

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**



**FILED**

Application of San Diego Gas & Electric Company (U902M) for Authority, Among Other Things to Update its Electric and Gas Revenue Requirement and Base Rates Effective on January 1, 2019.	Application 17-10-007 (Filed October 6, 2017)	04/30/24 04:59 PM A1710007
And Related Matter.	Application 17-10-008 (Consolidated)	
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And Related Matter.	Application 21-05-014 (Consolidated)	
Application of Southern California Gas Company (U 902 M) for Authority, Among Other Things, to Update its Gas Revenue Requirement and Base Rates Effective on January 1, 2024.	Application 22-05-015 (Filed May 16, 2022)	
And Related Matter.	Application 22-05-016 (Consolidated)	

**RISK SPENDING ACCOUNTABILITY REPORT OF  
SAN DIEGO GAS & ELECTRIC COMPANY (U 902 M) AND  
SOUTHERN CALIFORNIA GAS COMPANY (U 904 G) FOR 2023**

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April 30, 2024

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**RISK SPENDING ACCOUNTABILITY REPORT OF  
SAN DIEGO GAS & ELECTRIC COMPANY (U 902 M) AND  
SOUTHERN CALIFORNIA GAS COMPANY (U 904 G) FOR 2023**

In compliance with Decision (D.) 19-04-020 and D.22-10-002, the Safety Model Assessment Proceeding (S-MAP) Decisions (S-MAP Decisions), San Diego Gas & Electric Company (SDG&E) and Southern California Gas Company (SoCalGas) submit this 2023 Risk Spending Accountability Report (2023 RSAR). The 2023 RSAR covers spend that was authorized in the Test Year 2019 General Rate Case cycle for activities that address safety, reliability, and/or maintenance, consistent with California Public Utilities Code Section 591(a). This report is timely filed and served in accordance with D.19-04-020, D.22-10-002 and Section 591(b). SoCalGas and SDG&E hereby file and serve their 2023 RSAR in accordance with D.19-

04-020, which directs that utilities:

shall file each annual RSAR in the utility's current or most recent Risk Assessment Mitigation Phase (RAMP) and General Rate Case (GRC) proceeding at the time of filing as well as the RAMP/GRC that approved the risk spending, [and] shall serve each RSAR to the California Public Advocate's Office and the Office of Safety Advocates ....<sup>1</sup>

Energy Division's Report on SoCalGas and SDG&E's 2020 RSARs similarly directs that: [SoCalGas and SDG&E] should file and serve their 2021 RSAR in the most recent [...] proceeding in which costs are imputed, (A.17-10-007/A.17-10-008), and the 2021 Risk Assessment and Mitigation Phase (RAMP, A.21-05-011 and A.21-05-014) with copies provided to the CPUC's Safety Policy Division, Safety and Enforcement Division, and the Public Advocates Office. Sempra should also provide the 2021 RSAR to the ED Tariff Unit by emailing the report to edtariffunit@cpuc.ca.gov.<sup>2</sup>

SoCalGas and SDG&E also file the 2023 RSAR in accordance with the immediately effective October 2022 S-MAP Track 3 Decision adopting RSAR enhancements that apply to spending authorized in the 2019 GRC Decision.<sup>3</sup> A list of the requirements applied beginning in 2023 and applied for this 2023 RSAR are discussed in Section 2.A of the Report.

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<sup>1</sup> D.19-04-020 at 64, Ordering Paragraph 8.

<sup>2</sup> December 3, 2021, letter regarding "San Diego Gas & Electric Company and Southern California Gas Company 2020 Risk Spending Accountability Report Review" at 3, (citing D.19-04-020, p. 47) (emphasis added), available at [https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/risk-spending-accountability-reports/sempra\\_2020\\_rsar\\_ed-review-signed.pdf](https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/risk-spending-accountability-reports/sempra_2020_rsar_ed-review-signed.pdf).

<sup>3</sup> See D.22-10-002, Ordering Paragraph (OP) 1 at 55 (ordering that SoCalGas and SDG&E shall implement the RSAR requirements contained in Appendix A to D.22-10-002, "effective immediately with the exception of requirement 25 in Appendix A, which PG&E, SCE, SoCalGas, and SDG&E shall each implement in its first annual RSAR due following approval of its next GRC application approved subsequent to adoption of this decision, as outlined in this decision. The RSAR, RAMP, and GRC requirements contained in Appendix A add to and do not replace those adopted in D.14-12-025, D.16-08-018, D.18-12-014, D.19-04-020 and D.20-01-002, which are retained unmodified, with the exception of the annual RSAR schedule.").

Party comments should be submitted in accordance with D.19-04-020 (which directs, for example, that “[p]arties should clearly identify the RSAR on which they are submitting comments”),<sup>4</sup> and the revised schedule set forth in D.22-10-002, which requires Intervenor comments to be submitted by July 21.<sup>5</sup>

Respectfully submitted,

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April 30, 2024

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<sup>4</sup> See D.19-04-020 at 47.

<sup>5</sup> D.22-10-002 at Appendix A.



**Southern California Gas Company and San Diego Gas & Electric Company  
2023 Risk Spending Accountability Report**

**April 30, 2024**

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## 1. INTRODUCTION

In compliance with Decisions (D.) 19-04-020 and D.22-10-002, the Safety Model Assessment Proceeding (S-MAP) Decisions (S-MAP Decisions), Southern California Gas Company (SoCalGas) and San Diego Gas & Electric Company (SDG&E) (collectively, the Utilities) timely submit this annual Risk Spending Accountability Report (RSAR) comparing 2023 imputed authorized spending to actual spending (2023 RSAR or Report).<sup>6</sup> This 2023 RSAR addresses Operations and Maintenance (O&M) expenses and capital investments authorized in D.19-09-051, the Decision Addressing the Test Year (TY) 2019 General Rate Cases (GRCs) of SoCalGas and SDG&E (2019 GRC Decision) for activities that address safety, reliability, and/or maintenance, consistent with California Public Utilities Code (P.U. Code) Section 591 and the S-MAP Decisions. Additional decisions impacting funding for 2023 are D.20-07-038 (the Order Modifying D.19-09-051 and Denying Rehearing, as Modified) and D.21-05-003 (the Decision Regarding the Utilities' Post Test Year Mechanism For 2022 And 2023).

This 2023 RSAR addresses the fourth and final attrition year of the 2019 GRC cycle. The Utilities filed their TY 2019 GRC Application (in October 2017) before the Commission adopted the S-MAP Phase 2 Decision RSAR requirements (in April 2019). Because of this timing, certain aspects of the information provided in the 2023 RSAR were not authorized in the 2019 GRC Decision in a manner consistent with the S-MAP Decisions' requirements. Thus, the 2023 RSAR is a transitional report.

The 2023 RSAR is organized as follows:

- **Section 1 Introduction** – briefly introduces the Report.
  - **Section 1.A. Procedural Background** – describes previous events that led to this Report.

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<sup>6</sup> In compliance with D.14-12-025, D.19-04-020, and D.22-10-002, this 2023 RSAR is being filed in and served on the service lists for Application (A.) 17-10-007/008 (cons.), the “applicable GRC proceeding in which funding for the risk mitigation activities and spending was authorized” (*see* D.14-12-025 at 46), A.21-05-011/-014 (cons.), and A.22-05-015/-016 (cons.), the “most recent RAMP/GRC at the time of its filing” D.19-04-020 at 45.

- **Section 1.B. Overview of General Rate Cases and 2019 Cycle** – describes the basics of GRCs and the GRC cycle applicable for this Report.
- **Section 2 Presentation of 2023 Risk Spending Accountability Report** – provides foundational information to consider when reviewing this 2023 RSAR.
  - **Section 2.A. Summary of Reporting Requirements** – sets forth the requirements subject to this Report adopted in the S-MAP Decisions.
  - **Section 2.B. Key Parameters and Considerations Underlying the Report** – discusses assumptions that inform review of this Report.
  - **Section 2.C. Identification of Safety, Reliability, and Maintenance-Related Programs** – describes the activities in scope of this Report.
  - **Section 2.D. Derivation of Imputed Authorized Dollars** – explains how the authorized dollars from the 2019 GRC Decision were derived for attrition year 2023 for this Report.
- **Section 3 Overview of 2023 Risk Spending Accountability Report Results** – provides the high-level results and a summary of the variance explanations of the Report.
- **Attachment A SDG&E** – presents tables providing authorized, actual, work units, variance explanations, program descriptions, project status information, and testimony references.
- **Attachment B SoCalGas** – presents tables providing authorized, actual, work units, variance explanations, program descriptions, project status information, and testimony references.
- **Attachment C** – include the hyperlinks to the cited GRC Exhibits.

**A. Procedural Background**

On November 14, 2013, the California Public Utilities Commission (Commission) opened Rulemaking (R.) 13-11-006, Order Instituting Rulemaking to Develop a Risk-Based



Decision-Making Framework to Evaluate Safety and Reliability Improvements and Revise the Rate Case Plan for Energy Utilities (the Risk OIR). The purpose of the Risk OIR was to incorporate a risk-based decision-making framework into the Rate Case Plan (RCP) for the energy utilities' GRCs, in which utilities request funding for safety-related and other activities. On December 4, 2014, the Commission adopted D.14-12-025 in the Risk OIR establishing, as part of its risk-informed decision-making framework, annual verification reports – one of which is the RSAR.<sup>7</sup> According to the Commission, the RSAR is intended to “compare the utility’s GRC projected spending for approved risk mitigation projects to the actual spending on those projects, and to explain any discrepancies between the two.”<sup>8</sup> These annual verification reports will “improve utility accountability of ratepayer money spent on risk mitigation.”<sup>9</sup> To implement the verification reporting requirements, in D.16-06-054, the decision approving the TY 2016 GRCs of SoCalGas and SDG&E (2016 GRC Decision), the Commission ordered the Utilities to file interim RSARs for years 2014 through 2016 on a limited set of risk mitigation projects.<sup>10</sup> These interim RSARs for years 2014-2016 were timely submitted by SoCalGas and SDG&E.

In September 2017, Senate Bill (SB) 549<sup>11</sup> was signed into law, effective January 1, 2018. SB 549 added P.U. Code § 591, which requires “an electrical or gas corporation to annually notify the [public utilities] commission . . . of each time since that notification was last provided that capital or expense revenue authorized by the commission for maintenance, safety, or reliability was redirected by the electrical or gas corporation to other purposes.”<sup>12</sup> Prior to the effective date of SB 549, RSARs had been limited to reporting on risk mitigation activities related to safety and/or reliability. SB 549 broadened the scope of reportable items to safety, reliability, and/or maintenance.<sup>13</sup>

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<sup>7</sup> D.14-12-025 also established the Risk Mitigation Accountability Report to compare projected and actual risk mitigation benefits (*see* D.14-12-025 at 12 and 44). Another element of this Risk Mitigation Accountability Report is addressed in the Utilities’ Safety Performance Metrics Report, which was separately filed on or before March 31, 2023 pursuant to the S-MAP Phase 2 Decision.

<sup>8</sup> D.14-12-025 at 44.

<sup>9</sup> D.14-12-025, Findings of Fact 27 at 52.

<sup>10</sup> D.16-06-054, Ordering Paragraph (OP) 11 at 331-332, and at 39-41.

<sup>11</sup> SB 549, Stats. 2017-2018, Ch. 284 (Cal. 2017).

<sup>12</sup> P.U. Code § 591(a).

<sup>13</sup> *See* D.19-04-020 at 9.

To implement the requirements of SB 549 and standardize future RSARs, in 2018, the Commission further examined RSAR requirements in Phase 2 of the S-MAP. Energy Division issued a Proposal for Standardized Reporting and Outline (Staff Proposal) recommending revised reporting requirements.

In April 2019, the S-MAP Phase 2 Decision adopted RSAR requirements<sup>14</sup> that, for SoCalGas and SDG&E, apply “starting with its 2019 RSAR filing (due March 31, 2020),”<sup>15</sup> for spending authorized in the 2019 GRC Decision.

In October 2022, the S-MAP Track 3 Decision adopted RSAR enhancements that, for SoCalGas and SDG&E, apply starting with its 2022 RSAR filing due April 30, 2023<sup>16</sup> for spending authorized in the 2019 GRC Decision. A list of the requirements applied beginning in 2023 and applied for this 2022 RSAR are discussed in Section 2.A. One additional requirement, 25 in Appendix A of this same decision, is not required until SDG&E and SoCalGas’s first annual RSAR following approval of its next GRC application (Test Year 2024).

## **B. Overview of General Rate Cases and the 2019 Cycle**

The Utilities file GRC applications with the Commission seeking a revenue requirement (comprising O&M and capital-related funding) to become effective on January 1 of the test year. The Utilities typically put forth these requests in direct (*i.e.*, not including overhead costs), base year dollars by forecasting values in workpapers, which are groups of organizational-based O&M cost centers and capital budget codes. These direct dollar forecasts also include various risk mitigation activities and projects that are proposed in testimony by witnesses. The forecasts are converted into a test year revenue requirement.<sup>17</sup> After the submission and thorough review of the evidentiary record, the Commission authorizes a revenue requirement to recover through

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<sup>14</sup> *Id.*, Attachment 2.

<sup>15</sup> *Id.* at 46.

<sup>16</sup> D.22-10-002, OP 1 at 55. The RSAR, RAMP, and GRC requirements contained in Appendix A add to and do not replace those adopted in D.14-12-025, D.16-08-018, D.18-12-014, D.19-04-020 and D.20-01-002, which are retained unmodified, with the exception of the annual RSAR schedule.

<sup>17</sup> The Utilities’ GRCs direct, base year dollar forecasts are converted into a test year revenue requirement using a ratemaking model, the Results of Operation (RO) model. The process by which the RO model converts the direct, base year dollars into a test year revenue requirement includes the escalation of costs (converting base year dollars into test year nominal dollars), intercompany billings between the Utilities, applying overheads (such as employee benefits) to capital projects, and converting the capital forecasts into capital-related costs (depreciation, taxes, and return).

rates the reasonable costs forecasted to be incurred in the test year, and a mechanism for adjusting the revenue requirement annually during the post-test years.<sup>18</sup> The Commission authorizations may or may not be the same as originally presented by the Utilities in their respective GRC applications.

SoCalGas and SDG&E filed their TY 2019 GRC Applications on October 6, 2017.<sup>19</sup> Among other things, the Utilities' Applications included requests related to mitigating their key safety risks and integrated the results from their Risk Assessment Mitigation Phase (RAMP) filed on November 30, 2016 (2016 RAMP). The Utilities included testimony supporting their 2019 GRC Applications that provided a roadmap of the RAMP risks to the corresponding witness area,<sup>20</sup> a summary of GRC witnesses sponsoring RAMP costs,<sup>21</sup> testimony that explained the RAMP to GRC integration process,<sup>22</sup> and explicit identification of RAMP-related activities and costs in the testimony of the witness sponsoring those forecasts.

The 2019 GRC Decision was approved by the Commission on September 26, 2019. The 2019 GRC Decision states:

[t]he adopted revenue requirement and PTY increases for SDG&E will provide the necessary funds to allow it to operate its electric and natural gas transmission and distribution system safely and reliably and to fulfill customer service functions at reasonable rates.

For SoCalGas, the adopted revenue requirement and PTY increases will provide the necessary funds to allow it to operate its natural gas transmission, gas distribution, and gas storage systems safely and reliably and to fulfill customer service functions at reasonable rates.<sup>23</sup>

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<sup>18</sup> The years between a utility's GRC test years are referred to as post-test years or attrition years. The revenue requirements for the attrition years are generally determined through a post-test year mechanism. Ultimately, the GRC decision will prescribe the mechanism for how to adjust the test year revenue requirement for inflation and other factors that may affect costs, such as additional capital projects between test years.

<sup>19</sup> Exhibit references herein refer to utility exhibit numbers as listed on their respective websites.

<sup>20</sup> A.17-10-007/-008 (cons.), Ex. SCG-02-R/SDG&E-02-R, Chapter 1 (Day) at Appendix A.1.

<sup>21</sup> *Id.* at Appendix A.2.

<sup>22</sup> *See id.*, and Ex. SCG-02-R/SDG&E-02-R, Chapter 3 (York).

<sup>23</sup> D.19-09-051 at 3-4.

While SoCalGas and SDG&E endeavored to “isolate the RAMP activity, to allow the reader to see the dollar request in GRC workpapers,”<sup>24</sup> the 2019 GRC Decision stated that the “RAMP portion in Applicants’ requests is not presented as separate and distinct from the non-RAMP portions” and “in many instances our decision is not based on risk mitigation but rather on standard GRC methods.”<sup>25</sup> Work unit levels were also not presented for a given level of proposed funding. Based on this, the 2019 GRC Decision does not necessarily authorize RAMP activity costs or work unit levels by line-item details. Thus, in this 2023 RSAR, it was necessary to impute some of the authorized RAMP activity costs and work unit levels, or to provide activity descriptions in lieu of work units, when authorized levels were not available.

Furthermore, on January 16, 2020, the CPUC adopted a decision in the Risk OIR, D.20-01-002 (RCP Decision), extending the GRC cycle for each large California investor-owned utility (IOU) from three to four years. To facilitate the transition from a three- to four-year GRC cycle for the IOUs, the RCP Decision “direct[s] SoCalGas and SDG&E to request two additional attrition years (2022 and 2023) in their petition for modification of D.19-09-051.”<sup>26</sup> Thus, the RCP Decision revised the length of SoCalGas’s and SDG&E’s 2019 GRC cycle from 2019-2021 to 2019-2023. SoCalGas and SDG&E filed the required petition for modification (PFM) of the 2019 GRC Decision to set attrition year increases for 2022 and 2023 on April 9, 2020. On May 6, 2021, the Commission adopted D.21-05-003, which approved with modifications SoCalGas’s and SDG&E’s PFM of D.19-09-051.

The diagram below illustrates the GRC cycle relevant for this 2023 RSAR, the Utilities’ current TY 2019 GRC cycle for the TY 2019 GRC Application (as modified by the RCP Decision).

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<sup>24</sup> A.17-10-007/-008 (cons.), Ex. SCG-02-R/SDG&E-02-R, Chapter 3 (York) at JKY-6.

<sup>25</sup> D.19-09-051 at 22.

<sup>26</sup> D.20-01-002 at 52.

**Diagram 1: TY 2019 GRC Cycle of SoCalGas and SDG&E**

2019 GRC Proceeding	
Base Year	2016
Forecast Year	2017
Forecast Year	2018
Test Year	2019
Post-Test Year	2020
Post-Test Year	2021
Post-Test Year	2022
Post-Test Year	2023

**2. PRESENTATION OF 2023 RISK SPENDING ACCOUNTABILITY REPORT**

This section provides foundational information, such as the underlying assumptions and key parameters, to consider when reviewing this 2023 RSAR.

**A. Summary of Reporting Requirements**

The reporting requirements applicable to this 2023 RSAR were adopted in the S-MAP Phase 2 Decision,<sup>27</sup> which was further refined by the S-MAP Track 3 Decision, D.22-10-002. The requirements and a roadmap to where each requirement has been met in this Report are summarized in the table below.

RSAR Reporting Requirements	Roadmap of Compliance in 2023 RSAR with Reporting Requirements
Develop a list of programs (i.e., one list as an appendix to the report) that include activities relating to safety, reliability or maintenance authorized or in effect during the record period. The list should be separated into risk mitigation programs identified in the RAMP and other programs related to safety, reliability or maintenance presented in the GRC application.	The methodology used to determine the programs in scope is described in Section 2.C below.
Report the cumulative authorized and actual spending, by year over the GRC cycle, for each program in the record period and the difference in dollars (actual less authorized) and in percent (actual less authorized, divided by authorized).	Attachments A and B have tables dedicated to providing this information.

<sup>27</sup> D.19-04-020, Attachment 2.

RSAR Reporting Requirements	Roadmap of Compliance in 2023 RSAR with Reporting Requirements
Explain the difference between authorized and actual spending for the GRC programs chosen using the selection criteria specific to SoCalGas and SDG&E.	Where applicable, a variance explanation has been provided in Attachments A and B.
Provide a description of the program, program life, and references to testimony.	Attachments A and B have tables dedicated to providing this information. Hyperlinks to GRC testimony exhibits are in Attachment C.
Forecast program scope, schedule, and cost for the GRC cycle.	Attachments A and B have tables dedicated to providing this information.
Identify program status as proceeding as planned, canceled, deferred, emergent, or expanded. For the last year of the GRC cycle, the completion status will summarize the entire GRC cycle and discuss any deferred or cancelled scope.	Attachments A and B have tables dedicated to providing this information. Status definitions are in section 2.B.vii.
Report on authorized activities and actual safety activities performed, for each program, using, where available “work units” as the unit of reporting.	Where available, work units have been provided in Attachments A and B.
Group the GRC programs by the general lines of business as presented in the GRC in which the funding request for the record period was authorized.	Attachments A and B provide the required information by line of business and GRC witness area.
Divide programs into expense and capital programs.	Attachments A and B have different tables for O&M and Capital.
Include a separate section in the report, if a balancing account or memorandum account tracks any portion of a program, to discuss the cost recovery of the actual expenditures for the program.	Balanced programs have a dedicated section in Attachments A and B.
Include the total company authorized spending for the record period categorized into expense and capital programs.	Company totals are presented separately for capital and expense in Section 3.

The S-MAP Phase 2 Decision also adopted a definition of “program” for purposes of the RSAR for SoCalGas and SDG&E,<sup>28</sup> as follows:

**SDG&E and SoCalGas:** Expensed programs are defined at the workpaper level, which may contain one or more cost centers. Capital programs are defined at the budget code level, which may aggregate workpaper groups that share the same budget code.

<sup>28</sup> D.19-04-020, Attachment 2 at 3.

In addition, the S-MAP Phase 2 Decision adopted selection criteria for providing variance explanations based on SoCalGas and SDG&E for spending and work units as follows:

**Work Units:** Deviation between authorized work units and performed work units is equal to or greater than 20%.

**Spending:**

*SoCalGas*

- GRC expensed items: A variance of at least \$5 million, or a percentage variance of at least 20% subject to a minimum variance of \$1 million.
- Capital programs: A variance of at least \$10 million, or a percentage variance of at least 20% subject to a minimum variance of \$2 million.

*SDG&E – Electric Operations and Other Reportable Areas*

- GRC expensed items: A variance of at least \$5 million, or a percentage variance of at least 20% subject to a minimum variance of \$2.5 million.
- Capital programs: A variance of at least \$10 million, or a percentage variance of at least 20% subject to a minimum variance of \$5 million.

*SDG&E – Gas Operations*

- GRC expensed items: A variance of at least \$2.5 million, or a percentage variance of at least 20% subject to a minimum variance of \$0.5 million.
- Capital programs: A variance of at least \$5 million, or a percentage variance of at least 20% subject to a minimum variance of \$1 million.

**B. Key Parameters and Considerations Underlying the Report**

SoCalGas and SDG&E present this 2023 RSAR by company, further divided into the line of business (*e.g.*, electric, gas, other), by program (*i.e.*, O&M workpaper and Capital budget code as described in Section 2.A above), and by RAMP and non-RAMP activities. For the activities, if work units are available, they are provided. In the event the selection criteria for spending

and/or work units are met,<sup>29</sup> an explanation is provided along with the description of the program and citations to the associated 2019 GRC testimony and the 2024 GRC testimony, where applicable. Information regarding balanced programs is presented in a separate section.

The Utilities are presenting this 2023 RSAR in direct dollars. Direct dollars are the input into the revenue requirement calculations, but not the revenue requirement itself. For those programs recorded to balancing accounts, the 2023 RSAR presents such programs in both direct dollars and on a revenue requirement basis, in accordance with the S-MAP Phase 2 Decision.<sup>30</sup>

**i. Units**

As discussed in Section 1, the Utilities' respective 2019 GRC applications were filed before the S-MAP Phase 2 Decision RSAR requirements were adopted. The S-MAP Phase 2 Decision requires including work units where available in the 2023 RSAR; however, in most cases, no work units were presented in the Utilities' 2019 GRC showing and therefore were not specifically defined or authorized in the Commission's decision. Reporting authorized and actual work units when work units were not explicitly defined or authorized presents a challenge. Accordingly, for the purpose of this report, the Utilities provide actual units and impute authorized units, where available. In other instances, the Utilities provide explanations of the activities within a program performed during 2023.<sup>31</sup> These items are addressed by the Utilities as applicable in Attachments A and B.

**ii. RAMP**

The 2023 RSAR utilizes the 2016 RAMP (I.16-10-015/016) that was integrated into the 2019 GRC. Since that time, a more quantitative risk methodology and framework for RAMP and GRC filings was approved by the Commission in D.18-12-014. Therefore, this 2023 RSAR does not yet reflect the methodology that was adopted in D.18-12-014.

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<sup>29</sup> In response to SDG&E and SoCalGas's request for clarification of applying the variance selection criteria, Energy Division provided this guidance in an email dated February 14, 2021, "We have reviewed pages 41-43 of D.19-04-020 and believe that you should apply the selection criteria and explanations for all GRC programs as well as the risk mitigation programs, where work unit data is available. That is to say that you will only need to provide greater details for the unitized risk mitigation programs."

<sup>30</sup> D.19-04-020, OP 10 at 65-66.

<sup>31</sup> The S-MAP Phase 2 Decision requires the Utilities to work with Energy Division staff to identify programs where work unit information is not available (D.19-04-020 at 39). The Utilities conferred with Energy Division staff in February 2021 regarding the manner to identify programs, as provided in Attachments A and B.



For purposes of integrating the 2016 RAMP into the GRC, a variety of approaches were required, depending upon the activity. For example, the Utilities presented mappings of their 2016 RAMP risks to GRC witness areas<sup>32</sup> and a summary of RAMP costs by GRC witness area.<sup>33</sup>

However, for other areas, certain RAMP activities spanned multiple witness areas, meaning the costs for a particular RAMP activity were defended by and authorized in multiple GRC witness areas (*e.g.*, records management training). This could occur because multiple departments perform this RAMP activity. Rather than showing such widespread activities in every applicable witness area, “for presentation purposes in this GRC”<sup>34</sup> the RAMP activity was presented in a single workpaper or mapped to a “limited number of GRC witnesses.”<sup>35</sup> In these instances, the GRC presentation does not match where the costs are recorded and thus creates variances between the RAMP imputed authorized and actuals.

As discussed above in Section 1.B, the 2019 GRC Decision did not explicitly authorize RAMP activities differently from non-RAMP activities. Instead, the 2019 GRC Decision assessed and authorized funding for the Utilities in many instances based on “standard GRC methods, such as the quality of the forecast, counterarguments by intervenors, and whether a given showing met the burden of proof.”<sup>36</sup> This therefore made it difficult to identify or impute authorized amounts for some RAMP mitigation activities, especially at a granular activity level. Similarly, the Utilities do not necessarily track costs by RAMP mitigation activity or risk. Rather, the Utilities record costs to O&M cost centers and to various capital budget codes, aligned with their GRC presentations. Accordingly, assumptions were needed to impute actuals at the RAMP mitigation activity level.

Based on the foregoing, the 2023 RSAR reflects a transitional approach for presenting the above-noted Commission directives. The Utilities will continue to work with Energy Division staff and the S-MAP technical working group (as needed) regarding additional details for future reports.

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<sup>32</sup> A.17-10-007/-008 (cons.), Ex. SCG-02-R/SDG&E-02-R, Chapter 1 (Day) at Appendix A.1.

<sup>33</sup> *Id.* at Appendix A.2.

<sup>34</sup> A.17-10-007/-008 (cons.), Ex. SCG-02-R/SDG&E-02-, Chapter 3 (York) at JKY-3.

<sup>35</sup> *Id.* at JKY-4.

<sup>36</sup> D.19-09-051 at 22.

**iii. Implementation Timing of the Projects and Programs Funded by the TY 2019 GRC Decision**

As discussed in Section 1.B above, the Utilities’ test year was 2019, and rates approved in the 2019 GRC Decision were expected to become effective beginning on January 1, 2019. The 2019 GRC Decision was approved by the Commission on September 26, 2019, approximately three quarters into the 2019 financial year. This delay in issuing a final GRC decision resulted in uncertainty in the test year regarding the funding that would be available to implement planned projects and programs.

Since the outcome of the 2019 GRC Decision, the Utilities worked to execute on the programs discussed during the 2019 GRC proceeding. While the progress of some programs may have been impacted by a variety of factors, including the effects from the COVID-19 pandemic, cost pressures from inflation, and changes to regulations, the Utilities managed such programs over the 2019 GRC cycle. The results of this report reflect these circumstances for the 2023 financial period.

**iv. Reprioritization**

The Utilities recognize that they may need to re-prioritize funding to address critical matters that arise during the GRC cycle. Such differences in authorized programs are shown in this report and will likewise appear in future RSARs. The Commission has explicitly recognized that “new programs or projects may come up, others may be cancelled, and there may be reprioritization. *This process is expected and is necessary* for the utility to manage its operations in a safe and reliable manner.”<sup>37</sup> It is for these reasons that “utilit[ies] [are] allowed the flexibility to reprioritize the authorized funds in order to ensure safe and reliable operations.”<sup>38</sup> Reprioritizing spending also allows utilities to “[r]espond to immediate or short-term crises outside of the RAMP and GRC process,”<sup>39</sup> in accordance with Commission directives. As the

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<sup>37</sup> D.11-05-018 at 27 (emphasis added).

<sup>38</sup> Energy Division, Safety-Related Spending Accountability Report for Southern California Edison (May 2017) (Safety Report) at 10, available at <https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/risk-spending-accountability-reports/sce-2015-ed-response-sapr.pdf>; see also Resolution E-4464 (May 10, 2012) at 7 (“Under GRC ratemaking, the utilities are given an authorized revenue requirement to manage various parts of their utility business. Recognizing that the utilities may need to re-prioritize spending and spend more or less in a particular area of their business, the Commission affords them substantial flexibility to decide how much to spend in any particular area.”).

<sup>39</sup> D.18-04-016 at 6, citing n.7 (D.16-08-018 at 152).

Commission has stated: “RAMP and GRCs...are not designed to addresses immediate needs; the utilities have responsibility for addressing safety regardless of the GRC cycle.”<sup>40</sup> Accordingly, SoCalGas and SDG&E re-prioritize spending as needed. This is captured in variances, which may be attributable to a variety of causes. Where applicable, and in accordance with the requirements noted above, a variance explanation has been provided in Attachments A and B. Many variances included herein are driven, at least in part, by the pressures created by this aspect of safely and reliably managing a utility in California.

**v. COVID-19 Pandemic and Changing Macro Trends Impact on the Report**

The COVID-19 pandemic has materially impacted communities, supply chains and markets around the world, including in California. As essential service providers, and throughout the COVID-19 pandemic, SoCalGas and SDG&E continued to provide safe and reliable service, albeit significantly differently than expected and originally forecasted in the 2019 GRC. This is discussed where applicable in the variance explanations that can be found throughout the 2023 RSAR in Attachments A and B.

COVID-19 impacted SoCalGas and SDG&E’s customer-oriented work, creating additional cost pressures in some instances, and delaying certain programs. The levels of work performed during 2023 were, in some cases, significantly different than authorized in the 2019 GRC. For the Utilities (and in particular for SoCalGas, where more customer-oriented activities require in-home service), activities such as in-home work orders for Customer Service Field were below historic trends and forecast through most of the pandemic and continuing in much of 2023. Additional activity categories were impacted by regulatory and other governmental mandates that either ceased or drastically slowed activities, such as overdue bill collection moratoriums, and construction permitting and inspection delays. Furthermore, growing global and domestic supply chain issues, as well as variability in the availability of labor resources in 2022 and 2023, presented the Utilities with challenges in executing programs requiring additional labor and non-labor resources. Despite these impacts, SoCalGas and SDG&E were largely able to implement many of their projected incremental projects and programs, including reducing or eliminating delays described in the 2019 RSAR. Incremental costs associated with addressing COVID-19 that are not included in the imputed authorized dollars are not included

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<sup>40</sup> *Id.*

within this report and are being separately tracked through the Catastrophic Events Memorandum Account.

**vi. Amendments**

In this 2023 RSAR, SoCalGas and SDG&E have amended certain previously reported actual and imputed authorized costs and units, and RAMP mitigation cost categories for the 2019-2022 period. Therefore, the historical years 2019-2022 costs and units presented in the 2023 RSAR will not all match with previously filed reports. Because the 2023 RSAR is the fifth iteration of the RSAR report in the 2019-2023 GRC cycle, SDG&E and SoCalGas have leveraged their experience and the guidance of Energy Division to improve their reporting of costs and units. Amendments have been made to realign and amend spending to more accurately report GRC costs within their respective witness areas. Additionally, SDG&E and SoCalGas have made a significant effort to provide units where they previously did not, which also may include revising the historical units of measure to better demonstrate the activities that have been performed.

**vii. Definitions of Completion Statuses**

In accordance with D.22-10-002, SDG&E and SoCalGas hereby define the terms utilized within Attachments A and B of this 2023 RSAR. Appendix B of that decision, page B-4, included two categories of statuses that were newly required in the 2022 RSAR. The first category of statuses, relate to forecasts: the scope, schedule, and expected cost of the GRC line item by the end of the GRC cycle (December 31, 2023), compared with how the GRC line item was originally described in the TY 2019 GRC. The three statuses used are Under (U), On Target (T), and Over (O). The second category of required statuses designates the overall status of the GRC line item project/activity through seven categories of approximate completion status: (1) proceeding as planned – no changes; (2) deferred – still planned, but the timing is delayed; (3) canceled – no longer planning to do; (4) expanded – the scope is broader than originally planned; (5) emergent – a brand new item that was not forecasted as part of the TY 2019 GRC; (6) completed; and (7) other – we explain this status as part of the report.

### C. Identification of Safety, Reliability, and Maintenance-Related Programs

In accordance with the S-MAP Decisions, the 2023 RSAR includes a listing of all programs<sup>41</sup> authorized or in effect during 2023 that were associated with RAMP,<sup>42</sup> justified on the basis of safety and/or reliability, and programs associated with a maintenance<sup>43</sup> activity. In-scope workpapers for SDG&E include electric distribution, electric generation, electric and fuel procurement, gas distribution, gas transmission, gas engineering, gas system integrity, customer services, information technology including cybersecurity, support services, administrative and general, human resources, and SDG&E's balanced programs including the Gas Distribution Integrity Management Program (DIMP), Gas Transmission Integrity Management Program (TIMP), Tree Trimming, electric distribution overhead pools, and SDG&E's Wildfire Mitigation Plan Memorandum Account (WMPMA). The variance explanations for these workpapers are attached hereto as Attachment A.

Similarly, in-scope workpapers for this 2023 RSAR for SoCalGas include gas distribution, gas transmission, gas engineering, gas system integrity, gas major projects, pipeline safety enhancement program (PSEP), aboveground storage, underground storage, gas procurement, customer services, information technology including cybersecurity, support services, administrative and general, human resources, and SoCalGas's balanced programs including DIMP, TIMP, Gas Storage Integrity Management Program (SIMP), and Research, Development and Demonstration (RD&D). The variance explanations for these workpapers are attached hereto as Attachment B.

In this 2023 RSAR, SDG&E presents its wildfire mitigation-related programs differently from the 2019 GRC Decision. Subsequent to SDG&E filing its 2019 GRC Application on October 6, 2017, SB 901 was enacted in 2018, requiring SDG&E to submit an annual wildfire mitigation plan (WMP) to provide comprehensive information on SDG&E's efforts to mitigate

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<sup>41</sup> Programs are defined as workpaper categories for expense items (*e.g.*, 1ED011.000 – Electric Regional Operations) and as budget codes for capital expenditures (*e.g.*, 13247 FiRM – Phases 1 & 2). *See* D.19-04-020, Attachment 2 at 3, Section III.

<sup>42</sup> Categories include but are not limited to: (1) Infrastructure Integrity, Physical Security and Environmental, (2) Cybersecurity and Customer Data Privacy, (3) Wildfires, (4) System Reliability, and (5) Public & Employee Safety, Disaster Recovery. *Id.*, Attachment 2 at 2, Section III.

<sup>43</sup> *Id.*, Attachment 2 at 6, Section IV. These are activities associated with expensed and capitalized work related to Federal Energy Regulatory Commission Accounts 510-515, 528-532, 541-545, 551-554, 568-574, 576, 590-598, 830-837, 843, 861-869, 885-895, 932 and 935.

wildfire risk.<sup>44</sup> Pursuant to SB 901, on February 6, 2019, SDG&E submitted its first WMP (2019 WMP),<sup>45</sup> which the Commission subsequently approved in D.19-05-039. Following approval of the 2019 WMP, SDG&E filed an advice letter to establish memorandum accounts to record costs associated with implementing the WMP.<sup>46</sup>

Since its first WMP submission in 2019, SDG&E has continued to submit WMP filings in accordance with directives set forth by the Wildfire Safety Division, and its successor the Office of Energy Infrastructure Safety (Energy Safety). In those WMP filings, SDG&E is required to provide a “description of the preventive strategies and programs to be adopted by the electrical corporation to minimize the risk of its electrical lines and equipment causing catastrophic wildfire, including consideration of dynamic climate change risks.”<sup>47</sup> As explained in SDG&E's 2019 WMP, some, but not all, of the programs and strategies in SDG&E's WMPs were also forecasted in the 2019 GRC.<sup>48</sup> Therefore, refinements, continuations, and/or enhancements to certain wildfire mitigation programs were reflected in the WMP submissions. As an example, the Pole Risk Mitigation and Engineering (PRiME) program was presented in the 2019 GRC as a program associated with the Electric Infrastructure Integrity risk. However, in implementing PRiME, SDG&E primarily focused on the poles in its High Fire Threat District first, and thus categorized it as related to the risk of Wildfire.

Accordingly, in this 2023 RSAR, programs presented in SDG&E's WMP submissions and Annual WMP Updates are shown as such and are categorized as Wildfire consistent with the WMP; however, due to timing, not all those WMP programs were included as RAMP in the 2019

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<sup>44</sup> The initial requirement to submit annual wildfire mitigation plans was set forth in SB 901, P. U. Code § 8386(b). This P. U. Code section was subsequently amended by Assembly Bill (AB) 1054.

<sup>45</sup> R.18-10-007, San Diego Gas & Electric Company's Wildfire Mitigation Plan (February 6, 2019). The 2019 WMP is available at <https://www.sdge.com/sites/default/files/regulatory/R.18-10-007%20SDG%26E%20Wildfire%20Mitigation%20Plan.pdf>.

<sup>46</sup> SDG&E Advice Letter 3454-E/2817-G (filed October 31, 2019, effective May 30, 2019). SDG&E also established the Fire Risk Mitigation Memorandum Account (FRMMA) via Advice Letter 3333-E (effective January 16, 2019) in compliance with the applicable law at that time to track costs incurred for fire risk mitigation that are not otherwise covered in revenue requirements.

<sup>47</sup> P. U. Code § 8386(c)(3), as amended by AB 1054.

<sup>48</sup> R.18-10-007, SDG&E's Wildfire Mitigation Plan (February 6, 2019) at 83, (“Many (but not all) of the programs and activities described in this Plan have been included in and will be funded through SDG&E's GRC rates.... There may be programs in the Plans for which SDG&E has revised its assumptions and cost forecasts compared to the 2019 GRC.”), available at <https://energysafety.ca.gov/wp-content/uploads/docs/misc/docket/263673421.pdf>.

GRC. For this reason, SDG&E has listed newly identified Wildfire RAMP mitigations as Emergent RAMP. Subsequent to the GRC authorization, wildfire-related activities are subject to memorandum account treatment pursuant to statute. Therefore, SDG&E is also including the balances of the WMPMA and disposition thereof in the Balanced section of this 2023 RSAR.

**D. Derivation of Authorized Dollars**

	<b>2023 Imputed Authorized Direct O&amp;M<sup>49</sup></b>	<b>2023 Imputed Authorized Direct Capital</b>	<b>2023 Authorized Total Rev Req<sup>50</sup></b>
<b>SDG&amp;E</b>	\$1,096,595	\$852,403	\$2,359,193

	<b>2023 Imputed Authorized Total Direct O&amp;M<sup>51</sup></b>	<b>2023 Imputed Authorized Total Direct Capital<sup>52</sup></b>	<b>2023 Authorized Total Rev Req<sup>53</sup></b>
<b>SoCalGas</b>	\$1,703,531	\$972,061	\$3,378,566

<sup>49</sup> Excludes officer compensation per D.19-09-051, OP 11 and 12 at 778-779. Reflects reductions of Application for Rehearing per D.20-07-038, Rate Reform Cost Recovery per Resolution E-5069/ Advice Letter 3352-E, and the Petition for Modification per D.21-05-003.

<sup>50</sup> Attrition Year 2023 revenue requirement authorized in D. 19-09-051 is adjusted to exclude officer compensation per OP 11 and 12, at 778-779, Application for Rehearing per D.20-07-038, Rate Reform Cost Recovery per Resolution E-5069 / Advice Letter 3352-E, the Petition for Modification per D.21-05-003, and 2023 Cost of Capital per D.22-12-031.

<sup>51</sup> Excludes officer compensation per D.19-09-051, OP 11 and 12, at 778-779. Reflects reductions of Application for Rehearing per D.20-07-038 and the Petition for Modification per D.21-05-003.

<sup>52</sup> Includes PSEP projects adopted in the Post-Test Year model in D.19-09-051.

<sup>53</sup> Attrition Year 2023 revenue requirement authorized in D.19-09-051 is adjusted to exclude officer compensation per OP 11 and 12, at 778-779, 2020 Cost of Capital per D.19-12-056, Application for Rehearing per D.20-07-038, the Petition for Modification of D.21-05-003, and 2023 Cost of Capital per D.22-12-031.

For the majority of the workpaper categories covered in Attachments A and B of this report, the “authorized” amounts are imputed authorized funding values for those workpapers that are fully or partially requested to address safety, reliability, and/or maintenance risks.<sup>54</sup> The O&M and capital expenditures in the 2019 RSAR were specifically authorized in the TY 2019 GRC. The dollars presented by the witnesses in testimony and workpapers were stated in base year 2016 dollars; however, for purposes of the 2019 report, the Utilities presented the information in direct nominal dollars using the 2019 GRC decision authorized escalation factors. In this 2023 RSAR, the Utilities imputed authorized figures at the workpaper level, since this level of detail was neither specifically required, presented, or adopted in the 2019 GRC. This differs from the 2019 RSAR process because 2023 is an attrition or post-test year and not the test year. The adopted post-test year (PTY) ratemaking mechanism in the 2019 GRC Decision adjusts the authorized revenue requirement in the attrition years by applying separate attrition mechanisms for O&M expenses and capital-related costs. To derive the 2023 imputed authorized O&M expenses, 2019 adopted expenses, which were presented in base year 2016 dollars, were escalated to 2019 dollars based on the adopted labor and non-labor escalation rates.<sup>55</sup> The 2020 authorized O&M attrition factors are then applied to this expense level to derive the 2020 imputed authorized O&M; and then the authorized 2021 attrition factors were again applied to the 2020 imputed authorized O&M to derive the 2021 imputed authorized O&M; and then the authorized 2022 attrition factors were again applied to the 2021 imputed authorized O&M to derive the 2022 imputed authorized O&M; and then the authorized 2023 attrition factors were again applied to the 2022 imputed authorized O&M to derive the 2023 imputed authorized O&M for the last attrition year in the 2019 GRC cycle.

In the 2019 GRC, specific capital project forecasts were approved for assets forecasted to be placed in-service in years 2017-2019 to establish the TY rate base and the capital-related revenue requirement (*i.e.*, depreciation, tax, and return) for 2019. The 2019 GRC Decision adopted an escalated seven-year average of capital additions to calculate the capital-related revenue requirement for the post-test years, including 2023. PTY capital expenditures are not

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<sup>54</sup> The Commission-approved final GRC decisions do not always provide authorized figures by project or activity, which may be needed for accountability reporting.

<sup>55</sup> The authorized escalation factors used to calculate the direct nominal dollars were approved in D.19-09-051 and discussed on pages 670 – 671.



forecasted at a project-specific level in the adopted PTY model except for SoCalGas's PSEP projects. For the purpose of this Report, the Utilities imputed 2023 authorized capital expenditures by taking a seven-year average of the capital spending in base year dollars for the years 2013 through 2019 (2013-2016 recorded, 2017-2019 adopted values) which were then escalated to 2019 dollars. These values were first escalated using the adopted 2020 capital attrition factors to impute the authorized 2020 direct capital expenditures; then the adopted 2021 capital attrition factors were again applied to the 2020 imputed authorized direct capital expenditure to derive the 2021 imputed authorized direct capital expenditures; and then the adopted 2022 capital attrition factors were again applied to the 2021 imputed authorized direct capital expenditure to derive the 2022 imputed authorized direct capital expenditures. For the last attrition year in the 2019 GRC cycle, the adopted 2023 capital attrition factors were used to derive the 2023 imputed authorized direct capital expenditures at the workpaper level of detail. SoCalGas's PSEP program is the only program that was specifically forecasted at the project level in the PTY model.

For the balanced programs, this report presents O&M and capital in revenue requirement terms (in addition to reporting these programs on a direct dollar basis), because the programs are tracked on a revenue requirement basis, as required by the annual advice letter filings. Reviewing balanced programs in these terms, rather than in nominal direct dollars, reflects more accurately how the Utilities manage these programs and track costs. The Utilities manage balanced programs considering the authorized revenue requirement for the entire GRC cycle and not within an individual spending year.

In compliance with Ordering Paragraph 5 of D.16-08-003, SoCalGas for the first time, incorporated PSEP project forecasts into the TY 2019 GRC. In the 2019 GRC Application, SoCalGas presented detailed O&M and capital estimates to complete proposed PSEP pressure test, replacement and valve project work. In direct testimony, SoCalGas PSEP witness Rick Phillips described that 2019 O&M cost forecasts were normalized and not reflective of actual 2019 projected spend.

Because 2019 will be a transition year as PSEP is incorporated into the GRC process, forecasted costs for 2019 do not reflect the level of forecasted spend in the post-test years. Therefore, the PSEP TY 2019 O&M forecast has been

normalized to reflect the forecasted total level of O&M expenditures over the 2019 – 2021 GRC period.<sup>56</sup>

SoCalGas anticipated that actual O&M expenses would significantly differ from the normalized forecast and much of the 2023 PSEP O&M variance reflects the normalization methodology.

### 3. OVERVIEW OF 2023 RISK SPENDING ACCOUNTABILITY REPORT RESULTS

#### A. Summary of Report Variances by Company<sup>57</sup>

Reportable Totals for SDG&E

	2023 Actuals	2023 Imputed Authorized	\$ Variance	% Variance
SDG&E Direct Capital	1,391,036	706,701	684,335	97%
SDG&E Direct O&M	786,659	581,648	205,011	35%
<b>SDG&amp;E Direct Total</b>	<b>2,177,695</b>	<b>1,288,349</b>	<b>889,345</b>	<b>69%</b>

Reportable Totals for SoCalGas

	2023 Actuals	2023 Imputed Authorized	\$ Variance	% Variance
SoCalGas Direct Capital	1,627,762	896,296	731,465	82%
SoCalGas Direct O&M	1,084,316	1,063,017	21,300	2%
<b>SoCalGas Direct Total</b>	<b>2,712,078</b>	<b>1,959,313</b>	<b>752,765</b>	<b>38%</b>

<sup>56</sup> A.17-10-007/-008 (cons.), Ex. SCG-15-R (Philips) at RDP-A-21.

<sup>57</sup> The costs reported in these totals do not reflect PSEP Phase 1 costs. On June 12, 2014, in D.14-06-007, the Commission approved PSEP Phase 1 (addressing pipe in more populated areas and the Valve Enhancement Plan). The Commission approved PSEP Phase 1 with no authorized costs, subject to after-the-fact reasonableness review, along with authorization to establish balancing accounts to facilitate the recovery of costs for implementing Phase 1. For costs incurred prior to the effective date of D.14-06-007, the decision instructed SoCalGas and SDG&E to file an application to recover costs tracked in the memorandum accounts for PSEP expenses and completed PSEP capital projects.

**B. Summary of RAMP Variances by Company**

**i. SDG&E O&M RAMP Variances by GRC Witness Area**

<b>GRC Witness Area</b>	<b>SDG&amp;E Exhibit Number</b>	<b>2023 RAMP Actuals</b>	<b>2023 Imputed Authorized RAMP</b>	<b>RAMP \$ Variance</b>	<b>RAMP % Variance</b>
ACCOUNTING AND FINANCE	SDG&E-31	211	587	(376)	-64%
CORPORATE CENTER - GENERAL ADMINISTRATION	SDG&E-26	1,529	2,922	(1,393)	-48%
CS - FIELD	SDG&E-17	6,954	5,779	1,175	20%
CS - INFORMATION & TECHNOLOGIES	SDG&E-19	2,121	7,818	(5,697)	-73%
CS - OFFICE OPERATIONS	SDG&E-18	1,359	1,123	236	21%
Cybersecurity	SDG&E-25	14,886	9,013	5,872	65%
ELECTRIC DISTRIBUTION	SDG&E-15	269,201	111,043	158,157	142%
ELECTRIC GENERATION & SONGS	SDG&E-16	36	48	(12)	-25%
FLEET SERVICES	SDG&E-21	488		488	100%
GAS DISTRIBUTION	SDG&E-04	22,663	18,541	4,123	22%
GAS SYSTEM INTEGRITY	SDG&E-05	216	1,585	(1,369)	-86%
GAS TRANSMISSION	SDG&E-06	407	230	177	77%
HR	SDG&E-30	3,384	4,314	(930)	-22%
REAL ESTATE & FACILITIES	SDG&E-22	3,363	4,184	(821)	-20%
TIMP & DIMP	SDG&E-11	30,781	12,897	17,883	139%
<b>Grand Total</b>		<b>357,597</b>	<b>180,083</b>	<b>177,514</b>	<b>99%</b>

ii. SDG&E O&M RAMP Variances by RAMP Chapter

RAMP Chapter	RAMP Risk Description	2023 RAMP Actuals	2023 Imputed Authorized RAMP	RAMP \$ Variance	RAMP % Variance
SDG&E-01	Wildfires Caused by SDG&E Equipment (Including Third Party Pole Attachments)	87,949	43,800	44,149	101%
SDG&E-02	Catastrophic Damage Involving Third Party Dig-Ins	8,014	4,965	3,050	61%
SDG&E-03	Employee, Contractor, and Public Safety	77,860	55,749	22,111	40%
SDG&E-04	Distributed Energy Resources – Safety and Operational Concerns	100	88	12	14%
SDG&E-06	Fail to Blackstart	36	48	(12)	-25%
SDG&E-07	Cyber Security	14,886	9,013	5,872	65%
SDG&E-08	Aviation Incident	521	483	39	8%
SDG&E-09	Workplace Violence	4,779	5,600	(821)	-15%
SDG&E-10	Catastrophic Damage Involving High-Pressure Gas Pipeline Failure	30,416	6,084	24,332	400%
SDG&E-11	Unmanned Aircraft System Incident	1,170	191	980	514%
SDG&E-12	Electric Infrastructure Integrity	8,166	23,383	(15,218)	-65%
SDG&E-13	Records Management	7,231	10,079	(2,847)	-28%
SDG&E-14	Climate Change Adaptation		474	(474)	-100%
SDG&E-16	Catastrophic Damage Involving Medium-Pressure Gas Pipeline Failure	11,243	17,551	(6,308)	-36%
SDG&E-17	Workforce Planning	3,346	2,577	770	30%
New <sup>58</sup>	Emergent RAMP	101,880	—	101,880	100%
<b>Total SDG&amp;E RAMP O&amp;M</b>		<b>357,597</b>	<b>180,083</b>	<b>177,514</b>	<b>99%</b>

<sup>58</sup> Emergent RAMP includes RAMP mitigation activities that were not identified in the TY 2019 GRC but have been newly identified as RAMP in the TY 2024 GRC.

iii. **SDG&E Capital RAMP Totals by GRC Witness Area**

<b>GRC Witness Area</b>	<b>SDG&amp;E Exhibit Number</b>	<b>2023 RAMP Actuals</b>	<b>2023 Imputed Authorized RAMP</b>	<b>RAMP \$ Variance</b>	<b>RAMP % Variance</b>
Electric Distribution	SDG&E-14	509,231	227,134	282,097	124%
Electric Generation	SDG&E-16	—	336	(336)	-100%
Facilities/Other	SDG&E-22	18,463	10,394	8,069	78%
Gas Distribution	SDG&E-04	46,720	30,014	16,705	56%
Gas Transmission	SDG&E-07	9,421	2,317	7,104	307%
Information Technology	SDG&E-24	136,218	27,430	108,788	397%
TIMP/DIMP	SDG&E-11	104,656	28,729	75,927	264%
Human Resources	SDG&E-30	2,572		2,572	100%
Cybersecurity	SDG&E-25	4,661	3,380	1,281	38%
<b>Total SDG&amp;E RAMP Capital</b>		<b>831,942</b>	<b>329,736</b>	<b>502,206</b>	<b>152%</b>

iv. SDG&E Capital RAMP Totals by RAMP Chapter

RAMP Chapter	RAMP Risk Description	2023 RAMP Actuals	2023 Imputed Authorized RAMP	RAMP \$ Variance	RAMP % Variance
SDG&E-01	Wildfires Caused by SDG&E Equipment (Including Third Party Pole Attachments)	117,178	97,394	19,784	20%
SDG&E-02	Catastrophic Damage Involving Third Party Dig-Ins	6	329	(323)	-98%
SDG&E-03	Employee, Contractor, and Public Safety	17,828	13,890	3,938	28%
SDG&E-04	Distributed Energy Resources – Safety and Operational Concerns	724	254	470	185%
SDG&E-05	Major Disturbance to Electrical Service (e.g., Blackout)		1,819	(1,819)	-100%
SDG&E-06	Fail to Blackstart	—	2,156	(2,156)	-100%
SDG&E-07	Cybersecurity	4,661	3,380	1,281	38%
SDG&E-08	Aviation Incident	—	2,073	(2,073)	-100%
SDG&E-09	Workplace Violence	963	4,390	(3,428)	-78%
SDG&E-10	Catastrophic Damage Involving High-Pressure Gas Pipeline Failure	36,419	10,962	25,457	232%
SDG&E-12	Electric Infrastructure Integrity	95,297	115,617	(20,320)	-18%
SDG&E-13	Records Management	14,604	13,288	1,316	10%
SDG&E-16	Catastrophic Damage Involving Medium-Pressure Gas Pipeline Failure	121,211	46,946	74,265	158%
New <sup>59</sup>	Emergent RAMP	423,051	17,238	405,814	2354%
<b>Total SDG&amp;E RAMP Capital</b>		<b>831,942</b>	<b>329,736</b>	<b>502,206</b>	<b>152%</b>

<sup>59</sup> Emergent RAMP includes RAMP mitigation activities that were not identified in the TY 2019 GRC but have been newly identified as RAMP in the TY 2024 GRC.

v. SoCalGas O&M RAMP Variances by GRC Witness Area

GRC Witness Area	SoCalGas Exhibit Number	2023 RAMP Actuals	2023 Imputed Authorized RAMP	RAMP \$ Variance	RAMP % Variance
ACCOUNTING AND FINANCE	SCG-33	636	1,027	(391)	-38%
ADVANCED METERING	SCG-17	432	545	(112)	-21%
CORPORATE CENTER - GENERAL ADMINISTRATION	SCG-28	2,460	4,999	(2,539)	-51%
CS - FIELD & METER READING	SCG-18	62,456	68,876	(6,419)	-9%
CS - INFORMATION	SCG-20	1,104	3,204	(2,100)	-66%
CS - OFFICE OPERATIONS	SCG-19	1,706	3,023	(1,317)	-44%
Cybersecurity	SCG-27	10,738	837	9,901	1183%
ENVIRONMENTAL	SCG-25	2,849	3,084	(235)	-8%
FLEET & FACILITIES	SCG-23	11,296	1,230	10,066	819%
GAS CONTROL & SYSTEM OPERATIONS/PLANNING	SCG-13	5,755	6,755	(1,000)	-15%
GAS DISTRIBUTION	SCG-04	69,951	73,385	(3,434)	-5%
GAS ENGINEERING	SCG-09	428	2,405	(1,977)	-82%
GAS MAJOR PROJECTS	SCG-08	2,138	1,662	476	29%
GAS SYSTEM INTEGRITY	SCG-05	13,638	22,752	(9,114)	-40%
GAS TRANSMISSION	SCG-06	11,220	11,222	(2)	—%
HR	SCG-32	6,660	15,049	(8,389)	-56%
PIPELINE SAFETY ENHANCEMENT PLAN	SCG-15	41,503	66,400	(24,898)	-37%
TIMP & DIMP	SCG-14	174,451	101,647	72,805	72%
UNDERGROUND STORAGE	SCG-10	25,683	32,601	(6,918)	-21%
<b>Grand Total</b>		<b>445,103</b>	<b>420,701</b>	<b>24,402</b>	<b>6%</b>

vi. SoCalGas O&M RAMP Variances by RAMP Chapter

RAMP Chapter	RAMP Risk Description	2023 RAMP Actuals	2023 Imputed Authorized RAMP	RAMP \$ Variance	RAMP % Variance
SCG-01	Catastrophic Damage Involving Third Party Dig-Ins	21,401	25,055	(3,655)	-15%
SCG-02	Employee, Contractor, Customer, and Public Safety	88,698	108,166	(19,469)	-18%
SCG-03	Cyber Security	6,200	837	5,363	641%
SCG-04	Catastrophic Damage Involving High-Pressure Gas Pipeline Failure	182,973	137,707	45,266	33%
SCG-05	Workplace Violence	5,486	2,738	2,748	100%
SCG-06	Physical Security of Critical Gas Infrastructure	1,927	2,495	(568)	-23%
SCG-07	Workforce Planning	2,734	7,051	(4,318)	-61%
SCG-08	Records Management	7,715	15,719	(8,004)	-51%
SCG-09	Climate Change Adaptation	18	1,789	(1,771)	-99%
SCG-10	Catastrophic Damage Involving Medium-Pressure Gas Pipeline Failure	94,679	91,999	2,680	3%
SCG-11	Catastrophic Event Related to Storage Well Integrity	21,796	27,144	(5,349)	-20%
New <sup>60</sup>	Emergent RAMP	11,479		11,479	100%
<b>Total SoCalGas RAMP O&amp;M</b>		<b>445,103</b>	<b>420,701</b>	<b>24,402</b>	<b>6%</b>

<sup>60</sup> Emergent RAMP includes RAMP mitigation activities that were not identified in the TY 2019 GRC but have been newly identified as RAMP in the TY 2024 GRC.



vii. SoCalGas Capital RAMP Variances by GRC Witness Area

<b>GRC Witness Area</b>	<b>SoCalGas Exhibit Number</b>	<b>2023 RAMP Actuals</b>	<b>2023 Imputed Authorized RAMP</b>	<b>RAMP \$ Variance</b>	<b>RAMP % Variance</b>
Facilities/Other	SCG-23	3,712	346	3,366	974%
Gas Distribution	SCG-04	22,116	14,106	8,010	57%
Gas Engineering	SCG-09	1,254	2,968	(1,714)	-58%
Gas Major Projects	SCG-08	42,411	5,065	37,346	737%
Gas Transmission	SCG-07	83,264	28,673	54,591	190%
Information Technology	SCG-26	32,275	31,861	414	1%
PSEP	SCG-15	119,153	—	119,153	100%
TIMP/DIMP	SCG-14	304,507	130,999	173,508	132%
Underground Storage	SCG-10	118,877	96,014	22,863	24%
Cybersecurity	SCG-27	17,594	11,328	6,266	55%
<b>Total SoCalGas RAMP Capital</b>		<b>745,162</b>	<b>321,360</b>	<b>423,802</b>	<b>132%</b>

viii. SoCalGas Capital RAMP Variances by RAMP Chapter

RAMP Chapter	RAMP Risk Description	2023 RAMP Actuals	2023 Imputed Authorized RAMP	RAMP \$ Variance	RAMP % Variance
SCG-01	Catastrophic Damage Involving Third Party Dig-Ins	—	941	(941)	-100%
SCG-02	Employee, Contractor, Customer, and Public Safety	6,874	3,532	3,342	95%
SCG-03	Cybersecurity	17,594	11,328	6,266	55%
SCG-04	Catastrophic Damage Involving High-Pressure Gas Pipeline Failure	327,301	103,715	223,586	216%
SCG-05	Workplace Violence	3,712	346	3,366	974%
SCG-06	Physical Security of Critical Gas Infrastructure	1,137	4,374	(3,237)	-74%
SCG-08	Records Management	39,868	38,696	1,172	3%
SCG-09	Climate Change Adaptation	876	7,524	(6,648)	-88%
SCG-10	Catastrophic Damage Involving Medium-Pressure Gas Pipeline Failure	211,930	62,100	149,830	241%
SCG-11	Catastrophic Event Related to Storage Well Integrity	118,001	88,805	29,196	33%
New <sup>61</sup>	Emergent RAMP	17,869		17,869	100%
<b>Total SoCalGas RAMP Capital</b>		<b>745,162</b>	<b>321,360</b>	<b>423,802</b>	<b>132%</b>

<sup>61</sup> Emergent RAMP includes RAMP mitigation activities that were not identified in the TY 2019 GRC but have been newly identified as RAMP in the TY 2024 GRC.

