrification Distribution Workforce also supports non-customer requested work.

the breakout, this workforce staffing analysis includes the full staffing count of the primary functional areas that are part of the core energization process.

Projected staffing requirements balance anticipated growth in customer-driven energization requests with SDG&E's ongoing efforts to streamline and automate its manual and disaggregated processes and systems.[6] These initiatives aim to reduce duplicate and manual tasks and leverage technology through continued IT and automation investments. To meet these demands, SDG&E has a deliberate workforce strategy focused on operational efficiencies, process improvements, and technology enablement. This approach is designed to absorb incremental workload through automation and technology solutions, minimizing headcount growth except when critical to meeting energization timelines. By doing so, resources can be reduced or shifted to more specialized roles, driving efficiency and proficiency in roles supporting customer energization projects. A cornerstone of SDG&E's workforce strategy is maintaining a robust apprenticeship pipeline for technical field roles. These positions require extended time to achieve certification and proficiency in lineman-related trades. SDG&E also has an in-depth engineering rotational program, but it is not classified as an apprenticeship. Recruiting, training, and retaining these specialized skill sets are essential to sustaining SDG&E's ability to continue delivering safe, reliable, and timely service to customers. This staffing analysis reflects SDG&E's commitment to proactive workforce planning to continue meeting customer expectations and energization timelines.

The remainder of this report is divided into the following four Sections:

1. Section B – Framework for Staffing Analysis: Provides a background and overview of Senate Bill (SB) 410 (Powering Up Californians Act) and required staffing analysis per Public Utilities Code Section 935.
2. Section C – Current Qualified Staffing Levels of the Electric Distribution Workforce: Current Electrification Distribution workforce headcounts supporting customer energization requests.
3. Section D – Apprenticeship: Highlights of SDG&E's apprenticeship and trainee programs.
4. Section E – Forecast Staffing Analysis & Conclusion: Forecasted staffing needs for SDG&E. These forecasts take process improvements and

[6] A project lifecycle can span up to sixteen different business units across twenty disparate systems. In 2025 SDG&E began connecting these systems for visibility and transparency and is further pursuing efforts to streamline its energization work to reduce energization timelines and provide a simplified and transparent customer experience.

technology solutioning into consideration as part of the SDG&E staffing strategy.

B. Framework for Staffing Analysis

1. Regulatory Background

In 2023, the California Legislature enacted the Powering Up Californians Act through SB 410, establishing state policy that upgrades to electrical corporations' distribution systems are essential for meeting decarbonization goals, fulfilling utility obligations to serve, and ensuring that housing, businesses, and electric vehicles can be energized without delay. SB 410 was prompted by rising concern over utilities' ability to energize customer requests promptly, leading the Legislature to require that electrical corporations recruit, train, and retain a sufficiently large, qualified workforce to carry out distribution system upgrades and customer energizations while continuing vital safety and reliability activities such as wildfire mitigation, inspections, and maintenance. Importantly, the Legislature directed the California Public Utilities Commission (Commission) to mandate that utilities maintain adequate staffing and an apprentice pipeline to support these objectives. Consequently, Section 935 of the Public Utilities Code, requires utilities, as part of each general rate case and annual report, to provide an analysis of current and projected staffing levels for all roles needed to plan, engineer, and construct distribution system upgrades necessary for timely customer energization, without compromising critical ongoing safety and reliability work.

2. Approach to this Staffing Analysis

To meet the staffing analysis requirements of Public Utilities Code Section 935, SDG&E first identified every department that contributes to customer-driven energization projects across the full lifecycle—from initial customer request through planning, design, engineering, permitting, land, environmental, customer required work, inspection, and construction. Current staffing data was then collected for each functional area and reported here in Section C.

C. Current Qualified Staffing Levels of the Electrification Distribution Workforce

The Electrification Distribution Workforce is defined by the staffing required to energize residential, commercial, and government customers for tariff work pursuant electric Rules 2,13,15, 16, 45, 46 and other requests such as MPUs, coordination with Rule 21 projects and customer requested outages; or any combination of such therein to meet a customer's project needs. This includes, for example, combination jobs where more than one tariff rule applies such as Rule 15/16 and Rule 15/45. The staffing required for this workforce begins with our application intake team and concludes with the construction crews

required for energization. Across the 8-step energization process, adopted in D.24-09-020, the Electrification Distribution Workforce at SDG&E is comprised primarily of the following project functions:

- Planning & Project Management (including Billing)
- Land & Environmental Services
- Design & Permitting
- Electric Distribution Planning
- Electric Engineering
- Construction Management & Field Crews

Planning & Project Management: Responsible for the customer's application for energization, planning, and project management of customer requested projects including MPUs, and Rules 2,13,15, 16, 45, and 46 projects, as well as coordination on Rule 21 and customer requested outages. Provides project accountability for customers, including a single point of contact (SPOC) pursuant to the Energization OIR Decision. Responsible for providing seamless customer service throughout the project lifecycle and coordination where multiple tariffs or other customer requests are involved. Fields and writes service orders, performs all project planning activities, prepares customer contracts, supports customer billing and interfaces with Authorities Having Jurisdiction, to ensure customer inspections have been completed prior to energization. Includes working with **Billing** to ensure required fees are accurately reviewed and paid throughout the lifecycle of a project. Ensures that the appropriate meter rate is set for the customer for long-term service. This includes setting tariff incentivized rates such as the EV-HP rate.

Land & Environmental Services: These departments are responsible for obtaining essential land rights, including easements, and ensure compliance with all environmental requirements.

Design & Permitting: Prepares distribution designs for electric distribution work orders. For energization requests this would primarily include designs for Rule 2, 13, 15,16, 45 and 46. This scope includes all necessary Field Change Orders (FCO's) as well as quality assurance and quality control (QA/QC) reviews. Secures all required permits at the local, state, federal or agency level necessary for SDG&E to energize customer facilities or to perform other customer-requested work or company work.

Electric Distribution Planning: Responsible for identifying and scoping the distribution system upgrades based on the review and analysis of customer energization requests.

Responsibilities extend beyond energization and includes supporting emergency operations, integrating advanced technologies, and providing ongoing engineering support for internal and external stakeholders. The group also has resources supporting other engineering responsibilities and upstream capacity projects, which are not included in this analysis.

Electric Engineering: Responsible for maintaining and updating service standards, material standards, work methods and construction standards, and other technical support to safely and reliably energize customers. This group would also approve any customer requested deviations from these standards. In addition, responsibilities include coordination of protection settings for primary meter customers. The group also has resources supporting other engineering responsibilities and upstream capacity projects, which are not included in this analysis.

Construction Management & Field Crews: Executes pre-construction and construction activities for all tariff work. These teams work in-concert with local county and municipal inspection teams, SDG&E inspection teams, and ensure all required project prerequisites and safety verifications are completed and in compliance with SDG&E standards prior to scheduling construction crews. Assigns and manages contracted civil and electrical construction crews appropriate to project scope, creates switch plans and schedules any required outages to perform work, and coordinates with customer contractors.

A detailed breakdown by project functional area is as follows:[7]

Project Functional Area	2026	2027	2028	2029	2030	2031
Planning & Project Management	363	363	363	363	363	363
Design & Permitting	105	105	105	105	105	105
Construction Management & Field Crews	177	184	184	184	184	184
Electric Distribution Planning	7	7	7	7	7	7
Electric Engineering	38	38	38	38	38	38
Land & Environmental Services	108	109	111	111	111	111
TOTAL	**798**	**806**	**808**	**808**	**808**	**808**

A further breakdown of these project functional areas based on Job Classification is set forth in **Attachment A – "Workforce by Job Classification"** hereto.

[7] Includes SDG&E full time employees and contracted workforce.

D. Apprenticeship

SDG&E maintains structured apprenticeship and trainee programs for linemen to ensure a sustainable pipeline of qualified personnel for critical field and engineering support roles. Program elements typically include classroom instruction, on-the-job training (OJT), progressive skill assessments, and certification milestones aligned with safety and industry standards. SDG&E does not have apprenticeship pipelines for engineers. However, selected engineers do participate in a rotational program throughout the company.

E. Forecast Staffing Analysis & Conclusion

For the remainder of SDG&E's current General Rate Case (GRC) cycle (2026-2027), SDG&E does not currently forecast any workforce growth outside of filling any vacancies that currently exist. In preparation for growth in energization requests that will likely occur during this period or beyond, SDG&E's strategy is to prioritize technology investments and process improvements to reduce the need for additional workforce resources and will continue to look for opportunities to create efficiencies in workflow platforms and customer portals that further enable automation, customer communication and scheduling, and AI enhancements. The automation and creation of efficiencies of manual processes will create opportunities to shift resources to more complex and skilled tasks as energization requests increase.