**ATTACHMENT A - SDG&E'S 2023 RISK SPENDING ACCOUNTABILITY REPORT**

**I.SDG&E ELECTRIC**  
**A.SDG&E Electric Distribution**  
**i.SDG&E Electric Distribution O&M**

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Electric Distribution	Electric Distribution		Yes			90,100	110,363	114,644	127,717	141,435	584,260	99,972	102,616	105,151	107,242	109,661	524,641
O&M	Electric Distribution	Reliability & Capacity	Non-RAMP	No	On-Going	Annual	208	266	171	119	117	882	283	290	298	304	310	1,485
O&M	Electric Distribution	Reliability & Capacity	Improved modeling tools for DER's	No	On-Going	Annual	59	75	48	95	100	377	80	82	84	86	88	420
<b>O&amp;M</b>	<b>Electric Distribution</b>	<b>Sub-Total Reliability &amp; Capacity</b>		<b>Yes</b>			<b>267</b>	<b>342</b>	<b>219</b>	<b>214</b>	<b>217</b>	<b>1,260</b>	<b>363</b>	<b>373</b>	<b>382</b>	<b>389</b>	<b>398</b>	<b>1,905</b>
O&M	Electric Distribution	Construction Services	Non-RAMP	No	On-Going	Annual	768	799	770	515	756	3,608	929	953	977	996	1,019	4,874
O&M	Electric Distribution	Construction Services	Contractor Safety Review	No	On-Going	Annual	663	690	665	445	653	3,115	802	823	844	860	880	4,209
O&M	Electric Distribution	Construction Services	System Hardening and Grid Modernization	No	On-Going	Annual	2,360	2,454	2,364	1,584	2,323	11,085	2,853	2,928	3,001	3,060	3,129	14,972
O&M	Electric Distribution	Construction Services	Workforce Planning	No	On-Going	Annual	15	15	15	10	15	70	18	18	19	19	20	94
<b>O&amp;M</b>	<b>Electric Distribution</b>	<b>Sub-Total Construction Services</b>		<b>Yes</b>			<b>3,806</b>	<b>3,958</b>	<b>3,813</b>	<b>2,554</b>	<b>3,747</b>	<b>17,878</b>	<b>4,602</b>	<b>4,723</b>	<b>4,840</b>	<b>4,936</b>	<b>5,048</b>	<b>24,149</b>
O&M	Electric Distribution	District Ops Enterprise Geographic Information System Standards	Non-RAMP	No	On-Going	Annual	1,200	244	219	285	300	2,247	284	292	299	305	312	1,491
O&M	Electric Distribution	District Ops Enterprise Geographic Information System Standards	Records Management	No	On-Going	Annual	—	924	831	1,080	1,139	3,974	1,077	1,106	1,133	1,156	1,182	5,654
<b>O&amp;M</b>	<b>Electric Distribution</b>	<b>Sub-Total Dist Ops Enterprise Geographic Information System Standards</b>		<b>Yes</b>			<b>1,200</b>	<b>1,168</b>	<b>1,051</b>	<b>1,364</b>	<b>1,439</b>	<b>6,221</b>	<b>1,362</b>	<b>1,398</b>	<b>1,432</b>	<b>1,461</b>	<b>1,494</b>	<b>7,145</b>
O&M	Electric Distribution	Electric Distribution Operations	Non-RAMP	No	On-Going	Annual	18,243	22,399	26,120	32,501	34,075	133,338	18,540	19,030	19,500	19,888	20,336	97,293
O&M	Electric Distribution	Electric Distribution Operations	Workforce Planning	No	On-Going	Annual	26	36	42	53	55	213	30	31	32	32	33	157
O&M	Electric Distribution	Electric Distribution Operations	Records Management	No	On-Going	Annual	—	2,616	3,051	3,796	3,982	13,445	2,167	2,224	2,279	2,324	2,376	11,370
<b>O&amp;M</b>	<b>Electric Distribution</b>	<b>Sub-Total Electric Distribution Operations</b>		<b>Yes</b>			<b>18,269</b>	<b>25,051</b>	<b>29,214</b>	<b>36,350</b>	<b>38,112</b>	<b>146,996</b>	<b>20,736</b>	<b>21,284</b>	<b>21,810</b>	<b>22,244</b>	<b>22,746</b>	<b>108,820</b>

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Electric Distribution	Kearny Operations Services	Non-RAMP	No	On-Going	Annual	1,493	1,480	1,952	2,365	6,870	14,159	2,136	2,192	2,247	2,291	2,343	11,209
O&M	Electric Distribution	Grid Operations	Non-RAMP	No	On-Going	Annual	619	1,050	865	652	572	3,757	607	623	639	651	666	3,186
O&M	Electric Distribution	Grid Operations	Workforce Planning	No	On-Going	Annual	4	—	6	4	4	17	4	4	4	4	4	21
<b>O&amp;M</b>	<b>Electric Distribution</b>	<b>Sub-Total Grid Operations</b>		<b>Yes</b>			<b>623</b>	<b>1,050</b>	<b>870</b>	<b>656</b>	<b>575</b>	<b>3,774</b>	<b>611</b>	<b>627</b>	<b>643</b>	<b>656</b>	<b>670</b>	<b>3,207</b>
O&M	Electric Distribution	Project Management	Non-RAMP	No	On-Going	Annual	2,042	2,071	752	688	990	6,543	1,361	1,397	1,432	1,460	1,493	7,145
O&M	Electric Distribution	Electric Regional Operations	Non-RAMP	No	On-Going	Annual	13,337	12,396	12,541	12,437	12,991	63,703	10,969	11,259	11,538	11,767	12,032	57,565
O&M	Electric Distribution	Electric Regional Operations	Safety Policies & Programs	No	On-Going	Annual	18,157	22,658	20,970	22,806	23,964	108,555	20,234	20,769	21,282	21,705	22,195	106,185
O&M	Electric Distribution	Electric Regional Operations	Aviation Safety	No	On-Going	Annual	395	493	456	496	521	2,361	440	452	463	472	483	2,309
O&M	Electric Distribution	Electric Regional Operations	Distribution Switch Maintenance Program	No	On-Going	Annual	1,001	1,249	1,156	1,257	1,321	5,983	1,115	1,144	1,173	1,196	1,223	5,851
O&M	Electric Distribution	Electric Regional Operations	Employee Records Management training course	No	On-Going	Annual	38	—	44	47	50	178	42	43	44	45	46	220
O&M	Electric Distribution	Electric Regional Operations	Workforce Planning	No	On-Going	Annual	1,054	1,315	1,217	1,323	1,390	6,299	1,174	1,205	1,235	1,259	1,288	6,161
O&M	Electric Distribution	Electric Regional Operations	Inspection and Preventative Maintenance	No	On-Going	Annual	—	1,320	1,222	1,329	1,396	5,268	1,179	1,210	1,240	1,265	1,293	6,187
<b>O&amp;M</b>	<b>Electric Distribution</b>	<b>Sub-Total Electric Regional Operations</b>		<b>Yes</b>			<b>33,982</b>	<b>39,430</b>	<b>37,605</b>	<b>39,695</b>	<b>41,633</b>	<b>192,346</b>	<b>35,153</b>	<b>36,083</b>	<b>36,974</b>	<b>37,709</b>	<b>38,560</b>	<b>184,480</b>
O&M	Electric Distribution	Skills & Compliance Training	Non-RAMP	No	On-Going	Annual	1,681	1,978	1,517	1,784	1,368	8,329	2,095	2,151	2,204	2,247	2,298	10,995
O&M	Electric Distribution	Skills & Compliance Training	Ongoing maintenance programs	No	On-Going	Annual	2,371	2,789	2,139	2,509	1,929	11,738	2,954	3,032	3,107	3,169	3,240	15,502
<b>O&amp;M</b>	<b>Electric Distribution</b>	<b>Sub-Total Skills &amp; Compliance Training</b>		<b>Yes</b>			<b>4,052</b>	<b>4,768</b>	<b>3,656</b>	<b>4,293</b>	<b>3,298</b>	<b>20,067</b>	<b>5,049</b>	<b>5,183</b>	<b>5,311</b>	<b>5,416</b>	<b>5,539</b>	<b>26,498</b>
O&M	Electric Distribution	Service Order Team (SOT)	Non-RAMP	No	On-Going	Annual	1,877	2,113	4,221	4,981	7,119	20,312	173	178	182	186	190	908
O&M	Electric Distribution	Substation C&O	Non-RAMP	No	On-Going	Annual	3,939	6,029	7,591	10,355	10,509	38,423	4,822	4,949	5,071	5,172	5,289	25,303

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Electric Distribution	Substation C&O	Condition Base Maintenance (CBM) - Distribution	No	On-Going	Annual	256	—	—	—	—	256	313	321	329	336	343	1,643
O&M	Electric Distribution	Sub-Total Substation C&O		Yes			4,195	6,029	7,591	10,355	10,509	38,679	5,135	5,270	5,400	5,508	5,632	26,945
O&M	Electric Distribution	System Protection	Non-RAMP	No	On-Going	Annual	2,165	2,700	3,043	4,198	3,624	15,729	1,950	2,001	2,051	2,092	2,139	10,232
O&M	Electric Distribution	System Protection	Replace failed SCADA remote terminal units (RTU's)	No	On-Going	Annual	64	—	—	—	—	64	58	60	61	62	64	304
O&M	Electric Distribution	System Protection	Workforce Planning	No	On-Going	Annual	8	9	11	15	13	56	7	7	7	8	8	37
O&M	Electric Distribution	Sub-Total System Protection		Yes			2,237	2,709	3,053	4,213	3,636	15,849	2,015	2,068	2,119	2,161	2,210	10,573
O&M	Electric Distribution	Distribution and Engineering	Non-RAMP	No	On-Going	Annual	559	1,105	949	924	1,064	4,601	412	423	433	442	452	2,163
O&M	Electric Distribution	Distribution and Engineering	Safety Policies & Programs	No	On-Going	Annual	1,535	2,232	1,999	1,928	2,240	9,935	868	891	913	931	952	4,555
O&M	Electric Distribution	Distribution and Engineering	Workforce Planning	No	On-Going	Annual	388	566	507	489	568	2,517	220	226	231	236	241	1,155
O&M	Electric Distribution	Distribution and Engineering	Records Management	No	On-Going	Annual	—	109	98	94	110	411	43	44	45	46	47	223
O&M	Electric Distribution	Sub-Total Distribution and Engineering		Yes			2,482	4,013	3,552	3,435	3,982	17,464	1,543	1,583	1,623	1,655	1,692	8,096

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Electric Distribution	Asset Management	Utility Asset Management (Non-WMP)	No	On-Going	Annual	660	1,360	1,647	1,676	1,667	7,012	2,342	2,404	2,463	2,512	2,569	12,289
O&M	Electric Distribution	Asset Management	Annual records management compliance	No	On-Going	Annual	391	524	634	645	642	2,835	901	925	948	967	988	4,729
O&M	Electric Distribution	<b>Sub-Total Asset Management</b>		Yes			<b>1,051</b>	<b>1,884</b>	<b>2,281</b>	<b>2,321</b>	<b>2,309</b>	<b>9,846</b>	<b>3,243</b>	<b>3,329</b>	<b>3,411</b>	<b>3,479</b>	<b>3,557</b>	<b>17,018</b>
O&M	Electric Distribution	Troubleshooting	Non-RAMP	No	On-Going	Annual	7,096	8,409	8,184	8,856	10,436	42,981	8,465	8,689	8,904	9,081	9,286	44,424
O&M	Electric Distribution	Major Projects	Non-RAMP	No	On-Going	Annual	376	606	660	571	461	2,673	112	115	117	120	122	586
O&M	Electric Distribution	Major Projects	Contractor Safety Program	No	On-Going	Annual	20	32	35	31	25	143	6	6	6	6	7	31
O&M	Electric Distribution	<b>Sub-Total Major Projects</b>		Yes			<b>396</b>	<b>637</b>	<b>695</b>	<b>602</b>	<b>486</b>	<b>2,816</b>	<b>118</b>	<b>121</b>	<b>124</b>	<b>126</b>	<b>129</b>	<b>617</b>
O&M	Electric Distribution	Technology Utilization	Non-RAMP	No	On-Going	Annual	1,165	1,079	1,760	487	2,395	6,886	1,326	1,361	1,395	1,423	1,455	6,961
O&M	Electric Distribution	Compliance Management	Non-RAMP	No	On-Going	Annual	1,540	2,346	2,039	2,291	1,872	10,088	2,520	2,587	2,651	2,704	2,765	13,227
O&M	Electric Distribution	Compliance Management	Records Management	No	On-Going	Annual	—	508	441	496	405	1,850	545	560	574	585	598	2,862
O&M	Electric Distribution	<b>Sub-Total Compliance Management</b>		Yes			<b>1,540</b>	<b>2,854</b>	<b>2,481</b>	<b>2,786</b>	<b>2,277</b>	<b>11,938</b>	<b>3,066</b>	<b>3,147</b>	<b>3,225</b>	<b>3,289</b>	<b>3,363</b>	<b>16,089</b>
O&M	Electric Distribution	Tech Solutions and Reliability	Non-RAMP	No	On-Going	Annual	2,328	802	1,028	912	854	5,924	2,137	2,194	2,248	2,292	2,344	11,215
O&M	Electric Distribution	Tech Solutions and Reliability	Records Management	No	On-Going	Annual	—	517	664	589	551	2,321	1,379	1,416	1,451	1,479	1,513	7,237
O&M	Electric Distribution	<b>Sub-Total Tech Solutions And Reliability</b>		Yes			<b>2,328</b>	<b>1,319</b>	<b>1,692</b>	<b>1,501</b>	<b>1,406</b>	<b>8,245</b>	<b>3,516</b>	<b>3,609</b>	<b>3,698</b>	<b>3,772</b>	<b>3,857</b>	<b>18,452</b>

1.SDG&E ELECTRIC  
A.SDG&E Electric Distribution  
i.SDG&E Electric Distribution O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Electric Distribution	Electric Distribution		Yes	(9,872)	7,747	9,493	20,476	31,775	59,619	-10%	8%	9%	19%	29%	11%
O&M	Electric Distribution	Reliability & Capacity	Non-RAMP	No	(75)	(24)	(126)	(185)	(193)	(603)	-26%	-8%	-42%	-61%	-62%	-41%
O&M	Electric Distribution	Reliability & Capacity	Improved modeling tools for DER's	No	(21)	(7)	(36)	9	12	(43)	-26%	-8%	-43%	11%	14%	-10%
O&M	Electric Distribution	<b>Sub-Total Reliability &amp; Capacity</b>		Yes	<b>(96)</b>	<b>(31)</b>	<b>(162)</b>	<b>(175)</b>	<b>(181)</b>	<b>(645)</b>	<b>-26%</b>	<b>-8%</b>	<b>-43%</b>	<b>-45%</b>	<b>-45%</b>	<b>-34%</b>
O&M	Electric Distribution	Construction Services	Non-RAMP	No	(161)	(154)	(207)	(481)	(263)	(1,266)	-17%	-16%	-21%	-48%	-26%	-26%
O&M	Electric Distribution	Construction Services	Contractor Safety Review	No	(139)	(133)	(179)	(415)	(227)	(1,093)	-17%	-16%	-21%	-48%	-26%	-26%
O&M	Electric Distribution	Construction Services	System Hardening and Grid Modernization	No	(493)	(475)	(636)	(1,476)	(806)	(3,887)	-17%	-16%	-21%	-48%	-26%	-26%
O&M	Electric Distribution	Construction Services	Workforce Planning	No	(3)	(3)	(4)	(9)	(5)	(24)	-17%	-16%	-21%	-48%	-26%	-26%
O&M	Electric Distribution	<b>Sub-Total Construction Services</b>		Yes	<b>(796)</b>	<b>(765)</b>	<b>(1,027)</b>	<b>(2,382)</b>	<b>(1,301)</b>	<b>(6,271)</b>	<b>-17%</b>	<b>-16%</b>	<b>-21%</b>	<b>-48%</b>	<b>-26%</b>	<b>-26%</b>
O&M	Electric Distribution	District Ops Enterprise Geographic Information System Standards	Non-RAMP	No	916	(48)	(80)	(20)	(12)	756	322%	-16%	-27%	-7%	-4%	51%
O&M	Electric Distribution	District Ops Enterprise Geographic Information System Standards	Records Management	No	(1,077)	(182)	(302)	(76)	(43)	(1,681)	-100%	-16%	-27%	-7%	-4%	-30%
O&M	Electric Distribution	<b>Sub-Total Dist Ops Enterprise Geographic Information System Standards</b>		Yes	<b>(162)</b>	<b>(230)</b>	<b>(381)</b>	<b>(96)</b>	<b>(55)</b>	<b>(924)</b>	<b>-12%</b>	<b>-16%</b>	<b>-27%</b>	<b>-7%</b>	<b>-4%</b>	<b>-13%</b>
O&M	Electric Distribution	Electric Distribution Operations	Non-RAMP	No	(297)	3,369	6,621	12,613	13,739	36,045	-2%	18%	34%	63%	68%	37%
O&M	Electric Distribution	Electric Distribution Operations	Workforce Planning	No	(4)	5	11	21	22	55	-13%	18%	34%	65%	67%	35%
O&M	Electric Distribution	Electric Distribution Operations	Records Management	No	(2,167)	392	773	1,472	1,605	2,076	-100%	18%	34%	63%	68%	18%
O&M	Electric Distribution	<b>Sub-Total Electric Distribution Operations</b>		Yes	<b>(2,467)</b>	<b>3,767</b>	<b>7,404</b>	<b>14,106</b>	<b>15,366</b>	<b>38,176</b>	<b>-12%</b>	<b>18%</b>	<b>34%</b>	<b>63%</b>	<b>68%</b>	<b>35%</b>



Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Electric Distribution	Kearny Operations Services	Non-RAMP	No	(643)	(713)	(295)	74	4,527	2,950	-30%	-33%	-13%	3%	193%	26%
O&M	Electric Distribution	Grid Operations	Non-RAMP	No	12	427	226	1	(94)	571	2%	68%	35%	0%	-14%	18%
O&M	Electric Distribution	Grid Operations	Workforce Planning	No	—	(4)	1	(0)	(1)	(4)	—%	-100%	35%	-7%	-17%	-17%
<b>O&amp;M</b>	<b>Electric Distribution</b>	<b>Sub-Total Grid Operations</b>		<b>Yes</b>	<b>12</b>	<b>423</b>	<b>228</b>	<b>0</b>	<b>(95)</b>	<b>567</b>	<b>2%</b>	<b>67%</b>	<b>35%</b>	<b>0%</b>	<b>-14%</b>	<b>18%</b>
O&M	Electric Distribution	Project Management	Non-RAMP	No	680	674	(680)	(773)	(503)	(601)	50%	48%	-47%	-53%	-34%	-8%
O&M	Electric Distribution	Electric Regional Operations	Non-RAMP	No	2,368	1,137	1,004	670	959	6,137	22%	10%	9%	6%	8%	11%
O&M	Electric Distribution	Electric Regional Operations	Safety Policies & Programs	No	(2,077)	1,888	(312)	1,101	1,769	2,370	-10%	9%	-1%	5%	8%	2%
O&M	Electric Distribution	Electric Regional Operations	Aviation Safety	No	(45)	41	(7)	24	39	52	-10%	9%	-1%	5%	8%	2%
O&M	Electric Distribution	Electric Regional Operations	Distribution Switch Maintenance Program	No	(114)	104	(17)	61	98	131	-10%	9%	-1%	5%	8%	2%
O&M	Electric Distribution	Electric Regional Operations	Employee Records Management training course	No	(4)	(43)	(1)	2	4	(42)	-10%	-100%	-1%	4%	8%	-19%
O&M	Electric Distribution	Electric Regional Operations	Workforce Planning	No	(120)	110	(18)	64	103	138	-10%	9%	-1%	5%	8%	2%
O&M	Electric Distribution	Electric Regional Operations	Inspection and Preventative Maintenance	No	(1,179)	110	(18)	64	103	(920)	-100%	9%	-1%	5%	8%	-15%
<b>O&amp;M</b>	<b>Electric Distribution</b>	<b>Sub-Total Electric Regional Operations</b>		<b>Yes</b>	<b>(1,171)</b>	<b>3,347</b>	<b>631</b>	<b>1,986</b>	<b>3,074</b>	<b>7,866</b>	<b>-3%</b>	<b>9%</b>	<b>2%</b>	<b>5%</b>	<b>8%</b>	<b>4%</b>
O&M	Electric Distribution	Skills & Compliance Training	Non-RAMP	No	(414)	(172)	(687)	(463)	(930)	(2,666)	-20%	-8%	-31%	-21%	-40%	-24%
O&M	Electric Distribution	Skills & Compliance Training	Ongoing maintenance programs	No	(583)	(243)	(968)	(660)	(1,311)	(3,765)	-20%	-8%	-31%	-21%	-40%	-24%
<b>O&amp;M</b>	<b>Electric Distribution</b>	<b>Sub-Total Skills &amp; Compliance Training</b>		<b>Yes</b>	<b>(997)</b>	<b>(415)</b>	<b>(1,655)</b>	<b>(1,123)</b>	<b>(2,241)</b>	<b>(6,430)</b>	<b>-20%</b>	<b>-8%</b>	<b>-31%</b>	<b>-21%</b>	<b>-40%</b>	<b>-24%</b>
O&M	Electric Distribution	Service Order Team (SOT)	Non-RAMP	No	1,704	1,935	4,039	4,796	6,929	19,403	984%	1089%	2218%	2582%	3649%	2136%
O&M	Electric Distribution	Substation C&O	Non-RAMP	No	(882)	1,080	2,520	5,183	5,220	13,121	-18%	22%	50%	100%	99%	52%

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Electric Distribution	Substation C&O	Condition Base Maintenance (CBM) - Distribution	No	(57)	(321)	(329)	(336)	(343)	(1,387)	-18%	-100%	-100%	-100%	-100%	-84%
<b>O&amp;M</b>	<b>Electric Distribution</b>	<b>Sub-Total Substation C&amp;O</b>		<b>Yes</b>	<b>(939)</b>	<b>759</b>	<b>2,190</b>	<b>4,847</b>	<b>4,876</b>	<b>11,734</b>	<b>-18%</b>	<b>14%</b>	<b>41%</b>	<b>88%</b>	<b>87%</b>	<b>44%</b>
O&M	Electric Distribution	System Protection	Non-RAMP	No	216	698	992	2,107	1,485	5,497	11%	35%	48%	101%	69%	54%
O&M	Electric Distribution	System Protection	Replace failed SCADA remote terminal units (RTU's)	No	6	(60)	(61)	(62)	(64)	(240)	10%	-100%	-100%	-100%	-100%	-79%
O&M	Electric Distribution	System Protection	Workforce Planning	No	1	2	3	7	5	19	14%	31%	44%	100%	65%	51%
<b>O&amp;M</b>	<b>Electric Distribution</b>	<b>Sub-Total System Protection</b>		<b>Yes</b>	<b>223</b>	<b>641</b>	<b>934</b>	<b>2,052</b>	<b>1,426</b>	<b>5,276</b>	<b>11%</b>	<b>31%</b>	<b>44%</b>	<b>95%</b>	<b>65%</b>	<b>50%</b>
O&M	Electric Distribution	Distribution and Engineering	Non-RAMP	No	147	682	515	482	612	2,438	36%	161%	119%	109%	135%	113%
O&M	Electric Distribution	Distribution and Engineering	Safety Policies & Programs	No	667	1,342	1,086	997	1,288	5,380	77%	151%	119%	107%	135%	118%
O&M	Electric Distribution	Distribution and Engineering	Workforce Planning	No	168	340	275	253	327	1,363	76%	151%	119%	107%	135%	118%
O&M	Electric Distribution	Distribution and Engineering	Records Management	No	(43)	66	53	48	63	188	-100%	151%	119%	106%	135%	84%
<b>O&amp;M</b>	<b>Electric Distribution</b>	<b>Sub-Total Distribution and Engineering</b>		<b>Yes</b>	<b>940</b>	<b>2,429</b>	<b>1,930</b>	<b>1,780</b>	<b>2,290</b>	<b>9,368</b>	<b>61%</b>	<b>153%</b>	<b>119%</b>	<b>108%</b>	<b>135%</b>	<b>116%</b>

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Electric Distribution	Asset Management	Utility Asset Management (Non-WMP)	No	(1,682)	(1,043)	(816)	(836)	(901)	(5,278)	-72%	-43%	-33%	-33%	-35%	-43%
O&M	Electric Distribution	Asset Management	Annual records management compliance	No	(510)	(401)	(314)	(322)	(347)	(1,894)	-57%	-43%	-33%	-33%	-35%	-40%
O&M	Electric Distribution	<b>Sub-Total Asset Management</b>		Yes	<b>(2,192)</b>	<b>(1,445)</b>	<b>(1,130)</b>	<b>(1,157)</b>	<b>(1,248)</b>	<b>(7,172)</b>	<b>-68%</b>	<b>-43%</b>	<b>-33%</b>	<b>-33%</b>	<b>-35%</b>	<b>-42%</b>
O&M	Electric Distribution	Troubleshooting	Non-RAMP	No	(1,370)	(280)	(720)	(225)	1,150	(1,444)	-16%	-3%	-8%	-2%	12%	-3%
O&M	Electric Distribution	Major Projects	Non-RAMP	No	264	491	542	451	338	2,087	236%	428%	462%	377%	276%	356%
O&M	Electric Distribution	Major Projects	Contractor Safety Program	No	14	26	29	25	18	111	233%	415%	462%	382%	276%	354%
O&M	Electric Distribution	<b>Sub-Total Major Projects</b>		Yes	<b>278</b>	<b>517</b>	<b>571</b>	<b>476</b>	<b>357</b>	<b>2,198</b>	<b>236%</b>	<b>428%</b>	<b>462%</b>	<b>377%</b>	<b>276%</b>	<b>356%</b>
O&M	Electric Distribution	Technology Utilization	Non-RAMP	No	(162)	(282)	365	(936)	940	(75)	-12%	-21%	26%	-66%	65%	-1%
O&M	Electric Distribution	Compliance Management	Non-RAMP	No	(980)	(241)	(612)	(413)	(893)	(3,139)	-39%	-9%	-23%	-15%	-32%	-24%
O&M	Electric Distribution	Compliance Management	Records Management	No	(545)	(52)	(132)	(89)	(193)	(1,012)	-100%	-9%	-23%	-15%	-32%	-35%
O&M	Electric Distribution	<b>Sub-Total Compliance Management</b>		Yes	<b>(1,526)</b>	<b>(293)</b>	<b>(744)</b>	<b>(502)</b>	<b>(1,086)</b>	<b>(4,151)</b>	<b>-50%</b>	<b>-9%</b>	<b>-23%</b>	<b>-15%</b>	<b>-32%</b>	<b>-26%</b>
O&M	Electric Distribution	Tech Solutions and Reliability	Non-RAMP	No	191	(1,392)	(1,219)	(1,381)	(1,490)	(5,291)	9%	-63%	-54%	-60%	-64%	-47%
O&M	Electric Distribution	Tech Solutions and Reliability	Records Management	No	(1,379)	(898)	(787)	(890)	(961)	(4,916)	-100%	-63%	-54%	-60%	-64%	-68%
O&M	Electric Distribution	<b>Sub-Total Tech Solutions And Reliability</b>		Yes	<b>(1,188)</b>	<b>(2,290)</b>	<b>(2,006)</b>	<b>(2,271)</b>	<b>(2,451)</b>	<b>(10,207)</b>	<b>-34%</b>	<b>-63%</b>	<b>-54%</b>	<b>-60%</b>	<b>-64%</b>	<b>-55%</b>

I.SDG&E ELECTRIC  
A.SDG&E Electric Distribution  
i.SDG&E Electric Distribution O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
O&M	Electric Distribution	Electric Distribution		Yes																										
O&M	Electric Distribution	Reliability & Capacity	Non-RAMP	No	Unable to identify one single unit due to multiple activities in this workpaper such as monitoring, forecasting, and responding to utilization of the electric distribution system.																									
O&M	Electric Distribution	Reliability & Capacity	Improved modeling tools for DER's	No	Software License	1	1	1	1	1	5	1	1	1	1	1	5								-%	-%	-%	-%	-%	-%
O&M	Electric Distribution	Sub-Total Reliability & Capacity		Yes																										
O&M	Electric Distribution	Construction Services	Non-RAMP	No	Unable to identify one single unit due to multiple activities in this workpaper that support capital projects. These activities include data management, permit verification, environmental releases, review of purchase orders, and negotiations of start and end dates.																									
O&M	Electric Distribution	Construction Services	Contractor Safety Review	No	Unable to identify one single unit due to multiple activities in this workpaper such as construction oversight, contractor incidents reviews and investigations.																									
O&M	Electric Distribution	Construction Services	System Hardening and Grid Modernization	No	Unable to identify one single unit due to multiple activities in this workpaper that support capital projects. These activities include small wire and connector replacement in non-fire threat zone (O&M represents 3.7% of capital), replacement of bridged cutout switches (O&M represents 10% of capital), and replacement of 4kV assets with 12kV (O&M represents 5% of capital).																									
O&M	Electric Distribution	Construction Services	Workforce Planning	No	Training Modules	5	5	5	5	5	25	5	5	5	5	5	25								-%	-%	-%	-%	-%	-%
O&M	Electric Distribution	Sub-Total Construction Services		Yes																										
O&M	Electric Distribution	District Ops Enterprise Geographic Information System Standards	Non-RAMP	No	Unable to identify one single unit due to multiple activities in this workpaper such as creating and maintaining all electric distribution, transmission, telecommunications and substation data in SDG&E's enterprise GIS system																									
O&M	Electric Distribution	District Ops Enterprise Geographic Information System Standards	Records Management	No	Asset Management RAMP activity is annual records management compliance. Groups are to perform a self-assessment of the department's compliance with the records management policies and procedures. The assessments are then reviewed by the Records Management group.																									
O&M	Electric Distribution	Sub-Total Dist Ops Enterprise Geographic Information System Standards		Yes																										
O&M	Electric Distribution	Electric Distribution Operations	Non-RAMP	No	Unable to identify one single unit due to multiple activities in this workpaper such as management of storeroom functions assisting field crews with logistics and materials needed to perform daily construction.																									
O&M	Electric Distribution	Electric Distribution Operations	Workforce Planning	No	Training Administration FTE	2	2	2	2	2.5	11	2	2	2	2	2	10					0.5	1	-%	-%	-%	-%	25%	5%	
O&M	Electric Distribution	Electric Distribution Operations	Records Management	No	Asset Management RAMP activity is annual records management compliance. Groups are to perform a self-assessment of the department's compliance with the records management policies and procedures. The assessments are then reviewed by the Records Management group.																									
O&M	Electric Distribution	Sub-Total Electric Distribution Operations		Yes																										

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance		
O&M	Electric Distribution	Kearny Operations Services	Non-RAMP	No	FTE	10	10	17	21	23	81	20	20	20	20	20	100	(10)	(10)	(3)	1	3	(19)	-50%	-50%	-15%	5%	15%	-19%		
O&M	Electric Distribution	Grid Operations	Non-RAMP	No	EMS Systems Managed	1	1	1	1	1	5	1	1	1	1	1	5	—	—	—	—	—	—	—%	—%	—%	—%	—%	—%		
O&M	Electric Distribution	Grid Operations	Workforce Planning	No	FTE Equip Trainers	1	1	1	1	1	5	1	1	1	1	1	5	—	—	—	—	—	—	—%	—%	—%	—%	—%	—%		
<b>O&amp;M</b>	<b>Electric Distribution</b>	<b>Sub-Total Grid Operations</b>		<b>Yes</b>																											
O&M	Electric Distribution	Project Management	Non-RAMP	No	Unable to identify a single unit due to multiple activities in this workpaper such as planner development and training and design/development of e-training materials.																										
O&M	Electric Distribution	Electric Regional Operations	Non-RAMP	No	Estimated hours of project managers and advisors	24,250	26,000	22,636	25,222	26,345	124,453	22,973	22,973	22,973	22,973	22,973	114,865	1,277	3,027	(337)	2,249	3,372	9,588	6%	13%	-1%	10%	15%	8%		
O&M	Electric Distribution	Electric Regional Operations	Safety Policies & Programs	No	Employee hours in safety meetings plus 1 day/year a safety stand down	53,300	72,050	63,625	67,250	74,869	331,094	63,904	63,904	63,904	63,904	63,904	319,520	(10,604)	8,146	(279)	3,346	10,965	11,574	-17%	13%	-0%	5%	17%	4%		
O&M	Electric Distribution	Electric Regional Operations	Aviation Safety	No	Aviation Safety Management System	1	1	1	1	1	5	1	1	1	1	1	5	—	—	—	—	—	—	—%	—%	—%	—%	—%	—%		
O&M	Electric Distribution	Electric Regional Operations	Distribution Switch Maintenance Program	No	Switches inspected	420	542	474	439	530	2,405	481	481	481	481	481	2,405	(61)	61	(7)	(42)	49	—	-13%	13%	-1%	-9%	10%	—%		
O&M	Electric Distribution	Electric Regional Operations	Employee Records Management training course	No	Training Classes	1	1	1	1	1	5	1	1	1	1	1	5	—	—	—	—	—	—	—%	—%	—%	—%	—%	—%		
O&M	Electric Distribution	Electric Regional Operations	Workforce Planning	No	Apprentice Linemen	12	12	12	12	12	60	11	11	11	11	11	55	1	1	1	1	1	5	9%	9%	9%	9%	9%	9%		
O&M	Electric Distribution	Electric Regional Operations	Inspection and Preventative Maintenance	No	High risk OH switches (typically in contamination zones) Inspected or Replaced	—	134	117	97	102	450	119	119	119	119	119	595	(119)	15	(2)	(22)	(17)	(145)	-100%	13%	-2%	-18%	-14%	-24%		
<b>O&amp;M</b>	<b>Electric Distribution</b>	<b>Sub-Total Electric Regional Operations</b>		<b>Yes</b>																											
O&M	Electric Distribution	Skills & Compliance Training	Non-RAMP	No	FTE	12	13	12	12	8	57	14	14	14	14	14	70	(2)	(1)	(2)	(2)	(6)	(13)	-14%	-7%	-14%	-14%	-43%	-19%		
O&M	Electric Distribution	Skills & Compliance Training	Ongoing maintenance programs	No	Classes		220	146	336	224	926	232	232	232	232	232	1,160		(12)	(86)	104	(8)	(234)		-5%	-37%	45%	-3%	-20%		
<b>O&amp;M</b>	<b>Electric Distribution</b>	<b>Sub-Total Skills &amp; Compliance Training</b>		<b>Yes</b>																											
O&M	Electric Distribution	Service Order Team (SOT)	Non-RAMP	No	Unable to determine a single unit of measure due to multiple activities in this workpaper. These activities include, but are not limited to, home remodels including tear down rebuilds, solar installations, additional dwelling units (ADUs), new construction of single-family homes, and unmetered services. These activities include those with a long service life and labor-only jobs such as solar (a disconnect / reconnect order for customers to upgrade their electric meter panels to enable solar).																										
O&M	Electric Distribution	Substation C&O	Non-RAMP	No	Maintenance Orders	2,207	1,292	3,146	2,790	3,363	12,798	1,062	1,062	1,062	1,062	1,062	5,310	1,145	230	2,084	1,728	2,301	7,488	108%	22%	196%	163%	217%	141%		

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance		
O&M	Electric Distribution	Substation C&O	Condition Base Maintenance (CBM) - Distribution	No	CBM Monitors Replaced	5	—	—	—	—	5	15	15	15	15	15	75	(10)	(15)	(15)	(15)	(15)	(70)	-67%	-100%	-100%	-100%	-100%	-93%		
O&M	Electric Distribution	Sub-Total Substation C&O		Yes																											
O&M	Electric Distribution	System Protection	Non-RAMP	No	FTE	12	15	22	22	24	95	11	11	11	11	11	55	1	4	11	11	13	40	9%	36%	100%	100%	118%	73%		
O&M	Electric Distribution	System Protection	Replace failed SCADA remote terminal units (RTU's)	No	RTUs Replaced	5	—	—	—	—	5	7	7	7	7	7	35	(2)	(7)	(7)	(7)	(7)	(30)	-29%	-100%	-100%	-100%	-100%	-86%		
O&M	Electric Distribution	System Protection	Workforce Planning	No	Hours Job Shadowed	143	155	196	234	232	960	125	125	125	125	125	625	18	30	71	109	107	335	14%	24%	57%	87%	86%	54%		
O&M	Electric Distribution	Sub-Total System Protection		Yes																											
O&M	Electric Distribution	Distribution and Engineering	Non-RAMP	No	Unable to identify one single unit due to multiple activities in this workpaper such as developing and maintaining overhead and underground construction standards to ensure safe and reliable customer service throughout 12kv and 4kv electric distribution.																										
O&M	Electric Distribution	Distribution and Engineering	Safety Policies & Programs	No	Published updates to standards	485	368	382	339	303	1,877	454	454	454	454	454	2,270	31	(86)	(72)	(115)	(151)	(393)	7%	-19%	-16%	-25%	-33%	-17%		
O&M	Electric Distribution	Distribution and Engineering	Workforce Planning	No	Hours of training	4,836	4,272	3,322	2,700	2,506	17,636	4,108	4,108	4,108	4,108	4,108	16,432	728	164	(786)	(1,408)	(1,602)	1,204	18%	4%	-19%	-34%	-39%	7%		
O&M	Electric Distribution	Distribution and Engineering	Records Management	No	Asset Management RAMP activity is annual records management compliance. Groups are to perform a self-assessment of the department's compliance with the records management policies and procedures. The assessments are then reviewed by the Records Management group.																										
O&M	Electric Distribution	Sub-Total Distribution and Engineering		Yes																											

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
O&M	Electric Distribution	Asset Management	Utility Asset Management (Non-WMP)	No	Utility Asset Management RAMP activity is the development and implementation of an Asset Management program that conforms with ISO 55000 (non-High Fire Threat District (HFTD) portion of RAMP Activity). The variety of activities makes it infeasible to identify a single unit of measurement for this category.																									
O&M	Electric Distribution	Asset Management	Annual records management compliance	No	Asset Management RAMP activity is annual records management compliance. Groups are to perform a self-assessment of the department's compliance with the records management policies and procedures. The assessments are then reviewed by the Records Management group.																									
O&M	Electric Distribution	<b>Sub-Total Asset Management</b>		Yes																										
O&M	Electric Distribution	Troubleshooting	Non-RAMP	No	Number of orders worked on as tracked through the SORT software application.	65,532	75,567	67,929	62,972	63,588	335,588	77,580	77,580	77,580	77,580	77,580	387,900	(12,048)	(2,013)	(9,651)	(14,608)	(13,992)	(52,312)	-16%	-3%	-12%	-19%	-18%	-13%	
O&M	Electric Distribution	Major Projects	Non-RAMP	No	Unable to identify one single unit due to multiple activities in this workpaper involved with Project Management process improvement and support.																									
O&M	Electric Distribution	Major Projects	Contractor Safety Program	No	Unable to identify one single unit due to multiple activities in this workpaper such as Contractor Incidents Reports and Safety Reviews.																									
O&M	Electric Distribution	<b>Sub-Total Major Projects</b>		Yes																										
O&M	Electric Distribution	Technology Utilization	Non-RAMP	No	FTE	10	10	13	11	17	61	12	12	12	12	12	60	(2)	(2)	1	(1)	5	1	-17%	-17%	8%	-8%	42%	2%	
O&M	Electric Distribution	Compliance Management	Non-RAMP	No	FTE	8	8	9	9	8	42	11	11	11	11	11	55	(3)	(3)	(2)	(2)	(3)	(13)	-27%	-27%	-18%	-18%	-27%	-24%	
O&M	Electric Distribution	Compliance Management	Records Management	No	Asset Management RAMP activity is annual records management compliance. Groups are to perform a self-assessment of the department's compliance with the records management policies and procedures. The assessments are then reviewed by the Records Management group.																									
O&M	Electric Distribution	<b>Sub-Total Compliance Management</b>		Yes																										
O&M	Electric Distribution	Tech Solutions and Reliability	Non-RAMP	No	Unable to identify one single unit due to multiple activities in this workpaper, such as software, material, and travel necessary to perform department functions.																									
O&M	Electric Distribution	Tech Solutions and Reliability	Records Management	No	Asset Management RAMP activity is annual records management compliance. Groups perform a self-assessment of the department's compliance with the records management policies and procedures. The assessments are then reviewed by the Records Management group.																									
O&M	Electric Distribution	<b>Sub-Total Tech Solutions And Reliability</b>		Yes																										

1.SDG&E ELECTRIC  
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Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Electric Distribution	Electric Distribution		Yes									
O&M	Electric Distribution	Reliability & Capacity	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Electric Distribution	Reliability & Capacity	Improved modeling tools for DER's	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Electric Distribution	Sub-Total Reliability & Capacity		Yes	No								No
O&M	Electric Distribution	Construction Services	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Electric Distribution	Construction Services	Contractor Safety Review	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Electric Distribution	Construction Services	System Hardening and Grid Modernization	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Electric Distribution	Construction Services	Workforce Planning	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Electric Distribution	Sub-Total Construction Services		Yes	No								No
O&M	Electric Distribution	District Ops Enterprise Geographic Information System Standards	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Electric Distribution	District Ops Enterprise Geographic Information System Standards	Records Management	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Electric Distribution	Sub-Total Dist Ops Enterprise Geographic Information System Standards		Yes	No								No
O&M	Electric Distribution	Electric Distribution Operations	Non-RAMP	No	Yes	No	Variance primarily driven by increases in freight and truck stock related to increased capital construction as well as inflationary pressures. Freight and truck stock expenses scale with capital construction causing more expenses than the base-year forecast projected in the 2019 GRC.	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Electric Distribution	Electric Distribution Operations	Workforce Planning	No	No	Yes	N/A	Training staff was increased in 2023 to address attrition from prior years.	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Electric Distribution	Electric Distribution Operations	Records Management	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Electric Distribution	Sub-Total Electric Distribution Operations		Yes	Yes		Variance is primarily driven by increases in freight and truck stock related to increased capital construction, as well as inflationary pressures. Freight and truck stock expenses scale with capital construction causing more expenses than the base-year forecast projected in the 2019 GRC.	N/A					No



Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Electric Distribution	Kearny Operations Services	Non-RAMP	No	Yes	No	The cost variance was primarily driven by a large purchase of live line tools in 2023, totaling approximately \$4M. This purchase was necessary to: (1) acquire additional new tools to equip new fleet trucks and (2) replenish the inventory of tools available to electrical workers. Live line tools are returned to the laboratory on a defined schedule by field workers in order for the tools to be maintained, repaired, and tested. If tools are unable to be repaired or fail testing, they must be replaced. An adequate inventory of tools must be maintained through new purchases in order to ensure enough tools are in rotation for all fleet trucks and electrical workers to use, thereby maintaining compliance requirements.	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Electric Distribution	Grid Operations	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Electric Distribution	Grid Operations	Workforce Planning	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
<b>O&amp;M</b>	<b>Electric Distribution</b>	<b>Sub-Total Grid Operations</b>		<b>Yes</b>	<b>No</b>								<b>No</b>
O&M	Electric Distribution	Project Management	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Electric Distribution	Electric Regional Operations	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Electric Distribution	Electric Regional Operations	Safety Policies & Programs	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Electric Distribution	Electric Regional Operations	Aviation Safety	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Electric Distribution	Electric Regional Operations	Distribution Switch Maintenance Program	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Electric Distribution	Electric Regional Operations	Employee Records Management training course	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Electric Distribution	Electric Regional Operations	Workforce Planning	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Electric Distribution	Electric Regional Operations	Inspection and Preventative Maintenance	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
<b>O&amp;M</b>	<b>Electric Distribution</b>	<b>Sub-Total Electric Regional Operations</b>		<b>Yes</b>	<b>No</b>								<b>No</b>
O&M	Electric Distribution	Skills & Compliance Training	Non-RAMP	No	No	Yes	N/A	Staffing was lower than approved due to challenges finding qualified personnel to address attrition within the group.	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Electric Distribution	Skills & Compliance Training	Ongoing maintenance programs	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
<b>O&amp;M</b>	<b>Electric Distribution</b>	<b>Sub-Total Skills &amp; Compliance Training</b>		<b>Yes</b>	<b>No</b>								<b>No</b>
O&M	Electric Distribution	Service Order Team (SOT)	Non-RAMP	No	Yes	No	In 2023, the service order team responded to and managed an approximate 51 percent increase in completed service order requests in comparison to 2018. A portion of this increase has been a direct increase in labor-only jobs such as solar and unmetered, which increases the O&M spend. In addition, SDG&E periodically evaluates labor allocations between capital and O&M work. Recent trends have caused a shift in a portion of the labor allocation from capital to O&M, which results in this variance.	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Electric Distribution	Substation C&O	Non-RAMP	No	Yes	Yes	More O&M work was performed in 2023 than forecasted in the GRC. The amount of maintenance required on substation equipment varies year-to-year, depending upon timing of cyclical preventative maintenance, and identification of additional necessary corrective maintenance. Additionally, 2023 saw the ongoing upward pressure of costs associated with responding to Heat, Storm and other high profile events that required standby resources, which were not accounted for in the 2019 GRC.	More O&M work was performed in 2023 than forecasted in the GRC. The amount of maintenance required on substation equipment varies year-to-year, depending upon timing of cyclical preventative maintenance, and identification of additional necessary corrective maintenance. Additionally, 2023 saw the ongoing upward pressure of costs associated with responding to Heat, Storm, and other high profile events that required standby resources, which were not accounted for in the 2019 GRC.	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Electric Distribution	Substation C&O	Condition Base Maintenance (CBM) - Distribution	No	No	Yes	N/A	No CBM monitors failed in 2023, so no replacements were performed under this RAMP activity.	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	Yes
O&M	Electric Distribution	Sub-Total Substation C&O		Yes	Yes		More O&M work was performed in 2023 than forecasted in the GRC. The amount of maintenance required on substation equipment varies year-to-year, depending upon timing of cyclical preventative maintenance, and identification of additional necessary corrective maintenance. Additionally, 2023 saw the ongoing upward pressure of costs associated with responding to Heat, Storm, and other high profile events that required standby resources, which were not accounted for in the 2019 GRC.	N/A					No
O&M	Electric Distribution	System Protection	Non-RAMP	No	No	Yes	N/A	More O&M work was performed in 2023 than forecasted in the GRC. The amount of maintenance required on relay, protection, and control equipment varies year-to-year, depending upon timing of cyclical preventative maintenance, and identification of additional necessary corrective maintenance. There were also Heat, Storm, and other high profile events that required standby resources, which were not accounted for in the forecast. In addition, a growing number of SCADA devices which require maintenance are continuously being added to the distribution system, which requires more FTE resources to maintain.	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Electric Distribution	System Protection	Replace failed SCADA remote terminal units (RTUs)	No	No	Yes	N/A	No RTUs failed in 2023, so no replacements were performed under this RAMP activity.	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	Yes
O&M	Electric Distribution	System Protection	Workforce Planning	No	No	Yes	N/A	Due to increased attrition, more job shadow training for new relay techs and SCADA techs was required than originally forecasted.	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Electric Distribution	Sub-Total System Protection		Yes	No								No
O&M	Electric Distribution	Distribution and Engineering	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Electric Distribution	Distribution and Engineering	Safety Policies & Programs	No	No	Yes	N/A	In previous years, work was focused on developing new standards for safe work practice around strategic undergrounding and covered conductor initiatives. Progress continues with these standards as improvements are identified; however, like 2022, programs were already well established through previous years resulting in a decrease in publishing of new standards for these areas. In 2023, a complete review of the current design manual and service standards guide was a priority for the team to further enhance safety and align design decisions. These complex standards require additional review time for a thorough review with a targeted publishing date in 2024. With this focus on review of the design manual there was an overall decrease in the quantity of standards published in 2023.	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Electric Distribution	Distribution and Engineering	Workforce Planning	No	No	Yes	N/A	In 2023, the group brought on several new team members and retained several seasoned experts where large group trainings were less efficient for growing and training all team members. In response, the duration of large group trainings was significantly decreased, and these trainings were replaced with trainings that were more targeted for smaller groups of team members. This created more efficient growth of technical skill sets as individual team members were able to focus their training in areas they most needed it and spending less time in areas they had successfully gained those skills. This shift in focus resulted in an overall net decrease in training hours.	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Electric Distribution	Distribution and Engineering	Records Management	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Electric Distribution	Sub-Total Distribution and Engineering		Yes	No								No

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Electric Distribution	Asset Management	Utility Asset Management (Non-WMP)	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Electric Distribution	Asset Management	Annual records management compliance	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Electric Distribution	<b>Sub-Total Asset Management</b>		Yes	No								No
O&M	Electric Distribution	Troubleshooting	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Electric Distribution	Major Projects	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Electric Distribution	Major Projects	Contractor Safety Program	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Electric Distribution	<b>Sub-Total Major Projects</b>		Yes	No								No
O&M	Electric Distribution	Technology Utilization	Non-RAMP	No	No	Yes	N/A	The increase in resources is due to the increased number of projects and need for capital development support.	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Electric Distribution	Compliance Management	Non-RAMP	No	No	Yes	N/A	Staffing was lower than approved due to challenges finding qualified personnel to address attrition within the group.	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Electric Distribution	Compliance Management	Records Management	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Electric Distribution	<b>Sub-Total Compliance Management</b>		Yes	No								No
O&M	Electric Distribution	Tech Solutions and Reliability	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Electric Distribution	Tech Solutions and Reliability	Records Management	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Electric Distribution	<b>Sub-Total Tech Solutions And Reliability</b>		Yes	No								No

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Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Electric Distribution	Electric Distribution		Yes				
O&M	Electric Distribution	Reliability & Capacity	Non-RAMP	No	N/A			
O&M	Electric Distribution	Reliability & Capacity	Improved modeling tools for DER's	No	N/A			
O&M	Electric Distribution	Sub-Total Reliability & Capacity		Yes				
O&M	Electric Distribution	Construction Services	Non-RAMP	No	N/A			
O&M	Electric Distribution	Construction Services	Contractor Safety Review	No	N/A			
O&M	Electric Distribution	Construction Services	System Hardening and Grid Modernization	No	N/A			
O&M	Electric Distribution	Construction Services	Workforce Planning	No	N/A			
O&M	Electric Distribution	Sub-Total Construction Services		Yes				
O&M	Electric Distribution	District Ops Enterprise Geographic Information System Standards	Non-RAMP	No	N/A			
O&M	Electric Distribution	District Ops Enterprise Geographic Information System Standards	Records Management	No	N/A			
O&M	Electric Distribution	Sub-Total Dist Ops Enterprise Geographic Information System Standards		Yes				
O&M	Electric Distribution	Electric Distribution Operations	Non-RAMP	No	N/A	This workgroup is made up of the Electric Distribution Operations Control Center (EDOCC) and Electric Distribution Operations Technology (EDOT). The EDOCC is responsible for operating the Electric Distribution System safely and reliably for planned and unplanned events (e.g., outages). The Center has two main resource types: technical support personnel and operators/programmers. This group supports 24/7 operations management and oversight for: the electric distribution system, District Engineers with Reliability Analysis of feeders and branches, and customer call-backs initiated by the Technical Support Team (TST) for every outage event. EDOT provides technical and operational assistance necessary to operate the electric distribution system safely and efficiently. System operators will require increased levels of situational awareness for monitoring the performance of the grid with the integration of distributed resources. SDG&E anticipates the installation of 200-300 new remote-controlled devices per year to enable operators to more precisely isolate the fault and energize the customer. The Outage Management System (OMS), Distributed Energy Resource Management System (DERMS), and Advanced Distribution Management System (ADMS) will require increased capabilities to meet customer demand and to manage two-way power flow and granular visibility to support the integration of distributed energy resources on the grid. This will require increased support staff, additional equipment, and adequate facilities to effectively manage and maintain these additional devices and resources. This will also require continued support for the Back-Up Control Center, where equipment such as computers, servers, monitors and radio consoles will require constant monitoring.	SDG&E-15-2R WHS-28 to WHS-31 WP 1ED004.000	SDG&E-12-R-E TS-25 to TS-31 WP 1ED003.000
O&M	Electric Distribution	Electric Distribution Operations	Workforce Planning	No	N/A	This workgroup is made up of the Electric Distribution Operations Control Center (EDOCC) and Electric Distribution Operations Technology (EDOT). The EDOCC is responsible for operating the Electric Distribution System safely and reliably for planned and unplanned events (e.g., outages). The Center has two main resource types: technical support personnel and operators/programmers. This group supports 24/7 operations management and oversight for: the electric distribution system, District Engineers with Reliability Analysis of feeders and branches, and customer call-backs initiated by the Technical Support Team (TST) for every outage event. EDOT provides technical and operational assistance necessary to operate the electric distribution system safely and efficiently. System operators will require increased levels of situational awareness for monitoring the performance of the grid with the integration of distributed resources. SDG&E anticipates the installation of 200-300 new remote-controlled devices per year to enable operators to more precisely isolate the fault and energize the customer. The Outage Management System (OMS), Distributed Energy Resource Management System (DERMS), and Advanced Distribution Management System (ADMS) will require increased capabilities to meet customer demand and to manage two-way power flow and granular visibility to support the integration of distributed energy resources on the grid. This will require increased support staff, additional equipment, and adequate facilities to effectively manage and maintain these additional devices and resources. This will also require continued support for the Back-Up Control Center, where equipment such as computers, servers, monitors and radio consoles will require constant monitoring.	SDG&E-15-2R WHS-28 to WHS-31 WP 1ED004.000	SDG&E-12-R-E TS-25 to TS-31 WP 1ED003.000
O&M	Electric Distribution	Electric Distribution Operations	Records Management	No	N/A			
O&M	Electric Distribution	Sub-Total Electric Distribution Operations		Yes		This workgroup is made up of the Electric Distribution Operations Control Center (EDOCC) and Electric Distribution Operations Technology (EDOT). The EDOCC is responsible for operating the Electric Distribution System safely and reliably for planned and unplanned events (e.g., outages). The Center has two main resource types: technical support personnel and operators/programmers. This group supports 24/7 operations management and oversight for: the electric distribution system, District Engineers with Reliability Analysis of feeders and branches, and customer call-backs initiated by the Technical Support Team (TST) for every outage event. EDOT provides technical and operational assistance necessary to operate the electric distribution system safely and efficiently. System operators will require increased levels of situational awareness for monitoring the performance of the grid with the integration of distributed resources. SDG&E anticipates the installation of 200-300 new remote-controlled devices per year to enable operators to more precisely isolate the fault and energize the customer. The Outage Management System (OMS), Distributed Energy Resource Management System (DERMS), and Advanced Distribution Management System (ADMS) will require increased capabilities to meet customer demand and to manage two-way power flow and granular visibility to support the integration of distributed energy resources on the grid. This will require increased support staff, additional equipment, and adequate facilities to effectively manage and maintain these additional devices and resources. This will also require continued support for the Back-Up Control Center, where equipment such as computers, servers, monitors and radio consoles will require constant monitoring.	SDG&E-15-2R WHS-28 to WHS-31 WP 1ED004.000	SDG&E-12-R-E TS-25 to TS-31 WP 1ED003.000

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Electric Distribution	Kearny Operations Services	Non-RAMP	No	N/A	There are four functional work groups in the Kearny Maintenance Shops and Lab (Shop): (1) Tool Repair Group - the Shop maintains, repairs, fabricates, and acquires tooling, such as live-line tools, hot sticks, electric and hydraulic equipment and hand-tools. This is instrumental in maintaining the safety of the electric line and substation employees. (2) Apparatus Group - the condition-based maintenance program has necessitated the replacement of an increased number of electrical equipment. This includes the disposal or refurbishment of transformers, capacitors, switches, breakers, and bushings, along with associated gas and oil reclamation and recycling. Environmental concerns have been instrumental in the decision to scrap versus refurbishment. (3) Transformer Repair & High Voltage Testing - the Shop is a certified high voltage test station which tests to confirm the electrical condition of transformers, regulators, mechanical jumpers, grounds, hot sticks and other live line tools and equipment. Since 2008, there has been an increased demand for testing in the Shop to validate tool testing compliance. (4) Protective Equipment Testing Lab - the Shop is certified to inspect, and test rubber goods used for electrical work personal protection.	SDG&E-15-2R WHS-34 to WHS-35 WP 1ED006.000	SDG&E-12-R-E TS-34 to TS-37 WP 1ED005.000
O&M	Electric Distribution	Grid Operations	Non-RAMP	No	N/A			
O&M	Electric Distribution	Grid Operations	Workforce Planning	No	N/A			
<b>O&amp;M</b>	<b>Electric Distribution</b>	<b>Sub-Total Grid Operations</b>		<b>Yes</b>				
O&M	Electric Distribution	Project Management	Non-RAMP	No	N/A			
O&M	Electric Distribution	Electric Regional Operations	Non-RAMP	No	N/A			
O&M	Electric Distribution	Electric Regional Operations	Safety Policies & Programs	No	N/A			
O&M	Electric Distribution	Electric Regional Operations	Aviation Safety	No	N/A			
O&M	Electric Distribution	Electric Regional Operations	Distribution Switch Maintenance Program	No	N/A			
O&M	Electric Distribution	Electric Regional Operations	Employee Records Management training course	No	N/A			
O&M	Electric Distribution	Electric Regional Operations	Workforce Planning	No	N/A			
O&M	Electric Distribution	Electric Regional Operations	Inspection and Preventative Maintenance	No	N/A			
<b>O&amp;M</b>	<b>Electric Distribution</b>	<b>Sub-Total Electric Regional Operations</b>		<b>Yes</b>				
O&M	Electric Distribution	Skills & Compliance Training	Non-RAMP	No	N/A	Skills Training is responsible for the development and training of the Electric Regional Operations (ERO) workforce, which consists of electric field personnel, non-electrical support personnel, and supervisory staff. The core training provided by this organization consists of the following: electric linemen development using a three-year apprenticeship program; compliance training to meet federal, state, local, safety, and environmental regulations; equipment operations and commercial drivers' training; and providing training support for other business units.	SDG&E-15-2R WHS-46 to WHS-49 WP 1ED013.000	SDG&E-12-R-E TS-52 to TS-56 WP 1ED009.000
O&M	Electric Distribution	Skills & Compliance Training	Ongoing maintenance programs	No	N/A			
<b>O&amp;M</b>	<b>Electric Distribution</b>	<b>Sub-Total Skills &amp; Compliance Training</b>		<b>Yes</b>				
O&M	Electric Distribution	Service Order Team (SOT)	Non-RAMP	No	N/A	The Service Order Team (SOT) is responsible for planning, overseeing, and managing new additions and modifications to the electric and gas distribution systems, primarily related to services. The Service Order Team acts as the SDG&E customer representative on these projects. The O&M costs associated with this team are for its support of construction operations, storm recovery, construction maintenance programs, labor for training activities, and preparing orders to replace property.	SDG&E-15-2R WHS-50 to WHS-51 WP 1ED014.000	SDG&E-12-R-E TS-57 to TS-58 WP 1ED010.000
O&M	Electric Distribution	Substation C&O	Non-RAMP	No	N/A	The Substation Construction & Maintenance and associated support organizations are responsible for the installation, inspection and maintenance of 140 distribution substations on the SDG&E system. This includes the maintenance of 293 distribution power transformers and their associated load tap changers or voltage regulators. As well as 1300 circuit breakers including oil, air, and vacuum classifications, and their associated line and bus disconnects. This group inspects and maintains all substation equipment including batteries, buses, support structures, capacitor banks, reactors, grounding systems, fire suppression systems, and perimeter fences and gates. The substation construction and maintenance group is responsible for GO174 compliance, with regards to its inspection and corrective maintenance program, compliance with health and safety programs, and compliance with SDG&E's maintenance standards. These programs are critical to the safe and efficient installation, inspection, maintenance, and reliability of all distribution electric facilities managed and implemented within the Substation Construction and Maintenance section.	SDG&E-15-2R WHS-51 to WHS-53 WP 1ED015.000	SDG&E-12-R-E TS-37 to TS-41 WP 1ED006.000

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Electric Distribution	Substation C&O	Condition Base Maintenance (CBM) - Distribution	No	No CBM monitors failed in 2020-2023, so no replacements were performed under this RAMP activity for these years. The activity is monitored but no spend or units are incurred when there are no CBM monitor failures.	The Substation Construction & Maintenance and associated support organizations are responsible for the installation, inspection and maintenance of 140 distribution substations on the SDG&E system. This includes the maintenance of 293 distribution power transformers and their associated load tap changers or voltage regulators. As well as 1300 circuit breakers including oil, air, and vacuum classifications, and their associated line and bus disconnects. This group inspects and maintains all substation equipment including batteries, buses, support structures, capacitor banks, reactors, grounding systems, fire suppression systems, and perimeter fences and gates. The substation construction and maintenance group is responsible for GO174 compliance, with regards to its inspection and corrective maintenance program, compliance with health and safety programs, and compliance with SDG&E's maintenance standards. These programs are critical to the safe and efficient installation, inspection, maintenance, and reliability of all distribution electric facilities managed and implemented within the Substation Construction and Maintenance section.	SDG&E-15-2R WHS-51 to WHS-53 WP 1ED015.000	SDG&E-12-R-E TS-37 to TS-41 WP 1ED006.000
O&M	Electric Distribution	Sub-Total Substation C&O		Yes		<b>The Substation Construction &amp; Maintenance and associated support organizations are responsible for the installation, inspection and maintenance of 140 distribution substations on the SDG&amp;E system. This includes the maintenance of 293 distribution power transformers and their associated load tap changers or voltage regulators. As well as 1300 circuit breakers including oil, air, and vacuum classifications, and their associated line and bus disconnects. This group inspects and maintains all substation equipment including batteries, buses, support structures, capacitor banks, reactors, grounding systems, fire suppression systems, and perimeter fences and gates. The substation construction and maintenance group is responsible for GO174 compliance, with regards to its inspection and corrective maintenance program, compliance with health and safety programs, and compliance with SDG&amp;E's maintenance standards. These programs are critical to the safe and efficient installation, inspection, maintenance, and reliability of all distribution electric facilities managed and implemented within the Substation Construction and Maintenance section.</b>	SDG&E-15-2R WHS-51 to WHS-53 WP 1ED015.000	SDG&E-12-R-E TS-37 to TS-41 WP 1ED006.000
O&M	Electric Distribution	System Protection	Non-RAMP	No	N/A	System Protection Maintenance maintains protective relays and control systems within SDG&E's substations. This involves routine preventive maintenance on time-based intervals - calibrating and trip-testing protective relays. This also involves corrective maintenance, or troubleshooting, existing systems that alarm or fail to function properly. Cost Center staffing is on-call around the clock, and in addition, provides standby personnel for fire preparedness and responds to system emergencies, e.g., unscheduled load shedding and earthquakes. This is a technical group that uses computer-driven test equipment. Databases are used to generate work orders and store test results. The aging infrastructure includes old electromechanical relays that are replaced with microprocessor based relays. These new relays have considerably more functionality than the older discrete single-function electromechanical units, but they also require a greater degree of technical expertise and skill to maintain. In particular, computer and logic skills are essential to work with these devices, whereas in the past, it was not required. The new, more complex, protection schemes are being implemented for these relays which take advantage of the increased functionality. As a result, the company has increased the training it provides to relay technicians.	SDG&E-15-2R WHS-53 to WHS-55 WP 1ED017.000	SDG&E-12-R-E TS-42 to TS-44 WP 1ED006.002
O&M	Electric Distribution	System Protection	Replace failed SCADA remote terminal units (RTU's)	No	No RTUs failed in 2020-2023, so no replacements were performed under this RAMP activity for these years. The activity is monitored but no spend or units are incurred when there are no RTU failures.	System Protection Maintenance maintains protective relays and control systems within SDG&E's substations. This involves routine preventive maintenance on time-based intervals - calibrating and trip-testing protective relays. This also involves corrective maintenance, or troubleshooting, existing systems that alarm or fail to function properly. Cost Center staffing is on-call around the clock, and in addition, provides standby personnel for fire preparedness and responds to system emergencies, e.g., unscheduled load shedding and earthquakes. This is a technical group that uses computer-driven test equipment. Databases are used to generate work orders and store test results. The aging infrastructure includes old electromechanical relays that are replaced with microprocessor based relays. These new relays have considerably more functionality than the older discrete single-function electromechanical units, but they also require a greater degree of technical expertise and skill to maintain. In particular, computer and logic skills are essential to work with these devices, whereas in the past, it was not required. The new, more complex, protection schemes are being implemented for these relays which take advantage of the increased functionality. As a result, the company has increased the training it provides to relay technicians.	SDG&E-15-2R WHS-53 to WHS-55 WP 1ED017.000	SDG&E-12-R-E TS-42 to TS-44 WP 1ED006.002
O&M	Electric Distribution	System Protection	Workforce Planning	No	N/A	System Protection Maintenance maintains protective relays and control systems within SDG&E's substations. This involves routine preventive maintenance on time-based intervals - calibrating and trip-testing protective relays. This also involves corrective maintenance, or troubleshooting, existing systems that alarm or fail to function properly. Cost Center staffing is on-call around the clock, and in addition, provides standby personnel for fire preparedness and responds to system emergencies, e.g., unscheduled load shedding and earthquakes. This is a technical group that uses computer-driven test equipment. Databases are used to generate work orders and store test results. The aging infrastructure includes old electromechanical relays that are replaced with microprocessor based relays. These new relays have considerably more functionality than the older discrete single-function electromechanical units, but they also require a greater degree of technical expertise and skill to maintain. In particular, computer and logic skills are essential to work with these devices, whereas in the past, it was not required. The new, more complex, protection schemes are being implemented for these relays which take advantage of the increased functionality. As a result, the company has increased the training it provides to relay technicians.	SDG&E-15-2R WHS-53 to WHS-55 WP 1ED017.000	SDG&E-12-R-E TS-42 to TS-44 WP 1ED006.002
O&M	Electric Distribution	Sub-Total System Protection		Yes				
O&M	Electric Distribution	Distribution and Engineering	Non-RAMP	No	N/A			
O&M	Electric Distribution	Distribution and Engineering	Safety Policies & Programs	No	N/A	The specification requirements include all service standards for customer facilities as well as design manual standards for all of our project management design teams. New and revised construction standards and material specifications are designed to provide community safety and system reliability while keeping pace with technology advancements in areas such as fire-preparedness, communication technology improvements, and renewable integration with the advancements in rooftop Photovoltaic (PV) penetration and Plug-in Electric Vehicles. The electric standard practices developed by the team establish uniform and safe work methods and procedures and inspection requirements to ensure regulatory compliance with all governing agencies. Construction standards and standard practices are used by company and contractor construction forces throughout the SDG&E electric distribution system.	SDG&E-15-2R WHS-58 to WHS-61 WP 1ED018.000	SDG&E-12-R-E TS-58 to TS-62 WP 1ED012.000
O&M	Electric Distribution	Distribution and Engineering	Workforce Planning	No	N/A	In order to adequately address the risks of attrition, retirement, and knowledge loss, the Distribution and Engineering group plans to add additional training programs for their engineers. This program falls under the Workforce Planning Chapter of the RAMP Report and mitigates the safety and reliability risks associated with the need for knowledge transfer.	SDG&E-15-2R WHS-58 to WHS-61 WP 1ED018.000	SDG&E-12-R-E TS-58 to TS-62 WP 1ED012.000
O&M	Electric Distribution	Distribution and Engineering	Records Management	No	N/A			
O&M	Electric Distribution	Sub-Total Distribution and Engineering		Yes				

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Electric Distribution	Asset Management	Utility Asset Management (Non-WMP)	No	N/A			
O&M	Electric Distribution	Asset Management	Annual records management compliance	No	N/A			
O&M	<b>Electric Distribution</b>	<b>Sub-Total Asset Management</b>		<b>Yes</b>				
O&M	Electric Distribution	Troubleshooting	Non-RAMP	No	N/A			
O&M	Electric Distribution	Major Projects	Non-RAMP	No	N/A			
O&M	Electric Distribution	Major Projects	Contractor Safety Program	No	N/A			
O&M	<b>Electric Distribution</b>	<b>Sub-Total Major Projects</b>		<b>Yes</b>				
O&M	Electric Distribution	Technology Utilization	Non-RAMP	No	N/A	Advanced technologies support system stability by offsetting the intermittency of large-scale wind and solar through large scale battery storage installations, and helps operate the electric system more safely, reliably, and efficiently, with fewer Green House Gas (GHG) emissions to take advantage of new energy products such as plug-in electric vehicles, roof top solar panels, home energy management systems, and energy smart appliances. These costs support SDG&E's and California's goals via the analysis, development, evaluation, and integration of new technologies to drive grid modernization, enhance reliability, and provide benefits to our customers.	SDG&E-15-2R WHS-74 to WHS-75 WP 1ED024.000	SDG&E-15-R-E FV-8 to FV-11 WP 1DD002.000
O&M	Electric Distribution	Compliance Management	Non-RAMP	No	N/A	The Compliance Management workgroup is focused on ensuring that SDG&E maintains its compliance with internal and external regulations, policies, and procedures as they relate to operating and maintaining the electric distribution system in a safe, reliable, and efficient manner. The two main subsections that comprise the Compliance Management Workgroup are the Compliance Management Group and the Program Management Group. Compliance Management (CMG) has the responsibility to manage regulatory compliance to GO 95, 128, 165 and 166. The group carries out its function through audits, statistical analysis, reporting, and training of field personnel. It also maintains the relationship with the CPUC's SED to comply with CPUC requests regarding the electric distribution system. CMG also maintains responsibility for all joint utility processes related to CIP attachments, assuring compliance to CPUC D.98-10-05816, SDG&E's structural licensing process, and GO 95. Program Management is responsible for developing and centrally managing the patrol, inspection, and maintenance elements related to the GO 165 CMP. Functions include developing policies and procedures, training field employees, statistical reporting and analysis, budgeting, leading practice initiation, and other similar program management related activities.	SDG&E-15-2R WHS-75 to WHS-77 WP 1ED024.000	SDG&E-12-R-E TS-67 to TS-71 WP 1ED015.000
O&M	Electric Distribution	Compliance Management	Records Management	No	N/A			
O&M	<b>Electric Distribution</b>	<b>Sub-Total Compliance Management</b>		<b>Yes</b>				
O&M	Electric Distribution	Tech Solutions and Reliability	Non-RAMP	No	N/A			
O&M	Electric Distribution	Tech Solutions and Reliability	Records Management	No	N/A			
O&M	<b>Electric Distribution</b>	<b>Sub-Total Tech Solutions And Reliability</b>		<b>Yes</b>				

ii. SDG&E Electric Distribution Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
Capital	Electric Distribution	Electric Distribution		Yes			141,734	166,133	202,627	173,443	190,865	874,802	257,205	189,990	196,075	201,164	206,627	1,051,061
Capital	Electric Distribution	Field Shunt Capacitors	Non-RAMP	No	On-going	Annual	23	992	1,109	1,002	150	3,276	660	705	727	746	766	3,604
Capital	Electric Distribution	Ocean Ranch 69/12KV Substation	Non-RAMP	No	3	Completed	4,393	528	(18)	—	—	4,902	16,365	3,012	3,108	3,189	3,276	28,950
Capital	Electric Distribution	Substation 12kV Capacitor Upgrades	Non-RAMP	No	On-going	Annual	—	35	377	1,151	1,378	2,940	1,038	455	469	481	495	2,937
Capital	Electric Distribution	C1447 MTO: Extension and offload from C958	Non-RAMP	No	1	Completed	34	12	—	—	—	47	—	76	78	80	82	316
Capital	Electric Distribution	GRID Modernization	Non-RAMP	No	1	Completed	297	70	—	—	—	367	—	79	81	83	86	329
Capital	Electric Distribution	Planned Investments	Non-RAMP	No	Emergent	Annual	77	2,631	4,907	2,314	1,273	11,202	—	—	—	—	—	—
Capital	Electric Distribution	Reactive Small Capital Projects	Non-RAMP	No	On-going	Annual	893	3,001	1,331	1,108	1,743	8,076	2,058	2,338	2,413	2,476	2,543	11,829
Capital	Electric Distribution	C1023 LI New 12KV Circuit & Reconductor C354	Non-RAMP	No	4	Completed	694	122	116	—	—	932	—	495	511	524	538	2,068
Capital	Electric Distribution	C1450 MTO: New 12KV Circuit	Non-RAMP	No	3	Completed	106	5,428	632	458	9	6,633	—	237	244	251	257	989
Capital	Electric Distribution	TL633 Reconductor (Bernardo - Rancho Carmel)	Non-RAMP	No	Emergent	Completed	61	119	3	—	—	183	—	—	—	—	—	—
Capital	Electric Distribution	Doheny Desalination 15MW Project	Non-RAMP	No	1	Canceled	—	—	—	—	—	—	411	71	73	75	77	708



Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
Capital	Electric Distribution	C1139 Santee - New circuit	Non-RAMP	No	Emergent	Completed	1	—	—	—	—	1	—	—	—	—	—	—
Capital	Electric Distribution	Mira Sorrento 138/12KV Substation	Non-RAMP	No	12	Completed	7	—	—	—	—	7	—	—	—	—	—	—
Capital	Electric Distribution	Wabash Canyon Sub 60/12KV Bank 32	Non-RAMP	No	Emergent	Completed	611	72	—	—	—	683	—	—	—	—	—	—
Capital	Electric Distribution	Distribution System Capacity Improvement	Non-RAMP	No	On-going	Annual	2,924	4,263	2,440	1,797	49	11,472	1,948	2,006	2,070	2,124	2,182	10,331
Capital	Electric Distribution	Sub-Total Capacity/Expansion		Yes			10,121	17,273	10,897	7,830	4,602	50,722	22,480	9,473	9,777	10,031	10,303	62,063
Capital	Electric Distribution	Electric Distribution Tools/Equipment	Non-RAMP	No	On-going	Annual	1,156	1,701	2,045	660	562	6,124	1,166	2,052	2,118	2,173	2,232	9,742
Capital	Electric Distribution	Electric Transmission Tools/Equipment	Non-RAMP	No	Emergent	Annual	121	333	358	309	373	1,493	—	—	—	—	—	—
Capital	Electric Distribution	Sub-Total Equip/Tools/Misc.		Yes			1,277	2,034	2,404	969	934	7,617	1,166	2,052	2,118	2,173	2,232	9,742
Capital	Electric Distribution	RAMP Base - Corrective Maint Program (CMP)	Inspection, Repair, Maintenance & Replacement Programs	No	On-going	Annual	11,635	16,383	10,592	13,852	12,757	65,219	12,144	13,536	13,970	14,334	14,723	68,708
Capital	Electric Distribution	RAMP Base - DOE Switch/Manhole Replacement	Distribution Switch Maintenance Program	No	On-going	Annual	8,466	10,530	14,228	9,739	8,019	50,981	6,113	6,817	7,035	7,218	7,414	34,598
Capital	Electric Distribution	RAMP Base - Replacement of Live Front Equipment	Live Front Transformer and Terminator Replacement	No	On-going	Annual	(1)	522	832	609	307	2,268	770	668	689	707	726	3,560
Capital	Electric Distribution	Aerial Marking for Safety	Non-RAMP	No	On-going	Completed	5	11	(3)	(3)	—	10	134	70	73	74	76	428
Capital	Electric Distribution	RAMP Incremental - Distributed Generation Interconnect	Power Quality Studies of DER Interconnections	No	On-going	Annual	—	46	8	93	724	872	—	233	241	247	254	976

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
Capital	Electric Distribution	RAMP Incremental On Ramp Aerial Light - Post Filing	Install Aerial Marking and Lighting	No	1	Completed	—	—	—	—	—	—	—	244	252	259	266	1,021
Capital	Electric Distribution	Blue Hornet Solar	Non-RAMP	No	Emergent	Completed	—	1	63	—	—	64	—	—	—	—	—	—
Capital	Electric Distribution	Fallbrook Battery Energy Storage - PTO	Non-RAMP	No	Emergent	Completed	11	19	15	—	—	45	—	—	—	—	—	—
Capital	Electric Distribution	Gateway Energy Storage	Non-RAMP	No	Emergent	Completed	69	38	1	—	—	107	—	—	—	—	—	—
Capital	Electric Distribution	Kettle Solar One	Non-RAMP	No	Emergent	6	6	13	14	—	—	33	—	—	—	—	—	—
Capital	Electric Distribution	Mount Laguna Wind	Non-RAMP	No	Emergent	6	21	2	2	4	—	30	—	—	—	—	—	—
Capital	Electric Distribution	Rugged Solar Farm	Non-RAMP	No	Emergent	5	2	18	41	—	—	61	—	—	—	—	—	—
Capital	Electric Distribution	Top Gun PTO Interconnection	Non-RAMP	No	Emergent	Completed	5	65	10	—	—	79	—	—	—	—	—	—
Capital	Electric Distribution	Valley Center Renewable	Non-RAMP	No	Emergent	Completed	—	13	56	—	—	68	—	—	—	—	—	—
Capital	Electric Distribution	Elect Transmission Line Reliability Projects	Non-RAMP	No	On-going	Annual	3,361	3,072	3,136	3,490	3,818	16,877	450	366	377	387	398	1,977
Capital	Electric Distribution	RAMP Base — Annual Pole Reinforcement (Non-WMP)	GO165: Distribution Inspect and Repair program	No	On-going	Annual	7,114	7,154	12,709	17,241	16,921	61,139	6,269	7,189	7,419	7,612	7,819	36,309
Capital	Electric Distribution	TL632A Loop-In (Granite)	Non-RAMP	No	Emergent	Completed	—	—	—	9	1	10	—	—	—	—	—	—
Capital	Electric Distribution	RAMP Base - Avian Protection Program	Non-RAMP	No	On-going	Annual	—	209	1,762	188	(3)	2,156	735	634	654	671	689	3,383
<b>Capital</b>	<b>Electric Distribution</b>	<b>Sub-Total Mandated</b>		<b>Yes</b>			<b>30,694</b>	<b>38,095</b>	<b>43,465</b>	<b>45,222</b>	<b>42,543</b>	<b>200,019</b>	<b>26,614</b>	<b>29,757</b>	<b>30,711</b>	<b>31,510</b>	<b>32,366</b>	<b>150,959</b>
Capital	Electric Distribution	Electric Distribution Easements	Non-RAMP	No	On-going	Annual	1,851	1,905	2,766	2,534	2,827	11,882	1,233	1,562	1,612	1,654	1,699	7,761
<b>Capital</b>	<b>Electric Distribution</b>	<b>Sub-Total New Business</b>		<b>Yes</b>			<b>1,851</b>	<b>1,905</b>	<b>2,766</b>	<b>2,534</b>	<b>2,827</b>	<b>11,882</b>	<b>1,233</b>	<b>1,562</b>	<b>1,612</b>	<b>1,654</b>	<b>1,699</b>	<b>7,761</b>
Capital	Electric Distribution	Electric Meters & Regulators	Non-RAMP	No	On-going	Annual	3,839	2,578	7,613	6,598	7,891	28,519	5,166	3,792	3,913	4,015	4,124	21,010

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Capital	Electric Distribution	Transformers	Non-RAMP	No	On-going	Annual	22,706	21,571	16,834	20,505	49,270	130,885	24,415	23,510	24,264	24,895	25,572	122,656
<b>Capital</b>	<b>Electric Distribution</b>	<b>Sub-Total Materials</b>		<b>Yes</b>			<b>26,545</b>	<b>24,149</b>	<b>24,447</b>	<b>27,102</b>	<b>57,160</b>	<b>159,404</b>	<b>29,582</b>	<b>27,301</b>	<b>28,177</b>	<b>28,910</b>	<b>29,696</b>	<b>143,666</b>
Capital	Electric Distribution	Reliability/Improvements Capital Projects	Non-RAMP	No	On-going	Annual	1,680	1,218	1,013	337	743	4,990	1,764	1,915	1,977	2,028	2,083	9,767
Capital	Electric Distribution	Management of Overhead Distribution Service	Non-RAMP	No	On-going	Annual	6,615	6,510	11,768	9,633	8,710	43,236	7,125	7,471	7,711	7,911	8,126	38,344
Capital	Electric Distribution	Management of Underground Distribution Service	Non-RAMP	No	On-going	Annual	3,175	4,198	3,353	3,069	3,241	17,037	3,926	4,209	4,344	4,457	4,579	21,516
Capital	Electric Distribution	RAMP Base - Cable Replacement	Proactive cable replacement	No	On-going	Annual	6,077	9,678	10,129	11,228	7,526	44,637	17,495	18,150	18,733	19,220	19,742	93,341
Capital	Electric Distribution	RAMP Incremental Capital Restoration of Service	Capital improvements	No	On-going	Annual	9,393	7,567	10,817	11,559	9,183	48,518	12,929	10,245	10,573	10,848	11,143	55,739
Capital	Electric Distribution	Rebuild Pt Loma Substation	Non-RAMP	No	6	Completed	95	0	—	—	—	95	—	1,946	2,008	2,060	2,116	8,131
Capital	Electric Distribution	RAMP Incremental - 4 kV Modernization - Distribution	Overhead distribution modernization and hardening	No	On-going	Annual	542	2,951	4,698	238	1,566	9,994	4,269	1,476	1,523	1,563	1,606	10,437
Capital	Electric Distribution	Sewage Pump Station Rebuilds RAMP Incremental	Rebuild and repair aging infrastructure	No	2	Completed	350	—	(4)	—	—	346	—	746	770	790	812	3,119

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Capital	Electric Distribution	RAMP Base - Condition Based Maintenance - Smart Grid	Conditioned Based Monitoring System	No	6	Completed	572	1	—	—	—	573	1,738	2,113	2,180	2,237	2,298	10,566
Capital	Electric Distribution	Rebuild Kearny 69/12kV Substation	Non-RAMP	No	2	Completed	2,625	110	6	—	—	2,741	—	2,798	2,888	2,963	3,043	11,691
Capital	Electric Distribution	New Vine 69/12KV Substation	Non-RAMP	No	2	Completed	639	4	0	—	—	643	—	3,260	3,365	3,453	3,546	13,625
Capital	Electric Distribution	Streamview 69/12KV Sub Rebuild-Pre Eng	Non-RAMP	No	5	3	3	0	616	866	7,128	8,613	56	32	33	34	35	190
Capital	Electric Distribution	Poway Substation Rebuild	Poway 69kV Substation Rebuild	No	6	Completed	1,365	3,568	1,382	1,118	126	7,558	—	244	252	258	265	1,019

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Capital	Electric Distribution	Rancho Santa Fe Sub Fire Hardening	Non-RAMP	No	3	Completed	1,121	2,230	700	(27)	3	4,027	—	1,263	1,304	1,338	1,374	5,280
Capital	Electric Distribution	Vault Restoration	Non-RAMP	No	2	Canceled	—	—	—	—	—	—	1,124	388	401	411	422	2,747
Capital	Electric Distribution	OIR Worst Circuits	Non-RAMP	No	On-going	Canceled	—	—	—	—	—	—	2,812	1,458	1,504	1,543	1,585	8,903
Capital	Electric Distribution	San Mateo Substation Rebuild	Non-RAMP	No	Emergent	4	48	6	2	2	—	58	—	—	—	—	—	—
Capital	Electric Distribution	Avocado Sub 69KV Rebuild	Non-RAMP	No	Emergent	Completed	1,179	950	373	1	—	2,503	—	—	—	—	—	—
Capital	Electric Distribution	Substation Mod to Support FLISR	Substation Modification To Support FLISR	No	Emergent	4	42	2,513	2,511	1,009	(595)	5,480	—	—	—	—	—	—
Capital	Electric Distribution	Electric Distribution Grid Analytics	Non-RAMP	No	2	Canceled	—	—	—	—	—	—	3,710	1,282	1,323	1,357	1,394	9,065
Capital	Electric Distribution	Distribution Circuit Reliability Construction - RAMP	Expand and Maintain Distribution Advanced SCADA infrastructure	No	On-going	Annual	399	4,337	4,260	1,074	1,663	11,732	5,563	4,049	4,179	4,287	4,404	22,481
Capital	Electric Distribution	Power Quality Program	Power Quality Monitor Deployment and Replacement	No	Emergent	Annual	22	889	1,446	657	361	3,375	—	—	—	—	—	—
Capital	Electric Distribution	Meteorology Outage Prediction Modeling P2	Non-RAMP	No	2	Completed	—	—	—	—	—	—	—	259	268	275	282	1,084
Capital	Electric Distribution	12kV Substation Reliability	Torrey Pines 12kV Breaker Replacements	No	Emergent	4	—	796	720	366	172	2,054	—	—	—	—	—	—
Capital	Electric Distribution	12kV Substation Reliability	El Cajon 12kV Breaker Replacements	No	Emergent	4	—	584	346	432	829	2,191	—	—	—	—	—	—
Capital	Electric Distribution	12kV Substation Reliability	Non-RAMP	No	Emergent	4	—	1,262	995	375	755	3,387	—	—	—	—	—	—
Capital	Electric Distribution	12kV Substation Reliability	Granite 12kV Breaker & Switchgear Replacements	No	Emergent	3	—	2,055	226	1,273	288	3,842	—	—	—	—	—	—
Capital	Electric Distribution	12kV Substation Reliability	Miramar 12kV Replacements	No	Emergent	2	—	—	—	—	20	20	—	—	—	—	—	—

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Capital	Electric Distribution	Coronado 69/12kV Transformer Replacement	Substation Reliability for Distribution Components - Coronado 69/12kV Transformer Replacements	No	Emergent	3	—	—	17	174	565	756	—	—	—	—	—	—
Capital	Electric Distribution	La Jolla 69/12kV Transformer Replacement	La Jolla 69/12kV Transformer Replacement	No	Emergent	3	—	—	13	11	10	34	—	—	—	—	—	—
Capital	Electric Distribution	Non-HFTD WFI	Non-HFTD Wireless Fault Indicator	No	Emergent	Completed	—	—	62	83	—	145	—	—	—	—	—	—
Capital	Electric Distribution	Mission 12kV Replacements	Mission 12KV Replacements	No	Emergent	3	—	—	1,241	1,610	2,513	5,364	—	—	—	—	—	—
Capital	Electric Distribution	Emergency Substation Equipment	Emergency Transformer and Switchgear	No	On-going	Annual	—	739	1,728	2,369	1,282	6,118	56	490	505	518	532	2,102
Capital	Electric Distribution	RAMP - Substation SCADA Expansion-Distribution	Distribution Substation SCADA Expansion	No	On-going	Annual	—	227	796	1,017	743	2,783	—	391	403	414	425	1,633
Capital	Electric Distribution	Telegraph Canyon 138/12kV Bank & C1226	Non-RAMP	No	2	Completed	(593)	—	—	—	—	(593)	—	345	356	365	375	1,440
Capital	Electric Distribution	Margarita Substation New 12kV Circuit 1259	Non-RAMP	No	1	Completed	168	5	—	—	—	174	—	140	145	148	153	586
Capital	Electric Distribution	Transmission System Automation	Non-RAMP	No	On-going	Annual	203	293	(649)	106	83	36	—	—	—	—	—	—
Capital	Electric Distribution	Artesian 230Kv Substation Expansion	Substation Reliability For Distribution Components - Proactive	No	Emergent	Completed	72	370	1,264	162	267	2,135	—	—	—	—	—	—
Capital	Electric Distribution	High Risk Switch Replacement Project	Distribution Overhead Switch Replacement Program	No	Emergent	7	121	810	1,872	645	365	3,813	—	—	—	—	—	—
Capital	Electric Distribution	Urban Substation Rebuild	Substation Reliability For Distribution Components - Proactive	No	Emergent	5	—	916	533	2,487	6,184	10,120	—	—	—	—	—	—
Capital	Electric Distribution	Mission Substation 230kV Rebuild	Non-RAMP	No	Emergent	Completed	129	488	158	30	—	805	—	—	—	—	—	—

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Capital	Electric Distribution	TL603 Loop-in (Sweetwater, National City, and Naval Station Metering)	Transmission OH Reliability Projects	No	Emergent	7	12	1	1	—	2	15	—	—	—	—	—	—
Capital	Electric Distribution	TL673 Direct Buried Cable Replacement (Rose Canyon - La Jolla)	Transmission OH Reliability Projects	No	Emergent	Completed	8	10	24	23	32	96	—	—	—	—	—	—
Capital	Electric Distribution	TL6975- Escondido - San Marcos	Transmission OH Reliability Projects	No	Emergent	Completed	57	29	319	843	163	1,412	—	—	—	—	—	—
Capital	Electric Distribution	CBM - 4.2 Firmware Upgrade for Transformers	Non-RAMP	No	Emergent	3	—	—	405	507	140	1,052	—	—	—	—	—	—
Capital	Electric Distribution	Vista Fuel Cell	Non-RAMP	No	Emergent	2	—	—	782	811	357	1,950	—	—	—	—	—	—
Capital	Electric Distribution	TL698 AVOCADO SUB GATEWAY DB CBL REPLACE	Non-RAMP	No	Emergent	Completed	16	92	6	—	—	115	—	—	—	—	—	—
Capital	Electric Distribution	RAMP Base - Install SCADA On-Line Capacitors	Expand and Maintain Distribution Advanced SCADA infrastructure	No	On-going	Annual	—	—	834	1,189	1,084	3,107	2,381	1,152	1,189	1,220	1,253	7,196
Capital	Electric Distribution	TL23001/04 Insulator and Hardware Replacement	Non-RAMP	No	Emergent	Completed	—	—	4	200	10	213	—	—	—	—	—	—
Capital	Electric Distribution	Clairemont Substation Rebuild	Non-RAMP	No	Emergent	Completed	(12)	—	—	—	—	(12)	—	—	—	—	—	—
Capital	Electric Distribution	Shadow Ridge-Install 3rd Bank & Cir 937 & 938	Non-RAMP	No	Emergent	Completed	(4)	—	—	—	—	(4)	—	—	—	—	—	—
Capital	Electric Distribution	Mission 69kV Sub Rebuild	Mission 69kV Sub Rebuild	No	Emergent	3	—	—	—	95	1,607	1,702	—	—	—	—	—	—
Capital	Electric Distribution	RFS Japanese Mesa Substation	Non-RAMP	No	Emergent	3	—	—	—	45	71	116	—	—	—	—	—	—
Capital	Electric Distribution	Smart Isolation and Reclosing	Non-RAMP	No	0	0	—	—	—	—	4	4	—	—	—	—	—	—
Capital	Electric Distribution	Replace Obsolete Substation Equipment - RAMP	Substation rebuild/replacements based on operational significance and SDG&E reliability standards	No	On-going	Annual	49	4,126	2,161	967	2,143	9,446	17,023	5,197	5,364	5,504	5,653	38,742
Capital	Electric Distribution	<b>Sub-Total Reliability/Improvements</b>		<b>Yes</b>			<b>36,168</b>	<b>59,532</b>	<b>66,924</b>	<b>56,584</b>	<b>59,344</b>	<b>278,552</b>	<b>81,973</b>	<b>71,020</b>	<b>73,298</b>	<b>75,205</b>	<b>77,248</b>	<b>378,744</b>

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Capital	Electric Distribution	SF6 Switch Replacement	Replace with new technology	No	On-going	Annual	3,619	2,654	6,958	4,940	3,010	21,180	7,918	3,494	3,606	3,700	3,800	22,518
Capital	Electric Distribution	Meteorology - Fire Behavior Modeling	Non-RAMP	No	1	Completed	6	—	—	—	—	6	—	157	162	166	171	656
Capital	Electric Distribution	Elect Integrity - RAMP (Non-WMP)	Wire Correction, Switch Replacement and Underground Connector Upgrade Program	No	3	Canceled	—	—	—	—	—	—	54,909	12,339	12,735	13,066	13,421	106,468
Capital	Electric Distribution	RTU Modernization - RAMP Incremental - SCADA Master Modernization	Modernize Equipment	No	3	7	3,829	4,472	1,608	2,052	969	12,929	4,159	3,621	3,737	3,834	3,938	19,290
Capital	Electric Distribution	NCW New Bank 32 RAMP Incremental - Undergrounding New Circuits	Undergrounding	No	1	Canceled	—	—	—	—	—	—	4,319	746	770	790	812	7,436
Capital	Electric Distribution	Twin Engine Helicopter	Purchase a Twin Engine Helicopter	No	1	Completed	188	1	—	—	—	188	—	1,929	1,980	2,023	2,073	8,004
Capital	Electric Distribution	Tee Modernization Program	Non-RAMP	No	On-going	Annual	583	1,750	4,584	3,786	2,005	12,709	6,441	2,039	2,104	2,159	2,218	14,962
Capital	Electric Distribution	Proactive Dead Front Terminator Deploy	Replacement of Live Front Equipment - Proactive	No	Emergent	5	—	442	648	986	429	2,506	—	—	—	—	—	—
Capital	Electric Distribution	CAST Security Upgrades	Non-RAMP	No	On-going	Annual	27	1	2	—	81	111	—	—	—	—	—	—
Capital	Electric Distribution	Datamation Secure Cabinet	Non-RAMP	No	Emergent	Completed	—	—	93	4	—	97	—	—	—	—	—	—
Capital	Electric Distribution	Rebuilding of Skills Training Yard	Non-RAMP	No	Emergent	3	—	—	468	1,112	456	2,036	—	—	—	—	—	—



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Capital	Electric Distribution	Overhead Public Safety	Overhead distribution modernization and hardening	No	Emergent	4	—	53	13,130	8,093	3,777	25,053	—	—	—	—	—	—
Capital	Electric Distribution	C589 & C753 Damaged Pole Replacements	Non-RAMP	No	Emergent	Completed	7	—	—	—	—	7	—	—	—	—	—	—
Capital	Electric Distribution	Mobile Command Trailers (MCT)	Non-RAMP	No	Emergent	Completed	7	—	—	—	—	7	—	—	—	—	—	—
Capital	Electric Distribution	Rancho Santa Fe C1001 Wire Down Mit	Non-RAMP	No	0	Canceled	(64)	—	—	—	—	(64)	—	—	—	—	—	—
Capital	Electric Distribution	Transmission EMS/SCADA Reliance Upgrade	Non-RAMP	No	Emergent	2	—	—	—	752	462	1,214	—	—	—	—	—	—
Capital	Electric Distribution	Strategic Pole Replacement Program (SPRP)	Non-RAMP	No	0	0	—	—	—	—	5	5	—	—	—	—	—	—
Capital	Electric Distribution	Substation Security Proj under \$500K	Non-RAMP	No	On-going	Annual	(81)	1,500	119	732	137	2,408	—	—	—	—	—	—
<b>Capital</b>	<b>Electric Distribution</b>	<b>Sub-Total Safety &amp; Risk Management</b>	<b>Yes</b>				<b>8,119</b>	<b>10,873</b>	<b>27,611</b>	<b>22,457</b>	<b>11,332</b>	<b>80,391</b>	<b>77,746</b>	<b>24,324</b>	<b>25,094</b>	<b>25,738</b>	<b>26,433</b>	<b>179,335</b>
Capital	Electric Distribution	Advanced Energy Storage	Non-RAMP	No	Emergent	3	—	167	7,038	1,783	1,813	10,801	11,241	6,089	6,284	6,447	6,623	36,684
Capital	Electric Distribution	Borrego Microgrid 2.0	Non-RAMP	No	2	Completed	59	—	1	—	—	60	—	1,572	1,623	1,665	1,710	6,570
Capital	Electric Distribution	Borrego Microgrid 3.0	Non-RAMP	No	3	4	—	435	2,450	3,170	1,044	7,099	—	1,056	1,090	1,118	1,149	4,414
Capital	Electric Distribution	Safety Enhancements for Battery	Non-RAMP	No	Emergent	Completed	118	86	—	—	—	205	—	—	—	—	—	—
Capital	Electric Distribution	Borrego Springs Microgrid Generator Replacement	Non-RAMP	No	Emergent	1	—	—	—	—	67	67	—	—	—	—	—	—
Capital	Electric Distribution	Integrated Test Facility	Non-RAMP	No	2	7	—	—	—	—	—	—	—	305	315	323	332	1,276
<b>Capital</b>	<b>Electric Distribution</b>	<b>Sub-Total DER Integration</b>	<b>Yes</b>				<b>178</b>	<b>689</b>	<b>9,489</b>	<b>4,953</b>	<b>2,924</b>	<b>18,231</b>	<b>11,241</b>	<b>9,023</b>	<b>9,312</b>	<b>9,554</b>	<b>9,814</b>	<b>48,944</b>

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Capital	Electric Distribution	Transmission Substation Reliability	Non-RAMP	No	On-going	Annual	(2)	1	5	(7)	404	401	111	61	63	65	67	367
Capital	Electric Distribution	Orange County Long Range Plan - SOCRE	Non-RAMP	No	3	7	6,593	2,970	5,068	609	718	15,959	4,884	2,507	2,588	2,655	2,727	15,362
Capital	Electric Distribution	Los Coches Substation 138/69kV Rebuild	Non-RAMP	No	2	Completed	5	—	0	—	—	5	—	1,357	1,400	1,436	1,475	5,668
Capital	Electric Distribution	TL663 Mission to Kearny Reconductor	Non-RAMP	No	1	Completed	410	121	45	25	—	601	—	34	35	36	37	140
Capital	Electric Distribution	TL600 - Reliability Pole Replacements	Non-RAMP	No	Emergent	Completed	19	136	741	124	102	1,122	—	—	—	—	—	—
Capital	Electric Distribution	TL674A Del Mar Reconfigure/TL666D RFS	Non-RAMP	No	3	Completed	102	266	436	295	7,253	8,351	—	—	—	—	—	—
Capital	Electric Distribution	TL664_668 Miramar Wood to Steel	Non-RAMP	No	1	Completed	—	—	—	—	—	—	—	59	61	63	64	247

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
Capital	Electric Distribution	TL676 Mission to Mesa Heights Reconnector	Non-RAMP	No	2	Completed	2,107	14	4	—	—	2,126	—	887	916	940	965	3,708
Capital	Electric Distribution	TL697 San Luis Rey Wood to Steel - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	2	Completed	12	0	—	—	—	13	—	489	505	518	532	2,045
Capital	Electric Distribution	TL691 Avo-Mon Wood to Steel - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	2	7	—	—	—	—	—	—	—	45	46	47	49	187
Capital	Electric Distribution	TL6912 Wood to Steel Pole Replacement - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	2	Completed	—	—	—	—	—	—	—	60	62	64	66	252
Capital	Electric Distribution	TL695 Talega Wood to Steel - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	2	5	—	—	—	—	—	—	—	246	253	260	267	1,026
Capital	Electric Distribution	CNF - RAMP	System Hardening	No	5	Completed	15,491	3,705	1,232	374	302	21,104	—	9,359	9,660	9,911	10,180	39,110

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
Capital	Electric Distribution	TL649 Otay-San Ysidro- Border SW Pole Repl - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	2	Completed	—	—	—	—	—	—	—	246	254	260	267	1,027
Capital	Electric Distribution	Fiber Optic for Relay Protect & Telecom	Non-RAMP	No	On-going	Annual	1,840	4,302	7,075	4,359	415	17,991	176	127	131	134	138	706
Capital	Electric Distribution	SX-PQ 230 kV Line	Non-RAMP	No	Emergent	Completed	59	1	2	—	6	69	—	—	—	—	—	—
Capital	Electric Distribution	Rose Canyon TL617 Tap Removal	Non-RAMP	No	Emergent	Completed	8	(0)	—	—	—	8	—	—	—	—	—	—
Capital	Electric Distribution	TL690A Pendleton South W2S	Non-RAMP	No	Emergent	Completed	35	1	—	—	—	36	—	—	—	—	—	—
Capital	Electric Distribution	SONGS Synchronous Condenser	Non-RAMP	No	Emergent	Completed	26	1	—	—	—	27	—	—	—	—	—	—
Capital	Electric Distribution	Suncrest SVC Interconnection	Non-RAMP	No	Emergent	Completed	7	16	—	—	—	23	—	—	—	—	—	—
Capital	Electric Distribution	TL13835- Wood to Steel Project	Non-RAMP	No	Emergent	Completed	33	2	—	—	—	34	—	—	—	—	—	—
Capital	Electric Distribution	New 2nd Miguel to Bay Blvd. 230 kV Line	Non-RAMP	No	Emergent	Completed	13	1	—	—	—	13	—	—	—	—	—	—
Capital	Electric Distribution	Silver Ridge Mount Signal	Non-RAMP	No	Emergent	Completed	16	1	(0)	—	—	17	—	—	—	—	—	—
Capital	Electric Distribution	San Luis Rey	Non-RAMP	No	1	Completed	2	28	—	—	—	30	—	—	—	—	—	—
Capital	Electric Distribution	Miguel Substation 230kV Rebuild	Non-RAMP	No	Emergent	Completed	8	16	16	15	—	56	—	—	—	—	—	—
<b>Capital</b>	<b>Electric Distribution</b>	<b>Sub-Total Transm/FERC Driven Projects</b>		<b>Yes</b>			<b>26,783</b>	<b>11,583</b>	<b>14,624</b>	<b>5,793</b>	<b>9,200</b>	<b>67,983</b>	<b>5,171</b>	<b>15,477</b>	<b>15,974</b>	<b>16,389</b>	<b>16,834</b>	<b>69,846</b>

ii. SDG&E Electric Distribution Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
Capital	Electric Distribution	Electric Distribution		Yes	(115,471)	(23,857)	6,553	(27,721)	(15,762)	(176,258)	-45%	-13%	3%	-14%	-8%	-17%
Capital	Electric Distribution	Field Shunt Capacitors	Non-RAMP	No	(637)	287	382	256	(617)	(329)	-97%	41%	52%	34%	-80%	-9%
Capital	Electric Distribution	Ocean Ranch 69/12KV Substation	Non-RAMP	No	(11,972)	(2,484)	(3,126)	(3,189)	(3,276)	(24,048)	-73%	-82%	-101%	-100%	-100%	-83%
Capital	Electric Distribution	Substation 12kV Capacitor Upgrades	Non-RAMP	No	(1,038)	(420)	(93)	669	884	3	-100%	-92%	-20%	139%	179%	0%
Capital	Electric Distribution	C1447 MTO: Extension and offload from C958	Non-RAMP	No	34	(63)	(78)	(80)	(82)	(270)	100%	-84%	-100%	-100%	-100%	-85%
Capital	Electric Distribution	GRID Modernization	Non-RAMP	No	297	(9)	(81)	(83)	(86)	37	100%	-12%	-100%	-100%	-100%	11%
Capital	Electric Distribution	Planned Investments	Non-RAMP	No	77	2,631	4,907	2,314	1,273	11,202	100%	100%	100%	100%	100%	100%
Capital	Electric Distribution	Reactive Small Capital Projects	Non-RAMP	No	(1,166)	663	(1,083)	(1,368)	(801)	(3,753)	-57%	28%	-45%	-55%	-31%	-32%
Capital	Electric Distribution	C1023 LI New 12KV Circuit & Reconductor C354	Non-RAMP	No	694	(373)	(395)	(524)	(538)	(1,136)	100%	-75%	-77%	-100%	-100%	-55%
Capital	Electric Distribution	C1450 MTO: New 12KV Circuit	Non-RAMP	No	106	5,191	388	207	(249)	5,644	100%	2193%	159%	83%	-97%	571%
Capital	Electric Distribution	TL633 Reconductor (Bernardo - Rancho Carmel)	Non-RAMP	No	61	119	3	—	—	183	100%	100%	100%	—%	—%	100%
Capital	Electric Distribution	Doheny Desalination 15MW Project	Non-RAMP	No	(411)	(71)	(73)	(75)	(77)	(708)	-100%	-100%	-100%	-100%	-100%	-100%