SDG&E requested funding through its SB 410 Ratemaking Mechanism Application (A.25-04-015) to address the critical IT enhancements needed to meet the compliance requirements specified in D.24-09-020. Although the Commission's final decision on the application did not authorize SDG&E to utilize the mechanism to immediately recover the costs of these needed IT enhancements, SDG&E believes IT investments deliver value to all ratepayers by reducing cost of service to our customer base without growing the workforce, while also enabling faster energization timelines and more transparent communications with customers as intended by the D.24-09-020. Specifically, the SDG&E customer portal is being enhanced to strengthen communication and transparency throughout the energization process. Planned improvements include clearly identifying each customer's designated single point of contact, integrating AI-enabled capabilities to guide customers through the application process, and expanding status updates to provide more detailed, real-time visibility into project progress and requirements. In addition, SDG&E is expanding our internal process workflow platform (NEXUS) that interfaces and aligns SDG&E stakeholders across the 8-steps of energization to reduce timelines while ensuring unity of effort for every project type.

SDG&E is committed to having sufficient and adequately skilled resources to energize customers in a timely manner that meets their needs and in compliance with Public Utilities Code Section 935 without impairing ongoing safety and reliability activities such as wildfire mitigation, inspections, and maintenance. Multi-year hiring strategies will be reviewed and adjusted to reflect efficiencies, regulatory directives, and observed performance.

Attachment A - Workforce by Job Classification

Planning & Project Management

Full Time Employees (FTE)

Job Classification	2026	2027	2028	2029	2030	2031
Customer Engagement Manager	1	1	1	1	1	1
Planning Manager	4	4	4	4	4	4
Project Support Manager	1	1	1	1	1	1
Project Management Supervisor	13	13	13	13	13	13
Service Order Supervisor	6	6	6	6	6	6
Project Support Supervisor	3	3	3	3	3	3
Policy & Compliance	5	5	5	5	5	5
Data Analyst	3	3	3	3	3	3
New Service Representative	6	6	6	6	6	6
Planning Advisor	7	7	7	7	7	7
Project Manager	23	23	23	23	23	23
Project Planner	54	54	54	54	54	54
Project Support	32	32	32	32	32	32
Service Coordinator	10	10	10	10	10	10
Service Planner	34	34	34	34	34	34
Business Analyst	1	1	1	1	1	1
Accounting Supervisor	1	1	1	1	1	1
Senior Accountant	1	1	1	1	1	1
Total FTEs	**205**	**205**	**205**	**205**	**205**	**205**

Contractors

Job Classification	2026	2027	2028	2029	2030	2031
Data Analyst	10	10	10	10	10	10
Financial Analyst	3	3	3	3	3	3
Document Control Specialist	14	14	14	14	14	14
Project Planner	34	34	34	34	34	34
New Service Representative	3	3	3	3	3	3
Project Coordinator	13	13	13	13	13	13
Project Manager	17	17	17	17	17	17
Project Support	40	40	40	40	40	40
Service Coordinator	3	3	3	3	3	3
Service Planner	11	11	11	11	11	11
Training Specialists	6	6	6	6	6	6
Business Analyst	1	1	1	1	1	1
Senior Accountant	1	1	1	1	1	1
Staff Accountant	2	2	2	2	2	2
Total Contractors	**158**	**158**	**158**	**158**	**158**	**158**

Design & Permitting

Full Time Employees (FTE)

Job Classification	2026	2027	2028	2029	2030	2031
Distribution Designer	30	30	30	30	30	30
New Business Design Supervisor	3	3	3	3	3	3
Customer Driven Design Manager	1	1	1	1	1	1
Technical Support Assistant	3	3	3	3	3	3
Design Advisor	3	3	3	3	3	3
Governance & Optimization Supervisor	1	1	1	1	1	1
Permitting Supervisor	2	2	2	2	2	2
Governance & Optimization Manager	1	1	1	1	1	1
Permit Administrator	9	9	9	9	9	9
Municipal Advisor	6	6	6	6	6	6
Project Manager	1	1	1	1	1	1
QAQC Advisor	4	4	4	4	4	4
Total FTEs	**64**	**64**	**64**	**64**	**64**	**64**