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
Capital	Electric Distribution	C1139 Santee - New circuit	Non-RAMP	No	1	—	—	—	—	1	100%	—%	—%	—%	—%	100%
Capital	Electric Distribution	Mira Sorrento 138/12KV Substation	Non-RAMP	No	7	—	—	—	—	7	100%	—%	—%	—%	—%	100%
Capital	Electric Distribution	Wabash Canyon Sub 60/12KV Bank 32	Non-RAMP	No	611	72	—	—	—	683	100%	100%	—%	—%	—%	100%
Capital	Electric Distribution	Distribution System Capacity Improvement	Non-RAMP	No	976	2,257	369	(328)	(2,133)	1,141	50%	113%	18%	-15%	-98%	11%
Capital	Electric Distribution	Sub-Total Capacity/Expansion		Yes	(12,359)	7,801	1,120	(2,201)	(5,702)	(11,341)	-55%	82%	11%	-22%	-55%	-18%
Capital	Electric Distribution	Electric Distribution Tools/Equipment	Non-RAMP	No	(10)	(352)	(73)	(1,514)	(1,671)	(3,619)	-1%	-17%	-3%	-70%	-75%	-37%
Capital	Electric Distribution	Electric Transmission Tools/Equipment	Non-RAMP	No	121	333	358	309	373	1,493	100%	100%	100%	100%	100%	100%
Capital	Electric Distribution	Sub-Total Equip/Tools/Misc.		Yes	111	(19)	285	(1,205)	(1,298)	(2,125)	10%	-1%	13%	-55%	-58%	-22%
Capital	Electric Distribution	RAMP Base - Corrective Maint Program (CMP)	Inspection, Repair, Maintenance & Replacement Programs	No	(508)	2,847	(3,378)	(482)	(1,966)	(3,488)	-4%	21%	-24%	-3%	-13%	-5%
Capital	Electric Distribution	RAMP Base - DOE Switch/Manhole Replacement	Distribution Switch Maintenance Program	No	2,353	3,713	7,193	2,520	604	16,383	38%	54%	102%	35%	8%	47%
Capital	Electric Distribution	RAMP Base - Replacement of Live Front Equipment	Live Front Transformer and Terminator Replacement	No	(771)	(146)	143	(98)	(420)	(1,292)	-100%	-22%	21%	-14%	-58%	-36%
Capital	Electric Distribution	Aerial Marking for Safety	Non-RAMP	No	(129)	(59)	(76)	(77)	(76)	(417)	-96%	-85%	-104%	-104%	-100%	-98%
Capital	Electric Distribution	RAMP Incremental - Distributed Generation Interconnect	Power Quality Studies of DER Interconnections	No	—	(187)	(233)	(154)	470	(104)	—%	-80%	-97%	-62%	185%	-11%

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
Capital	Electric Distribution	RAMP Incremental On Ramp Aerial Light - Post Filing	Install Aerial Marking and Lighting	No	—	(244)	(252)	(259)	(266)	(1,021)	—%	-100%	-100%	-100%	-100%	-100%
Capital	Electric Distribution	Blue Hornet Solar	Non-RAMP	No	—	1	63	—	—	64	—%	100%	100%	—%	—%	100%
Capital	Electric Distribution	Fallbrook Battery Energy Storage - PTO	Non-RAMP	No	11	19	15	—	—	45	100%	100%	100%	—%	—%	100%
Capital	Electric Distribution	Gateway Energy Storage	Non-RAMP	No	69	38	1	—	—	107	100%	100%	100%	—%	—%	100%
Capital	Electric Distribution	Kettle Solar One	Non-RAMP	No	6	13	14	—	—	33	100%	100%	100%	—%	—%	100%
Capital	Electric Distribution	Mount Laguna Wind	Non-RAMP	No	21	2	2	4	—	30	100%	100%	100%	100%	—%	100%
Capital	Electric Distribution	Rugged Solar Farm	Non-RAMP	No	2	18	41	—	—	61	100%	100%	100%	—%	—%	100%
Capital	Electric Distribution	Top Gun PTO Interconnection	Non-RAMP	No	5	65	10	—	—	79	100%	100%	100%	—%	—%	100%
Capital	Electric Distribution	Valley Center Renewable	Non-RAMP	No	—	13	56	—	—	68	—%	100%	100%	—%	—%	100%
Capital	Electric Distribution	Elect Transmission Line Reliability Projects	Non-RAMP	No	2,911	2,707	2,759	3,103	3,420	14,900	647%	740%	731%	802%	860%	754%
Capital	Electric Distribution	RAMP Base — Annual Pole Reinforcement (Non-WMP)	GO165: Distribution Inspect and Repair program	No	846	(35)	5,289	9,629	9,101	24,830	13%	-0%	71%	126%	116%	68%
Capital	Electric Distribution	TL632A Loop-In (Granite)	Non-RAMP	No	—	—	—	9	1	10	—%	—%	—%	100%	100%	100%
Capital	Electric Distribution	RAMP Base - Avian Protection Program	Non-RAMP	No	(735)	(425)	1,108	(483)	(693)	(1,227)	-100%	-67%	169%	-72%	-100%	-36%
Capital	Electric Distribution	<b>Sub-Total Mandated</b>		<b>Yes</b>	<b>4,080</b>	<b>8,339</b>	<b>12,754</b>	<b>13,711</b>	<b>10,177</b>	<b>49,060</b>	<b>15%</b>	<b>28%</b>	<b>42%</b>	<b>44%</b>	<b>31%</b>	<b>32%</b>
Capital	Electric Distribution	Electric Distribution Easements	Non-RAMP	No	617	343	1,154	880	1,128	4,122	50%	22%	72%	53%	66%	53%
Capital	Electric Distribution	<b>Sub-Total New Business</b>		<b>Yes</b>	<b>617</b>	<b>343</b>	<b>1,154</b>	<b>880</b>	<b>1,128</b>	<b>4,122</b>	<b>50%</b>	<b>22%</b>	<b>72%</b>	<b>53%</b>	<b>66%</b>	<b>53%</b>
Capital	Electric Distribution	Electric Meters & Regulators	Non-RAMP	No	(1,327)	(1,214)	3,700	2,583	3,767	7,508	-26%	-32%	95%	64%	91%	36%

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Capital	Electric Distribution	Transformers	Non-RAMP	No	(1,710)	(1,939)	(7,430)	(4,390)	23,698	8,229	-7%	-8%	-31%	-18%	93%	7%
<b>Capital</b>	<b>Electric Distribution</b>	<b>Sub-Total Materials</b>		<b>Yes</b>	<b>(3,037)</b>	<b>(3,153)</b>	<b>(3,730)</b>	<b>(1,808)</b>	<b>27,465</b>	<b>15,737</b>	<b>-10%</b>	<b>-12%</b>	<b>-13%</b>	<b>-6%</b>	<b>92%</b>	<b>11%</b>
Capital	Electric Distribution	Reliability/Improvements Capital Projects	Non-RAMP	No	(84)	(698)	(964)	(1,691)	(1,340)	(4,777)	-5%	-36%	-49%	-83%	-64%	-49%
Capital	Electric Distribution	Management of Overhead Distribution Service	Non-RAMP	No	(510)	(961)	4,057	1,722	584	4,892	-7%	-13%	53%	22%	7%	13%
Capital	Electric Distribution	Management of Underground Distribution Service	Non-RAMP	No	(751)	(11)	(991)	(1,388)	(1,338)	(4,480)	-19%	-0%	-23%	-31%	-29%	-21%
Capital	Electric Distribution	RAMP Base - Cable Replacement	Proactive cable replacement	No	(11,419)	(8,473)	(8,604)	(7,992)	(12,217)	(48,704)	-65%	-47%	-46%	-42%	-62%	-52%
Capital	Electric Distribution	RAMP Incremental Capital Restoration of Service	Capital improvements	No	(3,536)	(2,678)	243	711	(1,960)	(7,221)	-27%	-26%	2%	7%	-18%	-13%
Capital	Electric Distribution	Rebuild Pt Loma Substation	Non-RAMP	No	95	(1,945)	(2,008)	(2,060)	(2,116)	(8,035)	100%	-100%	-100%	-100%	-100%	-99%
Capital	Electric Distribution	RAMP Incremental - 4 kV Modernization - Distribution	Overhead distribution modernization and hardening	No	(3,728)	1,475	3,175	(1,325)	(40)	(443)	-87%	100%	208%	-85%	-2%	-4%
Capital	Electric Distribution	Sewage Pump Station Rebuilds RAMP Incremental	Rebuild and repair aging infrastructure	No	350	(746)	(775)	(790)	(812)	(2,773)	100%	-100%	-101%	-100%	-100%	-89%



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Capital	Electric Distribution	RAMP Base - Condition Based Maintenance - Smart Grid	Conditioned Based Monitoring System	No	(1,166)	(2,112)	(2,180)	(2,237)	(2,298)	(9,993)	-67%	-100%	-100%	-100%	-100%	-95%
Capital	Electric Distribution	Rebuild Kearny 69/12kV Substation	Non-RAMP	No	2,625	(2,688)	(2,881)	(2,963)	(3,043)	(8,950)	100%	-96%	-100%	-100%	-100%	-77%
Capital	Electric Distribution	New Vine 69/12KV Substation	Non-RAMP	No	639	(3,256)	(3,365)	(3,453)	(3,546)	(12,981)	100%	-100%	-100%	-100%	-100%	-95%
Capital	Electric Distribution	Streamview 69/12KV Sub Rebuild-Pre Eng	Non-RAMP	No	(53)	(32)	583	832	7,093	8,423	-95%	-99%	1757%	2446%	20294%	4422%
Capital	Electric Distribution	Poway Substation Rebuild	Poway 69kV Substation Rebuild	No	1,365	3,324	1,130	859	(139)	6,539	100%	1363%	449%	333%	-52%	642%

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Capital	Electric Distribution	Rancho Santa Fe Sub Fire Hardening	Non-RAMP	No	1,121	966	(604)	(1,365)	(1,372)	(1,253)	100%	76%	-46%	-102%	-100%	-24%
Capital	Electric Distribution	Vault Restoration	Non-RAMP	No	(1,124)	(388)	(401)	(411)	(422)	(2,747)	-100%	-100%	-100%	-100%	-100%	-100%
Capital	Electric Distribution	OIR Worst Circuits	Non-RAMP	No	(2,812)	(1,458)	(1,504)	(1,543)	(1,585)	(8,903)	-100%	-100%	-100%	-100%	-100%	-100%
Capital	Electric Distribution	San Mateo Substation Rebuild	Non-RAMP	No	48	6	2	2	—	58	100%	100%	100%	100%	—%	100%
Capital	Electric Distribution	Avocado Sub 69KV Rebuild	Non-RAMP	No	1,179	950	373	1	—	2,503	100%	100%	100%	100%	—%	100%
Capital	Electric Distribution	Substation Mod to Support FLISR	Substation Modification To Support FLISR	No	42	2,513	2,511	1,009	(595)	5,480	100%	100%	100%	100%	100%	100%
Capital	Electric Distribution	Electric Distribution Grid Analytics	Non-RAMP	No	(3,710)	(1,282)	(1,323)	(1,357)	(1,394)	(9,065)	-100%	-100%	-100%	-100%	-100%	-100%
Capital	Electric Distribution	Distribution Circuit Reliability Construction - RAMP	Expand and Maintain Distribution Advanced SCADA infrastructure	No	(5,165)	288	82	(3,213)	(2,741)	(10,749)	-93%	7%	2%	-75%	-62%	-48%
Capital	Electric Distribution	Power Quality Program	Power Quality Monitor Deployment and Replacement	No	22	889	1,446	657	361	3,375	100%	100%	100%	100%	100%	100%
Capital	Electric Distribution	Meteorology Outage Prediction Modeling P2	Non-RAMP	No	—	(259)	(268)	(275)	(282)	(1,084)	—%	-100%	-100%	-100%	-100%	-100%
Capital	Electric Distribution	12kV Substation Reliability	Torrey Pines 12kV Breaker Replacements	No	—	796	720	366	172	2,054	—%	100%	100%	100%	100%	100%
Capital	Electric Distribution	12kV Substation Reliability	El Cajon 12kV Breaker Replacements	No	—	584	346	432	829	2,191	—%	100%	100%	100%	100%	100%
Capital	Electric Distribution	12kV Substation Reliability	Non-RAMP	No	—	1,262	995	375	755	3,387	—%	100%	100%	100%	100%	100%
Capital	Electric Distribution	12kV Substation Reliability	Granite 12kV Breaker & Switchgear Replacements	No	—	2,055	226	1,273	288	3,842	—%	100%	100%	100%	100%	100%
Capital	Electric Distribution	12kV Substation Reliability	Miramar 12kV Replacements	No	—	—	—	—	20	20	—%	—%	—%	—%	100%	100%

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Capital	Electric Distribution	Coronado 69/12kV Transformer Replacement	Substation Reliability for Distribution Components - Coronado 69/12kV Transformer Replacements	No	—	—	17	174	565	756	—%	—%	100%	100%	100%	100%
Capital	Electric Distribution	La Jolla 69/12kV Transformer Replacement	La Jolla 69/12kV Transformer Replacement	No	—	—	13	11	10	34	—%	—%	100%	100%	100%	100%
Capital	Electric Distribution	Non-HFTD WFI	Non-HFTD Wireless Fault Indicator	No	—	—	62	83	—	145	—%	—%	100%	100%	—%	100%
Capital	Electric Distribution	Mission 12kV Replacements	Mission 12KV Replacements	No	—	—	1,241	1,610	2,513	5,364	—%	—%	100%	100%	100%	100%
Capital	Electric Distribution	Emergency Substation Equipment	Emergency Transformer and Switchgear	No	(56)	250	1,222	1,851	749	4,016	-100%	51%	242%	357%	141%	191%
Capital	Electric Distribution	RAMP - Substation SCADA Expansion-Distribution	Distribution Substation SCADA Expansion	No	—	(164)	393	603	318	1,149	—%	-42%	97%	146%	75%	70%
Capital	Electric Distribution	Telegraph Canyon 138/12kV Bank & C1226	Non-RAMP	No	(593)	(345)	(356)	(365)	(375)	(2,033)	100%	-100%	-100%	-100%	-100%	-141%
Capital	Electric Distribution	Margarita Substation New 12kV Circuit 1259	Non-RAMP	No	168	(135)	(145)	(148)	(153)	(412)	100%	-96%	-100%	-100%	-100%	-70%
Capital	Electric Distribution	Transmission System Automation	Non-RAMP	No	203	293	(649)	106	83	36	100%	100%	100%	100%	100%	100%
Capital	Electric Distribution	Artesian 230Kv Substation Expansion	Substation Reliability For Distribution Components - Proactive	No	72	370	1,264	162	267	2,135	100%	100%	100%	100%	100%	100%
Capital	Electric Distribution	High Risk Switch Replacement Project	Distribution Overhead Switch Replacement Program	No	121	810	1,872	645	365	3,813	100%	100%	100%	100%	100%	100%
Capital	Electric Distribution	Urban Substation Rebuild	Substation Reliability For Distribution Components - Proactive	No	—	916	533	2,487	6,184	10,120	—%	100%	100%	100%	100%	100%
Capital	Electric Distribution	Mission Substation 230kV Rebuild	Non-RAMP	No	129	488	158	30	—	805	100%	100%	100%	100%	—%	100%

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
Capital	Electric Distribution	TL603 Loop-in (Sweetwater, National City, and Naval Station Metering)	Transmission OH Reliability Projects	No	12	1	1	—	2	15	100%	100%	100%	—%	100%	100%
Capital	Electric Distribution	TL673 Direct Buried Cable Replacement (Rose Canyon - La Jolla)	Transmission OH Reliability Projects	No	8	10	24	23	32	96	100%	100%	100%	100%	100%	100%
Capital	Electric Distribution	TL6975- Escondido - San Marcos	Transmission OH Reliability Projects	No	57	29	319	843	163	1,412	100%	100%	100%	100%	100%	100%
Capital	Electric Distribution	CBM - 4.2 Firmware Upgrade for Transformers	Non-RAMP	No	—	—	405	507	140	1,052	—%	—%	100%	100%	100%	100%
Capital	Electric Distribution	Vista Fuel Cell	Non-RAMP	No	—	—	782	811	357	1,950	—%	—%	100%	100%	100%	100%
Capital	Electric Distribution	TL698 AVOCADO SUB GATEWAY DB CBL REPLACE	Non-RAMP	No	16	92	6	—	—	115	100%	100%	100%	—%	—%	100%
Capital	Electric Distribution	RAMP Base - Install SCADA On-Line Capacitors	Expand and Maintain Distribution Advanced SCADA infrastructure	No	(2,381)	(1,152)	(355)	(32)	(169)	(4,089)	-100%	-100%	-30%	-3%	-13%	-57%
Capital	Electric Distribution	TL23001/04 Insulator and Hardware Replacement	Non-RAMP	No	—	—	4	200	10	213	—%	—%	100%	100%	100%	100%
Capital	Electric Distribution	Clairemont Substation Rebuild	Non-RAMP	No	(12)	—	—	—	—	(12)	100%	—%	—%	—%	—%	100%
Capital	Electric Distribution	Shadow Ridge-Install 3rd Bank & Cir 937 & 938	Non-RAMP	No	(4)	—	—	—	—	(4)	100%	—%	—%	—%	—%	100%
Capital	Electric Distribution	Mission 69kV Sub Rebuild	Mission 69kV Sub Rebuild	No	—	—	—	95	1,607	1,702	—%	—%	—%	100%	100%	100%
Capital	Electric Distribution	RFS Japanese Mesa Substation	Non-RAMP	No	—	—	—	45	71	116	—%	—%	—%	100%	100%	100%
Capital	Electric Distribution	Smart Isolation and Reclosing	Non-RAMP	No	—	—	—	—	4	4	—%	—%	—%	—%	100%	100%
Capital	Electric Distribution	Replace Obsolete Substation Equipment - RAMP	Substation rebuild/replacements based on operational significance and SDG&E reliability standards	No	(16,974)	(1,072)	(3,204)	(4,536)	(3,510)	(29,296)	-100%	-21%	-60%	-82%	-62%	-76%
Capital	Electric Distribution	<b>Sub-Total Reliability/Improvements</b>		<b>Yes</b>	<b>(45,805)</b>	<b>(11,488)</b>	<b>(6,374)</b>	<b>(18,621)</b>	<b>(17,905)</b>	<b>(100,193)</b>	<b>-56%</b>	<b>-16%</b>	<b>-9%</b>	<b>-25%</b>	<b>-23%</b>	<b>-26%</b>

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
Capital	Electric Distribution	SF6 Switch Replacement	Replace with new technology	No	(4,300)	(840)	3,352	1,240	(791)	(1,338)	-54%	-24%	93%	34%	-21%	-6%
Capital	Electric Distribution	Meteorology - Fire Behavior Modeling	Non-RAMP	No	6	(157)	(162)	(166)	(171)	(650)	100%	-100%	-100%	-100%	-100%	-99%
Capital	Electric Distribution	Elect Integrity - RAMP (Non-WMP)	Wire Correction, Switch Replacement and Underground Connector Upgrade Program	No	(54,909)	(12,339)	(12,735)	(13,066)	(13,421)	(106,468)	-100%	-100%	-100%	-100%	-100%	-100%
Capital	Electric Distribution	RTU Modernization - RAMP Incremental - SCADA Master Modernization	Modernize Equipment	No	(330)	851	(2,129)	(1,783)	(2,970)	(6,361)	-8%	24%	-57%	-46%	-75%	-33%
Capital	Electric Distribution	NCW New Bank 32 RAMP Incremental - Undergrounding New Circuits	Undergrounding	No	(4,319)	(746)	(770)	(790)	(812)	(7,436)	-100%	-100%	-100%	-100%	-100%	-100%
Capital	Electric Distribution	Twin Engine Helicopter	Purchase a Twin Engine Helicopter	No	188	(1,928)	(1,980)	(2,023)	(2,073)	(7,816)	100%	-100%	-100%	-100%	-100%	-98%
Capital	Electric Distribution	Tee Modernization Program	Non-RAMP	No	(5,858)	(289)	2,480	1,627	(213)	(2,253)	-91%	-14%	118%	75%	-10%	-15%
Capital	Electric Distribution	Proactive Dead Front Terminator Deploy	Replacement of Live Front Equipment - Proactive	No	—	442	648	986	429	2,506	—%	100%	100%	100%	100%	100%
Capital	Electric Distribution	CAST Security Upgrades	Non-RAMP	No	27	1	2	—	81	111	100%	100%	100%	—%	100%	100%
Capital	Electric Distribution	Datamation Secure Cabinet	Non-RAMP	No	—	—	93	4	—	97	—%	—%	100%	100%	—%	100%
Capital	Electric Distribution	Rebuilding of Skills Training Yard	Non-RAMP	No	—	—	468	1,112	456	2,036	—%	—%	100%	100%	100%	100%

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
Capital	Electric Distribution	Overhead Public Safety	Overhead distribution modernization and hardening	No	—	53	13,130	8,093	3,777	25,053	—%	100%	100%	100%	100%	100%
Capital	Electric Distribution	C589 & C753 Damaged Pole Replacements	Non-RAMP	No	7	—	—	—	—	7	100%	—%	—%	—%	—%	100%
Capital	Electric Distribution	Mobile Command Trailers (MCT)	Non-RAMP	No	7	—	—	—	—	7	100%	—%	—%	—%	—%	100%
Capital	Electric Distribution	Rancho Santa Fe C1001 Wire Down Mit	Non-RAMP	No	(64)	—	—	—	—	(64)	100%	—%	—%	—%	—%	100%
Capital	Electric Distribution	Transmission EMS/SCADA Reliance Upgrade	Non-RAMP	No	—	—	—	752	462	1,214	—%	—%	—%	100%	100%	100%
Capital	Electric Distribution	Strategic Pole Replacement Program (SPRP)	Non-RAMP	No	—	—	—	—	5	5	—%	—%	—%	—%	100%	100%
Capital	Electric Distribution	Substation Security Proj under \$500K	Non-RAMP	No	(81)	1,500	119	732	137	2,408	100%	100%	100%	100%	100%	100%
<b>Capital</b>	<b>Electric Distribution</b>	<b>Sub-Total Safety &amp; Risk Management</b>	<b>Yes</b>	<b>Yes</b>	<b>(69,627)</b>	<b>(13,452)</b>	<b>2,517</b>	<b>(3,281)</b>	<b>(15,101)</b>	<b>(98,944)</b>	<b>-90%</b>	<b>-55%</b>	<b>10%</b>	<b>-13%</b>	<b>-57%</b>	<b>-55%</b>
Capital	Electric Distribution	Advanced Energy Storage	Non-RAMP	No	(11,241)	(5,922)	754	(4,664)	(4,810)	(25,883)	-100%	-97%	12%	-72%	-73%	-71%
Capital	Electric Distribution	Borrego Microgrid 2.0	Non-RAMP	No	59	(1,572)	(1,622)	(1,665)	(1,710)	(6,510)	100%	-100%	-100%	-100%	-100%	-99%
Capital	Electric Distribution	Borrego Microgrid 3.0	Non-RAMP	No	—	(621)	1,360	2,051	(105)	2,686	—%	-59%	125%	183%	-9%	61%
Capital	Electric Distribution	Safety Enhancements for Battery	Non-RAMP	No	118	86	—	—	—	205	100%	100%	—%	—%	—%	100%
Capital	Electric Distribution	Borrego Springs Microgrid Generator Replacement	Non-RAMP	No	—	—	—	—	67	67	—%	—%	—%	—%	100%	100%
Capital	Electric Distribution	Integrated Test Facility	Non-RAMP	No	—	(305)	(315)	(323)	(332)	(1,276)	—%	-100%	-100%	-100%	-100%	-100%
<b>Capital</b>	<b>Electric Distribution</b>	<b>Sub-Total DER Integration</b>	<b>Yes</b>	<b>Yes</b>	<b>(11,063)</b>	<b>(8,334)</b>	<b>177</b>	<b>(4,601)</b>	<b>(6,890)</b>	<b>(30,713)</b>	<b>-98%</b>	<b>-92%</b>	<b>2%</b>	<b>-48%</b>	<b>-70%</b>	<b>-63%</b>

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
Capital	Electric Distribution	Transmission Substation Reliability	Non-RAMP	No	(113)	(60)	(58)	(72)	337	34	-102%	-98%	-92%	-111%	507%	9%
Capital	Electric Distribution	Orange County Long Range Plan - SOCRE	Non-RAMP	No	1,709	462	2,481	(2,046)	(2,009)	597	35%	18%	96%	-77%	-74%	4%
Capital	Electric Distribution	Los Coches Substation 138/69kV Rebuild	Non-RAMP	No	5	(1,357)	(1,400)	(1,436)	(1,475)	(5,664)	100%	-100%	-100%	-100%	-100%	-100%
Capital	Electric Distribution	TL663 Mission to Kearny Reconductor	Non-RAMP	No	410	88	10	(11)	(37)	461	100%	261%	30%	-31%	-100%	328%
Capital	Electric Distribution	TL600 - Reliability Pole Replacements	Non-RAMP	No	19	136	741	124	102	1,122	100%	100%	100%	100%	100%	100%
Capital	Electric Distribution	TL674A Del Mar Reconfigure/TL666D RFS	Non-RAMP	No	102	266	436	295	7,253	8,351	100%	100%	100%	100%	100%	100%
Capital	Electric Distribution	TL664_668 Miramar Wood to Steel	Non-RAMP	No	—	(59)	(61)	(63)	(64)	(247)	—%	-100%	-100%	-100%	-100%	-100%

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
Capital	Electric Distribution	TL676 Mission to Mesa Heights Reconnector	Non-RAMP	No	2,107	(873)	(912)	(940)	(965)	(1,582)	100%	-98%	-100%	-100%	-100%	-43%
Capital	Electric Distribution	TL697 San Luis Rey Wood to Steel - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	12	(489)	(505)	(518)	(532)	(2,032)	100%	-100%	-100%	-100%	-100%	-99%
Capital	Electric Distribution	TL691 Avo-Mon Wood to Steel - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	—	(45)	(46)	(47)	(49)	(187)	—%	-100%	-100%	-100%	-100%	-100%
Capital	Electric Distribution	TL6912 Wood to Steel Pole Replacement - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	—	(60)	(62)	(64)	(66)	(252)	—%	-100%	-100%	-100%	-100%	-100%
Capital	Electric Distribution	TL695 Talega Wood to Steel - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	—	(246)	(253)	(260)	(267)	(1,026)	—%	-100%	-100%	-100%	-100%	-100%
Capital	Electric Distribution	CNF - RAMP	System Hardening	No	15,491	(5,654)	(8,428)	(9,537)	(9,878)	(18,006)	100%	-60%	-87%	-96%	-97%	-46%



Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
Capital	Electric Distribution	TL649 Otay-San Ysidro-Border SW Pole Repl - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	—	(246)	(254)	(260)	(267)	(1,027)	—%	-100%	-100%	-100%	-100%	-100%
Capital	Electric Distribution	Fiber Optic for Relay Protect & Telecom	Non-RAMP	No	1,664	4,175	6,944	4,225	277	17,285	947%	3292%	5305%	3146%	201%	2449%
Capital	Electric Distribution	SX-PQ 230 kV Line	Non-RAMP	No	59	1	2	—	6	69	100%	100%	100%	—%	100%	100%
Capital	Electric Distribution	Rose Canyon TL617 Tap Removal	Non-RAMP	No	8	(0)	—	—	—	8	100%	100%	—%	—%	—%	100%
Capital	Electric Distribution	TL690A Pendleton South W2S	Non-RAMP	No	35	1	—	—	—	36	100%	100%	—%	—%	—%	100%
Capital	Electric Distribution	SONGS Synchronous Condenser	Non-RAMP	No	26	1	—	—	—	27	100%	100%	—%	—%	—%	100%
Capital	Electric Distribution	Suncrest SVC Interconnection	Non-RAMP	No	7	16	—	—	—	23	100%	100%	—%	—%	—%	100%
Capital	Electric Distribution	TL13835- Wood to Steel Project	Non-RAMP	No	33	2	—	—	—	34	100%	100%	—%	—%	—%	100%
Capital	Electric Distribution	New 2nd Miguel to Bay Blvd. 230 kV Line	Non-RAMP	No	13	1	—	—	—	13	100%	100%	—%	—%	—%	100%
Capital	Electric Distribution	Silver Ridge Mount Signal	Non-RAMP	No	16	1	(0)	—	—	17	100%	100%	100%	—%	—%	100%
Capital	Electric Distribution	San Luis Rey	Non-RAMP	No	2	28	—	—	—	30	100%	100%	—%	—%	—%	100%
Capital	Electric Distribution	Miguel Substation 230kV Rebuild	Non-RAMP	No	8	16	16	15	—	56	100%	100%	100%	100%	—%	100%
<b>Capital</b>	<b>Electric Distribution</b>	<b>Sub-Total Transm/FERC Driven Projects</b>		<b>Yes</b>	<b>21,612</b>	<b>(3,895)</b>	<b>(1,350)</b>	<b>(10,596)</b>	<b>(7,634)</b>	<b>(1,862)</b>	<b>418%</b>	<b>-25%</b>	<b>-8%</b>	<b>-65%</b>	<b>-45%</b>	<b>-3%</b>

ii. SDG&E Electric Distribution Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance		
Capital	Electric Distribution	Electric Distribution		Yes																											
Capital	Electric Distribution	Field Shunt Capacitors	Non-RAMP	No	Capacitor banks energized	—	21	4	5	2	32	8	8	8	8	8	40	(8)	13	(4)	(3)	(6)	(8)	-100%	163%	-50%	-38%	-75%	-20%		
Capital	Electric Distribution	Ocean Ranch 69/12KV Substation	Non-RAMP	No	This is a full substation rebuild/expansion major project that was completed as scheduled in 2019. It included a variety of work performed both inside and outside the substation, which made it infeasible to identify and track a single unit of measurement.																										
Capital	Electric Distribution	Substation 12kV Capacitor Upgrades	Non-RAMP	No	Capacitor banks energized	—	—	—	—	—	—	12	8	4	4	4	32	(12)	(8)	(4)	(4)	(4)	(32)	-100%	-100%	-100%	-100%	-100%	-100%		
Capital	Electric Distribution	C1447 MTO: Extension and offload from C958	Non-RAMP	No	Installation of a 4 Way SCADA Trayer switch and a padmount SCADA capacitor	1	—	—	—	—	1	—	—	—	—	—	—	1	—	—	—	—	1	100%	—%	—%	—%	—%	100%		
Capital	Electric Distribution	GRID Modernization	Non-RAMP	No	Project was completed in 2020. The project included cutover of load between two existing circuits eliminating an overload and increasing the reliability in the area. The cutover also provided available capacity for future growth in the area and reduced loading on the CAN substation. The variety of work activities in this program makes it infeasible to identify a single unit of measurement.																										
Capital	Electric Distribution	Planned Investments	Non-RAMP	No	This emergent blanket program provides for the reconstruction and extension of overhead and underground distribution facilities to replace overloaded conductors, to correct primary voltage problems, and to transfer load to balance circuits and substations. The variety of work activities in this program makes it infeasible to identify a single unit of measurement.																										
Capital	Electric Distribution	Reactive Small Capital Projects	Non-RAMP	No	This responsive blanket program addresses primary distribution system overload and voltage-related issues with individual capital jobs identified on the forecast process. It provides for the reconstruction and extension of overhead and underground distribution facilities to replace overloaded conductors, to correct primary voltage problems, and to transfer load to balance circuits and substations. The variety of work activities in this program makes it infeasible to identify a single unit of measurement.																										
Capital	Electric Distribution	C1023 LI New 12KV Circuit & Reconnector C354	Non-RAMP	No	This project was completed in 2019. It involved installing overhead conductor for the new circuit creating a double circuit pole line with the overloaded circuit 354. The existing circuit 354 reconducted as part of the new double pole line, and relocation of existing capacitors and retagging of all electric distribution equipment being cutover to the new circuit. The variety of work activities under this project makes it infeasible to identify a single unit of measurement.																										
Capital	Electric Distribution	C1450 MTO: New 12KV Circuit	Non-RAMP	No	This project was completed in 2021. The purpose of the project was to mitigate an overload and increase the tie capacity in the area. This involved installation of two new SCADA switches, a pad mount SCADA capacitor, trenching and installation of new conduit as well as installing 1000 kcmil of cable. The project also consisted of reconfiguring overhead poles from a single run to a twin run and the installation of two new hook sticks. The variety of work activities for this project in this category made it infeasible to identify and track a single unit of measurement.																										
Capital	Electric Distribution	TL633 Reconnector (Bernardo - Rancho Carmel)	Non-RAMP	No	The actuals in 2019 and 2020 represent the distribution and communication portion of this primarily FERC-driven transmission line reconnector project. The project was completed in 2020. The variety of work activities under this project makes it infeasible to identify a single unit of measurement.																										
Capital	Electric Distribution	Doheny Desalination 15MW Project	Non-RAMP	No	This project was cancelled. The purpose of this project was to mitigate a capacity limitation because of an alternative service request for the new Doheny Desalination Plant. This project was originally forecasted to go into service in 2019 as filed in the TY2019 GRC.																										

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance		
Capital	Electric Distribution	C1139 Santee - New circuit	Non-RAMP	No	This project was completed prior to the TY2019 GRC cycle with a small amount of costs related to closeout activities in 2019.																										
Capital	Electric Distribution	Mira Sorrento 138/12KV Substation	Non-RAMP	No	This project was completed prior to the TY2019 GRC cycle with a small amount of costs related to closeout activities posting in 2019. The purpose of the project was to eliminate projected overloads of 102% at North City West Substation, and high loading of 92% at Mesa Rim, 94% at Genesee, and 92% at Torrey Pines Substation. There are no imputed units beyond 2019 because the calculation used to impute authorized units at the activity level for the GRC post-test years incorporates aspects of the CPUC-approved post-test year mechanism for the SDG&E attrition years, which can result in imputed dollars when a project has been completed.																										
Capital	Electric Distribution	Wabash Canyon Sub 60/12kV Bank 32	Non-RAMP	No	Substation Bank	1	—	—	—	—	1	—	—	—	—	—	—	1	—	—	—	—	1	100%	—%	—%	—%	—%	100%		
Capital	Electric Distribution	Distribution System Capacity Improvement	Non-RAMP	No	This program is for minor modification types of projects. Work may include feeder and branch reconducting, installation of appropriate switching, and other equipment as necessary, to increase the capacity of the distribution system for reliability and operating concerns. This program also installs infrastructure for future circuit projects in conjunction with road improvements, transmission system upgrades or other upgrade activities. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																										
Capital	Electric Distribution	Sub-Total Capacity/Expansion		Yes																											
Capital	Electric Distribution	Electric Distribution Tools/Equipment	Non-RAMP	No	Various types of new tools and equipment are purchased through this program to support Electric Distribution work. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																										
Capital	Electric Distribution	Electric Transmission Tools/Equipment	Non-RAMP	No	This emergent program supports tool purchases for ongoing construction and maintenance activities on the Substation and Transmission System. Specialized tools and testing equipment are necessary for the proper inspection and operation of transmission and substation facilities. Acquisition of new types or additional tools will enable flexibility necessary for completing maintenance and construction goals. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																										
Capital	Electric Distribution	Sub-Total Equip/Tools/Misc.		Yes																											
Capital	Electric Distribution	RAMP Base - Corrective Maint Program (CMP)	Inspection, Repair, Maintenance & Replacement Programs	No	Distribution Equipment	1,667	1,920	1,603	1,284	969	7,443	1454	1735	1791	1329	1118	7,427	213	185	(188)	(45)	(149)	16	15%	11%	-10%	-3%	-13%	0%		
Capital	Electric Distribution	RAMP Base - DOE Switch/Manhole Replacement	Distribution Switch Maintenance Program	No	Vaults Restored and Number of DOE Switches Replaced	390	707	797	649	560	3,103	315	639	394	481	494	2,323	75	68	403	168	66	780	24%	11%	102%	35%	13%	34%		
Capital	Electric Distribution	RAMP Base - Replacement of Live Front Equipment	Live Front Transformer and Terminator Replacement	No	Live front Equipment (Terminators and Transformers)	—	6	10	16	22	54	8	8	8	8	8	40	(8)	(2)	2	8	14	14	-100%	-25%	25%	100%	175%	35%		
Capital	Electric Distribution	Aerial Marking for Safety	Non-RAMP	No	The Aerial Lighting and Marking program was designed to conduct a system wide assessment of the SDG&E transmission and distribution overhead structures and spans that were energized by August 2015 for FAA (Federal Aviation Administration) compliance. The goals were to get each structure analyzed by a respected 3rd party aviation consultant and submit any non-compliant structures to the FAA for determinations. Structures were identified as to whether they needed to be lit and spans were identified as to whether they needed to be marked. There were no findings in the Distribution system that requires remediation. Therefore, there was no distribution capital spend or units. The small amount of spend is related to the CPUC portion communication equipment, which is considered common plant. All Transmission Assets (Structures and Spans) identified to be marked were remediated using Transmission Capital. All Projects were completed in 2021.																										
Capital	Electric Distribution	RAMP Incremental - Distributed Generation Interconnect	Power Quality Studies of DER Interconnections	No	Interconnection SCADA switches installed	—	1	—	1	2	4	—	—	1	3	1	5	—	1	(1)	(2)	1	(1)	—%	100%	-100%	-67%	100%	-20%		

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Capital	Electric Distribution	RAMP Incremental On Ramp Aerial Light - Post Filing	Install Aerial Marking and Lighting	No	This project was completed prior to 2019 and the in service date as filed in the TY2019 GRC was August 2018. There are no imputed units because the calculation used to impute authorized units at the activity level for the GRC post-test years incorporates aspects of the CPUC-approved post-test year mechanism for the SDG&E attrition years, which can result in imputed dollars when a project has been completed.																										
Capital	Electric Distribution	Blue Hornet Solar	Non-RAMP	No	DG interconnection points installed and energized	—	—	1	—	—	1	—	—	—	—	—	—	—	—	1	—	—	1	—%	—%	100%	—%	—%	100%		
Capital	Electric Distribution	Fallbrook Battery Energy Storage - PTO	Non-RAMP	No	DG interconnection points installed and energized	—	—	1	—	—	1	—	—	—	—	—	—	—	—	1	—	—	1	—%	—%	100%	—%	—%	100%		
Capital	Electric Distribution	Gateway Energy Storage	Non-RAMP	No	DG interconnection points installed and energized	—	1	—	—	—	1	—	—	—	—	—	—	—	1	—	—	—	1	—%	100%	—%	—%	—%	100%		
Capital	Electric Distribution	Kettle Solar One	Non-RAMP	No	Kettle Solar One is an emergent customer-driven 90MW hybrid (battery + solar photovoltaic) generation project that is currently in design. The Interconnection Customer is targeting an in-service date of Aug 2026. Prior activities are related to engineering and pre-construction.																										
Capital	Electric Distribution	Mount Laguna Wind	Non-RAMP	No	This emergent project includes a Large Generation Interconnection Agreement with Terra Gen Development Company. This is a 400MW wind turbine facility with the Point of Interconnection at a new proposed 500kV switchyard with the Ocotillo-Suncrest line looped-in. This is a customer-driven project that is dependent on customer for scope and schedule and is currently on hold. Prior activities are related to pre-construction engineering and design.																										
Capital	Electric Distribution	Rugged Solar Farm	Non-RAMP	No	This is a customer-driven emergent 74W solar photovoltaic generation facility interconnected at the 69kV bus at SDG&E's Boulevard East substation. The majority of distribution work was completed in 2021-22 to allow the Customer to run their gen-tie into Boulevard East substation; some minor scope will remain for completing the interconnection once the customer reengages SDG&E.																										
Capital	Electric Distribution	Top Gun PTO Interconnection	Non-RAMP	No	DG interconnection points installed and energized	—	1	—	—	—	1	—	—	—	—	—	—	—	1	—	—	—	1	—%	100%	—%	—%	—%	100%		
Capital	Electric Distribution	Valley Center Renewable	Non-RAMP	No	DG interconnection points installed and energized	—	—	1	—	—	1	—	—	—	—	—	—	—	—	1	—	—	1	—%	—%	100%	—%	—%	100%		
Capital	Electric Distribution	Elect Transmission Line Reliability Projects	Non-RAMP	No	This is a transmission driven program for the replacement of poles. Distribution work under this project includes distribution underbuild related to the replacement of poles, insulators, conductor, and other electric infrastructure. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																										
Capital	Electric Distribution	RAMP Base — Annual Pole Reinforcement (Non-WMP)	GO165: Distribution Inspect and Repair program	No	Poles Replaced	511	546	711	840	730	3,338	565	537	454	371	352	2,279	(54)	9	257	469	378	1,059	-10%	2%	57%	126%	107%	46%		
Capital	Electric Distribution	TL632A Loop-In (Granite)	Non-RAMP	No	This is primarily a transmission driven project with a small portion for distribution. The Distribution portion was completed in 2022 with minimal carryover spend in 2023. This work consisted of information technology and communications upgrades inside the substation.																										
Capital	Electric Distribution	RAMP Base - Avian Protection Program	Non-RAMP	No	Poles protected	—	59	983	1	—	1,043	1152	993	993	993	993	5,124	(1,152)	(934)	(10)	(992)	(993)	(4,081)	-100%	-94%	-1%	-100%	-100%	-80%		
Capital	Electric Distribution	Sub-Total Mandated		Yes																											
Capital	Electric Distribution	Electric Distribution Easements	Non-RAMP	No	This capital budget is required 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. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																										
Capital	Electric Distribution	Sub-Total New Business		Yes																											
Capital	Electric Distribution	Electric Meters & Regulators	Non-RAMP	No	Meters purchased	22,220	14,138	48,888	81,683	54,838	221,767	29903	25704	26529	49709	28660	160,505	(7,683)	(11,566)	22,359	31,974	26,178	61,262	-26%	-45%	84%	64%	91%	38%		

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Capital	Electric Distribution	Transformers	Non-RAMP	No	Transformers purchased	5,017	8,682	6,271	6,279	4,959	31,208	5395	9073	9364	7623	2574	34,029	(378)	(391)	(3,093)	(1,344)	2,385	(2,821)	-7%	-4%	-33%	-18%	93%	-8%		
Capital	Electric Distribution	Sub-Total Materials		Yes																											
Capital	Electric Distribution	Reliability/Improvements Capital Projects	Non-RAMP	No	The activities under this workpaper include replacement of substation equipment in response to equipment failure. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																										
Capital	Electric Distribution	Management of Overhead Distribution Service	Non-RAMP	No	Overhead Transformer Forced Outages Requiring Crew In-Kind Replacements	103	115	110	91	111	530	111	111	111	111	111	555	(8)	4	(1)	(20)	—	(25)	-7%	4%	-1%	-18%	—%	-5%		
Capital	Electric Distribution	Management of Underground Distribution Service	Non-RAMP	No	Underground Transformer Forced Outages Requiring Repairs/Replacement Work	181	226	162	208	246	1,023	224	224	224	224	224	1,120	(43)	2	(62)	(16)	22	(97)	-19%	1%	-28%	-7%	10%	-9%		
Capital	Electric Distribution	RAMP Base - Cable Replacement	Proactive cable replacement	No	Underground Cable Forced Outages and Miles of Cable Replaced	411	460	428	458	540	2,297	1183	1183	1183	1183	1183	5,915	(772)	(723)	(755)	(725)	(643)	(3,618)	-65%	-61%	-64%	-61%	-54%	-61%		
Capital	Electric Distribution	RAMP Incremental Capital Restoration of Service	Capital improvements	No	Non-Transformer Forced Outages Requiring Crew Repair or In-Kind Replacement	1,413	1,377	1,239	1,073	934	6,036	1945	1945	1945	1945	1945	9,725	(532)	(568)	(706)	(872)	(1,011)	(3,689)	-27%	-29%	-36%	-45%	-52%	-38%		
Capital	Electric Distribution	Rebuild Pt Loma Substation	Non-RAMP	No	This substation rebuild project was completed in 2019. The project scope included a variety of different types of activities both inside and outside the substation perimeter, which made it infeasible to identify and track a single unit of measure.																										
Capital	Electric Distribution	RAMP Incremental - 4 kV Modernization - Distribution	Overhead distribution modernization and hardening	No	Miles of Conductor Replaced	—	2	7	—	1	10	—	3	3	—	1	7	—	(1)	4	—	(0.01)	3	—%	-33%	133%	—%	-1%	43%		
Capital	Electric Distribution	Sewage Pump Station Rebuilds RAMP Incremental	Rebuild and repair aging infrastructure	No	Transformers and breakers upgraded/replaced	3	—	—	—	—	3	—	—	—	—	—	—	3	—	—	—	—	3	100%	—%	—%	—%	—%	100%		

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Capital	Electric Distribution	RAMP Base - Condition Based Maintenance - Smart Grid	Conditioned Based Monitoring System	No	Transformers upgraded	50	—	—	—	—	50	145	152	152	152	152	753	(95)	(152)	(152)	(152)	(152)	(703)	-66%	-100%	-100%	-100%	-100%	-93%	
Capital	Electric Distribution	Rebuild Kearny 69/12kV Substation	Non-RAMP	No	This substation rebuild project was completed in 2019. The project scope included a variety of different types of activities both inside and outside the substation perimeter, which made it infeasible to identify and track a single unit of measure.																									
Capital	Electric Distribution	New Vine 69/12KV Substation	Non-RAMP	No	This project was completed in 2018. There are no imputed units because the calculation used to impute authorized units at the activity level for the GRC post-test years incorporates aspects of the CPUC-approved post-test year mechanism for the SDG&E attrition years, which can result in imputed dollars when a project has been completed.																									
Capital	Electric Distribution	Streamview 69/12KV Sub Rebuild-Pre Eng	Non-RAMP	No	This is a full substation rebuild major project that is currently in construction but was delayed several years due to land acquisition and permitting challenges. The project scope includes a variety of different types of activities both inside and outside the substation perimeter, which makes it infeasible to identify and track a single unit of measure.																									
Capital	Electric Distribution	Poway Substation Rebuild	Poway 69kV Substation Rebuild	No	This project was completed in 2022. The distribution scope of this project included installing 2 new 30MVA 69/12kV low profile transformers, 2 12kV metal clad switchgear, 2 12kV 7200MVAR cap banks, 1 69kV 50MVAR cap bank, and associated disconnects and breakers. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									

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Capital	Electric Distribution	Rancho Santa Fe Sub Fire Hardening	Non-RAMP	No	This substation rebuild project that was completed in 2021. It included a variety of work that included replacement of aging infrastructure both inside and outside the substation perimeter. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																										
Capital	Electric Distribution	Vault Restoration	Non-RAMP	No	This program was cancelled. It was intended to provide funding for the replacement or repair of deteriorated customer-owned vaults associated with SDG&E facilities. The program was cancelled when the cost to repair/replace customer-owned vaults became the responsibility of the owning customer. There are no imputed units because the variety of work activities in this category makes it infeasible to identify a single unit of measurement.																										
Capital	Electric Distribution	OIR Worst Circuits	Non-RAMP	No	This program was cancelled. It was intended to provide funding to support construction of projects that included modifications to and installation and/or replacement of equipment to improve reliability on SDG&E's 1% worst circuits as identified in the CPUC Annual Reliability Report. SDG&E has shifted work associated with these circuits to other reliability-based programs, e.g., system hardening programs (avian protection, lighting arrestor replacements, undergrounding, covered conductor, etc.) for circuits located in a high fire threat district (HFTD) and the management of overhead distribution service program for circuits not in an HFTD. There are no imputed units because the variety of work activities in this category makes it infeasible to identify a single unit of measurement. The underlying cost drivers for this program include switch installations, reconductors, installation of fault indicators, circuit reconfiguration, installation of fuses, and other circuit modifications required to improve reliability.																										
Capital	Electric Distribution	San Mateo Substation Rebuild	Non-RAMP	No	This is an emergent substation rebuild project that has been put on hold due to re-prioritization and reduced scope. Actuals represent project scoping and preliminary engineering activities. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																										
Capital	Electric Distribution	Avocado Sub 69KV Rebuild	Non-RAMP	No	This substation rebuild project was completed in 2021. It included a variety of work that included replacement of aging infrastructure both inside and outside the substation perimeter. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																										
Capital	Electric Distribution	Substation Mod to Support FLISR	Substation Modification To Support FLISR	No	Installed switchgear sections and breakers replaced	—	—	2	1	—	3	—	—	—	—	—	—	—	—	2	1	—	3	—%	—%	100%	100%	—%	100%		
Capital	Electric Distribution	Electric Distribution Grid Analytics	Non-RAMP	No	This project was cancelled in 2019. Project would have consolidated data sources from different functional areas allowing operations to create operational reports and dashboard for reliability, storm, and day to day management. These applications would provide data to management for decision making. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																										
Capital	Electric Distribution	Distribution Circuit Reliability Construction - RAMP	Expand and Maintain Distribution Advanced SCADA infrastructure	No	Switches Replaced	5	21	14	14	11	65	70	19	14	56	29	188	(65)	2	—	(42)	(18)	(123)	-93%	11%	—%	-75%	-62%	-65%		
Capital	Electric Distribution	Power Quality Program	Power Quality Monitor Deployment and Replacement	No	Meters Replaced/Installed	—	13	8	15	11	47	—	—	—	—	—	—	—	13	8	15	11	47	—%	100%	100%	100%	100%	100%		
Capital	Electric Distribution	Meteorology Outage Prediction Modeling P2	Non-RAMP	No	This project was completed on schedule in 2018. There are no imputed units because the calculation used to impute authorized units at the activity level for the GRC post-test years incorporates aspects of the CPUC-approved post-test year mechanism for the SDG&E attrition years, which can result in imputed dollars when a project has been completed.																										
Capital	Electric Distribution	12kV Substation Reliability	Torrey Pines 12kV Breaker Replacements	No	This emergent project consists of replacing fourteen 12kV circuit breakers at Torrey Pines Substation. There are no imputed units. The project is currently expected to be in service in 2024. Activities in 2023 represent pre-construction engineering and design.																										
Capital	Electric Distribution	12kV Substation Reliability	El Cajon 12kV Breaker Replacements	No	This emergent project consists of replacing fourteen 12kV circuit breakers at El Cajon Substation, including trenching and foundation modifications. There are no imputed units. The project is currently expected to be in service in 2024 and 2025. Activities in 2023 represent pre-construction engineering and design.																										
Capital	Electric Distribution	12kV Substation Reliability	Non-RAMP	No	This workpaper consists of 2 emergent projects. Kettner Substation 69/12kV Rebuild projects consists of replacing 69kV and 12kV oil circuit breakers with vacuum circuit breakers, adding 12kV Capacitor Bank with step-wise switching, and constructing new control shelter at the Kettner Substation. The project is currently expected to be placed into service in 2024. Melrose 12kV Breaker Replacement project has no work for 2023. The work was completed in 2021 and 2022.																										
Capital	Electric Distribution	12kV Substation Reliability	Granite 12kV Breaker & Switchgear Replacements	No	This emergent project comprises activities that include purchasing of 12kV circuit breakers, batteries, transformers, switchgear, engineering, design and survey services, and both above- and below-grade construction services. The variety of work activities in this category makes it infeasible to identify a single unit of measurement. The current expected in service date of for this project is 2025.																										
Capital	Electric Distribution	12kV Substation Reliability	Miramar 12kV Replacements	No	This emergent project consists of replacing fourteen 12kV circuit breakers at Miramar Substation. There are no imputed units. The project is currently expected to be in service in 2025. Activities in 2023 represent pre-construction engineering and design.																										

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Capital	Electric Distribution	Coronado 69/12kV Transformer Replacement	Substation Reliability for Distribution Components - Coronado 69/12kV Transformer Replacements	No	This is an emergent project. The activity in Coronado 69/12kV Transformer Replacement is related to material costs, pre-construction Engineering and Design Services. Upon the start of the construction, Transformers and Circuit Breakers will be used as a unit of measure.																										
Capital	Electric Distribution	La Jolla 69/12kV Transformer Replacement	La Jolla 69/12kV Transformer Replacement	No	This is an emergent project. The activity in this workpaper is related to pre-construction Engineering and Design Services. Upon the start of construction in 2025, the number of transformers replaced will be used as a unit of measure.																										
Capital	Electric Distribution	Non-HFTD WFI	Non-HFTD Wireless Fault Indicator	No	Wireless Fault Indicators (WFIs) Installed	—	—	15	—	—	15	—	—	—	—	—	—	—	—	15	—	—	15	—%	—%	100%	—%	—%	100%		
Capital	Electric Distribution	Mission 12kV Replacements	Mission 12kV Replacements	No	Circuit breakers	—	—	—	—	4	4	—	—	—	—	—	—	—	—	—	—	4	4	—%	—%	—%	—%	100%	100%		
Capital	Electric Distribution	Emergency Substation Equipment	Emergency Transformer and Switchgear	No	This workpaper includes activities to replenish a variety of spare equipment. Equipment includes breakers, transformer, cables, jumpers, etc. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																										
Capital	Electric Distribution	RAMP - Substation SCADA Expansion-Distribution	Distribution Substation SCADA Expansion	No	Substations Upgraded	—	1	1	—	2	4	—	—	—	—	—	—	—	1	1	—	2	4	—%	100%	100%	—%	100%	100%		
Capital	Electric Distribution	Telegraph Canyon 138/12kV Bank & C1226	Non-RAMP	No	This project was completed in 2018. There are no imputed units because the calculation used to impute authorized units at the activity level for the GRC post-test years incorporates aspects of the CPUC-approved post-test year mechanism for the SDG&E attrition years, which can result in imputed dollars when a project has been completed.																										
Capital	Electric Distribution	Margarita Substation New 12kV Circuit 1259	Non-RAMP	No	Circuits installed	1	—	—	—	—	1	—	—	—	—	—	—	1	—	—	—	—	1	100%	—%	—%	—%	—%	100%		
Capital	Electric Distribution	Transmission System Automation	Non-RAMP	No	The activities under this blanket budget include a variety of different types of system protection engineering projects and initiatives related to transmission SCADA system upgrades and control and monitoring in support of Grid Operations. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																										
Capital	Electric Distribution	Artesian 230Kv Substation Expansion	Substation Reliability For Distribution Components - Proactive	No	This is a FERC-driven major project. Phase 1 included building a brand new 69/12kV substation adjacent to the existing one was energized in 2021 with close-out costs carrying over in 2022-23. Being a brand new substation, the scope of the project included a multitude of both substation and line-side distribution and transmission work. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																										
Capital	Electric Distribution	High Risk Switch Replacement Project	Distribution Overhead Switch Replacement Program	No	Switches Replaced	—	18	35	19	12	84	—	—	—	—	—	—	—	18	35	19	12	84	—%	100%	100%	100%	100%	100%		
Capital	Electric Distribution	Urban Substation Rebuild	Substation Reliability For Distribution Components - Proactive	No	This is an emergent project. The construction activities include, but are not limited to - below grade work, improving site drainage and the vehicle access road, material installation of remote end relay panels, control cables, cable trays, throw over switches, and other common warehouse materials in support of construction both inside and outside the substation. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																										
Capital	Electric Distribution	Mission Substation 230kV Rebuild	Non-RAMP	No	This is the distribution portion of an emergent FERC-driven substation rebuild project, which includes activities for communication and IT equipment. The project was energized in 2020 with some trailing costs through 2022 related to project closeout activities. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																										



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Capital	Electric Distribution	TL603 Loop-in (Sweetwater, National City, and Naval Station Metering)	Transmission OH Reliability Projects	No	This is an emergent project. This is primarily a transmission driven project with a small portion for distribution. The minor scope of distribution work consisted of ancillary information technology and communications upgrades inside the substation.																										
Capital	Electric Distribution	TL673 Direct Buried Cable Replacement (Rose Canyon - La Jolla)	Transmission OH Reliability Projects	No	This is an emergent project that was completed in 2023. This is primarily a transmission driven project with a small portion for distribution. The minor scope of distribution work consisted of ancillary information technology and communications upgrades inside the substation.																										
Capital	Electric Distribution	TL6975- Escondido - San Marcos	Transmission OH Reliability Projects	No	This is an emergent project that was completed in 2023. The project scope included a variety of different types of activities which make it infeasible to identify and track a single unit of measure. 2023 activities were related to the construction and energization of the final phase, including distribution underbuild.																										
Capital	Electric Distribution	CBM - 4.2 Firmware Upgrade for Transformers	Non-RAMP	No	Firmware chips installed	—	—	83	106	6	195	—	—	—	—	—	—	—	—	83	106	6	195	—%	—%	100%	100%	100%	100%		
Capital	Electric Distribution	Vista Fuel Cell	Non-RAMP	No	Fuel Cell Systems Replaced	—	—	—	—	1	1	—	—	—	—	—	—	—	—	—	—	1	1	—%	—%	—%	—%	100%	100%		
Capital	Electric Distribution	TL698 AVOCADO SUB GATEWAY DB CBL REPLACE	Non-RAMP	No	This was a cable undergrounding project, with distribution work completed in 2019 and some small trailing costs through 2021. Distribution activities were related to IT, communications, and distribution underbuild work. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																										
Capital	Electric Distribution	RAMP Base - Install SCADA On-Line Capacitors	Expand and Maintain Distribution Advanced SCADA infrastructure	No	SCADA Capacitors Installed	—	—	15	14	14	43	—	—	21	14	16	51	—	—	(6)	—	(2)	(8)	—%	—%	-29%	—%	-13%	-16%		
Capital	Electric Distribution	TL23001/04 Insulator and Hardware Replacement	Non-RAMP	No	Insulator replacement completed	—	—	—	1	—	1	—	—	—	—	—	—	—	—	—	1	—	1	—%	—%	—%	100%	—%	100%		
Capital	Electric Distribution	Clairemont Substation Rebuild	Non-RAMP	No	This substation rebuild project was completed prior to the TY2019 GRC cycle with an accounting adjustment recorded in 2019. The project scope included a variety of different types of activities both inside and outside the substation perimeter, which made it infeasible to identify and track a single unit of measure.																										
Capital	Electric Distribution	Shadow Ridge-Install 3rd Bank & Cir 937 & 938	Non-RAMP	No	This project was completed prior to the TY2019 GRC cycle with an accounting adjustment recorded in 2019.																										
Capital	Electric Distribution	Mission 69kV Sub Rebuild	Mission 69kV Sub Rebuild	No	This is an emergent substation rebuild. The project scope included a variety of different types of activities both inside and outside the substation perimeter, which made it infeasible to identify and track a single unit of measure. 2023 activities are related to site development, structural foundations, distribution relocation, and transmission alignment.																										
Capital	Electric Distribution	RFS Japanese Mesa Substation	Non-RAMP	No	This is an emergent substation bypass project. The project includes new conductors, new poles and new lines being in serviced, as well as the decommissioning and removal of Japanese Mesa Substation. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																										
Capital	Electric Distribution	Smart Isolation and Reclosing	Non-RAMP	No	Smart Isolation & Reclosing Devices	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—%	—%	—%	—%	—%	—%		
Capital	Electric Distribution	Replace Obsolete Substation Equipment - RAMP	Substation rebuild/replacements based on operational significance and SDG&E reliability standards	No	This workpaper's activities include erosion control, fence replacement, control shelter roof replacement, transformer concrete pads, new drainage improvements in addition to replacement of traditional breakers, transformers, etc. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																										
Capital	Electric Distribution	<b>Sub-Total Reliability/Improvements</b>		<b>Yes</b>																											

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
Capital	Electric Distribution	SF6 Switch Replacement	Replace with new technology	No	Distribution Switches Replaced	14	7	37	20	12	90	31	9	19	15	15	89	(17)	(2)	18	5	(3)	1	-55%	-22%	95%	33%	-20%	1%	
Capital	Electric Distribution	Meteorology - Fire Behavior Modeling	Non-RAMP	No	This project was completed in 2019. There are no imputed units because the calculation used to impute authorized units at the activity level for the GRC post-test years incorporates aspects of the CPUC-approved post-test year mechanism for the SDG&E attrition years, which can result in imputed dollars when a project has been completed.																									
Capital	Electric Distribution	Elect Integrity - RAMP (Non-WMP)	Wire Correction, Switch Replacement and Underground Connector Upgrade Program	No	In the TY 2019 GRC, SDG&E revenue requirement allocated 10% to the Wildfire Mitigation Plan Overhead System Hardening efforts and 90% to non-wildfire Electric Distribution capital. Most of the projects within this description have since been broken out into other categories, such as Proactive Cable Replacement, High Risk Switch Replacement, Tee Modernization program, Overhead Public Safety Program, and Distribution Circuit Reliability. The variety of work activities under this category, which included overhead wire safety enhancements to safeguard against potential wire down events, corrosion mitigation programs (e.g. freeway crossing structural improvements), enhanced switch inspections and high-risk replacements, and potential strategic undergrounding of distribution lines where practical for frequent or relatively high consequence outage exposure areas, made it infeasible to identify a single unit of measurement.																									
Capital	Electric Distribution	RTU Modernization - RAMP Incremental - SCADA Master Modernization	Modernize Equipment	No	Remote Terminal Units (RTUs) Replaced	—	—	20	26	15	61	—	24	25	25	25	99	—	(24)	(5)	1	(10)	(38)	—%	-100%	-20%	4%	-40%	-38%	
Capital	Electric Distribution	NCW New Bank 32 RAMP Incremental - Undergrounding New Circuits	Undergrounding	No	This project was canceled. Activities for this project include undergrounding work, new poles, and equipment relocation. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Electric Distribution	Twin Engine Helicopter	Purchase a Twin Engine Helicopter	No	The helicopter was purchased as scheduled in 2017. There are no imputed units because the calculation used to impute authorized units at the activity level for the GRC post-test years incorporates aspects of the CPUC-approved post-test year mechanism for the SDG&E attrition years, which can result in imputed dollars when a project has been completed.																									
Capital	Electric Distribution	Tee Modernization Program	Non-RAMP	No	Tee locations	60	70	148	108	90	476	259	82	85	62	100	588	(199)	(12)	63	46	(10)	(112)	-77%	-15%	74%	74%	-10%	-19%	
Capital	Electric Distribution	Proactive Dead Front Terminator Deploy	Replacement of Live Front Equipment - Proactive	No	Terminators	—	8	15	13	9	45	—	—	—	—	—	—	—	8	15	13	9	45	—%	100%	100%	100%	100%	100%	
Capital	Electric Distribution	CAST Security Upgrades	Non-RAMP	No	This program is focused on major transmission substation security upgrade projects. This includes different types of physical and electronic security technologies. The spend is primarily the CPUC portion of communication equipment installs and upgrades. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Electric Distribution	Datamation Secure Cabinet	Non-RAMP	No	This was an emergent project that was completed in 2022. There are no imputed units. The activities in this workpaper included the purchase and delivery of 10 cabinets intended to store company-issued employee cell phones.																									
Capital	Electric Distribution	Rebuilding of Skills Training Yard	Non-RAMP	No	This is an emergent project. Activities in this workpaper represent equipment and labor related to rebuilding the tall training yard, site improvements, as well as purchase of underground switches that are being used on the field distribution system. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
Capital	Electric Distribution	Overhead Public Safety	Overhead distribution modernization and hardening	No	Miles of Conductor Replaced	—	—	8	7	4	19	—	—	—	—	—	—	—	—	8	7	4.33	19	—%	—%	100%	100%	100%	100%	
Capital	Electric Distribution	C589 & C753 Damaged Pole Replacements	Non-RAMP	No	This project was completed prior to the current GRC cycle with a small trailing charge in 2019. There are no imputed units because the calculation used to impute authorized units at the activity level for the GRC post-test years incorporates aspects of the CPUC-approved post-test year mechanism for the SDG&E attrition years, which can result in imputed dollars when a project has been completed.																									
Capital	Electric Distribution	Mobile Command Trailers (MCT)	Non-RAMP	No	Completed in 2019. Activities captured under this workpaper included modifications to Mobile Command Trailers (MCTs) such as chassis modifications, communication hardware mounting, ventilation system upgrades, and security system installation. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Electric Distribution	Rancho Santa Fe C1001 Wire Down Mit	Non-RAMP	No	This project predates the TY2019 GRC filing and was canceled. The cost in 2019 is an accounting adjustment made to write off the project.																									
Capital	Electric Distribution	Transmission EMS/SCADA Reliance Upgrade	Non-RAMP	No	This is an emergent project and includes new hardware, software, network device, as well as a disaster recovery system. The variety of work activities in this program makes it infeasible to identify a single unit of measurement.																									
Capital	Electric Distribution	Strategic Pole Replacement Program (SPRP)	Non-RAMP	No	Poles Replaced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—%	—%	—%	—%	—%	—%	
Capital	Electric Distribution	Substation Security Proj under \$500K	Non-RAMP	No	This program is focused on upgrading physical and electronic security systems within and around SDG&E's substation assets. The variety of work activities in this category makes it infeasible to identify a single unit of measurement. The 2023 spend represents pre-construction activities and procurement for construction planned for 2024.																									
Capital	Electric Distribution	Sub-Total Safety & Risk Management		Yes																										
Capital	Electric Distribution	Advanced Energy Storage	Non-RAMP	No	This workpaper includes a battery energy storage system and hydrogen energy storage system to leverage excess energy on an existing microgrid. This project is emergent and is scheduled to be placed in service in 2024. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Electric Distribution	Borrego Microgrid 2.0	Non-RAMP	No	Project was completed in 2018. There are no imputed units because the calculation used to impute authorized units at the activity level for the GRC post-test years incorporates aspects of the CPUC-approved post-test year mechanism for the SDG&E attrition years, which can result in imputed dollars when a project has been completed.																									
Capital	Electric Distribution	Borrego Microgrid 3.0	Non-RAMP	No	There are multiple tracks of activities that make up this project and units are not consistent across activities. Project activities include developing conceptual design for new distribution circuit and new substation bay, completing cultural survey of land and beginning scoping for site grading, completing analysis and assessment of existing microgrid equipment, finalizing scope for existing microgrid equipment upgrades, including new inverters and microgrid controller, and completing scoping for test environment simulation updates. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Electric Distribution	Safety Enhancements for Battery	Non-RAMP	No	Emergency stop buttons installed	—	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	1	—%	100%	—%	—%	—%	100%	
Capital	Electric Distribution	Borrego Springs Microgrid Generator Replacement	Non-RAMP	No	This emergent project will replace the two 1.8 MW Microgrid generators, with two 2.50 MW (standby rating) generators in the Borrego Springs Microgrid. There are no imputed units. The project is currently expected to be in service in 2024. Activities in 2023 represent pre-construction engineering and design.																									
Capital	Electric Distribution	Integrated Test Facility	Non-RAMP	No	This project has been deferred due to re-prioritization with reactive and microgrid/ energy storage project portfolio. The Integrated Test Facility has hosted projects for, but is not limited to, renewable integration, electric vehicle charging, Home Area Networks (HAN), cyber security and telecommunication advancement. The variety of work activities in this category makes it infeasible to identify a single unit of measurement. The variance is due to the calculation used to impute authorized funding at the activity level for the GRC post-test years. The CPUC approved a post-test year mechanism for the SDG&E attrition years rather than a specific funding level by activity for each year.																									
Capital	Electric Distribution	Sub-Total DER Integration		Yes																										

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
Capital	Electric Distribution	Transmission Substation Reliability	Non-RAMP	No	This workpaper includes the distribution and communication component of the replacement of obsolete or failed substation equipment. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Electric Distribution	Orange County Long Range Plan - SOCRE	Non-RAMP	No	2020 project activities included 1 substation, 1.9 miles of UG distribution, 0.5 miles of double-circuit 230kV UG Transmission, 7 miles of double-circuit 230kV Transmission. 2021 project activities included construction of the 12kV getway duct package and circuit cutovers. 2022 project activities included construction of the 12kV getway duct package and circuit cutovers. 2023 activities included removing the de-energized distribution conductor and associated poles and removal of TL13835A from service once TL23007 and the 230kV switchyard were energized. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Electric Distribution	Los Coches Substation 138/69kV Rebuild	Non-RAMP	No	This project was completed in 2019. Due to the scope of this substation rebuild involving a variety of activities both inside and outside the substation perimeter, a single unit of measure could not be identified and tracked. The variance is due to the calculation used to impute authorized funding at the activity level for the GRC post-test years. The CPUC approved a post-test year mechanism for the SDG&E attrition years rather than a specific funding level by activity for each year.																									
Capital	Electric Distribution	TL663 Mission to Kearny Reconductor	Non-RAMP	No	Topped distribution poles	—	56	2	—	—	58	—	—	—	—	—	—	—	56	2	—	—	58	—%	100%	100%	—%	—%	100%	
Capital	Electric Distribution	TL600 - Reliability Pole Replacements	Non-RAMP	No	Number of poles replaced	—	5	7	1	—	13	—	—	—	—	—	—	—	5	7	1	—	13	—%	100%	100%	100%	—%	100%	
Capital	Electric Distribution	TL674A Del Mar Reconfigure/TL666D RFS	Non-RAMP	No	The purpose of this project was to remove TL666D from service at the Del Mar sub, remove the tap on TL674 from service at Via De La Valle, build two circuits: Del Mar - North City West and Encinitas - Rancho Santa Fe, and terminate the new Del Mar - North City West circuit and the old TL666D. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Electric Distribution	TL664_668 Miramar Wood to Steel	Non-RAMP	No	This project was completed in 2017 on schedule and therefore there are no units. The variance is entirely due to the calculation used to impute authorized funding at the activity level for the GRC post-test years. The CPUC approved a post-test year mechanism for the SDG&E attrition years rather than a specific funding level by activity for each year.																									

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
Capital	Electric Distribution	TL676 Mission to Mesa Heights Reconnector	Non-RAMP	No	This project was completed in 2020, with small amount of trailing costs in subsequent years related to project close-out activities, and therefore there are no units. The variance is due to the calculation used to impute authorized funding at the activity level for the GRC post-test years. The CPUC approved a post-test year mechanism for the SDG&E attrition years rather than a specific funding level by activity for each year.																									
Capital	Electric Distribution	TL697 San Luis Rey Wood to Steel - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	Project completed in 2018 as scheduled and therefore there are no units. The variance is due to the calculation used to impute authorized funding at the activity level for the GRC post-test years. The CPUC approved a post-test year mechanism for the SDG&E attrition years rather than a specific funding level by activity for each year.																									
Capital	Electric Distribution	TL691 Avo-Mon Wood to Steel - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	Distribution Underbuild Miles	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—%	—%	—%	—%	—%	—%	
Capital	Electric Distribution	TL6912 Wood to Steel Pole Replacement - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	This project was expected to go in service in 2018 in the TY2019 GRC. There are no imputed units because the calculation used to impute authorized units at the activity level for the GRC post-test years incorporates aspects of the CPUC-approved post-test year mechanism for the SDG&E attrition years, which can result in imputed dollars when a project has been completed. This project was completed as part of the balanced Wildfire Mitigation Plan.																									
Capital	Electric Distribution	TL695 Talega Wood to Steel - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	This project is in the pre-construction phase and has recorded dollars shown in the Balanced file through 2023 for Engineering & Design. The underlying cost drivers for this project include replacing distribution facilities that are underbuilt in a transmission circuit upgrade project. There are imputed costs because the calculation used to impute authorized costs at the activity level for the GRC post-test years incorporates aspects of the CPUC-approved post-test year mechanism for the SDG&E attrition years, which can result in imputed dollars when a project has not yet begun construction.																									
Capital	Electric Distribution	CNF - RAMP	System Hardening	No	The non-balanced portion of the project is completed. The 2023 costs represent post construction remediation activities that are required by the Forest Service. There are no imputed units because the calculation used to impute authorized units at the activity level for the GRC post-test years incorporates aspects of the CPUC approved post-test year mechanism for the SDG&E attrition years, which can result in imputed dollars when a project has been completed.																									

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance		
Capital	Electric Distribution	TL649 Otay-San Ysidro-Border SW Pole Repl - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	Distribution Underbuild Circuit Miles	4	—	—	—	—	4	4	—	—	—	—	4	—	—	—	—	—	—	—%	—%	—%	—%	—%	—%		
Capital	Electric Distribution	Fiber Optic for Relay Protect & Telecom	Non-RAMP	No	All-Dielectric Self-Supporting (ADSS) Miles	21	20	23	2	—	66	—	—	—	—	—	—	21	20	23	2	—	66	100%	100%	100%	100%	—%	100%		
Capital	Electric Distribution	SX-PQ 230 kV Line	Non-RAMP	No	There are no actual or imputed authorized units available because this project was energized in 2018. The cost shown is a correcting journal entry to reflect a reclassification of construction costs.																										
Capital	Electric Distribution	Rose Canyon TL617 Tap Removal	Non-RAMP	No	Project was completed in 2019 and therefore there are no units. Scope included removal of tap on TL617 at Rose Canyon Sub, line split at the station creating two lines (TL617 and TL636). West section of line landed on bay position 5, with a double breaker configuration.																										
Capital	Electric Distribution	TL690A Pendleton South W2S	Non-RAMP	No	Project was completed in 2018 and therefore there are no units. The project had trailing charges related to project close-out activities.																										
Capital	Electric Distribution	SONGS Synchronous Condenser	Non-RAMP	No	This project was completed in 2018 and therefore there are no units. The project has trailing charges related to project close-out activities.																										
Capital	Electric Distribution	Suncrest SVC Interconnection	Non-RAMP	No	Interconnection	—	1	—	—	—	1	—	—	—	—	—	—	—	1	—	—	—	1	—%	100%	—%	—%	—%	100%		
Capital	Electric Distribution	TL13835- Wood to Steel Project	Non-RAMP	No	Project was completed in 2018 and therefore there are no units. The project had trailing charges related to project close-out activities.																										
Capital	Electric Distribution	New 2nd Miguel to Bay Blvd. 230 kV Line	Non-RAMP	No	Project was completed in 2019 and therefore there are no units. The project has trailing charges related to project close-out activities.																										
Capital	Electric Distribution	Silver Ridge Mount Signal	Non-RAMP	No	Project was completed in 2019 and therefore there are no units. The project had trailing charges related to project close-out activities in 2020.																										
Capital	Electric Distribution	San Luis Rey	Non-RAMP	No	This project was completed in phases prior to 2019 and therefore there are no units. The project has trailing charges related to project closeout activities.																										
Capital	Electric Distribution	Miguel Substation 230kV Rebuild	Non-RAMP	No	Project was completed in 2022. Prior 2022 activities include project support and closeout engineering work. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																										
Capital	Electric Distribution	Sub-Total Transm/FERC Driven Projects		Yes																											

ii. SDG&E Electric Distribution Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
Capital	Electric Distribution	Electric Distribution		Yes									
Capital	Electric Distribution	Field Shunt Capacitors	Non-RAMP	No	No	Yes	N/A	Capacitors are installed to efficiently supply the reactive power with the increasing load in the distribution system. In 2023, there was less need to install capacitors than forecasted in the 2019 GRC. Additionally, project work varies from year to year depending on ancillary work that may be required in conjunction with a capacitor replacement (e.g., pole replacement or retaining wall)	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Electric Distribution	Ocean Ranch 69/12KV Substation	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Completed	Yes
Capital	Electric Distribution	Substation 12kV Capacitor Upgrades	Non-RAMP	No	No	Yes	N/A	Projects are still in design and engineering phase. They are expected to be installed/energized in 2024/2025 and were previously delayed due to re-design and customer dependencies.	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Electric Distribution	C1447 MTO: Extension and offload from C958	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Completed	Yes
Capital	Electric Distribution	GRID Modernization	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	Over (O)	On Target (T)	Completed	Yes
Capital	Electric Distribution	Planned Investments	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	Reactive Small Capital Projects	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
Capital	Electric Distribution	C1023 LI New 12KV Circuit & Reconductor C354	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Completed	Yes
Capital	Electric Distribution	C1450 MTO: New 12KV Circuit	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Completed	Yes
Capital	Electric Distribution	TL633 Reconductor (Bernardo - Rancho Carmel)	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	Doheny Desalination 15MW Project	Non-RAMP	No	No	No	N/A	N/A	Under (U)	Under (U)	Under (U)	Canceled	No

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
Capital	Electric Distribution	C1139 Santee - New circuit	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	Mira Sorrento 138/12KV Substation	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Completed	No
Capital	Electric Distribution	Wabash Canyon Sub 60/12KV Bank 32	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	Distribution System Capacity Improvement	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	Yes
Capital	Electric Distribution	Sub-Total Capacity/Expansion		Yes	Yes	No							No
Capital	Electric Distribution	Electric Distribution Tools/Equipment	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
Capital	Electric Distribution	Electric Transmission Tools/Equipment	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	Sub-Total Equip/Tools/Misc.		Yes	No	No							No
Capital	Electric Distribution	RAMP Base - Corrective Maint Program (CMP)	Inspection, Repair, Maintenance & Replacement Programs	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Electric Distribution	RAMP Base - DOE Switch/Manhole Replacement	Distribution Switch Maintenance Program	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Electric Distribution	RAMP Base - Replacement of Live Front Equipment	Live Front Transformer and Terminator Replacement	No	No	Yes	N/A	This is a responsive program to replace live front equipment. 2023 had a higher than historical number of equipment replaced.	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Electric Distribution	Aerial Marking for Safety	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Completed	Yes
Capital	Electric Distribution	RAMP Incremental - Distributed Generation Interconnect	Power Quality Studies of DER Interconnections	No	No	Yes	N/A	This program funds the interconnection of customer or developer-owned generation to SDG&E's electric distribution system as established by Electric Rule 21 and the Wholesale Distribution Open Access Tariff (WDAT). Two installations were completed in 2023. The unit variance is primarily due to the calculation used to impute authorized units at the activity level, which uses the CPUC-approved post-test year mechanism for the SDG&E attrition years.	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No



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Capital	Electric Distribution	RAMP Incremental On Ramp Aerial Light - Post Filing	Install Aerial Marking and Lighting	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Completed	Yes
Capital	Electric Distribution	Blue Hornet Solar	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	Fallbrook Battery Energy Storage - PTO	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	Gateway Energy Storage	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	Kettle Solar One	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	Mount Laguna Wind	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	Rugged Solar Farm	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	Top Gun PTO Interconnection	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	Valley Center Renewable	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	Elect Transmission Line Reliability Projects	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Electric Distribution	RAMP Base -- Annual Pole Reinforcement (Non-WMP)	GO165: Distribution Inspect and Repair program	No	Yes	Yes	This is a responsive pole replacement program driven primarily by field findings. The variances for both dollars and units are driven by higher than planned average number of jobs, partially due to aging infrastructure. The program has also experienced an overall increase in pole replacement labor and material costs over time. The supply chain disruptions caused by the pandemic amplified these unit cost increases.	This is a responsive pole replacement program driven primarily by field findings. The variances for both dollars and units are driven by higher than planned average number of jobs, partially due to aging infrastructure. The program has also experienced an overall increase in pole replacement labor and material costs over time. The supply chain disruptions caused by the pandemic amplified these unit cost increases.	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Electric Distribution	TL632A Loop-In (Granite)	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	RAMP Base - Avian Protection Program	Non-RAMP	No	No	Yes	N/A	Lower actual unit count was driven by shift in focus from this non-high fire threat district (non-HFTD) workpaper to Avian Protection Wildfire Mitigation Plan (WMP) in the Balanced Capital table.	Under (U)	Under (U)	Under (U)	Deferred	No
<b>Capital</b>	<b>Electric Distribution</b>	<b>Sub-Total Mandated</b>		<b>Yes</b>	<b>Yes</b>	<b>No</b>							<b>No</b>
Capital	Electric Distribution	Electric Distribution Easements	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
<b>Capital</b>	<b>Electric Distribution</b>	<b>Sub-Total New Business</b>		<b>Yes</b>	<b>No</b>	<b>No</b>							<b>No</b>
Capital	Electric Distribution	Electric Meters & Regulators	Non-RAMP	No	No	Yes	N/A	This program is responsive in nature and the demand for meters is ongoing as replacement meters are necessary to service electric distribution customers. The unit variance is driven by higher than expected equipment failure and replacement rate of field electric smart meters.	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No

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Capital	Electric Distribution	Transformers	Non-RAMP	No	Yes	Yes	This ongoing program supports purchasing new distribution transformers that will provide service to SDG&E's electric distribution customers. Purchases are required to maintain inventory levels at SDG&E's electric distribution service centers. The cost variance is due to a significant increase in the average cost per unit caused by both price increases and a change in the mix of transformer demand to larger electrical rated units. Extreme industry demand, shortages in domestic supply leading to purchasing from foreign suppliers, and high raw material prices are driving up per-unit costs. High new business growth also led by vehicle electric charging infrastructure has led to demand for larger and more expensive units.	This ongoing program supports purchasing new distribution transformers that will provide service to SDG&E's electric distribution customers. These purchases are required to maintain inventory levels at SDG&E's electric distribution service centers. The unit variance is due to a significant increase in the average cost per unit caused by both price increases and a change in the mix of transformer demand to larger electrical rated units. Extreme industry demand, shortages in domestic supply leading to purchasing from foreign suppliers, and high raw material prices are driving up per-unit costs. High new business growth also led by vehicle electric charging infrastructure has led to demand for larger and more expensive units.	Over (O)	On Target (T)	Over (O)	Expanded	No
<b>Capital</b>	<b>Electric Distribution</b>	<b>Sub-Total Materials</b>		<b>Yes</b>	<b>Yes</b>	<b>No</b>							<b>No</b>
Capital	Electric Distribution	Reliability/Improvements Capital Projects	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Electric Distribution	Management of Overhead Distribution Service	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Electric Distribution	Management of Underground Distribution Service	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Electric Distribution	RAMP Base - Cable Replacement	Proactive cable replacement	No	Yes	Yes	This workpaper includes reactive and proactive cable replacement programs. The primary driver of the variances for both dollars and units is due to actual recorded results falling below the 5-year historical average used to calculate the forecast for the TY 2019 GRC filing.	This workpaper includes reactive and proactive cable replacement programs. The primary driver of the variances for both dollars and units is due to actual recorded results falling below the 5-year historical average used to calculate the forecast for the TY 2019 GRC filing.	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Electric Distribution	RAMP Incremental Capital Restoration of Service	Capital improvements	No	No	Yes	N/A	This is a responsive budget which repairs distribution facilities as necessary to restore electric service to customers in a timely manner. The unit variance is due to actual number of repairs required being less than forecasted, which was developed using a 4-year average methodology for the TY 2019 GRC filing.	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Electric Distribution	Rebuild Pt Loma Substation	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Completed	Yes
Capital	Electric Distribution	RAMP Incremental - 4 kV Modernization - Distribution	Overhead distribution modernization and hardening	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Electric Distribution	Sewage Pump Station Rebuilds RAMP Incremental	Rebuild and repair aging infrastructure	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Completed	Yes

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Capital	Electric Distribution	RAMP Base - Condition Based Maintenance - Smart Grid	Conditioned Based Monitoring System	No	No	Yes	N/A	This project was completed in 2019 following the successful installation of condition-based maintenance monitoring equipment on all substation transformers in SDG&E's system.	On Target (T)	On Target (T)	Under (U)	Completed	Yes
Capital	Electric Distribution	Rebuild Kearny 69/12kV Substation	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Completed	Yes
Capital	Electric Distribution	New Vine 69/12KV Substation	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Completed	Yes
Capital	Electric Distribution	Streamview 69/12KV Sub Rebuild-Pre Eng	Non-RAMP	No	Yes	No	The drivers of the cost variance include additional costs incurred due to land acquisition and permitting delays and complexities. It is also driven in part by the calculation used to impute authorized funding at the activity level for the GRC post-test years.	N/A	On Target (T)	Over (O)	Over (O)	Proceeding as Planned	No
Capital	Electric Distribution	Poway Substation Rebuild	Poway 69kV Substation Rebuild	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Completed	No

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Capital	Electric Distribution	Rancho Santa Fe Sub Fire Hardening	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Completed	Yes
Capital	Electric Distribution	Vault Restoration	Non-RAMP	No	No	No	N/A	N/A	Under (U)	Under (U)	Under (U)	Canceled	No
Capital	Electric Distribution	OIR Worst Circuits	Non-RAMP	No	No	No	N/A	N/A	Under (U)	Under (U)	Under (U)	Canceled	No
Capital	Electric Distribution	San Mateo Substation Rebuild	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	Avocado Sub 69KV Rebuild	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	Substation Mod to Support FLISR	Substation Modification To Support FLISR	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	Electric Distribution Grid Analytics	Non-RAMP	No	No	No	N/A	N/A	Under (U)	Under (U)	Under (U)	Canceled	No
Capital	Electric Distribution	Distribution Circuit Reliability Construction - RAMP	Expand and Maintain Distribution Advanced SCADA infrastructure	No	No	Yes	N/A	Lower actual unit count was driven by additional focus on other responsive projects as needed in 2023.	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Electric Distribution	Power Quality Program	Power Quality Monitor Deployment and Replacement	No	No	Yes	N/A	This emergent program is the expansion of the substation power quality monitoring system and associated communication system. This system improvement will allow an increase of data to be collected, which will result in a more effective grid reliability assessment. Driven by reliability and capacity needs, 11 Power Quality meters were replaced in 2023.	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	Meteorology Outage Prediction Modeling P2	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Completed	Yes
Capital	Electric Distribution	12kV Substation Reliability	Torrey Pines 12kV Breaker Replacements	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	12kV Substation Reliability	El Cajon 12kV Breaker Replacements	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	12kV Substation Reliability	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	12kV Substation Reliability	Granite 12kV Breaker & Switchgear Replacements	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	12kV Substation Reliability	Miramar 12kV Replacements	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No

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Capital	Electric Distribution	Coronado 69/12kV Transformer Replacement	Substation Reliability for Distribution Components - Coronado 69/12kV Transformer Replacements	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	La Jolla 69/12kV Transformer Replacement	La Jolla 69/12kV Transformer Replacement	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	Non-HFTD WFI	Non-HFTD Wireless Fault Indicator	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	Mission 12kV Replacements	Mission 12kV Replacements	No	No	Yes	N/A	This is an emergent project. In 2023, four circuit breakers were replaced. The purpose of this project is to facilitate the removal and replacement of circuit breakers due to aging infrastructure, operational limitations, environmental concerns, in addition to meeting current reliability standards.	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	Emergency Substation Equipment	Emergency Transformer and Switchgear	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Electric Distribution	RAMP - Substation SCADA Expansion-Distribution	Distribution Substation SCADA Expansion	No	No	Yes	N/A	Additional substation project completed in 2023 driven by construction delay of one project originally planned to be completed in 2022.	Over (O)	Over (O)	Over (O)	Expanded	No
Capital	Electric Distribution	Telegraph Canyon 138/12kV Bank & C1226	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	Under (U)	Under (U)	Completed	Yes
Capital	Electric Distribution	Margarita Substation New 12kV Circuit 1259	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Completed	Yes
Capital	Electric Distribution	Transmission System Automation	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Electric Distribution	Artesian 230Kv Substation Expansion	Substation Reliability For Distribution Components - Proactive	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	High Risk Switch Replacement Project	Distribution Overhead Switch Replacement Program	No	No	Yes	N/A	This is an emergent program created to reduce safety risks associated with overhead distribution switch failures. Their inoperability during an outage can extend the impact of an outage to the next upstream protection device causing a prolonged forced outage. SDG&E proactively replaced 12 switches in 2023. The new switches are deployed in strategic areas to improve distribution circuit reliability.	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	Urban Substation Rebuild	Substation Reliability For Distribution Components - Proactive	No	Yes	No	This is an emergent project. In 2023 costs represent material procurement and distribution construction activities. This included capacitor banks and partial payment on switchgears along with trench and conduit construction.	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	Mission Substation 230kV Rebuild	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No

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Capital	Electric Distribution	TL603 Loop-in (Sweetwater, National City, and Naval Station Metering)	Transmission OH Reliability Projects	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	TL673 Direct Buried Cable Replacement (Rose Canyon - La Jolla)	Transmission OH Reliability Projects	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	TL6975- Escondido - San Marcos	Transmission OH Reliability Projects	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	CBM - 4.2 Firmware Upgrade for Transformers	Non-RAMP	No	No	Yes	N/A	This is an emergent program. Units represent 6 firmware chips being installed in 2023. The project focuses on replacing/upgrading equipment and existing hardware/software at various substations that is used to monitor and provide numerous data points pertaining to the status of the transformers and ancillary equipment data on the gases forming inside transformers.	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	Vista Fuel Cell	Non-RAMP	No	No	Yes	N/A	This emergent project was initiated in 2021 and completed in 2023 to replace a nonworking asset that was installed under the Sustainable Communities Program, with a new 460kV natural gas-powered fuel cell system. The activity related to the Vista Fuel Cell project includes replacement of 1 fuel cell and the necessary engineering and construction to install it.	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	TL698 AVOCADO SUB GATEWAY DB CBL REPLACE	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	RAMP Base - Install SCADA On-Line Capacitors	Expand and Maintain Distribution Advanced SCADA infrastructure	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Electric Distribution	TL23001/04 Insulator and Hardware Replacement	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	Claremont Substation Rebuild	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Completed	No
Capital	Electric Distribution	Shadow Ridge-Install 3rd Bank & Cir 937 & 938	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Completed	No
Capital	Electric Distribution	Mission 69kV Sub Rebuild	Mission 69kV Sub Rebuild	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	RFS Japanese Mesa Substation	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	Smart Isolation and Reclosing	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Other	No
Capital	Electric Distribution	Replace Obsolete Substation Equipment - RAMP	Substation rebuild/replacements based on operational significance and SDG&E reliability standards	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Electric Distribution	<b>Sub-Total Reliability/Improvements</b>		<b>Yes</b>	<b>Yes</b>	<b>No</b>							<b>No</b>

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Capital	Electric Distribution	SF6 Switch Replacement	Replace with new technology	No	No	Yes	N/A	The number of units replaced in 2023 was lower than imputed due to reduced scope and re-prioritization of other reliability initiatives.	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Electric Distribution	Meteorology - Fire Behavior Modeling	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Completed	Yes
Capital	Electric Distribution	Elect Integrity - RAMP (Non-WMP)	Wire Correction, Switch Replacement and Underground Connector Upgrade Program	No	Yes	No	In the 2019 GRC, SDG&E revenue requirement allocated 10% to the Wildfire Mitigation Plan Overhead System Hardening efforts and 90% to non-wildfire Electric Distribution capital. All of the projects within this description have since been broken out into other categories, such as Proactive Cable Replacement, High Risk Switch Replacement, Tee Modernization program, Overhead Public Safety Program, and Distribution Circuit Reliability.	N/A	Under (U)	Under (U)	Under (U)	Canceled	No
Capital	Electric Distribution	RTU Modernization - RAMP Incremental - SCADA Master Modernization	Modernize Equipment	No	No	Yes	N/A	In 2023, actual units less than imputed due to transition to new remote terminal units (RTU) requiring additional time and training for construction crews.	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Electric Distribution	NCW New Bank 32 RAMP Incremental - Undergrounding New Circuits	Undergrounding	No	No	No	N/A	N/A	Under (U)	Under (U)	Under (U)	Canceled	No
Capital	Electric Distribution	Twin Engine Helicopter	Purchase a Twin Engine Helicopter	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Completed	Yes
Capital	Electric Distribution	Tee Modernization Program	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Electric Distribution	Proactive Dead Front Terminator Deploy	Replacement of Live Front Equipment - Proactive	No	No	Yes	N/A	This is an emergent program driven by employee safety risks. SDG&E proactively replaced 9 terminators in 2023. The new dead front terminators are deployed in strategic areas to improve distribution circuit reliability, such as where large customer segments can be further sectionalized in small pad mount applications.	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	CAST Security Upgrades	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	Datamation Secure Cabinet	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	Rebuilding of Skills Training Yard	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
Capital	Electric Distribution	Overhead Public Safety	Overhead distribution modernization and hardening	No	No	Yes	N/A	This is an emergent program in the non-high fire threat district (non-HFTD). Units represent 4.33 miles of conductor that were replaced in 2023. Engineering analyses of historic wire down events show aged small wire conductors present the largest wire down risk and can remain energized and undetected after failing. Removing long spans, antiquated wire, poor connectors and increasing detection methods can reduce the risk of these events.	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	C589 & C753 Damaged Pole Replacements	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	Mobile Command Trailers (MCT)	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	Rancho Santa Fe C1001 Wire Down Mit	Non-RAMP	No	No	No	N/A	N/A	Under (U)	Under (U)	Under (U)	Canceled	No
Capital	Electric Distribution	Transmission EMS/SCADA Reliance Upgrade	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	Strategic Pole Replacement Program (SPRP)	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Other	No
Capital	Electric Distribution	Substation Security Proj under \$500K	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
<b>Capital</b>	<b>Electric Distribution</b>	<b>Sub-Total Safety &amp; Risk Management</b>		<b>Yes</b>	<b>Yes</b>	<b>No</b>							<b>No</b>
Capital	Electric Distribution	Advanced Energy Storage	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	Borrego Microgrid 2.0	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Completed	Yes
Capital	Electric Distribution	Borrego Microgrid 3.0	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Electric Distribution	Safety Enhancements for Battery	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	Borrego Springs Microgrid Generator Replacement	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	Integrated Test Facility	Non-RAMP	No	No	No	N/A	N/A	Under (U)	Under (U)	Under (U)	Deferred	No
<b>Capital</b>	<b>Electric Distribution</b>	<b>Sub-Total DER Integration</b>		<b>Yes</b>	<b>Yes</b>	<b>No</b>							<b>No</b>



Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
Capital	Electric Distribution	Transmission Substation Reliability	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Electric Distribution	Orange County Long Range Plan - SOCRE	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	Over (O)	Over (O)	Completed	No
Capital	Electric Distribution	Los Coches Substation 138/69kV Rebuild	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Completed	Yes
Capital	Electric Distribution	TL663 Mission to Kearny Reconductor	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Completed	Yes
Capital	Electric Distribution	TL600 - Reliability Pole Replacements	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	TL674A Del Mar Reconfigure/TL666D RFS	Non-RAMP	No	Yes	No	Project funding was denied in the TY 2019 GRC final decision due to concerns over whether the project would be completed in 2019. Final Initial Study (IS) / Mitigated Negative Declaration (MND) was published by the CPUC in March 2019 and Notice to Proceed (NTP) request was approved by CPUC in November 2020. The project was completed in 2023 and included reconfiguring of TL674A by removing the Rancho Santa Fe Tap and installing approximately one mile of 69kV power line underground along Via de la Valle into Del Mar Substation (Phase 1), re-alignment of distribution lines into an underground configuration including gas line relocation (Phase 2) to accommodate removing from service approximately 6 miles of TL666D from Del Mar Substation to Carmel Mountain Rd (Phase 3). The project mitigates NERC reliability violations, ensures the reliability of SDG&E's electric transmission system, and improves outage restoration and maintenance in environmentally sensitive areas.	N/A	Over (O)	Over (O)	Over (O)	Other	No
Capital	Electric Distribution	TL664_668 Miramar Wood to Steel	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Completed	Yes

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
Capital	Electric Distribution	TL676 Mission to Mesa Heights Reconnector	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Completed	Yes
Capital	Electric Distribution	TL697 San Luis Rey Wood to Steel - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Completed	Yes
Capital	Electric Distribution	TL691 Avo-Mon Wood to Steel - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	No	No	N/A	N/A	On Target (T)	Under (U)	Over (O)	Deferred	No
Capital	Electric Distribution	TL6912 Wood to Steel Pole Replacement - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Completed	Yes
Capital	Electric Distribution	TL695 Talega Wood to Steel - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	No	No	N/A	N/A	On Target (T)	Over (O)	Under (U)	Deferred	No
Capital	Electric Distribution	CNF - RAMP	System Hardening	No	Yes	No	This project is complete. The 2023 costs represent post construction remediation activities that are required by the Forest Service. There is a cost variance because the calculation used to impute authorized dollars at the activity level for the GRC post-test years incorporates aspects of the CPUC approved post-test year mechanism for the SDG&E attrition years, which can result in imputed dollars when a project has been completed.	N/A	On Target (T)	On Target (T)	On Target (T)	Completed	Yes

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
Capital	Electric Distribution	TL649 Otay-San Ysidro-Border SW Pole Repl - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Completed	Yes
Capital	Electric Distribution	Fiber Optic for Relay Protect & Telecom	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Electric Distribution	SX-PQ 230 kV Line	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	Rose Canyon TL617 Tap Removal	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	TL690A Pendleton South W2S	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	SONGS Synchronous Condenser	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	Suncrest SVC Interconnection	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	TL13835- Wood to Steel Project	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	New 2nd Miguel to Bay Blvd. 230 kV Line	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	Silver Ridge Mount Signal	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	San Luis Rey	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Completed	No
Capital	Electric Distribution	Miguel Substation 230kV Rebuild	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Distribution	<b>Sub-Total Transm/FERC Driven Projects</b>		<b>Yes</b>	<b>Yes</b>	<b>No</b>							<b>No</b>

ii. SDG&E Electric Distribution Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
Capital	Electric Distribution	Electric Distribution		Yes				
Capital	Electric Distribution	Field Shunt Capacitors	Non-RAMP	No	N/A	This program provides installation of overhead and underground shunt capacitors on 4kV and 12kV distribution circuits.	SDG&E-14-R AFC-21 WP 002090	SDG&E-11-R OR-28 to OR-29 WP 002090
Capital	Electric Distribution	Ocean Ranch 69/12KV Substation	Non-RAMP	No	Project was completed as scheduled in 2019. The calculation used to impute authorized dollars at the activity level for the GRC post-test years incorporates aspects of the CPUC-approved post-test year mechanism for the SDG&E attrition years, which can result in imputed dollars when a project has been completed.	The purpose of this project was to build an ultimate 120MVA substation in the southeastern portion of the City of Oceanside, within the Pacific Coast Business Park, which is part of the Rancho Del Oro Specific Plan area. The new substation will assist with meeting the electric distribution load growth and reliability limitations.	SDG&E-14-R AFC-23 to AFC-24 WP 052530	N/A
Capital	Electric Distribution	Substation 12kV Capacitor Upgrades	Non-RAMP	No	N/A	Replace existing single-step capacitor banks at selected substations with banks of increased capacity and multiple steps. Add capacitor banks where the power factor is below minimum requirements. Add capacitor and reactor banks where the power factor is below minimum requirements.	SDG&E-14-R AFC-24 to AFC-25 WP 082530	SDG&E-11-R OR-32 to OR-33 WP 082530
Capital	Electric Distribution	C1447 MTO: Extension and offload from C958	Non-RAMP	No	Project was completed in 2019. The calculation used to impute authorized dollars at the activity level for the GRC post-test years incorporates aspects of the CPUC-approved post-test year mechanism for the SDG&E attrition years, which can result in imputed dollars when a project has been completed.	Project required installation of a 4 Way SCADA Trayer switch and a padmount SCADA capacitor. The project also included trenching and installation of new conduit as well as underground cable.	SDG&E-14-R AFC-28 WP 162670	N/A
Capital	Electric Distribution	GRID Modernization	Non-RAMP	No	This project was completed in 2020. The original estimated in-service date in the TY 2019 GRC was August 2018.	This project required cutover of load between two existing circuits eliminating an overload and increasing the reliability in the area. The cutover provided available capacity for future growth in the area and reduced loading on the CAN substation.	SDG&E-14-R AFC-27 WP 161420	N/A
Capital	Electric Distribution	Planned Investments	Non-RAMP	No	N/A			
Capital	Electric Distribution	Reactive Small Capital Projects	Non-RAMP	No	N/A			
Capital	Electric Distribution	C1023 LI New 12KV Circuit & Reconductor C354	Non-RAMP	No	Project was completed in 2019. This variance is not due to the project, program, or workpaper being canceled or deferred, but rather due to the calculation used to impute authorized funding at the activity level for the GRC post-test years. The CPUC approved a post-test year mechanism for the SDG&E attrition years rather than a specific funding level by activity for each year.	This project involved installing overhead conductor for the new circuit creating a double circuit pole line with the overloaded circuit 354. The existing circuit 354 reconducted as part of the new double pole line, and relocation of existing capacitors and retagging of all electric distribution equipment being cutover to the new circuit.	SDG&E-14-R AFC-26 to AFC-27 WP 112560	N/A
Capital	Electric Distribution	C1450 MTO: New 12KV Circuit	Non-RAMP	No	Project was completed in 2021. This variance is not due to the project, program, or workpaper being canceled or deferred, but rather due to the calculation used to impute authorized funding at the activity level for the GRC post-test years. The CPUC approved a post-test year mechanism for the SDG&E attrition years rather than a specific funding level by activity for each year.	The purpose of this project is to mitigate an overload and increase the tie capacity in the area. This will be accomplished by installing a new circuit. The new circuit will also enhance the reliability in the area and increase the available capacity.	SDG&E-14-R AFC-28 to AFC-29 WP 162680	N/A
Capital	Electric Distribution	TL633 Reconductor (Bernardo - Rancho Carmel)	Non-RAMP	No	N/A			
Capital	Electric Distribution	Doheny Desalination 15MW Project	Non-RAMP	No	N/A			

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
Capital	Electric Distribution	C1139 Santee - New circuit	Non-RAMP	No	N/A			
Capital	Electric Distribution	Mira Sorrento 138/12KV Substation	Non-RAMP	No	N/A			
Capital	Electric Distribution	Wabash Canyon Sub 60/12kV Bank 32	Non-RAMP	No	N/A			
Capital	Electric Distribution	Distribution System Capacity Improvement	Non-RAMP	No	Several planned project schedules were shifted from 2023 to 2024 due to permitting delays and new business dependencies, resulting in lower than forecasted 2023 construction activity and spend.	This blanket budget provides additional capacity on the distribution system in the heavily loaded areas. These areas have highly loaded circuits (>95% loaded) with limited tie capacity and sectionalizing device capabilities. This budget reduces circuit loading and increases tie capacity and sectionalizing capability. It is intended to provide additional capacity and reliability on the distribution system as required by SDG&E Design Standards. Projects identified within this budget are \$1M or less with quick turnaround time. Projects identified within this budget can consist of minor modifications to the distribution system to reduce the heavily loaded equipment.	SDG&E-14-R AFC-31 WP 972480	SDG&E-11-R OR-44 WP 972480
Capital	Electric Distribution	Sub-Total Capacity/Expansion		Yes				
Capital	Electric Distribution	Electric Distribution Tools/Equipment	Non-RAMP	No	N/A			
Capital	Electric Distribution	Electric Transmission Tools/Equipment	Non-RAMP	No	N/A			
Capital	Electric Distribution	Sub-Total Equip/Tools/Misc.		Yes				
Capital	Electric Distribution	RAMP Base - Corrective Maint Program (CMP)	Inspection, Repair, Maintenance & Replacement Programs	No	N/A			
Capital	Electric Distribution	RAMP Base - DOE Switch/Manhole Replacement	Distribution Switch Maintenance Program	No	N/A	Replacement or removal of underground and overhead switches, and repair of underground structures.	SDG&E-14-R AFC-47 to AFC-48 WP 002890	SDG&E-11-R OR-103 to OR-105 WP 002900
Capital	Electric Distribution	RAMP Base - Replacement of Live Front Equipment	Live Front Transformer and Terminator Replacement	No	N/A	The purpose of this project is to replace live front padmounted distribution equipment with dead front padmounted distribution equipment when it is encountered during normal SDG&E work.	SDG&E-14-R AFC-48 to AFC-49 WP 062470	SDG&E-11-R OR-149 to OR-150 WP 062470
Capital	Electric Distribution	Aerial Marking for Safety	Non-RAMP	No	The Aerial Lighting and Marking program was designed to conduct a system wide assessment of the SDG&E transmission and distribution overhead structures and spans that were energized by August 2015 for FAA compliance. The goals were to get each structure analyzed by a respected 3rd party aviation consultant and submit any non-compliant structures to the FAA for determinations. Structures were identified as to whether they needed to be lit and spans were identified as to whether they needed to be marked. There were no findings in the Distribution system that require remediation. Therefore, there was no distribution capital spend or units. The small amount of actual spend is related to the communication equipment. All projects were completed in 2021.	Comply with state and federal requirements and increase public and employee safety by installing aerial marking and lighting.	SDG&E-14-R AFC-51 to AFC-52 WP 13266A	N/A
Capital	Electric Distribution	RAMP Incremental - Distributed Generation Interconnect	Power Quality Studies of DER Interconnections	No	N/A	This program funds the interconnection of customer or developer owned generation to SDG&E's electric distribution system as established by Electric Rule 21 and the Wholesale Distribution Open Access Tariff (WDAT).	SDG&E-14-R AFC-50 to AFC-51 WP 13264.001	SDG&E-11-R OR-60 to OR-61 WP 132640

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
Capital	Electric Distribution	RAMP Incremental On Ramp Aerial Light - Post Filing	Install Aerial Marking and Lighting	No	Project was completed prior to the current GRC cycle. This variance is not due to the project, program, or workpaper being canceled or deferred, but rather due to the calculation used to impute authorized funding at the activity level for the GRC post-test years. The CPUC approved a post-test year mechanism for the SDG&E attrition years rather than a specific funding level by activity for each year.	This budget provided funding to establish wireless communication aerial lighting to meet the state and federal requirements and increase public and employee safety. The Federal Aviation Administration establishes the standards and notification criteria for the construction or alteration of objects affecting navigable airspace. SDG&E must meet those requirements as well as California State Aeronautics Code Title 21 and local Airport Land Use Commissions.	SDG&E-14-R AFC-50 WP 11144A	N/A
Capital	Electric Distribution	Blue Hornet Solar	Non-RAMP	No	N/A			
Capital	Electric Distribution	Fallbrook Battery Energy Storage - PTO	Non-RAMP	No	N/A			
Capital	Electric Distribution	Gateway Energy Storage	Non-RAMP	No	N/A			
Capital	Electric Distribution	Kettle Solar One	Non-RAMP	No	N/A			
Capital	Electric Distribution	Mount Laguna Wind	Non-RAMP	No	N/A			
Capital	Electric Distribution	Rugged Solar Farm	Non-RAMP	No	N/A			
Capital	Electric Distribution	Top Gun PTO Interconnection	Non-RAMP	No	N/A			
Capital	Electric Distribution	Valley Center Renewable	Non-RAMP	No	N/A			
Capital	Electric Distribution	Elect Transmission Line Reliability Projects	Non-RAMP	No	N/A			
Capital	Electric Distribution	RAMP Base -- Annual Pole Reinforcement (Non-WMP)	GO165: Distribution Inspect and Repair program	No	N/A	This program provides funding to continue the pole restoration, replacement and removal program for electric distribution poles identified through the CMP program.	SDG&E-14-R AFC-52 to AFC-53 WP 872320	SDG&E-11-R OR-62 to OR-63 WP 872320
Capital	Electric Distribution	TL632A Loop-In (Granite)	Non-RAMP	No	N/A			
Capital	Electric Distribution	RAMP Base - Avian Protection Program	Non-RAMP	No	N/A	Systematically inspect all distribution lines and poles in the overhead distribution system that either 1) lie within the Avian Protection Zone, or 2) have associated known bird contacts, in which case potential avian risks are identified and resolved	SDG&E-14-R AFC-49 to AFC-50 WP 102650	SDG&E-11-R OR-58 to OR-60 WP 102650
Capital	Electric Distribution	<b>Sub-Total Mandated</b>		<b>Yes</b>				
Capital	Electric Distribution	Electric Distribution Easements	Non-RAMP	No	N/A			
Capital	Electric Distribution	<b>Sub-Total New Business</b>		<b>Yes</b>				
Capital	Electric Distribution	Electric Meters & Regulators	Non-RAMP	No	N/A	This program provides funding to install distribution meters and regulators necessary to operate and maintain SDG&E's electric distribution system.	SDG&E-14-R AFC-54 to AFC-55 WP 002020	SDG&E-11-R OR-64 to OR-65 WP 002020

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
Capital	Electric Distribution	Transformers	Non-RAMP	No	N/A	This blanket budget provides the funds to purchase new line transformers. Materials are required to support the electric distribution system. The funds for this blanket budget are required to purchase new line transformers to be used to service the electric distribution system's customers. It is required to maintain inventory levels at each of the electric distribution service centers.	SDG&E-14-R AFC-55 to AFC-56 WP 002140	SDG&E-11-R OR-65 WP 002140
<b>Capital</b>	<b>Electric Distribution</b>	<b>Sub-Total Materials</b>		<b>Yes</b>				
Capital	Electric Distribution	Reliability/Improvements Capital Projects	Non-RAMP	No	N/A			
Capital	Electric Distribution	Management of Overhead Distribution Service	Non-RAMP	No	N/A			
Capital	Electric Distribution	Management of Underground Distribution Service	Non-RAMP	No	N/A			
Capital	Electric Distribution	RAMP Base - Cable Replacement	Proactive cable replacement	No	N/A	This program facilitates the replacement of underground cable that was identified to have a high probability of failure based on electric reliability circuit analysis and cable failure data.	SDG&E-14-R AFC-81 to AFC-82 WP 002300	SDG&E-11-R OR-99 to OR-100 WP 002300 SDG&E-11-R OR-102 to OR-103 WP 002380
Capital	Electric Distribution	RAMP Incremental Capital Restoration of Service	Capital improvements	No	N/A	The purpose of this program is to fund reactionary repairs to SDG&E distribution facilities as necessary to restore electric service to customers in a timely manner and in compliance with the CPUC General Orders.	SDG&E-14-R AFC-81 to AFC-82 WP 002360	SDG&E-11-R OR-100 to OR-102 WP 002360
Capital	Electric Distribution	Rebuild Pt Loma Substation	Non-RAMP	No	Project was completed in 2019. This variance is not due to the project, program, or workpaper being canceled or deferred, but rather due to the calculation used to impute authorized funding at the activity level for the GRC post-test years. The CPUC approved a post-test year mechanism for the SDG&E attrition years rather than a specific funding level by activity for each year.	Ultimate 120MVA of capacity with an initial build of replacing five aging 69kV TL breakers and 69kV PTs and rebuilding the 69kV bus. The existing 69/4kV transformer and 4kV rack removed. New control shelter constructed with microprocessor relaying and SCADA installed. The existing 12kV rack removed and three 69/12kV transformers with three sections of 12kV switchgear installed. Two existing open rack 12kV capacitors replaced with new 12kV 7.2MVAR step capacitors.	SDG&E-14-R AFC-82 to AFC-83 WP 012690	N/A
Capital	Electric Distribution	RAMP Incremental - 4 kV Modernization - Distribution	Overhead distribution modernization and hardening	No	N/A			
Capital	Electric Distribution	Sewage Pump Station Rebuilds RAMP Incremental	Rebuild and repair aging infrastructure	No	Project was completed in 2019. This variance is not due to the project, program, or workpaper being canceled or deferred, but rather due to the calculation used to impute authorized funding at the activity level for the GRC post-test years. The CPUC approved a post-test year mechanism for the SDG&E attrition years rather than a specific funding level by activity for each year.	This budget provides funding to rebuild three existing 12/4kV substations which feed City of San Diego owned sewage treatment and pump station facilities based on aging infrastructure and the goal of increased reliability. Point Loma Sewage, Sewage Pump Station #1, and Sewage Pump Station #2 are the three substations associated with this budget. The three substations that are being rebuilt feed the City's operation that pumps all the sewage generated in the city and a large portion of the sewage generated in the county out to be treated before it is pumped into the Pacific Ocean. All three stations need upgrades to the breakers and transformers, as the electrical equipment has reached the end of its life.	SDG&E-14-R AFC-89 to AFC-90 WP 112610	N/A