Contractors

Job Classification	2026	2027	2028	2029	2030	2031
Design Support Coordinators	2	2	2	2	2	2
Document Control Specialist	2	2	2	2	2	2
Business Analyst	2	2	2	2	2	2
Design Techs	5	5	5	5	5	5
New Business POC	3	3	3	3	3	3
Project Coordinator	1	1	1	1	1	1
Design Advisor	2	2	2	2	2	2
TCP Specialist	12	12	12	12	12	12
Project Specialist	5	5	5	5	5	5
QAQC Technical Specialist	2	2	2	2	2	2
QAQC Construction Inspector	5	5	5	5	5	5
Total Contractors	**41**	**41**	**41**	**41**	**41**	**41**

Construction Management & Field Crews

				Full Time Employees (FTE)		
Job Classification	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Electric Construction Manager (CM)	2	2	2	2	2	2
Civil Construction Manager (CM)	2	2	2	2	2	2
Electric Field Construction Advisor (FCA)	5	5	5	5	5	5
Civil Field Construction Advisor (FCA)	2	2	2	2	2	2
Project Manager	1	1	1	1	1	1
Construction Management Specialist	4	5	5	5	5	5
Project Advisor	1	1	1	1	1	1
Project Support Supervisor	1	1	1	1	1	1
Project Coordinator	8	11	11	11	11	11
Inspector Supervisor	2	2	2	2	2	2
Trench Desk	6	6	6	6	6	6
Inspector A	29	32	32	32	32	32
PC and Insp Manager	2	2	2	2	2	2
Construction Supervisor	9	9	9	9	9	9
Working Foreman	9	9	9	9	9	9
Lineman	27	27	27	27	27	27
Total FTEs	**110**	**117**	**117**	**117**	**117**	**117**

				Contractors		
Job Classification	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Standby Lineman Field Const. Advisor	2	2	2	2	2	2
Civil Field Construction Advisor	3	3	3	3	3	3
Project Advisor	1	1	1	1	1	1
Business Analyst	1	1	1	1	1	1
Foreman	10	10	10	10	10	10
Lineman (FPW)	30	30	30	30	30	30
Apprentice (FPW)	10	10	10	10	10	10
Project Manager (FPW)	3	3	3	3	3	3
Operations Assistant	7	7	7	7	7	7
Total Contractors	**67**	**67**	**67**	**67**	**67**	**67**

Electric Distribution Planning

Full Time Employees (FTE)						
Job Classification	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Planning Engineer	7	7	7	7	7	7
Total FTEs	**7**	**7**	**7**	**7**	**7**	**7**

Electric Engineering

Full Time Employees (FTE)						
Job Classification	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Engineer	13	13	13	13	13	13
Construction Standards Administrator	7	7	7	7	7	7
Service standard Administors	4	4	4	4	4	4
Project Manager	2	2	2	2	2	2
Total FTEs	**26**	**26**	**26**	**26**	**26**	**26**

Contractors						
Job Classification	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
Drafter/Designers	5	5	5	5	5	5
Project Manager/Coordiantor	7	7	7	7	7	7
Total Contractors	**12**	**12**	**12**	**12**	**12**	**12**

Land & Environmental

Full Time Employees (FTE)						
Job Classification	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
ROW Agent	1	1	1	1	1	1
Land Manager	6	6	6	6	6	6
Land Survey Advisors	3	3	3	3	3	3
Facility Environmental Reps	6	6	7	7	7	7
Environmental Planners	7	7	8	8	8	8
Queue Coordinator and GIS	2	2	2	2	2	2
Cultural Resources SME	7	7	7	7	7	7
Natural Resources SME	7	7	7	7	7	7
Air and Water Resources SME	4	4	4	4	4	4
Field Operations Representative	1	1	1	1	1	1
Senior Water Quality Specialist	1	1	1	1	1	1
Total FTEs	**45**	**45**	**47**	**47**	**47**	**47**

Contractors						
Job Classification	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
ROW Agent	5	5	5	5	5	5
ROW Assts	5	5	5	5	5	5
Land Manager Assts	3	3	3	3	3	3
Rights Researchers	5	6	6	6	6	6
Land Surveyors	5	5	5	5	5	5
Natural Resources SME	20	20	20	20	20	20
Cultural Resources SME	11	11	11	11	11	11
Water Resources SME	2	2	2	2	2	2
Queue Coordinator	2	2	2	2	2	2
GIS Specialist	1	1	1	1	1	1
Support for Tribal Projects w/ BIA	4	4	4	4	4	4
Total Contractors	**63**	**64**	**64**	**64**	**64**	**64**