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
Capital	Electric Distribution	RAMP Base - Condition Based Maintenance - Smart Grid	Conditioned Based Monitoring System	No	This project was completed in 2019 following the successful installation of condition-based maintenance monitoring equipment on all substation transformers in our system	Implement advanced technologies to monitor the health of critical distribution substation assets. The CBM project benefits are centered around better understanding of the health of assets so that proper maintenance activities are identified and performed as needed to achieve greater asset utilization and longevity of use. Additionally, the CBM project has a dependency from the OMS/DMS system which will use portions of the real-time asset information generated by the CBM system to dynamically rate substation transformer load capacity which provides operational benefits aligned with the Smart Grid Deployment plan.	SDG&E-14-R AFC-95 to AFC-96 WP 122660	N/A
Capital	Electric Distribution	Rebuild Kearny 69/12kV Substation	Non-RAMP	No	Project was completed in 2019. This variance is not due to the project, program, or workpaper being canceled or deferred, but rather due to the calculation used to impute authorized funding at the activity level for the GRC post-test years. The CPUC approved a post-test year mechanism for the SDG&E attrition years rather than a specific funding level by activity for each year.	The Kearny Substation rebuild will consist of relocating the existing installation to the west side of the Kearny facility on a larger and more suitable location to accommodate a low profile 120MVA substation. The relocation will be on the existing Kearny facility property zoned for utility use, and therefore will not be subject to any permits. It will be rebuilt on the site once utilized by transformer oil tanks, in the southwest corner of the Kearny facility. This site will allow space for all required expansion to meet existing and projected electric distribution load growth and the ultimate arrangement will allow for feeds to existing generators and proposed battery storage area. It is anticipated that the rebuild will improve Kearny's reliability by 98%. The ultimate arrangement of the substation will consist of five 69kV bays consisting of five 69 kV TL breakers, one 69kV bus tie breaker, four 69 kV bank breakers, one 69kV ground bank and associated breaker, four 30 MVA 69/12 kV low profile transformers, four ¼ sections of switchgear, four 12 kV capacitors, one new control shelter, new relaying, SCADA, five 69 kV transmission lines, and sixteen distribution circuits.	SDG&E-14-R AFC-96 to AFC-97 WP 132420	N/A
Capital	Electric Distribution	New Vine 69/12KV Substation	Non-RAMP	No	Project was completed in 2018. This variance is not due to the project, program, or workpaper being canceled or deferred, but rather due to the calculation used to impute authorized funding at the activity level for the GRC post-test years. The CPUC approved a post-test year mechanism for the SDG&E attrition years rather than a specific funding level by activity for each year.	Build a new 69/12kV substation near the downtown area to serve the downtown and outlying areas in San Diego. Add tie capacity and reliability to existing substations in the area.	SDG&E-14-R AFC-97 to AFC-98 WP 132430	N/A
Capital	Electric Distribution	Streamview 69/12KV Sub Rebuild-Pre Eng	Non-RAMP	No	N/A	The TY2019 workpaper funding and scope focused on the land acquisition and pre-engineering phase of the project. In the TY2024 filing, the project scope and funding request were expanded to include the full scope as defined by the completed project design and schedule. The project will rebuild and expand the existing Streamview substation to comply with present engineering standards and to allow for customer count/load balancing with other substations in the area. This will provide the substation with additional capacity to serve existing area load and future customer-driven electrical load growth, and to enhance the distribution and power network to minimize the potential for service disruptions to existing customers.	SDG&E-14-R AFC-98 WP 132440	SDG&E-11-R OR-108 to OR-109 WP 132440
Capital	Electric Distribution	Poway Substation Rebuild	Poway 69kV Substation Rebuild	No	N/A			



Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
Capital	Electric Distribution	Rancho Santa Fe Sub Fire Hardening	Non-RAMP	No	Project was completed in 2021. This variance is not due to the project, program, or workpaper being canceled or deferred, but rather due to the calculation used to impute authorized funding at the activity level for the GRC post-test years. The CPUC approved a post-test year mechanism for the SDG&E attrition years rather than a specific funding level by activity for each year.	The Rancho Santa Fe Substation fire hardening project will consist of removing the aging 69/4kV substation and cut it over to 12kV padmounts, replacement of aging infrastructure on the 12kV and 69kV equipment, replacement of the 12kV circuit getaways, replacement of the 12.5MVA 69/12kV spare with a 28MVA transformer, and installation of distribution SCADA	SDG&E-14-R AFC-114 to AFC-115 WP 15246	N/A
Capital	Electric Distribution	Vault Restoration	Non-RAMP	No	N/A			
Capital	Electric Distribution	OIR Worst Circuits	Non-RAMP	No	N/A			
Capital	Electric Distribution	San Mateo Substation Rebuild	Non-RAMP	No	N/A			
Capital	Electric Distribution	Avocado Sub 69KV Rebuild	Non-RAMP	No	N/A			
Capital	Electric Distribution	Substation Mod to Support FLISR	Substation Modification To Support FLISR	No	N/A	Install switchgear and replace 12kV breakers, 12kV capacitor banks, and 12kV relaying at San Ysidro Substation.	N/A	SDG&E-11-R OR-116 to OR-118 WP 17243
Capital	Electric Distribution	Electric Distribution Grid Analytics	Non-RAMP	No	N/A			
Capital	Electric Distribution	Distribution Circuit Reliability Construction - RAMP	Expand and Maintain Distribution Advanced SCADA infrastructure	No	N/A	The electric service reliability will deteriorate in the absence of comprehensive remedial solutions offered by these projects, also, electric reliability performance is negatively impacted by system deficiencies and an aging infrastructure. The 93240 budget funds projects that mitigate existing electric system deficiencies, projects for system performance improvements as follows General Reliability, Scada Initiatives and the Community Fire Safety Program.	SDG&E-14-R AFC-106 to AFC-107 WP 932400	SDG&E-11-R OR-143 to OR-144 WP 932400
Capital	Electric Distribution	Power Quality Program	Power Quality Monitor Deployment and Replacement	No	N/A	This program provides funding for the expansion of the substation power quality monitoring system (PQ Nodes) and associated communication system. This system improvement will allow an increase of data to be collected which will result in a more effective grid reliability assessment.	N/A	SDG&E-11-R OR-145 to OR-146 WP 942410
Capital	Electric Distribution	Meteorology Outage Prediction Modeling P2	Non-RAMP	No	This project was completed on schedule in 2018. This variance is not due to the project, program, or workpaper being canceled or deferred, but rather due to the calculation used to impute authorized funding at the activity level for the GRC post-test years. The CPUC approved a post-test year mechanism for the SDG&E attrition years rather than a specific funding level by activity for each year.	This project will use data analytics and historical outage data to predict the impacts from winter storms, lightning storms, or any adverse weather events. Comprehensive models have been built in 2016, phase two will finalize model verification, information visualization and deployment.	SDG&E-14-R AFC-100 to AFC-101 WP 162440	N/A
Capital	Electric Distribution	12kV Substation Reliability	Torrey Pines 12kV Breaker Replacements	No	N/A			
Capital	Electric Distribution	12kV Substation Reliability	El Cajon 12kV Breaker Replacements	No	N/A			
Capital	Electric Distribution	12kV Substation Reliability	Non-RAMP	No	N/A			
Capital	Electric Distribution	12kV Substation Reliability	Granite 12kV Breaker & Switchgear Replacements	No	N/A			
Capital	Electric Distribution	12kV Substation Reliability	Miramar 12kV Replacements	No	N/A			

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Capital	Electric Distribution	Coronado 69/12kV Transformer Replacement	Substation Reliability for Distribution Components - Coronado 69/12kV Transformer Replacements	No	N/A			
Capital	Electric Distribution	La Jolla 69/12kV Transformer Replacement	La Jolla 69/12kV Transformer Replacement	No	N/A			
Capital	Electric Distribution	Non-HFTD WFI	Non-HFTD Wireless Fault Indicator	No	N/A			
Capital	Electric Distribution	Mission 12kV Replacements	Mission 12kV Replacements	No	N/A	This project removes and replaces circuit breaker(s) and relay(s) due to aging infrastructure, operational limitations, environmental concerns, and to meet current reliability standards.	N/A	SDG&E-11-R OR-134 to OR-135 WP 202680
Capital	Electric Distribution	Emergency Substation Equipment	Emergency Transformer and Switchgear	No	N/A			
Capital	Electric Distribution	RAMP - Substation SCADA Expansion-Distribution	Distribution Substation SCADA Expansion	No	N/A	This project provides funding for the installation, upgrades, and expansion of the Supervisory Control and Data Acquisition (SCADA) system at substations for the distribution portion in substations.	SDG&E-14-R AFC-99 to AFC-100 WP 152430	SDG&E-11-R OR-113 to OR-114 WP 152430
Capital	Electric Distribution	Telegraph Canyon 138/12kV Bank & C1226	Non-RAMP	No	This project was completed in 2018. This variance is not due to the project, program, or workpaper being canceled or deferred, but rather due to the calculation used to impute authorized funding at the activity level for the GRC post-test years. The CPUC approved a post-test year mechanism for the SDG&E attrition years rather than a specific funding level by activity for each year.	The project requires trenching and installing conduit as well as 1000 kcmil cable along with removing existing underground cable. Two new PME3 manual switches will be installed and retagging electric distribution equipment.	SDG&E-14-R AFC-86 WP 072450	N/A
Capital	Electric Distribution	Margarita Substation New 12kV Circuit 1259	Non-RAMP	No	This project was completed in 2019. The variance is not due to the project, program, or workpaper being canceled or deferred, but rather due to the calculation used to impute authorized funding at the activity level for the GRC post-test years. The CPUC approved a post-test year mechanism for the SDG&E attrition years rather than a specific funding level by activity for each year.	This budget provides funding to improve reliability in the South Orange County area by transferring load from other circuits to the newly constructed circuit.	SDG&E-14-R AFC-86 WP 092710	N/A
Capital	Electric Distribution	Transmission System Automation	Non-RAMP	No	N/A			
Capital	Electric Distribution	Artesian 230Kv Substation Expansion	Substation Reliability For Distribution Components - Proactive	No	N/A			
Capital	Electric Distribution	High Risk Switch Replacement Project	Distribution Overhead Switch Replacement Program	No	N/A	This project will reduce the risk of catastrophic switch failure by replacing high risk OH switches, in-line switches, and cutouts that are located in environmental contamination and corrosion zones. Their inoperability during an outage can extend the impact of an outage to the next upstream protection device causing a prolonged forced outage as crews are required to install additional jumpers or other workarounds. This equipment will be replaced with new and improved designs and/or dynamic protective devices.	N/A	SDG&E-11-R OR-118 to OR-120 WP 172610
Capital	Electric Distribution	Urban Substation Rebuild	Substation Reliability For Distribution Components - Proactive	No	N/A	Urban Substation was originally constructed in 1976. Presently, the existing 12kV switchgear and capacitors are approximately 35 years old and needs to be replaced due to aging infrastructure and reliability concerns.	N/A	SDG&E-11-R OR-124 to OR-125 WP 192520
Capital	Electric Distribution	Mission Substation 230kV Rebuild	Non-RAMP	No	N/A			

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Capital	Electric Distribution	TL603 Loop-in (Sweetwater, National City, and Naval Station Metering)	Transmission OH Reliability Projects	No	N/A			
Capital	Electric Distribution	TL673 Direct Buried Cable Replacement (Rose Canyon - La Jolla)	Transmission OH Reliability Projects	No	N/A			
Capital	Electric Distribution	TL6975- Escondido - San Marcos	Transmission OH Reliability Projects	No	N/A			
Capital	Electric Distribution	CBM - 4.2 Firmware Upgrade for Transformers	Non-RAMP	No	N/A	Replace/upgrade equipment and existing hardware/software at various substations that is used to monitor and provide numerous data points pertaining to the status of the transformers and ancillary equipment data on the gases forming inside transformers.	N/A	SDG&E-11-R OR-139 to OR-140 WP 202830
Capital	Electric Distribution	Vista Fuel Cell	Non-RAMP	No	N/A	N/A	N/A	N/A
Capital	Electric Distribution	TL698 AVOCADO SUB GATEWAY DB CBL REPLACE	Non-RAMP	No	N/A			
Capital	Electric Distribution	RAMP Base - Install SCADA On-Line Capacitors	Expand and Maintain Distribution Advanced SCADA infrastructure	No	N/A			
Capital	Electric Distribution	TL23001/04 Insulator and Hardware Replacement	Non-RAMP	No	N/A			
Capital	Electric Distribution	Clairemont Substation Rebuild	Non-RAMP	No	N/A			
Capital	Electric Distribution	Shadow Ridge-Install 3rd Bank & Cir 937 & 938	Non-RAMP	No	N/A			
Capital	Electric Distribution	Mission 69kV Sub Rebuild	Mission 69kV Sub Rebuild	No	N/A			
Capital	Electric Distribution	RFS Japanese Mesa Substation	Non-RAMP	No	N/A			
Capital	Electric Distribution	Smart Isolation and Reclosing	Non-RAMP	No	N/A			
Capital	Electric Distribution	Replace Obsolete Substation Equipment - RAMP	Substation rebuild/replacements based on operational significance and SDG&E reliability standards	No	N/A			
Capital	Electric Distribution	<b>Sub-Total Reliability/Improvements</b>		<b>Yes</b>				

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Capital	Electric Distribution	SF6 Switch Replacement	Replace with new technology	No	N/A	The primary objective of this initiative is to reduce environmental risks associated with the potential for SF6 emissions.	SDG&E-14-R AFC-112 to AFC-114 WP 142490	SDG&E-11-R OR-150 to OR-152 WP 142490
Capital	Electric Distribution	Meteorology - Fire Behavior Modeling	Non-RAMP	No	This project was completed in 2019. This variance is not due to the project, program, or workpaper being canceled or deferred, but rather due to the calculation used to impute authorized funding at the activity level for the GRC post-test years. The CPUC approved a post-test year mechanism for the SDG&E attrition years rather than a specific funding level by activity for each year.	This project was created with the objective to modernize and operationalize fire behavior modeling by leveraging the technology developed to run the Wildfire Risk Reduction Model and run that operationally using high performance computing.	SDG&E-14-R AFC-101 to AFC-103 WP 16245A	N/A
Capital	Electric Distribution	Elect Integrity - RAMP (Non-WMP)	Wire Correction, Switch Replacement and Underground Connector Upgrade Program	No	N/A	Overhead small wire and connector replacement.	SDG&E-14-R AFC-117 to AFC-119 WP 162520	N/A
Capital	Electric Distribution	RTU Modernization - RAMP Incremental - SCADA Master Modernization	Modernize Equipment	No	N/A	The project will resolve issues with the current SCADA system. This project will allow SDG&E to address current existing issues and move away from legacy communications protocol which is no longer supported. This project will also allow a more transparent view to our grid which will enhance our reliability and security of the grid. The project will proactively modernized our SCADA Remote Terminal Units (RTU) and replace our old legacy equipment which is no longer supported.	SDG&E-14-R AFC-119 to AFC-120 WP 162550	SDG&E-11-R OR-152 to OR-153 WP 162760 and SDGE-11-R OR-153 to OR-155 WP 162770
Capital	Electric Distribution	NCW New Bank 32 RAMP Incremental - Undergrounding New Circuits	Undergrounding	No	N/A			
Capital	Electric Distribution	Twin Engine Helicopter	Purchase a Twin Engine Helicopter	No	This project was completed on schedule in 2017. This variance is not due to the project, program, or workpaper being canceled or deferred, but rather due to the calculation used to impute authorized funding at the activity level for the GRC post-test years. The CPUC approved a post-test year mechanism for the SDG&E attrition years rather than a specific funding level by activity for each year.	The purchase of a twin-engine helicopter addresses safety risks associated with helicopter operations, as well as providing a more capable aircraft.	SDG&E-14-R AFC-121 to AFC-122 WP 172420	N/A
Capital	Electric Distribution	Tee Modernization Program	Non-RAMP	No	N/A			
Capital	Electric Distribution	Proactive Dead Front Terminator Deploy	Replacement of Live Front Equipment - Proactive	No	N/A	The new dead front terminators (UG 3517, 3518) will be deployed in strategic areas to improve distribution circuit reliability, such as where large customer segments can be further sectionalized in small padmount applications. Funding for this program assumes a target of 15 locations each year where live front terminators currently exist. Limited cable replacements will be included in this work as directly related to making up new cable terminations. This project differs from secondary budget 6247, which is currently utilized by Electric Regional Operations (ERO) to account for live front infrastructure removed in conjunction with other work such as cable replacements.	N/A	SDG&E-11-R OR-158 to OR-160 WP 192410
Capital	Electric Distribution	CAST Security Upgrades	Non-RAMP	No	N/A			
Capital	Electric Distribution	Datamation Secure Cabinet	Non-RAMP	No	N/A			
Capital	Electric Distribution	Rebuilding of Skills Training Yard	Non-RAMP	No	N/A			

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Capital	Electric Distribution	Overhead Public Safety	Overhead distribution modernization and hardening	No	N/A	This program involves proactively replacing high-risk overhead (OH) conductors prone to wire down events measured as tracked by failure rates, historic wire down events, Corrective maintenance program records and lack of protection (fuse or advanced) that are in proximity to the public (schools, freeways, high profile areas) that could put the public at risk of energized contact.	N/A	SDG&E-11-R OR-160 to OR-161 WP 202410
Capital	Electric Distribution	C589 & C753 Damaged Pole Replacements	Non-RAMP	No	N/A			
Capital	Electric Distribution	Mobile Command Trailers (MCT)	Non-RAMP	No	N/A			
Capital	Electric Distribution	Rancho Santa Fe C1001 Wire Down Mit	Non-RAMP	No	N/A			
Capital	Electric Distribution	Transmission EMS/SCADA Reliance Upgrade	Non-RAMP	No	N/A			
Capital	Electric Distribution	Strategic Pole Replacement Program (SPRP)	Non-RAMP	No	N/A			
Capital	Electric Distribution	Substation Security Proj under \$500K	Non-RAMP	No	N/A			
<b>Capital</b>	<b>Electric Distribution</b>	<b>Sub-Total Safety &amp; Risk Management</b>		<b>Yes</b>				
Capital	Electric Distribution	Advanced Energy Storage	Non-RAMP	No	N/A			
Capital	Electric Distribution	Borrego Microgrid 2.0	Non-RAMP	No	Project was completed in 2018. The calculation used to impute authorized units at the activity level for the GRC post test years incorporates aspects of the CPUC-approved post-test year mechanism for the SDG&E attrition year, which can result in imputed dollars when a project has been completed.	The Borrego Springs Microgrid 2.0 project consists of two phases. Phase 1 of the project involves near term solutions to operationalizing the Microgrid, specifically allowing EDO to operate the Microgrid as an asset and the resolution of the Noise Ordinance compliance. Phase 2 of the project involves increasing the operational flexibility and capability of the current Microgrid. This will include hardening key distribution infrastructure, additional SCADA devices, and upgrades to the protection schemes.	SDG&E-14-R AFC-130 to AFC-132 WP 142430	N/A
Capital	Electric Distribution	Borrego Microgrid 3.0	Non-RAMP	No	N/A			
Capital	Electric Distribution	Safety Enhancements for Battery	Non-RAMP	No	N/A			
Capital	Electric Distribution	Borrego Springs Microgrid Generator Replacement	Non-RAMP	No	N/A			
Capital	Electric Distribution	Integrated Test Facility	Non-RAMP	No	N/A	This budget will provide funding to install Grideo secondary regulation devices to correct voltage issues (low or high) on the secondary network (240V). With an increase of photovoltaic (PV) installations, SDG&E has seen a change in voltage profiles. Through AMI analysis, we have found that several distribution circuits have violated the ANSI standard of +/- 5% of nominal. This can cause damage to customer equipment and decrease energy efficiency. By optimizing our voltage profile, we will be more energy efficient and maintain ANSI standards.	SDG&E-14-R AFC-135 to AFC-136 WP 172450	N/A
<b>Capital</b>	<b>Electric Distribution</b>	<b>Sub-Total DER Integration</b>		<b>Yes</b>				

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Capital	Electric Distribution	Transmission Substation Reliability	Non-RAMP	No	N/A			
Capital	Electric Distribution	Orange County Long Range Plan - SOCRE	Non-RAMP	No	N/A			
Capital	Electric Distribution	Los Coches Substation 138/69kV Rebuild	Non-RAMP	No	This project was completed in 2019. The calculation used to impute authorized units at the activity level for the GRC post-test years incorporates aspects of the CPUC-approved post-test year mechanism for the SDG&E attrition years, which can result in imputed dollars when a project has been completed.	The Business Purpose is to rebuild Los Coches 138/69/12kV substation due to reliability concerns. Los Coches substation is an existing SDG&E 138/69/12kV substation constructed in 1950's. Banks 50 and 51 are approaching end of their useful life, they are smaller than the current standard size transformers and under N-1 condition, one transformer out of service, the remaining transformer cannot handle the load. The 138kV and 69kV buses are at capacity, undersized and do not meet current seismic specification. The 12kV yard is at capacity with no room for installing the 4th 69/12kV distribution transformer.	SDG&E-14-R AFC-145 to AFC-146 WP 101350	N/A
Capital	Electric Distribution	TL663 Mission to Kearny Reconductor	Non-RAMP	No	Project was completed in 2021. The calculation used to impute authorized units at the activity level for the GRC post-test years incorporates aspects of the CPUC-approved post-test year mechanism for the SDG&E attrition years, which can result in imputed dollars when a project has been completed.	The Business Purpose is to provide a long term "wires" mitigation for the identified NERC CAT B reliability criteria indications. Availability of the short-term non-wires option of depending on the pre-contingency dispatch of the Kearny gas turbines to provide loading relief is no longer available after 2013. Additionally, SDG&E does not consider reliance on pre-contingency gas turbine dispatch as a suitable long-term solution for sustained NERC reliability criteria indications.	SDG&E-14-R AFC-149 to AFC-150 WP 111260	N/A
Capital	Electric Distribution	TL600 - Reliability Pole Replacements	Non-RAMP	No	N/A			
Capital	Electric Distribution	TL674A Del Mar Reconfigure/TL666D RFS	Non-RAMP	No	N/A	This project is for a Del Mar Sub Remove From Service (RFS) TL666D [Del Mar Sub - Del Mar Tap]. At Via De La Valle, RFS the existing Tap on TL674 [EN-NCW-SF] and build two circuits: Del Mar - North City West and Encinitas - Rancho Santa FE. Terminate the new Del Mar - North City West circuit and the old TL666D CB.	SDG&E-14-R AFC-153 WP 131300	SDG&E-11-R OR-171 to OR-172 WP 131300
Capital	Electric Distribution	TL664_668 Miramar Wood to Steel	Non-RAMP	No	This project was completed in 2017 on schedule. This variance is not due to the project, program, or workpaper being canceled or deferred, but rather due to the calculation used to impute authorized funding at the activity level for the GRC post-test years. The CPUC approved a post-test year mechanism for the SDG&E attrition years rather than a specific funding level by activity for each year.	To reinforce OH infrastructure and replace poles that are out of compliance. Replace approximately 21 wood poles with 14 steel direct-buried poles and 7 engineered steel foundation poles along a portion of the TL664 & TL668 transmission lines. All existing conductor is transferred to the new poles.	SDG&E-14-R AFC-150 to AFC-151 WP 111330	N/A

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Capital	Electric Distribution	TL676 Mission to Mesa Heights Reconnector	Non-RAMP	No	Project completed in 2020. This variance is not due to the project, program, or workpaper being canceled or deferred, but rather due to the calculation used to impute authorized funding at the activity level for the GRC post-test years. The CPUC approved a post-test year mechanism for the SDG&E attrition years rather than a specific funding level by activity for each year.	The scope of the project includes reconductoring 4.3 miles of 2 636 ACSR/AW to 2 636 ACSS, replacing all 93 existing wood poles with wood equivalent steel poles, removing the existing cable pole, constructing a new double circuit trench, and erecting a new double circuit steel cable pole in the franchise position. This scope of work will provide a line capable of a new minimum continuous rating of 204MVA. In addition, Mesa Heights substation will require replacement of two disconnect switches from 1200A to 2000A and the rebuilding of a portion of the south bus from 2 inch aluminum to 3.5 inch aluminum. No work is required at Mission substation. Distribution scope typically consists of transfers for the pole replacements though segments of reconductoring have been identified and added to the scope.	SDG&E-14-R AFC-145 WP 091530	N/A
Capital	Electric Distribution	TL697 San Luis Rey Wood to Steel - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	Project completed in 2018 as scheduled. This variance is not due to the project, program, or workpaper being canceled or deferred, but rather due to the calculation used to impute authorized funding at the activity level for the GRC post-test years. The CPUC approved a post-test year mechanism for the SDG&E attrition years rather than a specific funding level by activity for each year.	Replace existing wires (reconductor) and replace (42) wood pole structures with new dull galvanized steel pole structures. Total length is approximately 3.3 miles from San Luis Rey to Oceanside substation and located within a 60' SDG&E ROW (shared with TL690A)	SDG&E-14-R AFC-148 to AFC-149 WP 101470	N/A
Capital	Electric Distribution	TL691 Avo-Mon Wood to Steel - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	N/A			
Capital	Electric Distribution	TL6912 Wood to Steel Pole Replacement - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	This project is complete and was put in-service in 2020. There is a cost variance because the calculation used to impute authorized dollars at the activity level for the GRC post-test years incorporates aspects of the CPUC approved post-test year mechanism for the SDG&E attrition years, which can result in imputed dollars when a project has been completed.	Replace (75) wood poles with a combination of direct buried steel poles and equivalent (SW) poles and self-supporting tubular steel poles on concrete anchor bolt foundation or micropile foundations. Approximately 5.5 miles from San Luis Rey to Pendleton substation.	SDG&E-14-R AFC-149 WP 10149A	N/A
Capital	Electric Distribution	TL695 Talega Wood to Steel - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	N/A			
Capital	Electric Distribution	CNF - RAMP	System Hardening	No	This project is complete. The 2023 costs represent post construction remediation activities that are required by the Forest Service. There is a cost variance because the calculation used to impute authorized dollars at the activity level for the GRC post-test years incorporates aspects of the CPUC approved post-test year mechanism for the SDG&E attrition years, which can result in imputed dollars when a project has been completed.	The Cleveland National Forest (CNF) Fire Hardening program hardened transmission and distribution electric infrastructure within CNF boundaries through replacing wood poles with steel poles, replacing aged conductor with new high-strength conductor, and associated upgrades. The CNF hardening projects were all completed in 2021 but environmental restoration costs will continue.	SDG&E-14-R AFC-143 to AFC-144 WP 081650	SDG&E-13-2R-E JTW-130 to JTW-132 CWP 081650

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Capital	Electric Distribution	TL649 Otay-San Ysidro-Border SW Pole Repl - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	This overall project was completed in 2020 and distribution underbuild miles installed in 2019. This variance is not due to the project, program, or workpaper being canceled or deferred, but rather due to the calculation used to impute authorized funding at the activity level for the GRC post-test years. The CPUC approved a post-test year mechanism for the SDG&E attrition years rather than a specific funding level by activity for each year.	Replace wood infrastructure with steel infrastructure within established fire threat zones to increase fire safety and service reliability.	SDG&E-14-R AFC-145 WP 091530	N/A
Capital	Electric Distribution	Fiber Optic for Relay Protect & Telecom	Non-RAMP	No	N/A			
Capital	Electric Distribution	SX-PQ 230 kV Line	Non-RAMP	No	N/A			
Capital	Electric Distribution	Rose Canyon TL617 Tap Removal	Non-RAMP	No	N/A			
Capital	Electric Distribution	TL690A Pendleton South W2S	Non-RAMP	No	N/A			
Capital	Electric Distribution	SONGS Synchronous Condenser	Non-RAMP	No	N/A			
Capital	Electric Distribution	Suncrest SVC Interconnection	Non-RAMP	No	N/A			
Capital	Electric Distribution	TL13835- Wood to Steel Project	Non-RAMP	No	N/A			
Capital	Electric Distribution	New 2nd Miguel to Bay Blvd. 230 kV Line	Non-RAMP	No	N/A			
Capital	Electric Distribution	Silver Ridge Mount Signal	Non-RAMP	No	N/A			
Capital	Electric Distribution	San Luis Rey	Non-RAMP	No	N/A			
Capital	Electric Distribution	Miguel Substation 230kV Rebuild	Non-RAMP	No	N/A			
Capital	Electric Distribution	<b>Sub-Total Transm/FERC Driven Projects</b>		<b>Yes</b>				



**B. SDG&E Electric Generation**  
**i.SDG&E Electric Generation O&M**

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Electric Generation	Electric Generation		Yes			36,664	33,490	37,168	39,804	49,549	196,674	41,070	42,156	43,197	44,056	45,050	215,529
O&M	Electric Generation	Generation - Plant - Admin	Non-RAMP	No	On-going	Annual	246	246	270	268	276	1,306	379	389	399	407	416	1,990
O&M	Electric Generation	Generation Plant Miramar	Non-RAMP	No	On-going	Annual	1,313	2,172	1,975	2,323	1,239	9,023	2,520	2,587	2,651	2,703	2,764	13,225
O&M	Electric Generation	Generation Plant Miramar	Maintenance Certification and testing of existing Blackstart Resources	No	On-going	Annual	15	11	4	2	30	63	22	23	23	24	24	115
O&M	Electric Generation	<b>Sub-Total Generation Plant Miramar</b>		<b>Yes</b>			<b>1,328</b>	<b>2,183</b>	<b>1,980</b>	<b>2,325</b>	<b>1,270</b>	<b>9,086</b>	<b>2,542</b>	<b>2,609</b>	<b>2,674</b>	<b>2,727</b>	<b>2,788</b>	<b>13,341</b>
O&M	Electric Generation	Generation Plant Palomar	Non-RAMP	No	On-going	Annual	19,985	15,303	19,439	22,033	31,515	108,275	19,712	20,234	20,733	21,146	21,623	103,448
O&M	Electric Generation	Electric Project Development	Non-RAMP	No	On-going	Canceled	1	1	0	0	0	2	131	135	138	141	144	690
O&M	Electric Generation	Generation Plant Desert Star	Non-RAMP	No	On-going	Annual	13,462	13,820	13,769	12,853	14,664	68,568	16,282	16,712	17,125	17,465	17,859	85,443
O&M	Electric Generation	Generation Plant Cuyamaca Peak	Non-RAMP	No	On-going	Annual	733	1,049	1,102	1,785	1,059	5,728	1,131	1,161	1,189	1,213	1,240	5,933
O&M	Electric Generation	Generation Plant Cuyamaca Peak	Add blackstart capabilities to the southern part of the SDG&E electric system.	No	On-going	Annual	—	7	12	2	6	27	22	23	23	24	24	115
O&M	Electric Generation	<b>Sub-Total Generation Plant Cuyamaca Peak</b>		<b>Yes</b>			<b>733</b>	<b>1,056</b>	<b>1,114</b>	<b>1,787</b>	<b>1,065</b>	<b>5,755</b>	<b>1,153</b>	<b>1,183</b>	<b>1,212</b>	<b>1,236</b>	<b>1,264</b>	<b>6,049</b>
O&M	Electric Generation	Resource Planning Director	Non-RAMP	No	On-going	Annual	908	880	597	537	760	3,682	871	894	916	934	955	4,570

**B. SDG&E Electric Generation**  
**i.SDG&E Electric Generation O&M**

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Electric Generation	Electric Generation		Yes	(4,406)	(8,666)	(6,029)	(4,253)	4,499	(18,855)	-11%	-21%	-14%	-10%	10%	-9%
O&M	Electric Generation	Generation - Plant - Admin	Non-RAMP	No	(133)	(143)	(129)	(139)	(140)	(683)	-35%	-37%	-32%	-34%	-34%	-34%
O&M	Electric Generation	Generation Plant Miramar	Non-RAMP	No	(1,207)	(415)	(675)	(381)	(1,525)	(4,202)	-48%	-16%	-25%	-14%	-55%	-32%
O&M	Electric Generation	Generation Plant Miramar	Maintenance Certification and testing of existing Blackstart Resources	No	(7)	(11)	(19)	(21)	6	(52)	-32%	-49%	-81%	-90%	25%	-45%
O&M	Electric Generation	<b>Sub-Total Generation Plant Miramar</b>		<b>Yes</b>	<b>(1,214)</b>	<b>(426)</b>	<b>(694)</b>	<b>(402)</b>	<b>(1,519)</b>	<b>(4,255)</b>	<b>-48%</b>	<b>-16%</b>	<b>-26%</b>	<b>-15%</b>	<b>-54%</b>	<b>-32%</b>
O&M	Electric Generation	Generation Plant Palomar	Non-RAMP	No	273	(4,931)	(1,294)	887	9,892	4,828	1%	-24%	-6%	4%	46%	5%
O&M	Electric Generation	Electric Project Development	Non-RAMP	No	(131)	(134)	(138)	(141)	(144)	(688)	-100%	-100%	-100%	-100%	-100%	-100%
O&M	Electric Generation	Generation Plant Desert Star	Non-RAMP	No	(2,819)	(2,892)	(3,356)	(4,612)	(3,196)	(16,875)	-17%	-17%	-20%	-26%	-18%	-20%
O&M	Electric Generation	Generation Plant Cuyamaca Peak	Non-RAMP	No	(397)	(111)	(87)	572	(182)	(206)	-35%	-10%	-7%	47%	-15%	-3%
O&M	Electric Generation	Generation Plant Cuyamaca Peak	Add blackstart capabilities to the southern part of the SDG&E electric system.	No	(22)	(16)	(11)	(21)	(18)	(88)	-100%	-70%	-48%	-90%	-75%	-76%
O&M	Electric Generation	<b>Sub-Total Generation Plant Cuyamaca Peak</b>		<b>Yes</b>	<b>(419)</b>	<b>(127)</b>	<b>(98)</b>	<b>551</b>	<b>(200)</b>	<b>(294)</b>	<b>-36%</b>	<b>-11%</b>	<b>-8%</b>	<b>45%</b>	<b>-16%</b>	<b>-5%</b>
O&M	Electric Generation	Resource Planning Director	Non-RAMP	No	37	(14)	(319)	(397)	(195)	(888)	4%	-2%	-35%	-43%	-20%	-19%

B. SDG&E Electric Generation  
iSDG&E Electric Generation O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
O&M	Electric Generation	Electric Generation		Yes																										
O&M	Electric Generation	Generation - Plant - Admin	Non-RAMP	No	FTE	1	1	1	1	1	5	2	2	2	2	2	10	(1)	(1)	(1)	(1)	(1)	(5)	-50%	-50%	-50%	-50%	-50%	-50%	
O&M	Electric Generation	Generation Plant Miramar	Non-RAMP	No	Plant Equivalent Operating Hours	18,575	15,198	5,617	8,493	5,604	53,487	24,863	24,863	24,863	24,863	24,863	124,315	(6,288)	(9,665)	(19,246)	(16,370)	(19,259)	(70,828)	-25%	-39%	-77%	-66%	-77%	-57%	
O&M	Electric Generation	Generation Plant Miramar	Maintenance Certification and testing of existing Blackstart Resources	No	FTE	—	—	—	—	0	0	0	0	0	0	1	-0	-0	-0	-0	-0	-0	(0)	-100%	-100%	-100%	-100%	-60%	-92%	
O&M	Electric Generation	Sub-Total Generation Plant Miramar		Yes																										
O&M	Electric Generation	Generation Plant Palomar	Non-RAMP	No	Plant Equivalent Operating Hours	19,871	26,713	22,918	23,610	16,521	109,633	25,427	25,427	25,427	25,427	25,427	127,135	(5,556)	1,286	(2,509)	(1,817)	(8,905.7)	(17,502)	-22%	5%	-10%	-7%	-35%	-14%	
O&M	Electric Generation	Electric Project Development	Non-RAMP	No	FTE	—	—	—	—	—	—	1	1	1	1	1	4	(1)	(1)	(1)	(1)	(1)	(4)	-100%	-100%	-100%	-100%	-100%	-100%	
O&M	Electric Generation	Generation Plant Desert Star	Non-RAMP	No	Plant Equivalent Operating Hours	24,434	20,093	13,318	15,812	26,493	100,150	17,985	17,985	17,985	17,985	17,985	89,925	6,449	2,108	(4,667)	(2,173)	8,508	10,225	36%	12%	-26%	-12%	47%	11%	
O&M	Electric Generation	Generation Plant Cuyamaca Peak	Non-RAMP	No	Plant Equivalent Operating Hours	6,463	4,801	5,960	4,551	4,028	25,803	11,565	11,565	11,565	11,565	11,565	57,825	(5,102)	(6,764)	(5,605)	(7,014)	(7,537)	(32,022)	-44%	-58%	-48%	-61%	-65%	-55%	
O&M	Electric Generation	Generation Plant Cuyamaca Peak	Add blackstart capabilities to the southern part of the SDG&E electric system.	No	FTE	—	0	—	—	0	0	0	0	0	0	1	-0	0	-0	-0	-0	-0	(0)	-100%	—%	-100%	-100%	-90%	-78%	
O&M	Electric Generation	Sub-Total Generation Plant Cuyamaca Peak		Yes																										
O&M	Electric Generation	Resource Planning Director	Non-RAMP	No	FTE	6	4	4	3	4	20	5	5	5	5	5	25	1	(1)	(2)	(2)	(1)	(5)	10%	-14%	-30%	-38%	-22%	-19%	

**B. SDG&E Electric Generation**  
**iSDG&E Electric Generation O&M**

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Electric Generation	Electric Generation		Yes									
O&M	Electric Generation	Generation - Plant - Admin	Non-RAMP	No	No	Yes	N/A	Underrun in FTEs is due to Principal Business Analyst position in 2019 GRC labor forecast not filled in 2023.	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Electric Generation	Generation Plant Miramar	Non-RAMP	No	No	Yes	N/A	Underrun in plant equivalent operating hours is due to Miramar Plant dispatched less in 2023 causing lower number of starts and service hours.	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Electric Generation	Generation Plant Miramar	Maintenance Certification and testing of existing Blackstart Resources	No	No	Yes	N/A	Underrun in FTEs for Miramar Blackstart facility is due to lower maintenance and testing. Recertification completed in 2023.	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Electric Generation	Sub-Total Generation Plant Miramar		Yes	No								No
O&M	Electric Generation	Generation Plant Palomar	Non-RAMP	No	Yes	Yes	Variance is due to Palomar Energy Center completing an extended maintenance outage, which included a major inspection/overhaul to the the steam turbine, in 2023.	Underrun in plant equivalent operating hours is due to Palomar Energy Center completing an extended maintenance outage in 2023. The extended outage caused the plant to have lower starts and service hours.	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Electric Generation	Electric Project Development	Non-RAMP	No	No	Yes	N/A	Underrun in FTEs is due to Manager - Electric Project Development position in 2019 GRC labor forecast not filled in 2023.	Under (U)	Under (U)	Under (U)	Canceled	No
O&M	Electric Generation	Generation Plant Desert Star	Non-RAMP	No	No	Yes	N/A	Overrun in plant equivalent operating hours is due to Desert Star Plant dispatched more in 2023 causing higher number of starts and service hours.	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Electric Generation	Generation Plant Cuyamaca Peak	Non-RAMP	No	No	Yes	N/A	Underrun in plant equivalent operating hours is due to Cuyamaca Plant dispatched less in 2023 causing lower number of starts and service hours.	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Electric Generation	Generation Plant Cuyamaca Peak	Add blackstart capabilities to the southern part of the SDG&E electric system.	No	No	Yes	N/A	Underrun in FTEs for Cuyamaca Peak Blackstart facility is due to lower maintenance and testing and no certification performed in 2023.	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Electric Generation	Sub-Total Generation Plant Cuyamaca Peak		Yes	No								No
O&M	Electric Generation	Resource Planning Director	Non-RAMP	No	No	Yes	N/A	Underrun in FTEs is due to lower than forecasted staffing levels associated with Resource Planning.	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No

B. SDG&E Electric Generation  
i.SDG&E Electric Generation O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Electric Generation	Electric Generation		Yes				
O&M	Electric Generation	Generation - Plant - Admin	Non-RAMP	No	N/A	Generation Plant Administration includes labor for (1) Director of Generation, labor for: (1) Principal Business Analyst, and associated administrative expenses. This activity provides managerial oversight, plant cost analysis and budgeting for all generating facilities.	SDG&E-16 DSB-22 WP 1EG001.000	SDG&E-14-E DSB-14 WP 1EG001.000
O&M	Electric Generation	Generation Plant Miramar	Non-RAMP	No	N/A	Generation Plant Miramar encompasses the operation and maintenance of (2) peaking plants at the Miramar Energy Facility. Labor costs include Supervision, Maintenance, Operations, and Engineering personnel. Non-labor costs include items such as industrial gases, water, and maintenance parts and activities.	SDG&E-16 DSB-20 WP 1EG002.000	SDG&E-14-E DSB-11 WP 1EG002.000
O&M	Electric Generation	Generation Plant Miramar	Maintenance Certification and testing of existing Blackstart Resources	No	N/A	Generation Plant Miramar encompasses the operation and maintenance of (2) peaking plants at the Miramar Energy Facility. Labor costs include Supervision, Maintenance, Operations, and Engineering personnel. Non-labor costs include items such as industrial gases, water, and maintenance parts and activities.	SDG&E-16 DSB-20 WP 1EG002.000	SDG&E-14-E DSB-11 WP 1EG002.000
O&M	Electric Generation	Sub-Total Generation Plant Miramar		Yes				
O&M	Electric Generation	Generation Plant Palomar	Non-RAMP	No	N/A	Generation Plant Palomar encompasses the operation and maintenance of the Combined Cycle Generating Plant at Palomar Energy Center. Labor costs include Supervision, Maintenance, Operations and Engineering personnel. Non-labor costs include items such as industrial gases, chemicals, water, and maintenance parts and activities.	SDG&E-16 DSB-18 WP 1EG003.000	SDG&E-14-E DSB-10 WP 1EG003.000
O&M	Electric Generation	Electric Project Development	Non-RAMP	No	N/A	Electric Project Development includes labor for (1) Manager - Electric Project Development and associated administrative expenses. This activity was intended to provide project management and business planning for existing and planned electric projects.	SDG&E-16 DSB-22 WP 1EG004.000	N/A
O&M	Electric Generation	Generation Plant Desert Star	Non-RAMP	No	N/A	Generation Plant Desert Star encompasses the operation and maintenance of the Plant at the Desert Star Energy Center. Labor costs include Supervision, Maintenance, and Operational expenses. Non-labor costs include items such as industrial gases, chemicals, water, outside services, and maintenance parts and activities.	SDG&E-16 DSB-19 WP 1EG006.000	SDG&E-14-E DSB-10 WP 1EG006.000
O&M	Electric Generation	Generation Plant Cuyamaca Peak	Non-RAMP	No	N/A	Generation Plant Cuyamaca Peak encompasses the operation and maintenance of the Peaking Plant at the Cuyamaca Peak Energy Plant. Labor costs include Supervision, Maintenance, and Operational expenses. Non-labor costs include items such as industrial gases, demineralized water, and maintenance parts and activities.	SDG&E-16 DSB-20 - DSB-21 WP 1EG007.000	SDG&E-14-E DSB-12 WP 1EG007.000
O&M	Electric Generation	Generation Plant Cuyamaca Peak	Add blackstart capabilities to the southern part of the SDG&E electric system.	No	N/A	Generation Plant Cuyamaca Peak encompasses the operation and maintenance of the Peaking Plant at the Cuyamaca Peak Energy Plant. Labor costs include Supervision, Maintenance, and Operational expenses. Non-labor costs include items such as industrial gases, demineralized water, and maintenance parts and activities.	SDG&E-16 DSB-20 - DSB-21 WP 1EG007.000	SDG&E-14-E DSB-12 WP 1EG007.000
O&M	Electric Generation	Sub-Total Generation Plant Cuyamaca Peak		Yes				
O&M	Electric Generation	Resource Planning Director	Non-RAMP	No	N/A	Resource Planning is responsible for planning the long-term electric generation needs of SDG&E's bundled customers as well as planning for adequate resources to meet local capacity requirements of all customers.	SDG&E-16 DSB-8 WP 2100-3433.000	SDG&E-10 CAS-21 - CAS-23 WP 1EP004.000

**B. SDG&E Electric Generation**  
**ii. SDG&E Electric Generation Capital**

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
Capital	Electric Generation	Electric Generation		Yes			12,314	18,521	43,664	16,459	18,846	109,804	12,971	15,463	15,828	16,098	16,394	76,754
Capital	Electric Generation	Generation Capital Tools & Test Eqpt.	Non-RAMP	No	On-going	Annual	56	92	53	46	38	285	297	230	235	239	244	1,246
Capital	Electric Generation	Miramar	Non-RAMP	No	On-going	Annual	975	6,080	1,009	167	349	8,581	2,784	3,182	3,257	3,312	3,373	15,909
Capital	Electric Generation	Palomar Plant Operational Improvements	Non-RAMP	No	On-going	Annual	5,751	5,970	8,862	4,781	6,123	31,487	5,774	4,890	5,005	5,090	5,184	25,943
Capital	Electric Generation	Desert Star Energy Ctr Oper. Enhance	Non-RAMP	No	On-going	Annual	3,579	3,871	9,879	3,914	2,386	23,630	3,627	3,875	3,966	4,034	4,108	19,609
Capital	Electric Generation	Cuyamaca Peak Energy Plant Oper Enhance	Non-RAMP	No	On-going	Annual	1,946	982	281	1,254	374	4,837	489	393	402	409	416	2,109
Capital	Electric Generation	RAMP - Incremental Black Start - South Grid - CPEP	Add blackstart capabilities to the southern part of the SDG&E electric system	No	On-going	Annual	—	1,408	34	—	—	1,442	—	317	325	330	336	1,309
Capital	Electric Generation	Solar Photovoltaic Initiative	Non-RAMP	No	On-going	Annual	(0)	—	(2)	—	—	(2)	—	2,577	2,638	2,683	2,732	10,630
Capital	Electric Generation	Palomar Adv Gas Path Overhaul	Non-RAMP	No	On-going	Annual	—	—	22,323	—	—	22,323	—	—	—	—	—	—
Capital	Electric Generation	Palomar Green Hydrogen Systems	Non-RAMP	No	On-going	Annual	—	—	1,224	6,254	9,204	16,681	—	—	—	—	—	—
Capital	Electric Generation	Escondido BESS Operational Enhancements	Non-RAMP	No	On-going	Annual	—	—	—	9	357	366	—	—	—	—	—	—
Capital	Electric Generation	El Cajon BESS Operational Enhancements	Non-RAMP	No	On-going	Annual	—	—	—	9	6	15	—	—	—	—	—	—
Capital	Electric Generation	Top Gun BESS Operational Enhancements	Non-RAMP	No	On-going	Annual	—	—	—	26	6	32	—	—	—	—	—	—
Capital	Electric Generation	Ramona Solar Plant Oper Enhance	Non-RAMP	No	On-going	Annual	6	118	—	—	—	124	—	—	—	—	—	—
Capital	Electric Generation	Miguel VRF-Battery Facilities Enhancements	Non-RAMP	No	On-going	Annual	—	—	—	—	3	3	—	—	—	—	—	—

**B. SDG&E Electric Generation**  
**ii. SDG&E Electric Generation Capital**

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
Capital	Electric Generation	Electric Generation		Yes	(657)	3,058	27,836	361	2,453	33,050	-5%	20%	176%	2%	15%	43%
Capital	Electric Generation	Generation Capital Tools & Test Eqpt.	Non-RAMP	No	(241)	(138)	(183)	(194)	(206)	(961)	-81%	-60%	-78%	-81%	-84%	-77%
Capital	Electric Generation	Miramar	Non-RAMP	No	(1,809)	2,898	(2,248)	(3,145)	(3,024)	(7,327)	-65%	91%	-69%	-95%	-90%	-46%
Capital	Electric Generation	Palomar Plant Operational Improvements	Non-RAMP	No	(23)	1,080	3,858	(310)	939	5,544	-0%	22%	77%	-6%	18%	21%
Capital	Electric Generation	Desert Star Energy Ctr Oper. Enhance	Non-RAMP	No	(47)	(3)	5,913	(119)	(1,722)	4,021	-1%	-0%	149%	-3%	-42%	21%
Capital	Electric Generation	Cuyamaca Peak Energy Plant Oper Enhance	Non-RAMP	No	1,457	589	(121)	845	(43)	2,727	298%	150%	-30%	207%	-10%	129%
Capital	Electric Generation	RAMP - Incremental Black Start - South Grid - CPEP	Add blackstart capabilities to the southern part of the SDG&E electric system	No	—	1,091	(291)	(330)	(336)	133	—%	344%	-89%	-100%	-100%	10%
Capital	Electric Generation	Solar Photovoltaic Initiative	Non-RAMP	No	(0)	(2,577)	(2,639)	(2,683)	(2,732)	(10,632)	100%	-100%	-100%	-100%	-100%	-100%
Capital	Electric Generation	Palomar Adv Gas Path Overhaul	Non-RAMP	No	—	—	22,323	—	—	22,323	—%	—%	100%	—%	—%	100%
Capital	Electric Generation	Palomar Green Hydrogen Systems	Non-RAMP	No	—	—	1,224	6,254	9,204	16,681	—%	—%	100%	100%	100%	100%
Capital	Electric Generation	Escondido BESS Operational Enhancements	Non-RAMP	No	—	—	—	9	357	366	—%	—%	—%	100%	100%	100%
Capital	Electric Generation	El Cajon BESS Operational Enhancements	Non-RAMP	No	—	—	—	9	6	15	—%	—%	—%	100%	100%	100%
Capital	Electric Generation	Top Gun BESS Operational Enhancements	Non-RAMP	No	—	—	—	26	6	32	—%	—%	—%	100%	100%	100%
Capital	Electric Generation	Ramona Solar Plant Oper Enhance	Non-RAMP	No	6	118	—	—	—	124	100%	100%	—%	—%	—%	100%
Capital	Electric Generation	Miguel VRF-Battery Facilities Enhancements	Non-RAMP	No	—	—	—	—	3	3	—%	—%	—%	—%	100%	100%

**B. SDG&E Electric Generation**  
**ii. SDG&E Electric Generation Capital**

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance						
Capital	Electric Generation	Electric Generation		Yes																															
Capital	Electric Generation	Generation Capital Tools & Test Eqpt.	Non-RAMP	No	Acquisition of mechanical tools, plant test and analysis equipment (meters, cameras, volt detectors, videoscopes, other equipment). The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																														
Capital	Electric Generation	Miramar	Non-RAMP	No	2023 Actual project spend that increased the overall reliability, operability and safety of the Miramar Plant including modified pedestrian access, battery monitoring, cyber security suite upgrade, and various electrical, mechanical and instrumentation improvement projects. These projects are comparable to the type of projects reflected in the Imputed Authorized amounts; however, because these plants have a variety of capital activities, the units and the costs vary year over year.																														
Capital	Electric Generation	Palomar Plant Operational Improvements	Non-RAMP	No	2023 Actual project spend that increased the overall reliability, operability and safety of the Palomar Plant including upgrades to combustion turbine Load Commutated Inverter (LCI) units, upgrades to generator exciter units, valve replacements, piping and insulation upgrades, cyber security suite upgrade, and various electrical, mechanical and instrument improvement projects. These projects are comparable to the type of projects reflected in the imputed authorized amounts; however, because these plants have a variety of capital activities, the units and the costs vary year over year.																														
Capital	Electric Generation	Desert Star Energy Ctr Oper. Enhance	Non-RAMP	No	2023 actual project spend that increased the overall reliability, operability and safety of the Desert Star Plant including , redesign of hot reheat bypass desuperheater, physical security improvements, Air Cooled Condenser (ACC) fan motor upgrade, electrical building HVAC upgrade, Heat Recovery Steam Generator (HRSG) drain pipe replacement and various electrical, mechanical and instrumentation improvement projects. These projects are comparable to the type of projects reflected in the imputed authorized amounts; however, because these plants have a variety of capital activities, the units and the costs vary year over year.																														
Capital	Electric Generation	Cuyamaca Peak Energy Plant Oper Enhance	Non-RAMP	No	2023 Actual project spend that increased the overall reliability, operability and safety of the Cuyamaca Plant including fire protection system upgrade, cyber security suite upgrade, and various electrical, mechanical and instrumentation improvement projects. These projects are comparable to the type of projects reflected in the imputed authorized amounts; however, because these plants have a variety of capital activities, the units and the costs vary year over year.																														
Capital	Electric Generation	RAMP - Incremental Black Start - South Grid - CPEP	Add blackstart capabilities to the southern part of the SDG&E electric system	No	Capital project to provide black start capability for the southern part of the SDG&E electric grid. Project activities included site preparation and permitting, and acquisition and installation of a small size gas generator for black start. The 2019 GRC Workpaper assumed the project would be completed in 2018 and was completed in 2020. The CPUC approved a post-test year mechanism for the SDG&E attrition years rather than a specific funding level by activity for each year.																														
Capital	Electric Generation	Solar Photovoltaic Initiative	Non-RAMP	No	The capital project to construct a utility-owned 4.95 MWdc solar photovoltaic facility, developed under the CPUC Solar Energy program, was completed in 2017. The 2019 GRC Workpaper assumed the project would be completed in 2017 and was completed in 2017. This variance is not due to the Solar project being cancelled or deferred, but rather is due to the calculation used to impute authorized funding at the activity level for the GRC post-test years. The CPUC approved a post-test year mechanism for the SDG&E attrition years, rather than a specific funding level by activity for each year.																														
Capital	Electric Generation	Palomar Adv Gas Path Overhaul	Non-RAMP	No	Capital project to enhance the operating performance of the two combustion turbines at Palomar Energy Center. Upgrades included installing improved turbine materials, enhancing air and gas flow, and increasing firing temperature. The Palomar Adv Gas Path (AGP) Overhaul project is emergent work as this workpaper activity was not a workpaper in the 2019 GRC.																														
Capital	Electric Generation	Palomar Green Hydrogen Systems	Non-RAMP	No	Capital project focused on demonstrating multiple use cases of electrolytically produced hydrogen to support decarbonizing natural gas-powered plant operations. This pilot project focuses on increased understanding of hydrogen's behavior and impact on SDG&E's turbines; the impact on various emissions; how to design, operate, and maintain hydrogen equipment; and how to reduce the unit cost of hydrogen. The Palomar Green Hydrogen System project is emergent work as this workpaper activity was not a workpaper in the 2019 GRC.																														
Capital	Electric Generation	Escondido BESS Operational Enhancements	Non-RAMP	No	2023 Actual project spend that increased the overall reliability, operability and safety of the Escondido Battery Energy Storage Systems (BESS) includes upgrades to the dry pipe system. This project is comparable to the type of ongoing projects for these plants. These plants have a variety of capital activities, the units and the costs vary year over year. The Escondido BESS Operational Enhancements project is emergent work as this workpaper activity was not a workpaper in the 2019 GRC.																														
Capital	Electric Generation	El Cajon BESS Operational Enhancements	Non-RAMP	No	2023 Actual project spend that increased the overall reliability, operability and safety of the El Cajon BESS includes upgrades to the dry pipe system. This project is comparable to the type of ongoing projects for these plants. These plants have a variety of capital activities, the units and the costs vary year over year. The El Cajon BESS Operational Enhancements project is emergent work as this workpaper activity was not a workpaper in the 2019 GRC.																														
Capital	Electric Generation	Top Gun BESS Operational Enhancements	Non-RAMP	No	2023 Actual project spend that increased the overall reliability, operability and safety of the Top Gun BESS includes the installation of safety upgrades to plant electrical switch gear. This project is comparable to the type of ongoing projects for these plants. These plants have a variety of capital activities, the units and the costs vary year over year. The Top Gun Operational Enhancements project is emergent work as this workpaper activity was not a workpaper in the 2019 GRC.																														
Capital	Electric Generation	Ramona Solar Plant Oper Enhance	Non-RAMP	No	No activity for 2021 through 2023. Typical projects would be completed to increase the overall reliability, operability and safety of the Ramona Solar Plant. The plant typically has a variety of capital activities, the units and the costs vary year over year. The Ramona Solar Plant Operational Enhancements are emergent work as this workpaper activity was not a workpaper in the 2019 GRC.																														
Capital	Electric Generation	Miguel VRF-Battery Facilities Enhancements	Non-RAMP	No	2023 Actual project spend that increased the overall reliability, operability and safety of the Miguel VRF BESS include network upgrades. This project is comparable to the type of ongoing projects for these plants. These plants have a variety of capital activities, the units and the costs vary year over year. The Miguel Vanadium Redox Flow (VRF) Operational Enhancements project is emergent work as this workpaper activity was not a workpaper in the 2019 GRC.																														



B. SDG&E Electric Generation  
ii. SDG&E Electric Generation Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
Capital	Electric Generation	Electric Generation		Yes									
Capital	Electric Generation	Generation Capital Tools & Test Eqpt.	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
Capital	Electric Generation	Miramar	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
Capital	Electric Generation	Palomar Plant Operational Improvements	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Electric Generation	Desert Star Energy Ctr Oper. Enhance	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Electric Generation	Cuyamaca Peak Energy Plant Oper Enhance	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Electric Generation	RAMP - Incremental Black Start - South Grid - CPEP	Add blackstart capabilities to the southern part of the SDG&E electric system	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Completed	Yes
Capital	Electric Generation	Solar Photovoltaic Initiative	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Completed	Yes
Capital	Electric Generation	Palomar Adv Gas Path Overhaul	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Generation	Palomar Green Hydrogen Systems	Non-RAMP	No	Yes	No	This Capital project was not included in the 2019 GRC and therefore no imputed authorized costs were assigned. This Capital project is focused on demonstrating multiple use cases of electrolytically produced hydrogen to support decarbonizing natural gas-powered plant operations. This pilot project focuses on increased understanding of hydrogen's behavior and impact on SDG&E's turbines; the impact on various emissions; how to design, operate, and maintain hydrogen equipment; and how to reduce the unit cost of hydrogen.	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Generation	Escondido BESS Operational Enhancements	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Generation	El Cajon BESS Operational Enhancements	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Generation	Top Gun BESS Operational Enhancements	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Generation	Ramona Solar Plant Oper Enhance	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Electric Generation	Miguel VRF-Battery Facilities Enhancements	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No

**B. SDG&E Electric Generation**  
**ii. SDG&E Electric Generation Capital**

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
Capital	Electric Generation	Electric Generation		Yes				
Capital	Electric Generation	Generation Capital Tools & Test Eqpt.	Non-RAMP	No	N/A			
Capital	Electric Generation	Miramar	Non-RAMP	No	N/A			
Capital	Electric Generation	Palomar Plant Operational Improvements	Non-RAMP	No	N/A			
Capital	Electric Generation	Desert Star Energy Ctr Oper. Enhance	Non-RAMP	No	N/A			
Capital	Electric Generation	Cuyamaca Peak Energy Plant Oper Enhance	Non-RAMP	No	N/A			
Capital	Electric Generation	RAMP - Incremental Black Start - South Grid - CPEP	Add blackstart capabilities to the southern part of the SDG&E electric system	No	Project is completed. This variance is not due to the project, program, or workpaper being cancelled or deferred, but rather due to the calculation used to impute authorized funding at the activity level for the GRC post-test years. The CPUC approved a post-test year mechanism for the SDG&E attrition years rather than a specific funding level by activity for each year.	Capital project to provide black start capability for the southern part of the SDG&E electric grid. Project activities included site preparation and permitting, and acquisition and installation of a small size gas generator for black start.	SDG&E-16 DSB-44 - DSB-49 WP 00011A	N/A
Capital	Electric Generation	Solar Photovoltaic Initiative	Non-RAMP	No	Project is completed. This variance is not due to the project, program, or workpaper being cancelled or deferred, but rather due to the calculation used to impute authorized funding at the activity level for the GRC post-test years. The CPUC approved a post-test year mechanism for the SDG&E attrition years rather than a specific funding level by activity for each year.	Capital project to construct a utility-owned 4.95 MWdc solar photovoltaic facility, developed under the CPUC Solar Energy program.	SDG&E-16 DSB-60 - DSB-67 WP 080300	N/A
Capital	Electric Generation	Palomar Adv Gas Path Overhaul	Non-RAMP	No	N/A			
Capital	Electric Generation	Palomar Green Hydrogen Systems	Non-RAMP	No	N/A	Capital project focused on demonstrating multiple use cases of electrolytically produced hydrogen to support decarbonizing natural gas-powered plant operations. This pilot project focuses on increased understanding of hydrogen's behavior and impact on SDG&E's turbines; the impact on various emissions; how to design, operate, and maintain hydrogen equipment; and how to reduce the unit cost of hydrogen.	N/A	SDG&E-14-E DSB-15 - DSB-16 WP 210390  SDG&E-15-R-E FV-31 - FV-32
Capital	Electric Generation	Escondido BESS Operational Enhancements	Non-RAMP	No	N/A			
Capital	Electric Generation	El Cajon BESS Operational Enhancements	Non-RAMP	No	N/A			
Capital	Electric Generation	Top Gun BESS Operational Enhancements	Non-RAMP	No	N/A			
Capital	Electric Generation	Ramona Solar Plant Oper Enhance	Non-RAMP	No	N/A			
Capital	Electric Generation	Miguel VRF-Battery Facilities Enhancements	Non-RAMP	No	N/A			

C. SDG&E Electric Fuel and Procurement  
iSDG&E Electric Fuel and Procurement O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Electric & Fuel Procurement	Electric & Fuel Procurement		Yes			7,964	7,525	8,644	8,605	9,124	41,862	9,349	9,597	9,834	10,029	10,255	49,064
O&M	Electric & Fuel Procurement	Long Term Procurement	Non-RAMP	No	On-Going	Annual	1,805	1,996	1,777	2,056	1,730	9,365	2,389	2,452	2,513	2,563	2,620	12,537
O&M	Electric & Fuel Procurement	Trading & Scheduling	Non-RAMP	No	On-Going	Annual	2,070	1,544	1,947	2,025	2,317	9,903	3,192	3,276	3,357	3,424	3,501	16,749
O&M	Electric & Fuel Procurement	Mid and Back Office	Non-RAMP	No	On-Going	Annual	4,089	3,985	4,919	4,524	5,077	22,594	3,769	3,868	3,964	4,043	4,134	19,778

C. SDG&E Electric Fuel and Procurement  
iSDG&E Electric Fuel and Procurement O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Electric & Fuel Procurement	Electric & Fuel Procurement		Yes	(1,386)	(2,071)	(1,190)	(1,424)	(1,131)	(7,202)	-15%	-22%	-12%	-14%	-11%	-15%
O&M	Electric & Fuel Procurement	Long Term Procurement	Non-RAMP	No	(584)	(456)	(736)	(507)	(890)	(3,172)	-24%	-19%	-29%	-20%	-34%	-25%
O&M	Electric & Fuel Procurement	Trading & Scheduling	Non-RAMP	No	(1,122)	(1,732)	(1,410)	(1,399)	(1,184)	(6,847)	-35%	-53%	-42%	-41%	-34%	-41%
O&M	Electric & Fuel Procurement	Mid and Back Office	Non-RAMP	No	320	116	955	482	943	2,816	8%	3%	24%	12%	23%	14%

C. SDG&E Electric Fuel and Procurement  
iSDG&E Electric Fuel and Procurement O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
O&M	Electric & Fuel Procurement	Electric & Fuel Procurement		Yes																										
O&M	Electric & Fuel Procurement	Long Term Procurement	Non-RAMP	No	FTE	11	13	11	11	10	56	15	15	15	15	15	75	(4)	(2)	(4)	(4)	(5)	(19)	-27%	-13%	-27%	-27%	-33%	-25%	
O&M	Electric & Fuel Procurement	Trading & Scheduling	Non-RAMP	No	FTE	16	12	15	15	17	75	20	20	20	20	20	100	(4)	(8)	(5)	(5)	(3)	(25)	-20%	-40%	-25%	-25%	-15%	-25%	
O&M	Electric & Fuel Procurement	Mid and Back Office	Non-RAMP	No	FTE	22	21	21	20	22	106	25	25	25	25	25	125	(3)	(4)	(4)	(5)	(3)	(19)	-12%	-16%	-16%	-20%	-12%	-15%	

C. SDG&E Electric Fuel and Procurement  
iSDG&E Electric Fuel and Procurement O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Electric & Fuel Procurement	Electric & Fuel Procurement		Yes									
O&M	Electric & Fuel Procurement	Long Term Procurement	Non-RAMP	No	No	Yes	N/A	The variance in FTEs is primarily due to lower than forecasted staffing levels associated with Long-Term Procurement.	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Electric & Fuel Procurement	Trading & Scheduling	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Electric & Fuel Procurement	Mid and Back Office	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No

C. SDG&E Electric Fuel and Procurement  
iSDG&E Electric Fuel and Procurement O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Electric & Fuel Procurement	Electric & Fuel Procurement		Yes				
O&M	Electric & Fuel Procurement	Long Term Procurement	Non-RAMP	No	N/A	<p>Long-Term Procurement functions include the Vice President of Energy Supply and the Origination and Portfolio Design (O&amp;PD) department. The Vice President is responsible for providing strategic direction consistent with and complementary to SDG&amp;E's wider mission, developing policies to strengthen and enhance energy supply functions and performance, and ensuring that all energy procurement is conducted consistent with internal requirements, Commission rules and decisions, and CAISO tariffs. O&amp;PD is responsible for soliciting energy supplies from independent producers and utility-owned resources to meet SDG&amp;E's long-term energy and capacity requirements. For supplies from independent producers, O&amp;PD negotiates and executes Power Purchase Agreements (PPAs). At the end of 2016, Electric &amp; Fuel Procurement's (E&amp;FP's) portfolio included 72 PPAs for 4,774 Megawatts (MW) of energy and capacity under contract terms ranging from 1 year to 30 years. To develop long-term procurement plans and implement legislative mandates, O&amp;PD regularly participates in regulatory proceedings and interfaces with numerous government agencies, including the CPUC, the California Energy Commission, and the California Air Resources Board. O&amp;PD must also negotiate contracts and oversee project development until commercial operation. Of note, O&amp;PD must develop PPA language for new product types.</p>	SDG&E - 12 KKH 4 to KKH 7 WP 1EP001.000	SDG&E - 10 CAS-6 to CAS-14 WP 1EP001.000
O&M	Electric & Fuel Procurement	Trading & Scheduling	Non-RAMP	No	N/A			
O&M	Electric & Fuel Procurement	Mid and Back Office	Non-RAMP	No	N/A			

2. SDG&E GAS  
A. SDG&E Gas Distribution  
i. SDG&E Gas Distribution O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Gas Distribution	Gas Distribution		Yes			29,069	34,649	36,425	40,628	42,272	183,043	31,481	32,313	33,112	33,770	34,532	165,207
O&M	Gas Distribution	Field O&M - Other Services	Non-RAMP	No	On-Going	Annual	315	472	216	239	165	1,408	218	224	230	234	239	1,145
O&M	Gas Distribution	Field O&M - Leak Survey	Maintenance	No	On-Going	Annual	1,868	1,449	2,175	2,199	2,216	9,906	1,778	1,825	1,871	1,908	1,951	9,333
O&M	Gas Distribution	Field O&M - Leak Survey	Employee, Contractor, and Public Safety	No	On-Going	Annual	—	256	269	271	274	1,070	220	225	231	236	241	1,152
O&M	Gas Distribution	<b>Sub-Total Field O&amp;M - Leak Survey</b>		Yes	On-Going		1,868	1,705	2,444	2,470	2,490	10,976	1,998	2,051	2,101	2,143	2,192	10,485
O&M	Gas Distribution	Field O&M - Locate & Mark	Training Locate & Mark Activities Prevention and Improvements	No	On-Going	Annual	5,290	8,341	7,112	7,864	7,799	36,405	3,860	3,962	4,060	4,141	4,234	20,257
O&M	Gas Distribution	Field O&M - Main Maintenance	Non-RAMP	No	On-Going	Annual	2,210	2,298	1,900	2,170	2,993	11,571	2,347	2,409	2,469	2,518	2,574	12,317
O&M	Gas Distribution	Field O&M - Main Maintenance	Safety Policies & Programs	No	On-Going	Annual	968	1,568	1,602	1,641	1,273	7,052	1,351	1,387	1,421	1,449	1,482	7,090
O&M	Gas Distribution	Field O&M - Main Maintenance	Emergent RAMP (GED)	No	On-Going	Annual	—	—	1,017	632	832	2,481	—	—	—	—	—	—
O&M	Gas Distribution	<b>Sub-Total Field O&amp;M - Main Maintenance</b>		Yes	On-Going	Annual	3,178	3,866	4,519	4,443	5,098	21,104	3,698	3,796	3,890	3,967	4,056	19,407
O&M	Gas Distribution	Field O&M - Service Maintenance	Non-RAMP	No	On-Going	Annual	1,897	2,190	2,352	2,982	3,020	12,440	2,025	2,079	2,130	2,173	2,222	10,629
O&M	Gas Distribution	Field O&M - Service Maintenance	Emergent RAMP (GED)	No	On-Going	Annual	—	—	1,014	655	1,232	2,901	—	—	—	—	—	—
O&M	Gas Distribution	<b>Sub-Total Field O&amp;M - Service Maintenance</b>		Yes	On-Going	Annual	1,897	2,190	3,366	3,637	4,252	15,341	2,025	2,079	2,130	2,173	2,222	10,629
O&M	Gas Distribution	Field O&M - Tools Fittings & Materials	Non-RAMP	No	On-Going	Annual	1,219	1,414	1,047	1,276	1,225	6,181	1,085	1,114	1,141	1,164	1,190	5,694
O&M	Gas Distribution	Field O&M - Tools Fittings & Materials	Emergent RAMP PPE	No	On-Going	Annual	—	—	266	250	353	869	—	—	—	—	—	—
O&M	Gas Distribution	<b>Sub-Total Field O&amp;M - Tools Fittings &amp; Materials</b>		Yes	On-Going	Annual	1,219	1,414	1,313	1,526	1,578	7,050	1,085	1,114	1,141	1,164	1,190	5,694
O&M	Gas Distribution	Field O&M - Electric Support	Non-RAMP	No	On-Going	Annual	263	317	410	689	546	2,225	458	471	482	492	503	2,406



Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Gas Distribution	Field O&M - Supervision & Training	Non-RAMP	No	On-Going	Annual	2,311	2,947	3,615	3,982	3,699	16,554	1,785	1,832	1,878	1,915	1,958	9,368
O&M	Gas Distribution	Field O&M - Supervision & Training	Safety Policies & Programs	No	On-Going	Annual	220	112	113	16	224	685	2,034	2,088	2,139	2,182	2,231	10,674
O&M	Gas Distribution	Field O&M - Supervision & Training	Improvements	No	On-Going	Annual	1,415	1,492	1,167	567	608	5,249	346	355	364	371	380	1,816
<b>O&amp;M</b>	<b>Gas Distribution</b>	<b>Sub-Total Field O&amp;M - Supervision &amp; Training</b>		<b>Yes</b>	<b>On-Going</b>	<b>Annual</b>	<b>3,946</b>	<b>4,551</b>	<b>4,895</b>	<b>4,565</b>	<b>4,531</b>	<b>22,488</b>	<b>4,165</b>	<b>4,275</b>	<b>4,381</b>	<b>4,468</b>	<b>4,569</b>	<b>21,858</b>
O&M	Gas Distribution	Asset Management	Non-RAMP	No	On-Going	Annual	1,037	920	980	2,059	2,121	7,117	1,844	1,893	1,940	1,978	2,023	9,677
O&M	Gas Distribution	Asset Management	Maintenance	No	On-Going	Annual	—	—	—	—	—	—	188	193	198	202	207	989
O&M	Gas Distribution	Asset Management	Operations	No	On-Going	Annual	39	90	90	113	117	449	74	76	77	79	81	386
O&M	Gas Distribution	Asset Management	Coat or remove affected buried piping in vaults	No	On-Going	Annual	120	200	—	—	—	320	235	241	247	252	258	1,233
<b>O&amp;M</b>	<b>Gas Distribution</b>	<b>Sub-Total Field O&amp;M - Asset Management</b>		<b>Yes</b>	<b>On-Going</b>		<b>1,196</b>	<b>1,210</b>	<b>1,070</b>	<b>2,172</b>	<b>2,238</b>	<b>7,886</b>	<b>2,341</b>	<b>2,403</b>	<b>2,462</b>	<b>2,511</b>	<b>2,568</b>	<b>12,285</b>
O&M	Gas Distribution	Measurement & Regulation	Non-RAMP	No	On-Going	Annual	1,965	2,298	2,396	2,838	2,628	12,125	1,965	2,017	2,067	2,108	2,155	10,312
O&M	Gas Distribution	Measurement & Regulation	Scheduled monitoring and survey activities	No	On-Going	Annual	2,664	2,720	3,070	3,231	3,083	14,767	2,597	2,666	2,732	2,786	2,849	13,631
<b>O&amp;M</b>	<b>Gas Distribution</b>	<b>Sub-Total Field O&amp;M - Measurement &amp; Regulation</b>		<b>Yes</b>	<b>On-Going</b>		<b>4,629</b>	<b>5,018</b>	<b>5,466</b>	<b>6,069</b>	<b>5,711</b>	<b>26,892</b>	<b>4,562</b>	<b>4,683</b>	<b>4,799</b>	<b>4,894</b>	<b>5,005</b>	<b>23,943</b>
O&M	Gas Distribution	Cathodic Protection	Requirements for Corrosion Control	No	On-Going	Annual	1,959	2,093	2,279	2,510	2,774	11,616	2,483	2,549	2,612	2,664	2,724	13,030
O&M	Gas Distribution	Operations Management & Training	Non-RAMP	No	On-Going	Annual	1,883	1,843	1,924	3,018	3,212	11,879	2,850	2,926	2,998	3,057	3,126	14,957
O&M	Gas Distribution	Operations Management & Training	Qualifications of Pipeline Personnel	No	On-Going	Annual	608	746	519	419	670	2,962	702	720	738	753	770	3,683
O&M	Gas Distribution	Operations Management & Training	Operations #1	No	On-Going	Annual	50	95	24	188	235	592	97	100	102	104	107	510
O&M	Gas Distribution	Operations Management & Training	Operations #2	No	On-Going	Annual	22	64	61	66	103	316	73	75	77	79	81	385
O&M	Gas Distribution	Operations Management & Training	Mandatory employee refresher training programs	No	On-Going	Annual	748	724	807	754	871	3,904	864	887	908	927	947	4,533
<b>O&amp;M</b>	<b>Gas Distribution</b>	<b>Sub-Total Operations Management &amp; Training</b>		<b>Yes</b>	<b>On-Going</b>		<b>3,311</b>	<b>3,472</b>	<b>3,335</b>	<b>4,445</b>	<b>5,091</b>	<b>19,653</b>	<b>4,586</b>	<b>4,708</b>	<b>4,824</b>	<b>4,920</b>	<b>5,031</b>	<b>24,068</b>

2. SDG&E GAS  
A. SDG&E Gas Distribution  
i. SDG&E Gas Distribution O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Gas Distribution	Gas Distribution		Yes	(2,412)	2,335	3,314	6,858	7,741	17,836	-8%	7%	10%	20%	22%	11%
O&M	Gas Distribution	Field O&M - Other Services	Non-RAMP	No	97	248	(13)	5	(74)	263	45%	111%	-6%	2%	-31%	23%
O&M	Gas Distribution	Field O&M - Leak Survey	Maintenance	No	89	(377)	305	291	265	573	5%	-21%	16%	15%	14%	6%
O&M	Gas Distribution	Field O&M - Leak Survey	Employee, Contractor, and Public Safety	No	(220)	31	38	36	33	(82)	-100%	14%	16%	15%	14%	-7%
O&M	Gas Distribution	<b>Sub-Total Field O&amp;M - Leak Survey</b>		Yes	<b>(130)</b>	<b>(346)</b>	<b>343</b>	<b>326</b>	<b>298</b>	<b>491</b>	<b>-7%</b>	<b>-17%</b>	<b>16%</b>	<b>15%</b>	<b>14%</b>	<b>5%</b>
O&M	Gas Distribution	Field O&M - Locate & Mark	Training Locate & Mark Activities Prevention and Improvements	No	1,430	4,379	3,052	3,723	3,565	16,148	37%	111%	75%	90%	84%	80%
O&M	Gas Distribution	Field O&M - Main Maintenance	Non-RAMP	No	(137)	(111)	(569)	(347)	419	(746)	-6%	-5%	-23%	-14%	16%	-6%
O&M	Gas Distribution	Field O&M - Main Maintenance	Safety Policies & Programs	No	(383)	181	181	192	(209)	(38)	-28%	13%	13%	13%	-14%	-1%
O&M	Gas Distribution	Field O&M - Main Maintenance	Emergent RAMP (GED)	No	—	—	1,017	632	832	2,481	—%	—%	100%	100%	100%	100%
O&M	Gas Distribution	<b>Sub-Total Field O&amp;M - Main Maintenance</b>		Yes	<b>(520)</b>	<b>70</b>	<b>629</b>	<b>476</b>	<b>1,042</b>	<b>1,697</b>	<b>-14%</b>	<b>2%</b>	<b>16%</b>	<b>12%</b>	<b>26%</b>	<b>9%</b>
O&M	Gas Distribution	Field O&M - Service Maintenance	Non-RAMP	No	(129)	111	222	809	798	1,811	-6%	5%	10%	37%	36%	17%
O&M	Gas Distribution	Field O&M - Service Maintenance	Emergent RAMP (GED)	No	—	—	1,014	655	1,232	2,901	—%	—%	100%	100%	100%	100%
O&M	Gas Distribution	<b>Sub-Total Field O&amp;M - Service Maintenance</b>		Yes	<b>(129)</b>	<b>111</b>	<b>1,236</b>	<b>1,464</b>	<b>2,030</b>	<b>4,712</b>	<b>-6%</b>	<b>5%</b>	<b>58%</b>	<b>67%</b>	<b>91%</b>	<b>44%</b>
O&M	Gas Distribution	Field O&M - Tools Fittings & Materials	Non-RAMP	No	134	301	(95)	112	34	487	12%	27%	-8%	10%	3%	9%
O&M	Gas Distribution	Field O&M - Tools Fittings & Materials	Emergent RAMP PPE	No	—	—	266	250	353	869	—%	—%	100%	100%	100%	100%
O&M	Gas Distribution	<b>Sub-Total Field O&amp;M - Tools Fittings &amp; Materials</b>		Yes	<b>134</b>	<b>301</b>	<b>171</b>	<b>362</b>	<b>387</b>	<b>1,356</b>	<b>12%</b>	<b>27%</b>	<b>15%</b>	<b>31%</b>	<b>33%</b>	<b>24%</b>
O&M	Gas Distribution	Field O&M - Electric Support	Non-RAMP	No	(196)	(154)	(72)	197	43	(181)	-43%	-33%	-15%	40%	9%	-8%

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Gas Distribution	Field O&M - Supervision & Training	Non-RAMP	No	525	1,115	1,738	2,067	1,741	7,186	29%	61%	93%	108%	89%	77%
O&M	Gas Distribution	Field O&M - Supervision & Training	Safety Policies & Programs	No	(1,814)	(1,976)	(2,026)	(2,166)	(2,007)	(9,989)	-89%	-95%	-95%	-99%	-90%	-94%
O&M	Gas Distribution	Field O&M - Supervision & Training	Improvements	No	1,069	1,137	803	196	228	3,433	309%	320%	221%	53%	60%	189%
<b>O&amp;M</b>	<b>Gas Distribution</b>	<b>Sub-Total Field O&amp;M - Supervision &amp; Training</b>		<b>Yes</b>	<b>(220)</b>	<b>276</b>	<b>514</b>	<b>97</b>	<b>(38)</b>	<b>630</b>	<b>-5%</b>	<b>6%</b>	<b>12%</b>	<b>2%</b>	<b>-1%</b>	<b>3%</b>
O&M	Gas Distribution	Asset Management	Non-RAMP	No	(807)	(973)	(960)	81	99	(2,560)	-44%	-51%	-49%	4%	5%	-26%
O&M	Gas Distribution	Asset Management	Maintenance	No	(188)	(193)	(198)	(202)	(207)	(989)	-100%	-100%	-100%	-100%	-100%	-100%
O&M	Gas Distribution	Asset Management	Operations	No	(35)	14	13	34	36	63	-47%	19%	16%	43%	45%	16%
O&M	Gas Distribution	Asset Management	Coat or remove affected buried piping in vaults	No	(115)	(41)	(247)	(252)	(258)	(913)	-49%	-17%	-100%	-100%	-100%	-74%
<b>O&amp;M</b>	<b>Gas Distribution</b>	<b>Sub-Total Field O&amp;M - Asset Management</b>		<b>Yes</b>	<b>(1,145)</b>	<b>(1,193)</b>	<b>(1,392)</b>	<b>(339)</b>	<b>(330)</b>	<b>(4,399)</b>	<b>-49%</b>	<b>-50%</b>	<b>-57%</b>	<b>-14%</b>	<b>-13%</b>	<b>-36%</b>
O&M	Gas Distribution	Measurement & Regulation	Non-RAMP	No	—	281	329	730	473	1,813	—%	14%	16%	35%	22%	18%
O&M	Gas Distribution	Measurement & Regulation	Scheduled monitoring and survey activities	No	66	54	338	445	234	1,137	3%	2%	12%	16%	8%	8%
<b>O&amp;M</b>	<b>Gas Distribution</b>	<b>Sub-Total Field O&amp;M - Measurement &amp; Regulation</b>		<b>Yes</b>	<b>66</b>	<b>335</b>	<b>667</b>	<b>1,175</b>	<b>706</b>	<b>2,950</b>	<b>1%</b>	<b>7%</b>	<b>14%</b>	<b>24%</b>	<b>14%</b>	<b>12%</b>
O&M	Gas Distribution	Cathodic Protection	Requirements for Corrosion Control	No	(524)	(455)	(332)	(154)	50	(1,415)	-21%	-18%	-13%	-6%	2%	-11%
O&M	Gas Distribution	Operations Management & Training	Non-RAMP	No	(968)	(1,083)	(1,074)	(39)	86	(3,078)	-34%	-37%	-36%	-1%	3%	-21%
O&M	Gas Distribution	Operations Management & Training	Qualifications of Pipeline Personnel	No	(94)	26	(219)	(334)	(100)	(721)	-13%	4%	-30%	-44%	-13%	-20%
O&M	Gas Distribution	Operations Management & Training	Operations #1	No	(47)	(5)	(78)	84	128	82	-49%	-5%	-77%	80%	120%	16%
O&M	Gas Distribution	Operations Management & Training	Operations #2	No	(51)	(11)	(16)	(13)	23	(69)	-70%	-15%	-21%	-16%	28%	-18%
O&M	Gas Distribution	Operations Management & Training	Mandatory employee refresher training programs	No	(116)	(163)	(101)	(173)	(77)	(629)	-13%	-18%	-11%	-19%	-8%	-14%
<b>O&amp;M</b>	<b>Gas Distribution</b>	<b>Sub-Total Operations Management &amp; Training</b>		<b>Yes</b>	<b>(1,276)</b>	<b>(1,236)</b>	<b>(1,489)</b>	<b>(475)</b>	<b>60</b>	<b>(4,415)</b>	<b>-28%</b>	<b>-26%</b>	<b>-31%</b>	<b>-10%</b>	<b>1%</b>	<b>-18%</b>

2. SDG&E GAS  
A. SDG&E Gas Distribution  
i. SDG&E Gas Distribution O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance								
O&M	Gas Distribution	Gas Distribution		Yes																																	
O&M	Gas Distribution	Field O&M - Other Services	Non-RAMP	No	This consists of miscellaneous expenses associated with Gas Distribution field operations that are not captured in other workgroups. Activities include inspecting and repairing customer meters, house regulators and house lines, and providing patrolling and other support to Transmission facilities and pipelines. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																																
O&M	Gas Distribution	Field O&M - Leak Survey	Maintenance	No	Inspections and Surveys	990	837	805	812	868	4,312	The number of inspections and surveys on an annual basis vary by type of pipe, pressure and location. As such, it is infeasible to calculate a single imputed authorized unit.																									
O&M	Gas Distribution	Field O&M - Leak Survey	Employee, Contractor, and Public Safety	No	Inspections and Surveys	—	104	99	100	107	410	The number of inspections and surveys on an annual basis vary by type of pipe, pressure and location. As such, it is infeasible to calculate a single imputed authorized unit.																									
O&M	Gas Distribution	Sub-Total Field O&M - Leak Survey		Yes																																	
O&M	Gas Distribution	Field O&M - Locate & Mark	Training Locate & Mark Activities Prevention and Improvements	No	Tickets Transmitted	150,747	166,070	151,106	171,360	203,026	842,309	The variety of drivers that influence the number of tickets transmitted each year makes it infeasible to calculate a single imputed authorized unit. The number of tickets transmitted is beyond the control of SDG&E.																									
O&M	Gas Distribution	Field O&M - Main Maintenance	Non-RAMP	No	Non-RAMP Orders	—	2,545	2,090	4,736	4,192	13,563	The variety, scope, and duration of work for main maintenance (moving, lowering, raising gas mains, vaults, valves, and related structures) makes it infeasible to calculate a single imputed authorized unit.																									
O&M	Gas Distribution	Field O&M - Main Maintenance	Safety Policies & Programs	No	Leaks Repaired	144	153	73	67	94	531	The variety, scope, and duration of work for main maintenance (investigating and repairing leaks) makes it infeasible to calculate a single imputed authorized unit.																									
O&M	Gas Distribution	Field O&M - Main Maintenance	Emergent RAMP (GED)	No	Responses	—	—	391	398	347	1,136	This work activity is an emergent RAMP activity; thus, no imputed authorized units are available.																									
O&M	Gas Distribution	Sub-Total Field O&M - Main Maintenance		Yes																																	
O&M	Gas Distribution	Field O&M - Service Maintenance	Non-RAMP	No	Work Orders	—	2,387	1,460	3,299	4,015	11,161	The variety, scope, and duration of work for service maintenance (moving, lowering, raising gas mains, vaults, valves, and related structures) makes it infeasible to calculate a single imputed authorized unit.																									
O&M	Gas Distribution	Field O&M - Service Maintenance	Emergent RAMP (GED)	No	Responses	—	—	1,062	1,075	966	3,103	This work activity is an emergent RAMP activity; thus, no imputed authorized units are available.																									
O&M	Gas Distribution	Sub-Total Field O&M - Service Maintenance		Yes																																	
O&M	Gas Distribution	Field O&M - Tools Fittings & Materials	Non-RAMP	No	Included in this category are materials used and expenses necessary for small tools, small pipe fittings, miscellaneous pipeline materials, and miscellaneous installation materials used during construction and maintenance activities and those held in inventory as vehicle truck stock. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																																
O&M	Gas Distribution	Field O&M - Tools Fittings & Materials	Emergent RAMP PPE	No	Included in this category are materials used and expenses necessary for Personal Protective Equipment (PPE) used during construction and maintenance activities and those held in inventory as vehicle truck stock. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																																
O&M	Gas Distribution	Sub-Total Field O&M - Tools Fittings & Materials		Yes																																	
O&M	Gas Distribution	Field O&M - Electric Support	Non-RAMP	No		—	516	673	844	903	2,936	The variety and scope of work for electric support (Gas Crew and Street Repair support primarily their Corrective Maintenance Program, the QC Repairs and Inspection Program, the restoration of outage, and transformer change outs) makes it infeasible to calculate a single imputed authorized unit.																									

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance								
O&M	Gas Distribution	Field O&M - Supervision & Training	Non-RAMP	No	The activities in this item include the supervision and management in the operating districts, training expenses of the employees in the districts, supplies, telephone expenses, mileage expenses, employee uniforms, etc. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																																
O&M	Gas Distribution	Field O&M - Supervision & Training	Safety Policies & Programs	No	Internal Traffic Control Crews	21	21	21	21	21	105	21	21	21	21	21	105	—	—	—	—	—	—	—%	—%	—%	—%	—%	—%								
O&M	Gas Distribution	Field O&M - Supervision & Training	Improvements	No	Personnel Trained	445	558	583	573	583	2,742	The variety and scope of work for Field O&M - Supervision and Training-Improvements (Annual Environmental, Safety, Compliance Management Program/Operator Qualification, welding school) make it infeasible to identify a single imputed authorized unit.																									
<b>O&amp;M</b>	<b>Gas Distribution</b>	<b>Sub-Total Field O&amp;M - Supervision &amp; Training</b>	<b>Yes</b>																																		
O&M	Gas Distribution	Asset Management	Non-RAMP	No	These activities include overheads representing time spent by personnel to support the technical office associated with identifying construction design requirements. Examples of work include evaluating pressure specifications, providing project drawings, and identifying material selection. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																																
O&M	Gas Distribution	Asset Management	Maintenance	No	Conflict Checks Performed	—	—	—	—	—	—	This activity is outside of the control of SDG&E, which makes it infeasible to identify a single imputed authorized unit.																									
O&M	Gas Distribution	Asset Management	Operations	No	Standards Reviewed	192	144	158	134	98	726	This activity involves standards reviewed at different review cycles based on industry requirements, regulation changes, and equipment and tool technology changes. The variety of work activities in this category makes it infeasible to identify an imputed authorized unit.																									
O&M	Gas Distribution	Asset Management	Coat or remove affected buried piping in vaults	No	Projects Reviewed	19	29	—	—	—	48	The number of these projects is dependent upon discovery during mapping reviews. It is therefore infeasible to calculate a single imputed authorized unit.																									
<b>O&amp;M</b>	<b>Gas Distribution</b>	<b>Sub-Total Field O&amp;M - Asset Management</b>	<b>Yes</b>																																		
O&M	Gas Distribution	Measurement & Regulation	Non-RAMP	No	Non-RAMP Work Orders related to Meter changes and EPM maintenance	—	2,052	1,056	1,681	1,857	6,646	The number of these projects is dependent upon discovery during mapping reviews. It is therefore infeasible to calculate a single imputed authorized unit.																									
O&M	Gas Distribution	Measurement & Regulation	Scheduled monitoring and survey activities	No	Compliance Components Maintained	5,798	5,434	4,471	5,769	6,000	27,472	The number and types of compliance components maintained fluctuates on an annual basis. It is therefore infeasible to identify a single imputed authorized unit.																									
<b>O&amp;M</b>	<b>Gas Distribution</b>	<b>Sub-Total Field O&amp;M - Measurement &amp; Regulation</b>	<b>Yes</b>																																		
O&M	Gas Distribution	Cathodic Protection	Requirements for Corrosion Control	No	CP Reads	20,845	25,730	23,272	27,009	26,175	123,031	This activity is dependent upon an ever-changing number of Cathodic Protection (CP) stations and CP10s (10-year inspection cycle) and the regulatory requirements surrounding these stations regarding the frequency of reads. It is therefore infeasible to identify a single imputed authorized unit.																									
O&M	Gas Distribution	Operations Management & Training	Non-RAMP	No	The activities of this workpaper include expenses for leadership-based training of personnel in the Gas Technical Services, Gas Operations, and Gas Distribution groups. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																																
O&M	Gas Distribution	Operations Management & Training	Qualifications of Pipeline Personnel	No	Student Operator Qualifications	258	336	389	324	328	1,635	The continuous fluctuation in Gas Distribution workforce as a result of promotional positions to other departments in the company make it infeasible to identify a single imputed authorized unit.																									
O&M	Gas Distribution	Operations Management & Training	Operations #1	No	L&M Inspectors	—	3	3	3	3	12	The number of Locate & Mark (LM) tickets transmitted varies on an annual basis. It is therefore infeasible to identify a single imputed authorized unit.																									
O&M	Gas Distribution	Operations Management & Training	Operations #2	No	New Construction Inspections	—	869	2,586	2,722	3,813	9,990	This activity includes inspection of installed assets, welding/bonding procedures, material verification, gas standards and other construction activities of the capital investments performed above. There were no imputed authorized units included in the TY 2019 GRC.																									
O&M	Gas Distribution	Operations Management & Training	Mandatory employee refresher training programs	No	Personnel Trained	445	558	583	573	583	2,742	The continuous fluctuation in Gas Distribution workforce as a result of promotional positions to other departments in the company make it infeasible to identify a single imputed authorized unit.																									
<b>O&amp;M</b>	<b>Gas Distribution</b>	<b>Sub-Total Operations Management &amp; Training</b>	<b>Yes</b>																																		

2. SDG&E GAS  
A. SDG&E Gas Distribution  
i. SDG&E Gas Distribution O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Gas Distribution	Gas Distribution		Yes									
O&M	Gas Distribution	Field O&M - Other Services	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas Distribution	Field O&M - Leak Survey	Maintenance	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas Distribution	Field O&M - Leak Survey	Employee, Contractor, and Public Safety	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas Distribution	Sub-Total Field O&M - Leak Survey		Yes	No				On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas Distribution	Field O&M - Locate & Mark	Training Locate & Mark Activities Prevention and Improvements	No	Yes	No	The cost increase variance is primarily attributed to the business model change in Gas Distribution, which shifted the Locate and Mark (LM) function away from the high use of external resources to 100% internal SDG&E resources along with growth in ticket volume. The transition was made to improve the quality and efficiency of the LM function through increased oversight, control and higher internal resource competency that ensures compliance with mandated California Government Code 4216 – Dig Alert requirements.	N/A	Over (O)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Gas Distribution	Field O&M - Main Maintenance	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas Distribution	Field O&M - Main Maintenance	Safety Policies & Programs	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas Distribution	Field O&M - Main Maintenance	Emergent RAMP (GED)	No	Yes	No	The variance for this work activity is due to this being an emergent RAMP activity Gas Emergency Department (GED). The GED was established to improve gas emergency response time. This RAMP mitigation is now included in the 2024 GRC application.	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
O&M	Gas Distribution	Sub-Total Field O&M - Main Maintenance		Yes	Yes				On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas Distribution	Field O&M - Service Maintenance	Non-RAMP	No	Yes	No	This variance for this Non-RAMP activity was associated with an approximate 60% increase in workorders in the following activities: excavating to determine the exact source of a leak, changing service valves, riser rewraps, checking the condition of coating at the MSA, testing service pipe for leaks, inspecting and testing service pipe after repairs have been made, and installing, maintaining, and removing temporary feeds such as "by-passes" or temporary supply sources.	N/A	Over (O)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Gas Distribution	Field O&M - Service Maintenance	Emergent RAMP (GED)	No	Yes	No	The variance for this work activity is due to this being an emergent RAMP activity GED. The GED was established to improve gas emergency response time. This RAMP mitigation is now included in the 2024 GRC application.	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
O&M	Gas Distribution	Sub-Total Field O&M - Service Maintenance		Yes	Yes								No
O&M	Gas Distribution	Field O&M - Tools Fittings & Materials	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas Distribution	Field O&M - Tools Fittings & Materials	Emergent RAMP PPE	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
O&M	Gas Distribution	Sub-Total Field O&M - Tools Fittings & Materials		Yes	No				On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas Distribution	Field O&M - Electric Support	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Gas Distribution	Field O&M - Supervision & Training	Non-RAMP	No	Yes	No	This cost variance was caused by additional training expenses, supervision, and support resulting from the continued expansion and implementation of the Operator Qualification Program for Gas Operations, LM personnel required to meet the commitment of 100% internal LM function, and the training and onboarding of additional field personnel required for the GED and to meet the increase of capital work approved in the TY 2019 GRC.	N/A	Over (O)	On Target (T)	Over (O)	Expanded	No
O&M	Gas Distribution	Field O&M - Supervision & Training	Safety Policies & Programs	No	Yes	No	The variance is due to the risk mitigation of traffic control being spread over the respective compliance O&M cost groups rather than collected here in one expense location.	N/A	Under (U)	Under (U)	Under (U)	Other	No
O&M	Gas Distribution	Field O&M - Supervision & Training	Improvements	No	No	No	N/A	N/A	Over (O)	On Target (T)	Over (O)	Expanded	No
<b>O&amp;M</b>	<b>Gas Distribution</b>	<b>Sub-Total Field O&amp;M - Supervision &amp; Training</b>		<b>Yes</b>	<b>No</b>				<b>On Target (T)</b>	<b>On Target (T)</b>	<b>On Target (T)</b>	<b>Proceeding as Planned</b>	<b>No</b>
O&M	Gas Distribution	Asset Management	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas Distribution	Asset Management	Maintenance	No	No	No	N/A	N/A	Under (U)	Under (U)	Under (U)	Canceled	No
O&M	Gas Distribution	Asset Management	Operations	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas Distribution	Asset Management	Coat or remove affected buried piping in vaults	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Completed	Yes
<b>O&amp;M</b>	<b>Gas Distribution</b>	<b>Sub-Total Field O&amp;M - Asset Management</b>		<b>Yes</b>	<b>No</b>								<b>No</b>
O&M	Gas Distribution	Measurement & Regulation	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas Distribution	Measurement & Regulation	Scheduled monitoring and survey activities	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
<b>O&amp;M</b>	<b>Gas Distribution</b>	<b>Sub-Total Field O&amp;M - Measurement &amp; Regulation</b>		<b>Yes</b>	<b>No</b>				<b>On Target (T)</b>	<b>On Target (T)</b>	<b>On Target (T)</b>	<b>Proceeding as Planned</b>	<b>No</b>
O&M	Gas Distribution	Cathodic Protection	Requirements for Corrosion Control	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas Distribution	Operations Management & Training	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas Distribution	Operations Management & Training	Qualifications of Pipeline Personnel	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas Distribution	Operations Management & Training	Operations #1	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas Distribution	Operations Management & Training	Operations #2	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas Distribution	Operations Management & Training	Mandatory employee refresher training programs	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
<b>O&amp;M</b>	<b>Gas Distribution</b>	<b>Sub-Total Operations Management &amp; Training</b>		<b>Yes</b>	<b>No</b>				<b>On Target (T)</b>	<b>On Target (T)</b>	<b>On Target (T)</b>	<b>Proceeding as Planned</b>	<b>No</b>

2. SDG&E GAS  
A. SDG&E Gas Distribution  
i. SDG&E Gas Distribution O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Gas Distribution	Gas Distribution		Yes				
O&M	Gas Distribution	Field O&M - Other Services	Non-RAMP	No	N/A			
O&M	Gas Distribution	Field O&M - Leak Survey	Maintenance	No	N/A			
O&M	Gas Distribution	Field O&M - Leak Survey	Employee, Contractor, and Public Safety	No	N/A			
O&M	Gas Distribution	Sub-Total Field O&M - Leak Survey		Yes				
O&M	Gas Distribution	Field O&M - Locate & Mark	Training Locate & Mark Activities Prevention and Improvements	No	N/A	Locate and Mark is the process mandated by 49 CFR 192.614 (Damage Prevention Program) and the California One Call Law (Government Code section 4216), where the owner of underground facilities, when notified by the Underground Service Alert One-Call Center of a planned excavation, must respond within two working days and mark the location of those underground facilities that are in conflict with the planned excavations. This workpaper is in scope of the report because locate and mark activities, as described, are designed to mitigate damage by third party excavators that can interrupt gas service and pose a risk to public and employee safety.	SDG&E-04-R GOM-36 to GOM-39 WP 1GD000.002	SDG&E-04-R-E LPK-31 to LPK-35 WP 1GD002
O&M	Gas Distribution	Field O&M - Main Maintenance	Non-RAMP	No	N/A			
O&M	Gas Distribution	Field O&M - Main Maintenance	Safety Policies & Programs	No	N/A			
O&M	Gas Distribution	Field O&M - Main Maintenance	Emergent RAMP (GED)	No	N/A	Service maintenance work is generally corrective in nature and is required to keep the natural gas system operating safely and reliably. The work in this workgroup is designed to meet federal (49 C.F.R. §192) and state (CPUC General Order 112-F) pipeline safety regulations and to extend the life of distribution service pipelines and related infrastructure. Service maintenance work primarily comprises labor and non-labor expenses associated with investigating and repairing leaks in distribution services, changing service valves, checking the condition of coating at the MSA, testing service pipe for leaks, inspecting and testing service pipe after repairs have been made, and installing, maintaining, and removing temporary feeds. Also included in this subgroup are expenses for moving, lowering, and raising sections of distribution services. Rearranging and changing the location of an existing service may be required due to alterations in buildings or grounds and municipal improvements such as street widening or sewer and water system work.	N/A	SDG&E-04-R-E LPK-35 to LPK-39 WP 1GD003
O&M	Gas Distribution	Sub-Total Field O&M - Main Maintenance		Yes				
O&M	Gas Distribution	Field O&M - Service Maintenance	Non-RAMP	No	N/A	Service maintenance work is generally corrective in nature and is required to keep the natural gas system operating safely and reliably. The work in this workgroup is designed to meet federal (49 C.F.R. §192) and state (CPUC General Order 112-F) pipeline safety regulations and to extend the life of distribution service pipelines and related infrastructure. Service maintenance work primarily comprises labor and non-labor expenses associated with investigating and repairing leaks in distribution services, changing service valves, checking the condition of coating at the MSA, testing service pipe for leaks, inspecting and testing service pipe after repairs have been made, and installing, maintaining, and removing temporary feeds. Also included in this subgroup are expenses for moving, lowering, and raising sections of distribution services. Rearranging and changing the location of an existing service may be required due to alterations in buildings or grounds and municipal improvements such as street widening or sewer and water system work.	SDG&E-04-R GOM-41 to GOM-44 WP 1GD000.004	SDG&E-04-R-E LPK-38 to LPK-42 WP 1GD004
O&M	Gas Distribution	Field O&M - Service Maintenance	Emergent RAMP (GED)	No	N/A	Service maintenance work is generally corrective in nature and is required to keep the natural gas system operating safely and reliably. The work in this workgroup is designed to meet federal (49 C.F.R. §192) and state (CPUC General Order 112-F) pipeline safety regulations and to extend the life of distribution service pipelines and related infrastructure. Service maintenance work primarily comprises labor and non-labor expenses associated with investigating and repairing leaks in distribution services, changing service valves, checking the condition of coating at the MSA, testing service pipe for leaks, inspecting and testing service pipe after repairs have been made, and installing, maintaining, and removing temporary feeds. Also included in this subgroup are expenses for moving, lowering, and raising sections of distribution services. Rearranging and changing the location of an existing service may be required due to alterations in buildings or grounds and municipal improvements such as street widening or sewer and water system work.	N/A	SDG&E-04-R-E LPK-38 to LPK-42 WP 1GD004
O&M	Gas Distribution	Sub-Total Field O&M - Service Maintenance		Yes				
O&M	Gas Distribution	Field O&M - Tools Fittings & Materials	Non-RAMP	No	N/A			
O&M	Gas Distribution	Field O&M - Tools Fittings & Materials	Emergent RAMP PPE	No	N/A			
O&M	Gas Distribution	Sub-Total Field O&M - Tools Fittings & Materials		Yes				
O&M	Gas Distribution	Field O&M - Electric Support	Non-RAMP	No				



Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Gas Distribution	Field O&M - Supervision & Training	Non-RAMP	No	N/A	Supervision and Training includes employee field skills training, field supervision and management, and miscellaneous expenses related to SDG&E's gas operations. This category includes costs for activities designed to mitigate employee safety risks.	SDG&E-04-R GOM-47 to GOM-50 WP 1GD000.007	SDG&E-04-R-E LPK-59 to LPK-65 WP 1GD010
O&M	Gas Distribution	Field O&M - Supervision & Training	Safety Policies & Programs	No	This variance is not due to the project, program, or workpaper being cancelled or deferred, but rather due to the risk mitigation of traffic control being spread over the respective compliance O&M cost groups rather than collected here in one expense location.	Supervision and Training includes employee field skills training, field supervision and management, and miscellaneous expenses related to SDG&E's gas operations. This category includes costs for activities designed to mitigate employee safety risks.	SDG&E-04-R GOM-47 to GOM-50 WP 1GD000.007	N/A
O&M	Gas Distribution	Field O&M - Supervision & Training	Improvements	No	N/A			
<b>O&amp;M</b>	<b>Gas Distribution</b>	<b>Sub-Total Field O&amp;M - Supervision &amp; Training</b>		<b>Yes</b>				
O&M	Gas Distribution	Asset Management	Non-RAMP	No	N/A			
O&M	Gas Distribution	Asset Management	Maintenance	No	N/A			
O&M	Gas Distribution	Asset Management	Operations	No	N/A			
O&M	Gas Distribution	Asset Management	Coat or remove affected buried piping in vaults	No	Work was completed in 2020.			
<b>O&amp;M</b>	<b>Gas Distribution</b>	<b>Sub-Total Field O&amp;M - Asset Management</b>		<b>Yes</b>				
O&M	Gas Distribution	Measurement & Regulation	Non-RAMP	No	N/A			
O&M	Gas Distribution	Measurement & Regulation	Scheduled monitoring and survey activities	No	N/A			
<b>O&amp;M</b>	<b>Gas Distribution</b>	<b>Sub-Total Field O&amp;M - Measurement &amp; Regulation</b>		<b>Yes</b>				
O&M	Gas Distribution	Cathodic Protection	Requirements for Corrosion Control	No	N/A			
O&M	Gas Distribution	Operations Management & Training	Non-RAMP	No	N/A			
O&M	Gas Distribution	Operations Management & Training	Qualifications of Pipeline Personnel	No	N/A			
O&M	Gas Distribution	Operations Management & Training	Operations #1	No	N/A			
O&M	Gas Distribution	Operations Management & Training	Operations #2	No	N/A			
O&M	Gas Distribution	Operations Management & Training	Mandatory employee refresher training programs	No	N/A			
<b>O&amp;M</b>	<b>Gas Distribution</b>	<b>Sub-Total Operations Management &amp; Training</b>		<b>Yes</b>				

A. SDG&E Gas Distribution  
ii. SDG&E Gas Distribution Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
Capital	Gas Distribution	Gas Distribution		Yes			71,044	96,099	141,554	150,817	130,734	590,248	110,069	65,154	66,185	66,966	68,393	376,767
Capital	Gas Distribution	New Business	Non-RAMP	No	On-Going	Annual	7,284	6,417	9,649	18,464	8,050	49,863	8,780	8,073	8,201	8,298	8,475	41,827
Capital	Gas Distribution	New Business	Odorization of gas	No	On-Going	Annual	—	—	—	—	—	—	51	49	50	50	51	251
Capital	Gas Distribution	<b>Sub-Total New Business</b>		Yes			<b>7,284</b>	<b>6,417</b>	<b>9,649</b>	<b>18,464</b>	<b>8,050</b>	<b>49,863</b>	<b>8,831</b>	<b>8,122</b>	<b>8,251</b>	<b>8,348</b>	<b>8,526</b>	<b>42,078</b>
Capital	Gas Distribution	System Minor Additions, Relocations, & Retirements	Non-RAMP	No	On-Going	Annual	3,761	5,303	5,409	8,691	7,573	30,737	3,905	4,327	4,395	4,447	4,542	21,615
Capital	Gas Distribution	System Minor Additions, Relocations, & Retirements - RAMP	Locate and Mark	No	On-Going	Annual	6	4	3	3	6	22	275	305	309	313	320	1,522
Capital	Gas Distribution	<b>Sub-Total System Minor Additions, Relocations, &amp;</b>		Yes			<b>3,767</b>	<b>5,307</b>	<b>5,412</b>	<b>8,694</b>	<b>7,579</b>	<b>30,758</b>	<b>4,180</b>	<b>4,631</b>	<b>4,705</b>	<b>4,760</b>	<b>4,862</b>	<b>23,137</b>
Capital	Gas Distribution	Meters and Regulator Materials	Non-RAMP	No	On-Going	Annual	5,685	12,448	8,375	7,564	8,826	42,898	8,241	7,451	7,568	7,658	7,821	38,738
Capital	Gas Distribution	Pressure Betterment	Non-RAMP	No	On-Going	Annual	13	264	2,024	30	132	2,463	1,918	1,973	2,004	2,028	2,071	9,995
Capital	Gas Distribution	Easements	Non-RAMP	No	On-Going	Annual	37	—	3	14	8	61	43	43	43	44	45	218
Capital	Gas Distribution	Franchise Relocations	Non-RAMP	No	On-Going	Annual	4,666	4,132	6,570	8,166	11,175	34,709	7,541	8,173	8,303	8,401	8,580	40,998
Capital	Gas Distribution	Tools and Equipment	Non-RAMP	No	On-Going	Annual	2,798	6,279	3,469	1,734	963	15,242	2,143	1,927	1,957	1,980	2,022	10,029
Capital	Gas Distribution	Tools and Equipment	Training props	No	On-Going	Annual	114	115	190	79	82	580	368	589	599	606	619	2,780
Capital	Gas Distribution	<b>Sub-Total Tools and Equipment</b>		Yes			<b>2,912</b>	<b>6,393</b>	<b>3,660</b>	<b>1,813</b>	<b>1,045</b>	<b>15,822</b>	<b>2,511</b>	<b>2,516</b>	<b>2,556</b>	<b>2,586</b>	<b>2,641</b>	<b>12,809</b>
Capital	Gas Distribution	Code Compliance	Non-RAMP	No	On-Going	Annual	1,452	2,587	3,197	5,597	3,765	16,598	1,328	1,201	1,220	1,234	1,261	6,245

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
Capital	Gas Distribution	Replacements of Mains and Services - RAMP1	Early Vintage Steel Replacement	No	On-Going	Annual	1,795	3,754	14,712	8,130	8,232	36,623	8,356	3,291	3,343	3,383	3,455	21,829
Capital	Gas Distribution	Replacements of Mains and Services - RAMP2	Early Vintage Threaded Main Removal	No	On-Going	Annual	(0)	1,663	13,682	17,739	6,324	39,408	8,356	3,304	3,356	3,396	3,468	21,881
Capital	Gas Distribution	Replacements of Mains and Services - RAMP3	Pipeline Observations (Standby)	No	On-Going	Annual	—	—	—	—	—	—	15	9	9	9	9	50
Capital	Gas Distribution	Replacements of Mains and Services - RAMP4	Leak Repair	No	On-Going	Annual	9,248	9,500	10,083	13,713	12,466	55,010	1,649	1,170	1,188	1,202	1,228	6,436
Capital	Gas Distribution	Replacements of Mains and Services - RAMP5	EPOCH Planned Replacement of Pipe	No	On-Going	Annual	—	1,040	4,208	3,914	640	9,802	2,939	1,505	1,528	1,546	1,579	9,098
<b>Capital</b>	<b>Gas Distribution</b>	<b>Sub-Total Replacements of Mains and Services</b>		<b>Yes</b>			<b>11,043</b>	<b>15,958</b>	<b>42,685</b>	<b>43,496</b>	<b>27,662</b>	<b>140,843</b>	<b>21,314</b>	<b>9,278</b>	<b>9,425</b>	<b>9,536</b>	<b>9,740</b>	<b>59,294</b>
Capital	Gas Distribution	Cathodic Protection	Non-RAMP	No	On-Going	Annual	4,976	3,672	4,410	4,667	5,391	23,117	2,202	1,526	1,550	1,569	1,602	8,449
Capital	Gas Distribution	Regulator Station Improvements and Other	Non-RAMP	No	On-Going	Annual	417	1,032	645	1,577	4,539	8,209	862	393	399	404	413	2,472
Capital	Gas Distribution	Regulator Station Improvements and Other - RAMP1	Improvements	No	On-Going	3	(0)	1,391	3,935	2,744	2,554	10,624	8,913	2,752	2,796	2,829	2,889	20,178
Capital	Gas Distribution	Regulator Station Improvements and Other - RAMP2	Improvements	No	On-Going	3	0	193	3,668	2,332	1,050	7,244	10,495	3,246	3,298	3,337	3,408	23,783
Capital	Gas Distribution	Regulator Station Improvements and Other - RAMP3	Improvements	No	On-Going	3	(0)	188	2,925	2,049	2,411	7,574	8,734	1,377	1,398	1,415	1,445	14,369
Capital	Gas Distribution	Regulator Station Improvements and Other - RAMP4	Improvements	No	On-Going	3	0	448	893	2,007	902	4,251	—	604	614	621	634	2,474
<b>Capital</b>	<b>Gas Distribution</b>	<b>Sub-Total Regulator Station Improvements and Other</b>		<b>Yes</b>			<b>417</b>	<b>3,253</b>	<b>12,067</b>	<b>10,709</b>	<b>11,457</b>	<b>37,903</b>	<b>29,004</b>	<b>8,373</b>	<b>8,505</b>	<b>8,606</b>	<b>8,789</b>	<b>63,276</b>

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
Capital	Gas Distribution	GD Local Engineering Pool	Non-RAMP	No	On-Going	Annual	10,708	17,939	15,279	15,315	19,018	78,260	1,974	1,474	1,498	1,515	1,548	8,009
Capital	Gas Distribution	GD Local Engineering Pool	Local Engineering overhead costs associated with large RAMP proposed projects	No	On-Going	Annual	2,768	4,737	4,729	5,278	4,821	22,333	8,797	3,859	3,920	3,966	4,050	24,591
Capital	Gas Distribution	GD Local Engineering Pool	Improvements to Cathodic Protection reliability	No	Transferred to SCG	3	33	120	192	—	—	344	3,789	1,197	1,216	1,230	1,257	8,689
Capital	Gas Distribution	GD Local Engineering Pool	Safety policies and Programs	No	Allocated direct to Capital Jobs	3	30	182	91	—	—	303	3,569	2,690	2,732	2,764	2,823	14,578
Capital	Gas Distribution	GD Local Engineering Pool	Gas Handling Plans RAMP	No	On-Going	Annual	—	—	540	460	488	1,488	—	—	—	—	—	—
Capital	Gas Distribution	GD Local Engineering Pool	Gas standards review	No	On-Going	Annual	58	61	70	74	77	340	60	45	46	46	47	244
Capital	Gas Distribution	GD Local Engineering Pool	Operational QA/QC	No	On-Going	Annual	2,104	2,411	2,865	1,235	2,588	11,203	337	254	258	261	267	1,377
<b>Capital</b>	<b>Gas Distribution</b>	<b>Sub-Total GD Local Engineering Pool</b>		<b>Yes</b>			<b>15,701</b>	<b>25,449</b>	<b>23,767</b>	<b>22,362</b>	<b>26,992</b>	<b>114,272</b>	<b>18,526</b>	<b>9,519</b>	<b>9,669</b>	<b>9,783</b>	<b>9,992</b>	<b>57,490</b>
Capital	Gas Distribution	Cathodic Protection System Enhancement - RAMP	Cathodic Protection	No	On-Going	Annual	1,536	1,249	2,919	981	1,405	8,090	4,430	2,348	2,385	2,413	2,465	14,041
Capital	Gas Distribution	Gas Department Overhead Pool	Non-RAMP	No	On-Going	Annual	3,962	4,481	8,099	8,849	11,270	36,661	—	—	—	—	—	—
Capital	Gas Distribution	Gas Contract Admin Pool	Non-RAMP	No	On-Going	Annual	7,595	4,489	8,719	9,412	3,133	33,348	—	—	—	—	—	—
Capital	Gas Distribution	CNG Station Upgrades	Non-RAMP	No	On-Going	Annual	—	—	—	—	170	170	—	—	—	—	—	—
Capital	Gas Distribution	Emergent RAMP: New Gas Transmission Safety Rule (GTSR)	New Gas Transmission Safety Rule (GTSR)	No	On-Going	Annual	—	—	—	—	2,673	2,673	—	—	—	—	—	—

A. SDG&E Gas Distribution  
ii. SDG&E Gas Distribution Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
Capital	Gas Distribution	Gas Distribution		Yes	(39,025)	30,944	75,369	83,852	62,341	213,481	-35%	-47%	114%	125%	91%	57%
Capital	Gas Distribution	New Business	Non-RAMP	No	(1,497)	(1,656)	1,448	10,166	(425)	8,036	-17%	-21%	18%	123%	-5%	19%
Capital	Gas Distribution	New Business	Odorization of gas	No	(51)	(49)	(50)	(50)	(51)	(251)	-100%	-100%	-100%	-100%	-100%	-100%
Capital	Gas Distribution	<b>Sub-Total New Business</b>		Yes	<b>(1,548)</b>	<b>(1,705)</b>	<b>1,398</b>	<b>10,116</b>	<b>(476)</b>	<b>7,786</b>	<b>-18%</b>	<b>-21%</b>	<b>17%</b>	<b>121%</b>	<b>-6%</b>	<b>19%</b>
Capital	Gas Distribution	System Minor Additions, Relocations, & Retirements	Non-RAMP	No	(144)	977	1,014	4,244	3,031	9,121	-4%	23%	23%	95%	67%	42%
Capital	Gas Distribution	System Minor Additions, Relocations, & Retirements - RAMP	Locate and Mark	No	(269)	(301)	(307)	(310)	(314)	(1,500)	-98%	-99%	-99%	-99%	-98%	-99%
Capital	Gas Distribution	<b>Sub-Total System Minor Additions, Relocations, &amp;</b>		Yes	<b>(413)</b>	<b>676</b>	<b>707</b>	<b>3,934</b>	<b>2,717</b>	<b>7,621</b>	<b>-10%</b>	<b>15%</b>	<b>15%</b>	<b>83%</b>	<b>56%</b>	<b>33%</b>
Capital	Gas Distribution	Meters and Regulator Materials	Non-RAMP	No	(2,556)	4,997	806	(94)	1,006	4,159	-31%	67%	11%	-1%	13%	11%
Capital	Gas Distribution	Pressure Betterment	Non-RAMP	No	(1,905)	(1,709)	20	(1,998)	(1,939)	(7,532)	-99%	-87%	1%	-99%	-94%	-75%
Capital	Gas Distribution	Easements	Non-RAMP	No	(6)	(43)	(40)	(30)	(37)	(157)	-14%	-100%	-93%	-69%	-83%	-72%
Capital	Gas Distribution	Franchise Relocations	Non-RAMP	No	(2,875)	(4,041)	(1,733)	(235)	2,596	(6,289)	-38%	-49%	-21%	-3%	30%	-15%
Capital	Gas Distribution	Tools and Equipment	Non-RAMP	No	655	4,352	1,512	(246)	(1,060)	5,213	31%	226%	77%	-12%	-52%	52%
Capital	Gas Distribution	Tools and Equipment	Training props	No	(254)	(475)	(408)	(527)	(537)	(2,200)	-69%	-81%	-68%	-87%	-87%	-79%
Capital	Gas Distribution	<b>Sub-Total Tools and Equipment</b>		Yes	<b>401</b>	<b>3,877</b>	<b>1,104</b>	<b>(773)</b>	<b>(1,596)</b>	<b>3,013</b>	<b>16%</b>	<b>154%</b>	<b>43%</b>	<b>-30%</b>	<b>-60%</b>	<b>24%</b>
Capital	Gas Distribution	Code Compliance	Non-RAMP	No	123	1,386	1,977	4,362	2,505	10,353	9%	115%	162%	353%	199%	166%

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
Capital	Gas Distribution	Replacements of Mains and Services - RAMP1	Early Vintage Steel Replacement	No	(6,561)	463	11,369	4,748	4,777	14,794	-79%	14%	340%	140%	138%	68%
Capital	Gas Distribution	Replacements of Mains and Services - RAMP2	Early Vintage Threaded Main Removal	No	(8,356)	(1,641)	10,326	14,343	2,856	17,527	-100%	-50%	308%	422%	82%	80%
Capital	Gas Distribution	Replacements of Mains and Services - RAMP3	Pipeline Observations (Standby)	No	(15)	(9)	(9)	(9)	(9)	(50)	-100%	-100%	-100%	-100%	-100%	-100%
Capital	Gas Distribution	Replacements of Mains and Services - RAMP4	Leak Repair	No	7,599	8,331	8,894	12,511	11,238	48,573	461%	712%	749%	1041%	915%	755%
Capital	Gas Distribution	Replacements of Mains and Services - RAMP5	EPOCH Planned Replacement of Pipe	No	(2,939)	(464)	2,679	2,368	(940)	705	-100%	-31%	175%	153%	-59%	8%
<b>Capital</b>	<b>Gas Distribution</b>	<b>Sub-Total Replacements of Mains and Services</b>		<b>Yes</b>	<b>(10,272)</b>	<b>6,680</b>	<b>33,259</b>	<b>33,960</b>	<b>17,922</b>	<b>81,549</b>	<b>-48%</b>	<b>72%</b>	<b>353%</b>	<b>356%</b>	<b>184%</b>	<b>138%</b>
Capital	Gas Distribution	Cathodic Protection	Non-RAMP	No	2,774	2,146	2,859	3,099	3,789	14,668	126%	141%	184%	198%	237%	174%
Capital	Gas Distribution	Regulator Station Improvements and Other	Non-RAMP	No	(446)	638	246	1,173	4,126	5,737	-52%	162%	62%	290%	999%	232%
Capital	Gas Distribution	Regulator Station Improvements and Other - RAMP1	Improvements	No	(8,913)	(1,361)	1,139	(85)	(335)	(9,554)	-100%	-49%	41%	-3%	-12%	-47%
Capital	Gas Distribution	Regulator Station Improvements and Other - RAMP2	Improvements	No	(10,495)	(3,053)	371	(1,005)	(2,358)	(16,539)	-100%	-94%	11%	-30%	-69%	-70%
Capital	Gas Distribution	Regulator Station Improvements and Other - RAMP3	Improvements	No	(8,734)	(1,188)	1,527	634	966	(6,795)	-100%	-86%	109%	45%	67%	-47%
Capital	Gas Distribution	Regulator Station Improvements and Other - RAMP4	Improvements	No	0	(156)	279	1,386	268	1,777	100%	-26%	45%	223%	42%	72%
<b>Capital</b>	<b>Gas Distribution</b>	<b>Sub-Total Regulator Station Improvements and Other</b>		<b>Yes</b>	<b>(28,587)</b>	<b>(5,120)</b>	<b>3,562</b>	<b>2,104</b>	<b>2,668</b>	<b>(25,374)</b>	<b>-99%</b>	<b>-61%</b>	<b>42%</b>	<b>24%</b>	<b>30%</b>	<b>-40%</b>

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
Capital	Gas Distribution	GD Local Engineering Pool	Non-RAMP	No	8,735	16,465	13,781	13,800	17,471	70,251	443%	1117%	920%	911%	1129%	877%
Capital	Gas Distribution	GD Local Engineering Pool	Local Engineering overhead costs associated with large RAMP proposed projects	No	(6,029)	878	809	1,312	771	(2,258)	-69%	23%	21%	33%	19%	-9%
Capital	Gas Distribution	GD Local Engineering Pool	Improvements to Cathodic Protection reliability	No	(3,756)	(1,078)	(1,024)	(1,230)	(1,257)	(8,345)	-99%	-90%	-84%	-100%	-100%	-96%
Capital	Gas Distribution	GD Local Engineering Pool	Safety policies and Programs	No	(3,539)	(2,508)	(2,641)	(2,764)	(2,823)	(14,276)	-99%	-93%	-97%	-100%	-100%	-98%
Capital	Gas Distribution	GD Local Engineering Pool	Gas Handling Plans RAMP	No	—	—	540	460	488	1,488	—%	—%	100%	100%	100%	100%
Capital	Gas Distribution	GD Local Engineering Pool	Gas standards review	No	(2)	16	24	28	29	95	-3%	35%	53%	60%	62%	39%
Capital	Gas Distribution	GD Local Engineering Pool	Operational QA/QC	No	1,767	2,157	2,607	974	2,321	9,826	524%	849%	1010%	373%	870%	713%
<b>Capital</b>	<b>Gas Distribution</b>	<b>Sub-Total GD Local Engineering Pool</b>		<b>Yes</b>	<b>(2,825)</b>	<b>15,931</b>	<b>14,097</b>	<b>12,579</b>	<b>17,000</b>	<b>56,782</b>	<b>-15%</b>	<b>167%</b>	<b>146%</b>	<b>129%</b>	<b>170%</b>	<b>99%</b>
Capital	Gas Distribution	Cathodic Protection System Enhancement - RAMP	Cathodic Protection	No	(2,894)	(1,099)	534	(1,432)	(1,059)	(5,951)	-65%	-47%	22%	-59%	-43%	-42%
Capital	Gas Distribution	Gas Department Overhead Pool	Non-RAMP	No	3,962	4,481	8,099	8,849	11,270	36,661	100%	100%	100%	100%	100%	100%
Capital	Gas Distribution	Gas Contract Admin Pool	Non-RAMP	No	7,595	4,489	8,719	9,412	3,133	33,348	100%	100%	100%	100%	100%	100%
Capital	Gas Distribution	CNG Station Upgrades	Non-RAMP	No	—	—	—	—	170	170	—%	—%	—%	—%	100%	100%
Capital	Gas Distribution	Emergent RAMP: New Gas Transmission Safety Rule (GTSR)	New Gas Transmission Safety Rule (GTSR)	No	—	—	—	—	2,673	2,673	—%	—%	—%	—%	100%	100%

A. SDG&E Gas Distribution  
 ii. SDG&E Gas Distribution Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance
Capital	Gas Distribution	Gas Distribution		Yes																									
Capital	Gas Distribution	New Business	Non-RAMP	No	Projects	1,535	1,843	2,321	1,616	1,425	8,740																		
Capital	Gas Distribution	New Business	Odorization of gas	No	Projects	0	0	0	0	0	—																		
Capital	Gas Distribution	Sub-Total New Business		Yes																									
Capital	Gas Distribution	System Minor Additions, Relocations, & Retirements	Non-RAMP	No	Projects	303	805	751	848	806	3,513																		
Capital	Gas Distribution	System Minor Additions, Relocations, & Retirements - RAMP	Locate and Mark	No	Tickets	303	805	751	848	806	3,513																		
Capital	Gas Distribution	Sub-Total System Minor Additions, Relocations, &		Yes																									
Capital	Gas Distribution	Meters and Regulator Materials	Non-RAMP	No	Meters/Regulators purchased	31,843	93,337	66,744	83,119	98,684	373,727																		
Capital	Gas Distribution	Pressure Betterment	Non-RAMP	No	Projects	1	1	11	10	4	27																		
Capital	Gas Distribution	Easements	Non-RAMP	No	Projects	0	0	1	2	2	5																		
Capital	Gas Distribution	Franchise Relocations	Non-RAMP	No	Projects	58	29	58	34	34	213																		
Capital	Gas Distribution	Tools and Equipment	Non-RAMP	No	Tools	0	490	642	185	166	1,483																		
Capital	Gas Distribution	Tools and Equipment	Training props	No	Tools	0	49	175	114	4	342																		
Capital	Gas Distribution	Sub-Total Tools and Equipment		Yes																									
Capital	Gas Distribution	Code Compliance	Non-RAMP	No	Projects	0	1,364	1,888	2,847	3,666	9,765																		



Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
Capital	Gas Distribution	Replacements of Mains and Services - RAMP1	Early Vintage Steel Replacement	No	Feet Replaced	15,840	10,560	47,133	54,930	28840	157,303																			The timing of individual projects is based on a number of factors including the need for review of operating conditions, detailed planning requirements, acquiring the necessary permits, and coordination and scheduling of resources. Therefore, it is infeasible to identify a single imputed authorized unit.
Capital	Gas Distribution	Replacements of Mains and Services - RAMP2	Early Vintage Threaded Main Removal	No	Feet Replaced	0	1,759	42,648	65,533	20081	130,021																			The timing of individual projects is based on a number of factors including the need for review of operating conditions, detailed planning requirements, acquiring the necessary permits, and coordination and scheduling of resources. Therefore, it is infeasible to identify a single imputed authorized unit.
Capital	Gas Distribution	Replacements of Mains and Services - RAMP3	Pipeline Observations (Standby)	No	Projects	0	0	0	0	0	—																			The timing of individual projects is based on a number of factors including the need for review of operating conditions, detailed planning requirements, acquiring the necessary permits, and coordination and scheduling of resources. Therefore, it is infeasible to identify a single imputed authorized unit. This work is not separately tracked, but rather is charged directly to the project, where applicable.
Capital	Gas Distribution	Replacements of Mains and Services - RAMP4	Leak Repair	No	Projects	873	769	787	923	504	3,856																			The timing of individual projects is based on a number of factors including customer or leak survey reporting of leaks, the need for review of operating conditions, detailed planning requirements, acquiring the necessary permits, and coordination and scheduling of resources. Therefore, it is infeasible to identify a single imputed authorized unit.
Capital	Gas Distribution	Replacements of Mains and Services - RAMP5	EPOCH Planned Replacement of Pipe	No	Feet Replaced	0	3,696	28,183	18,163	1295	51,337																			The timing of individual projects is based on a number of factors including customer or leak survey reporting of leaks, the need for review of operating conditions, detailed planning requirements, acquiring the necessary permits, and coordination and scheduling of resources. Therefore, it is infeasible to identify a single imputed authorized unit.
<b>Capital</b>	<b>Gas Distribution</b>	<b>Sub-Total Replacements of Mains and Services</b>		<b>Yes</b>																										
Capital	Gas Distribution	Cathodic Protection	Non-RAMP	No	Projects	52	39	52	37	38	218																			The frequency of projects performed in this work category are driven by the age of the Cathodic Protection (CP) system, the health of surrounding CP stations, soil conditions, and effective resolution of failed CP stations. It is therefore infeasible to identify a single imputed authorized unit.
Capital	Gas Distribution	Regulator Station Improvements and Other	Non-RAMP	No	Projects	4	6	7	3	19	39																			Units in this workpaper vary depending largely on the number and nature of remediations identified as well as planning, permitting, and scheduling requirements. It is therefore infeasible to identify a single imputed authorized unit.
Capital	Gas Distribution	Regulator Station Improvements and Other - RAMP1	Improvements	No	Couplings Removed	0	11	27	8	5	51																			The variety and scope of work for removal of each dresser coupling project, along with crew availability and the process to acquire municipality permits, makes it infeasible to identify a single imputed authorized unit.
Capital	Gas Distribution	Regulator Station Improvements and Other - RAMP2	Improvements	No	Oil Drips Removed	0	3	55	6	2	66																			The variety and scope of work for removal of each oil drip piping, along with crew availability and the process to acquire municipality permits, makes it infeasible to identify a single imputed authorized unit.
Capital	Gas Distribution	Regulator Station Improvements and Other - RAMP3	Improvements	No	Buried Vault Pipes Repaired or Replaced	0	2	14	4	8	28																			The variety and scope of work for removal of each pipeline buried in vaults, along with crew availability and the process to acquire municipality permits, makes it infeasible to identify a single imputed authorized unit.
Capital	Gas Distribution	Regulator Station Improvements and Other - RAMP4	Improvements	No	HP/MP Valves Removed	0	4	5	5	3	17																			The variety and scope of work for each removal of closed valve between High Pressure (HP) and Medium Pressure (MP) Pipeline projects, along with crew availability and the process to acquire municipality permits, makes it infeasible to identify a single imputed authorized unit.
<b>Capital</b>	<b>Gas Distribution</b>	<b>Sub-Total Regulator Station Improvements and Other</b>		<b>Yes</b>																										

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance			
Capital	Gas Distribution	GD Local Engineering Pool	Non-RAMP	No	This activity includes non-RAMP related work performed by both company employees and contracted personnel based on availability and skill sets required of each project's scope of work. The type of work includes project management, engineering, design, and drafting cost for both internal and external resources to support capital investment. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																											
Capital	Gas Distribution	GD Local Engineering Pool	Local Engineering overhead costs associated with large RAMP proposed projects	No	This activity includes RAMP related work performed by both company employees and contracted personnel based on availability and skill sets required of each project's scope of work. The type of work includes project management, engineering, design, and drafting cost for both internal and external resources to support capital investment. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																											
Capital	Gas Distribution	GD Local Engineering Pool	Improvements to Cathodic Protection reliability	No	This activity is a region-specific program to perform a detailed cathodic protection evaluation to assess the health of the cathodic protection system. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																											
Capital	Gas Distribution	GD Local Engineering Pool	Safety policies and Programs	No	This activity is related to traffic control measures for capital projects. The variety of work activities in this category makes it infeasible to identify a single unit of measurement. Activity is now being tracked within the specific projects rather than within this activity.																											
Capital	Gas Distribution	GD Local Engineering Pool	Gas Handling Plans RAMP	No	Number of Gas Handling Plans developed	0	0	430	438	352	1,220																The variety and scope of work involved with the creation of Gas Handling Plans on all the different and unique Gas Handling jobs, makes it infeasible to identify a single imputed authorized unit.					
Capital	Gas Distribution	GD Local Engineering Pool	Gas standards review	No	Number of Standards Reviewed	192	144	158	134	98	726																This activity involves standards reviewed at different review cycles based on industry requirements, regulation changes, and equipment and tool technology changes. There were no imputed authorized units included in the TY 2019 GRC.					
Capital	Gas Distribution	GD Local Engineering Pool	Operational QA/QC	No	Number of QA/QC inspections			2,586	2,722	3,813	9,121																In 2019, SDG&E did not have a mechanism in place to track units. In 2020, SDG&E did not have a mechanism in place to track units. This activity includes inspection of installed assets, welding/bonding procedures, material verification, gas standards and other construction activities supporting the capital investments performed above. There were no imputed authorized units included in the TY 2019 GRC.					
<b>Capital</b>	<b>Gas Distribution</b>	<b>Sub-Total GD Local Engineering Pool</b>		<b>Yes</b>																												
Capital	Gas Distribution	Cathodic Protection System Enhancement - RAMP	Cathodic Protection	No	Projects	39	18	26	33	45	161																The variety and scope of work for each cathodic protection system enhancement projects, along with crew availability and the process to acquire municipality permits, makes it infeasible to identify a single imputed authorized unit.					
Capital	Gas Distribution	Gas Department Overhead Pool	Non-RAMP	No	The activities included in this non-RAMP Department Overhead pool consists of expenses for supervision and administration of gas crews in the SDG&E Construction and Operation (C&O) districts. Department Overhead is charged for expenses that are not attributable to one particular project, but benefit many projects, or the Construction and Operation (C&O) districts as a whole. Certain costs are incurred by capital projects that originate from central activities, which are subsequently distributed to those capital projects. These central activity costs are also called 'pooled' or 'overhead' costs.																											
Capital	Gas Distribution	Gas Contract Admin Pool	Non-RAMP	No	This activity included in this non-RAMP Contract Administration (CA) pool consists of those expenses necessary for the administration of projects that are performed by contractors for SDG&E. The expenses to this pool consist of labor for Contract Administrators 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.																											
Capital	Gas Distribution	CNG Station Upgrades	Non-RAMP	No	The work conducted in 2023 consists of project planning, capital repairs, and equipment purchasing for CNG stations at several locations. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																											
Capital	Gas Distribution	Emergent RAMP: New Gas Transmission Safety Rule (GTSR)	New Gas Transmission Safety Rule (GTSR)	No	The work conducted in 2023 consists of project planning, data management, and reporting activities. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																											

A. SDG&E Gas Distribution  
ii. SDG&E Gas Distribution Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
Capital	Gas Distribution	Gas Distribution		Yes									
Capital	Gas Distribution	New Business	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Gas Distribution	New Business	Odorization of gas	No	No	No	N/A	N/A	Under (U)	Under (U)	Under (U)	Canceled	No
Capital	Gas Distribution	<b>Sub-Total New Business</b>		Yes	No								No
Capital	Gas Distribution	System Minor Additions, Relocations, & Retirements	Non-RAMP	No	Yes	No	This activity covers the relocation of existing gas distribution facilities when necessitated by customer initiated improvements. The scope of projects is based on factors outside of SDG&E's control. Most come from customer requests or expenses involved in customer encroachments and the number of projects was greater than forecasted.	N/A	Over (O)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Gas Distribution	System Minor Additions, Relocations, & Retirements - RAMP	Locate and Mark	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	Yes
Capital	Gas Distribution	<b>Sub-Total System Minor Additions, Relocations, &amp;</b>		Yes	Yes								No
Capital	Gas Distribution	Meters and Regulator Materials	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Gas Distribution	Pressure Betterment	Non-RAMP	No	Yes	No	This activity includes system reinforcement projects required to remedy low pressure situations and/or improve reliability to large single feed areas that are usually initiated due to new loads being added to the system. The number and scope of projects is dependent on number, type, location, and timing of new loads, and these are factors outside of SDG&E's control. As number and scope of projects are added to the system, analysis is being completed to determine load. Based on this load, projects are prioritized based on total resources available, permits, and future growth to determine if the project needs to be scheduled this year or into the future. The variance in cost actuals below forecasted spend for this activity is attributed to less than the forecasted number of projects emerging as viable as described above and the reprioritizing of engineering resources, design, and construction resources to other RAMP related activities in 2023.	N/A	Under (U)	On Target (T)	Under (U)	Proceeding as Planned	No
Capital	Gas Distribution	Easements	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Gas Distribution	Franchise Relocations	Non-RAMP	No	Yes	No	This activity covers the relocation of existing gas distribution facilities when necessitated by public improvements, as required by the company's franchise agreements to clear municipal or other improvements. The scope of projects is based on factors outside of SDG&E's control, and the number of projects completed in 2023 was higher than forecasted expectations.	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Gas Distribution	Tools and Equipment	Non-RAMP	No	Yes	No	The work described in the workpaper is for acquiring tools and equipment for use by gas crews. The costs were reprioritized to other workpapers in Gas Distribution (like Leak Repair and Cathodic Protection) to help address higher risk activities. To address this, some new or replacement tool purchases were deferred to 2024.	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Gas Distribution	Tools and Equipment	Training props	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
Capital	Gas Distribution	<b>Sub-Total Tools and Equipment</b>		Yes	Yes								No
Capital	Gas Distribution	Code Compliance	Non-RAMP	No	Yes	No	The cost of compliance-related activities was higher than forecasted due to an increase in capital investment to replace more inoperable valves than anticipated, more barrier post installations than anticipated and unforeseen construction costs incurred due to municipality requirements requiring increased street repaving and working hour restrictions.	N/A	Over (O)	On Target (T)	Over (O)	Expanded	No

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
Capital	Gas Distribution	Replacements of Mains and Services - RAMP1	Early Vintage Steel Replacement	No	Yes	No	Work for this new program involving steel pipe replacement began after authorization in the TY 2019 GRC Decision. These types of jobs involve extensive design, engineering, planning, scheduling, resource procurement, and permit coordination with the local municipalities, which can take an extensive amount of time from the time funding is authorized to the time of actual completion of construction. As such, costs and work associated with this program were incurred later in the GRC cycle. This is illustrated in spending which is well below authorized levels in 2019, 2020 and increased spending in 2021, 2022 and 2023 to reflect the project status moving from the design and planning phase into the later construction completion phase.	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Gas Distribution	Replacements of Mains and Services - RAMP2	Early Vintage Threaded Main Removal	No	Yes	No	Work for this new program involving steel pipe replacement began after authorization in the TY 2019 GRC Decision. These types of jobs involve extensive design, engineering, planning, scheduling, resource procurement, and permit coordination with the local municipalities, which can take an extensive amount of time from the time funding is authorized to the time of actual completion of construction. As such, costs and work associated with this program were incurred later in the GRC cycle. This is illustrated in spending which is well below authorized levels in 2019, 2020 and increased spending in 2021, 2022 and 2023 to reflect the project status moving from the design and planning phase into the later construction completion phase.	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Gas Distribution	Replacements of Mains and Services - RAMP3	Pipeline Observations (Standby)	No	No	No	N/A	N/A	Under (U)	Under (U)	Under (U)	Canceled	No
Capital	Gas Distribution	Replacements of Mains and Services - RAMP4	Leak Repair	No	Yes	No	The variance is due to higher than forecasted number of leak repairs and an increased cost per repair due to municipality constraints, enhanced design and higher construction, permit and paving costs.	N/A	Over (O)	On Target (T)	Over (O)	Expanded	No
Capital	Gas Distribution	Replacements of Mains and Services - RAMP5	EPOCH Planned Replacement of Pipe	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
<b>Capital</b>	<b>Gas Distribution</b>	<b>Sub-Total Replacements of Mains and Services</b>		<b>Yes</b>	<b>Yes</b>								<b>No</b>
Capital	Gas Distribution	Cathodic Protection	Non-RAMP	No	Yes	No	The variance is due to the installation of higher numbers of new and renewed cathodic protection (CP) stations to maintain protection of the steel piping system in accordance with mandated compliance. In addition, there was an increase in cost per station associated with municipality constraints and enhanced station design leading to higher construction costs.	N/A	Over (O)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Gas Distribution	Regulator Station Improvements and Other	Non-RAMP	No	Yes	No	The variance is due to high costs associated with the replacement and RFS (remove from service) of regulator stations and replacement of inaccessible valves with excess flow valves. In addition, there was an increase in cost associated with municipality constraints and higher material and construction costs (traffic control, night work, and paving costs) than forecasted.	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Gas Distribution	Regulator Station Improvements and Other - RAMP1	Improvements	No	No	No	N/A	N/A	On Target (T)	Under (U)	Under (U)	Proceeding as Planned	No
Capital	Gas Distribution	Regulator Station Improvements and Other - RAMP2	Improvements	No	Yes	No	The variance is due to dollars being shifted to CP to accommodate higher than anticipated new and renewed CP stations to maintain protection of the steel piping system in accordance with mandated compliance.	N/A	On Target (T)	Under (U)	Under (U)	Proceeding as Planned	No
Capital	Gas Distribution	Regulator Station Improvements and Other - RAMP3	Improvements	No	No	No	N/A	N/A	On Target (T)	Under (U)	Under (U)	Proceeding as Planned	No
Capital	Gas Distribution	Regulator Station Improvements and Other - RAMP4	Improvements	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
<b>Capital</b>	<b>Gas Distribution</b>	<b>Sub-Total Regulator Station Improvements and Other</b>		<b>Yes</b>	<b>Yes</b>								<b>No</b>

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
Capital	Gas Distribution	GD Local Engineering Pool	Non-RAMP	No	Yes	No	This variance is due to higher than projected project management, engineering, design, and drafting cost for both internal and external resources to support capital investment. Additional municipality requirements and post-design changes contributed to additional costs and construction delays.	N/A	Over (O)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Gas Distribution	GD Local Engineering Pool	Local Engineering overhead costs associated with large RAMP proposed projects	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Gas Distribution	GD Local Engineering Pool	Improvements to Cathodic Protection reliability	No	Yes	No	To streamline resources between SoCalGas and SDG&E, SDG&E installed Real Time Monitoring Units to provide real time data on each rectifier station, is canceling algorithm model development, and is instead using the new quantitative risk assessment that is being developed by SoCalGas.	N/A	Under (U)	Under (U)	Under (U)	Canceled	No
Capital	Gas Distribution	GD Local Engineering Pool	Safety policies and Programs	No	Yes	No	This variance is due to the risk mitigation of traffic control being spread over the respective Capital projects rather than collected in this workpaper.	N/A	Under (U)	Under (U)	Under (U)	Canceled	No
Capital	Gas Distribution	GD Local Engineering Pool	Gas Handling Plans RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Gas Distribution	GD Local Engineering Pool	Gas standards review	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Gas Distribution	GD Local Engineering Pool	Operational QA/QC	No	Yes	No	This activity involves the inspection and establishing material traceability to maintain code compliance associated with new construction projects. The variance is due to incremental requirements for Capital QA/QC costs not requested in the TY 2019 GRC.	N/A	Over (O)	On Target (T)	Over (O)	Proceeding as Planned	No
<b>Capital</b>	<b>Gas Distribution</b>	<b>Sub-Total GD Local Engineering Pool</b>		<b>Yes</b>	<b>Yes</b>								<b>No</b>
Capital	Gas Distribution	Cathodic Protection System Enhancement - RAMP	Cathodic Protection	No	Yes	No	This activity provides for CP reliability improvement projects on the Gas Distribution system. This includes primarily the purchase and installation of ISO joints to isolate segments of the CP System for the establishment of distinct zones for CP protection. Historically, this activity has also included special CP projects to address stranded steel segments, services, and valves. The lower-than-forecasted spend is attributed to most of the special projects being completed earlier in the GRC cycle and now shifting the focus back primarily to ISO joints projects.	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Gas Distribution	Gas Department Overhead Pool	Non-RAMP	No	Yes	No	This variance is due to the creation of these pools in 2021. Variance is a result of no imputed authorized dollars established for this emergent activity.	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Gas Distribution	Gas Contract Admin Pool	Non-RAMP	No	Yes	No	This variance is due to the creation of these pools in 2021. Variance is a result of no imputed authorized dollars established for this emergent activity.	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Gas Distribution	CNG Station Upgrades	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Other	No
Capital	Gas Distribution	Emergent RAMP: New Gas Transmission Safety Rule (GTSR)	New Gas Transmission Safety Rule (GTSR)	No	Yes	No	In October 2019, PHMSA published the GTSR Part 1 (Pipeline Safety: Safety of Gas Transmission Pipelines: MAOP Reconfirmation, Expansion of Assessment Requirements, and Other Related Amendments final rule). The final rule update or added approximately 30 sections of the CFR. Pursuant to 49 CFR § 192.624, SDG&E is required to reconfirm – by July 2035 – the MAOP of transmission lines that either: 1) do not have traceable, verifiable, or complete pressure test records to establish MAOP in accordance with 49 C.F.R. § 192.619(a) and are located in HCAs or Class 3 or 4 locations, or 2) have an MAOP established in accordance with 49 CFR § 192.619(c), have an MAOP greater than 30% SMYS, and are located in HCAs, Class 3 or 4 locations, or – where the segment can accommodate an in-line inspection (ILI) tool – MCAs. SDG&E has incurred project planning costs to meet regulatory requirements.	N/A	Over (O)	Over (O)	Over (O)	Emergent	No

A. SDG&E Gas Distribution  
ii. SDG&E Gas Distribution Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
Capital	Gas Distribution	Gas Distribution		Yes				
Capital	Gas Distribution	New Business	Non-RAMP	No	N/A			
Capital	Gas Distribution	New Business	Odorization of gas	No	N/A			
Capital	Gas Distribution	<b>Sub-Total New Business</b>		Yes				
Capital	Gas Distribution	System Minor Additions, Relocations, & Retirements	Non-RAMP	No	N/A	Expenses in budget code 501 provide for minor gas distribution main and service additions, retirements and relocations.	SDG&E-04-R GOM-73 to GOM-75 WP 005010	SDG&E-04-R-E LPK-74 to LPK-77 WP 005010
Capital	Gas Distribution	System Minor Additions, Relocations, & Retirements - RAMP	Locate and Mark	No	Cost are incurred in O&M. L&M doesn't have the ability to always track these expenses to this capital workpaper.			
Capital	Gas Distribution	<b>Sub-Total System Minor Additions, Relocations, &amp;</b>		Yes				
Capital	Gas Distribution	Meters and Regulator Materials	Non-RAMP	No	N/A			
Capital	Gas Distribution	Pressure Betterment	Non-RAMP	No	N/A	Expenditures within budget code 503 provide for gas distribution system reinforcement projects required to maintain gas service to core customers. This work category addresses critical areas of the distribution pipeline network that are most susceptible to pressure drops to alleviate the potential risk of loss of service to customers.	SDG&E-04-R GOM-77 to GOM-79 WP 005030	SDG&E-04-R-E LPK-80 to LPK-82 WP 005030
Capital	Gas Distribution	Easements	Non-RAMP	No	N/A			
Capital	Gas Distribution	Franchise Relocations	Non-RAMP	No	N/A	This project covers the relocation of existing gas distribution facilities when necessitated by public improvements as required by the company's franchise agreements to clear municipal or other improvements. Generally, the work involves a change in alignment and/or grade of existing gas pipelines and associated facilities driven by local and state agency requirements. Work may involve main replacement in a new location in lieu of lowering, raising or changing lateral position of the existing main due to municipal improvements such as street and highway, railroad, and water and sewer line construction. This project covers the relocation of existing gas distribution facilities in compliance with State Highway and Municipal Franchise Agreements. All pipeline work must be performed in compliance with CPUC GO 112-F.	SDG&E-04-R GOM-80 to GOM-82 WP 005050	SDG&E-04-R-E LPK-84 to LPK-86 WP 005050
Capital	Gas Distribution	Tools and Equipment	Non-RAMP	No	N/A	Funds in this budget code are used to acquire various tools and equipment used by gas crews, personnel in the field, construction operations, shop operations, and identical state-of-the-art tools used in training.	SDG&E-04-R GOM-82 to GOM-84 WP 005060	SDG&E-04-R-E LPK-86 to LPK-89 WP 005060
Capital	Gas Distribution	Tools and Equipment	Training props	No	N/A			
Capital	Gas Distribution	<b>Sub-Total Tools and Equipment</b>		Yes				
Capital	Gas Distribution	Code Compliance	Non-RAMP	No	N/A	Capital expenditures in budget code 507 are used to keep SDG&E's gas distribution system in compliance with State and Federal regulations for natural gas pipelines.	SDG&E-04-R GOM-84 to GOM-87 WP 005070	SDG&E-04-R-E LPK-88 to LPK-92 WP 005070

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
Capital	Gas Distribution	Replacements of Mains and Services - RAMP1	Early Vintage Steel Replacement	No	N/A	Mitigating activity: Early vintage steel replacement. This program intends to remove early vintage, non-piggable, medium and high pressure pipelines primarily cathodically protected by cold tar asphaltic wrap. This program does not have an historical equivalent	SDG&E-04-R GOM-88 to GOM-91 WP 005080	SDG&E-04-R-E LPK-105 to LPK-106 WP 19564
Capital	Gas Distribution	Replacements of Mains and Services - RAMP2	Early Vintage Threaded Main Removal	No	N/A	Mitigating activity: Early vintage threaded main removal. This program intends to remove 152 miles of early vintage, threaded pipe over a 10-year period at an average of 15 miles per year. This program does not have an historical equivalent.	SDG&E-04-R GOM-88 to GOM-91 WP 005080	SDG&E-04-R-E LPK-104 to LPK-105 WP 19565
Capital	Gas Distribution	Replacements of Mains and Services - RAMP3	Pipeline Observations (Standby)	No	The costs associated with this workpaper are rolled into the projects for which the standby is required and not tracked separately.			
Capital	Gas Distribution	Replacements of Mains and Services - RAMP4	Leak Repair	No	N/A	Mitigating activity: Leak repair. This workpaper identifies historically embedded costs for replacing pipe or system components that are leaking	SDG&E-04-R GOM-88 to GOM-91 WP 005080	SDG&E-04-R-E LPK-92 to LPK-94 WP 00508
Capital	Gas Distribution	Replacements of Mains and Services - RAMP5	EPOCH Planned Replacement of Pipe	No	N/A	Mitigating activity: EPOCH Planned replacement of pipe with a recurring leak history. This workpaper identifies historically embedded costs for the planned replacement of pipe sections where multiple leaks have been repaired.	SDG&E-04-R GOM-88 to GOM-91 WP 005080	SDG&E-04-R-E LPK-107 to LPK-108 WP 00514
<b>Capital</b>	<b>Gas Distribution</b>	<b>Sub-Total Replacements of Mains and Services</b>		<b>Yes</b>				
Capital	Gas Distribution	Cathodic Protection	Non-RAMP	No	N/A	Budget code 509 provides funds to enhance and improve SDG&E's cathodic protection (CP) system. CP equipment additions are required to ensure SDG&E meets code mandated corrosion control requirements for the steel portion of the gas distribution system. By placing steel pipelines under cathodic protection, corrosion is minimized, resulting in a safer and more reliable gas system as well as extending the life of the steel pipeline system.	SDG&E-04-R GOM-91 to GOM-94 WP 005090	SDG&E-04-R-E LPK-94 to LPK-97 WP 00509
Capital	Gas Distribution	Regulator Station Improvements and Other	Non-RAMP	No	N/A	Budget code 510 provides funding for small capital projects (not captured under the other budget codes) that improve safety, provide required code compliance, and improve gas system performance or reliability through the replacement of aging gas operating equipment.	SDG&E-04-R GOM-94 to GOM-97 WP 005100	SDG&E-04-R-E LPK-100 to LPK-102 WP 00510
Capital	Gas Distribution	Regulator Station Improvements and Other - RAMP1	Improvements	No	N/A			
Capital	Gas Distribution	Regulator Station Improvements and Other - RAMP2	Improvements	No	N/A	Mitigating activity: Verification of above ground and buried oil drip lines and containers and and removal of facilities that are not necessary. This program does not have an historical equivalent.	SDG&E-04-R GOM-94 to GOM-97 WP 005100	SDG&E-04-R-E LPK-111 to LPK-112 WP 19567
Capital	Gas Distribution	Regulator Station Improvements and Other - RAMP3	Improvements	No	N/A			
Capital	Gas Distribution	Regulator Station Improvements and Other - RAMP4	Improvements	No	N/A			
<b>Capital</b>	<b>Gas Distribution</b>	<b>Sub-Total Regulator Station Improvements and Other</b>		<b>Yes</b>				

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
Capital	Gas Distribution	GD Local Engineering Pool	Non-RAMP	No	N/A	This budget code represents the forecasted costs associated with the Gas Distribution Local Engineering (LE) Pool. Certain costs are incurred by capital projects that originate from central activities which are subsequently distributed to those capital projects. These central activity costs are also called 'pooled' or 'indirect' costs.	SDG&E-04-R GOM-99 to GOM-102 WP 09020	SDG&E-04-R-E LPK-122 to LPK-129 WP 09020
Capital	Gas Distribution	GD Local Engineering Pool	Local Engineering overhead costs associated with large RAMP proposed projects	No	N/A	Local engineering pool costs driven by incremental RAMP projects.	SDG&E-04-R GOM-99 to GOM-102 WP 09020	SDG&E-04-R-E LPK-122 to LPK-129 WP 09020
Capital	Gas Distribution	GD Local Engineering Pool	Improvements to Cathodic Protection reliability	No	N/A	Mitigating activity: Performance of a detailed cathodic protection evaluation to include an expanded analysis of the system's routine maintenance records collected per CFR 49 Part 192 Subpart 1 - requirements for corrosion control, and the development of a risk algorithm to assess the health of the CP system. This program does not have an historical equivalent.	SDG&E-04-R GOM-99 to GOM-102 WP 09020	N/A
Capital	Gas Distribution	GD Local Engineering Pool	Safety policies and Programs	No	N/A	Mitigating activity: Traffic Control. This workpaper identifies historically embedded costs for traffic control activities.	SDG&E-04-R GOM-99 to GOM-102 WP 09020	N/A
Capital	Gas Distribution	GD Local Engineering Pool	Gas Handling Plans RAMP	No	N/A			
Capital	Gas Distribution	GD Local Engineering Pool	Gas standards review	No	N/A			
Capital	Gas Distribution	GD Local Engineering Pool	Operational QA/QC	No	N/A	The Local Engineering Pool work category provides the labor and non-labor funding for a broad range of services to support Gas Distribution field capital asset construction. This budget code represents the forecasted costs associated with the Gas Distribution Local Engineering Pool. The Local Engineering Pool is composed of three cost categories: technical planning, project management, and engineering activities.	SDG&E-04-R GOM-99 to GOM-102 WP 09020	SDG&E-04 LPK-124 to LPK-131 WP 09020
<b>Capital</b>	<b>Gas Distribution</b>	<b>Sub-Total GD Local Engineering Pool</b>		<b>Yes</b>				
Capital	Gas Distribution	Cathodic Protection System Enhancement - RAMP	Cathodic Protection	No	N/A	Budget code 12551 provides funds to enhance and improve SDG&E's cathodic protection (CP) system in addition to the cathodic protection work performed in budget code 509. The Cathodic Protection System Enhancement budget code tracks projects specifically associated with creating dedicated high pressure and medium distribution pressure pipeline CP systems, and remediating non-state-of-the-art cathodic protection on steel pipe segments, risers and valves as determined through advances in GIS mapping capabilities.	SDG&E-04-R GOM-91 to GOM-94 WP 125510	SDG&E-04-R-E LPK-97 to LPK-100 WP 125510
Capital	Gas Distribution	Gas Department Overhead Pool	Non-RAMP	No	N/A	This budget code represents the Department Overhead expenses for supervision and administration of gas crews in the SDG&E Construction and Operation (C&O) districts. Department Overhead is charged for expenses that are not attributable to one particular project, but benefit many projects, or the Construction and Operation (C&O) districts as a whole. Certain costs are incurred by capital projects that originate from central activities which are subsequently distributed to those capital projects. These central activity costs are also called 'pooled' or 'indirect' costs.	N/A	SDG&E-04-R-E LPK-122 to LPK-129 WP 09020
Capital	Gas Distribution	Gas Contract Admin Pool	Non-RAMP	No	N/A	The Contract Administration (CA) pool consists of those expenses necessary for the administration of projects that are performed by contractors for SDG&E. The expenses to this pool consist of labor for Contract Administrators 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.	N/A	SDG&E-04-R-E LPK-122 to LPK-129 WP 09020
Capital	Gas Distribution	CNG Station Upgrades	Non-RAMP	No	Project funding was denied in the TY2019 GRC as it was for new refueling stations and not upgrades to existing stations. These dollars are for capital replacements and repairs to existing infrastructure.		SDG&E-04-R GOM-98 to GOM-99 WP145530	SDG&E-04-R-E LPK-121 to LPK-122 WP 145530
Capital	Gas Distribution	Emergent RAMP: New Gas Transmission Safety Rule (GTSR)	New Gas Transmission Safety Rule (GTSR)	No	N/A	Compliance with new gas safety rules and regulations, such as the Gas Transmission Safety Rule Parts 1 and 2 or other rules driven by the PIPES Act of 2020	N/A	SDG&E-09-R AK-TS-36 to AK-TS-46 WP 214770



**B. SDG&E Gas Engineering**  
**i. SDG&E Gas Engineering Capital**

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
Capital	Gas Engineering	Gas Engineering		Yes			432	602	748	929	627	3,338	303	474	481	487	497	2,241
Capital	Gas Engineering	GT Land Rights	Non-RAMP	No	On-going	Canceled	—	—	—	—	—	—	128	216	219	222	226	1,010
Capital	Gas Engineering	GT Auxiliary Equipment (BC 419)	Non-RAMP	No	On-going	Annual	2	1	43	203	240	490	20	30	30	31	31	143
Capital	Gas Engineering	GT Capital Tools	Non-RAMP	No	On-going	Annual	110	70	369	375	30	953	61	97	99	100	102	459
Capital	Gas Engineering	GT Auxiliary Equipment (BC 439)	Non-RAMP	No	On-going	Canceled	—	—	—	—	—	—	11	11	11	11	11	54
Capital	Gas Engineering	GT Supervision & Engineering Pool	Non-RAMP	No	On-going	Annual	320	530	336	351	357	1,895	83	120	122	124	126	575

**B. SDG&E Gas Engineering**  
**i. SDG&E Gas Engineering Capital**

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
Capital	Gas Engineering	Gas Engineering		Yes	129	128	267	442	130	1,097	43%	27%	56%	91%	26%	49%
Capital	Gas Engineering	GT Land Rights	Non-RAMP	No	(128)	(216)	(219)	(222)	(226)	(1,010)	-100%	-100%	-100%	-100%	-100%	-100%
Capital	Gas Engineering	GT Auxiliary Equipment (BC 419)	Non-RAMP	No	(18)	(29)	13	172	209	348	-89%	-96%	43%	562%	666%	244%
Capital	Gas Engineering	GT Capital Tools	Non-RAMP	No	49	(27)	270	275	(73)	494	80%	-28%	274%	275%	-71%	108%
Capital	Gas Engineering	GT Auxiliary Equipment (BC 439)	Non-RAMP	No	(11)	(11)	(11)	(11)	(11)	(54)	-100%	-100%	-100%	-100%	-100%	-100%
Capital	Gas Engineering	GT Supervision & Engineering Pool	Non-RAMP	No	238	410	214	228	231	1,320	288%	341%	175%	184%	183%	230%

**B. SDG&E Gas Engineering**  
**i. SDG&E Gas Engineering Capital**

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance						
Capital	Gas Engineering	Gas Engineering		Yes																															
Capital	Gas Engineering	GT Land Rights	Non-RAMP	No	Gas Transmission Land Rights activities include acquisition of property rights that allow for the access, construction, operation and maintenance of pipeline infrastructure. The variety of work activities in this category makes it infeasible to identify a single unit of measurement. No land rights renewed or acquired between 2019 and 2023 apply to this budget code.																														
Capital	Gas Engineering	GT Auxiliary Equipment (BC 419)	Non-RAMP	No	Gas Transmission Auxiliary Equipment activities include new installations or upgrades of aging Measurement & Regulation (M&R) station and pipeline system control and telemetry systems that provide information to centralized Gas Control Supervisory Control and Data Acquisition (SCADA) computer system. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																														
Capital	Gas Engineering	GT Capital Tools	Non-RAMP	No	Gas Transmission Capital Tools activities include acquiring and replacing Capital Tools used on a daily basis by the operating employees. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																														
Capital	Gas Engineering	GT Auxiliary Equipment (BC 439)	Non-RAMP	No	Gas Transmission Auxiliary Equipment activities include new installations of aging M&R station and pipeline system control and telemetry systems that provide information to the centralized Gas Control Supervisory Control and Data Acquisition (SCADA) computer system. The variety of work activities in this category makes it infeasible to identify a single unit of measurement. No new installations or upgrades of aging SDG&E M&R station and pipeline system control work completed between 2019 and 2023 apply to this budget code.																														
Capital	Gas Engineering	GT Supervision & Engineering Pool	Non-RAMP	No	Gas Transmission Supervision & Engineering Overhead Pool captures expenditures on a direct basis that will be reassigned to various capital workpaper categories and include labor costs for planning, and engineering of capital gas infrastructure projects. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																														

**B. SDG&E Gas Engineering**  
**i. SDG&E Gas Engineering Capital**

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
Capital	Gas Engineering	Gas Engineering		Yes									
Capital	Gas Engineering	GT Land Rights	Non-RAMP	No	No	No	N/A	N/A	Under (U)	Under (U)	Under (U)	Canceled	No
Capital	Gas Engineering	GT Auxiliary Equipment (BC 419)	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Gas Engineering	GT Capital Tools	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Gas Engineering	GT Auxiliary Equipment (BC 439)	Non-RAMP	No	No	No	N/A	N/A	Under (U)	Under (U)	Under (U)	Canceled	No
Capital	Gas Engineering	GT Supervision & Engineering Pool	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No

**B. SDG&E Gas Engineering**  
**i. SDG&E Gas Engineering Capital**

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
Capital	Gas Engineering	Gas Engineering		Yes				
Capital	Gas Engineering	GT Land Rights	Non-RAMP	No	N/A			
Capital	Gas Engineering	GT Auxiliary Equipment (BC 419)	Non-RAMP	No	N/A			
Capital	Gas Engineering	GT Capital Tools	Non-RAMP	No	N/A			
Capital	Gas Engineering	GT Auxiliary Equipment (BC 439)	Non-RAMP	No	N/A			
Capital	Gas Engineering	GT Supervision & Engineering Pool	Non-RAMP	No	N/A			

C. SDG&E Gas System Integrity  
i. SDG&E Gas System Integrity O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Gas System Integrity	Gas System Integrity		Yes			326	127	278	188	343	1,261	1,666	1,710	1,752	1,787	1,828	8,743
O&M	Gas System Integrity	Gas Contractor Controls	Safety Policies & Programs	No	On-going	Annual	—	—	—	—	—	—	138	142	145	148	151	724
O&M	Gas System Integrity	Pipeline Safety & Compliance	Non-RAMP	No	On-going	Annual	131	81	110	103	127	552	115	118	121	123	126	604
O&M	Gas System Integrity	Damage Prevention and Public Awareness	Non-RAMP	No	On-going	Annual	—	—	—	—	—	—	106	109	111	114	116	556
O&M	Gas System Integrity	Damage Prevention and Public Awareness	Public Awareness	No	On-going	Annual	195	45	168	85	216	709	666	684	700	714	731	3,495
O&M	Gas System Integrity	<b>Sub-Total Field O&amp;M -Damage Prevention And Public Awareness</b>		Yes			195	45	168	85	216	709	772	792	812	828	847	4,051
O&M	Gas System Integrity	Codes Standards and Records	Information Management Systems	No	On-going	Annual	—	—	—	—	—	—	641	658	674	688	703	3,364

C. SDG&E Gas System Integrity  
i. SDG&E Gas System Integrity O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Gas System Integrity	Gas System Integrity		Yes	(1,340)	(1,584)	(1,475)	(1,600)	(1,485)	(7,483)	-80%	-93%	-84%	-90%	-81%	-86%
O&M	Gas System Integrity	Gas Contractor Controls	Safety Policies & Programs	No	(138)	(142)	(145)	(148)	(151)	(724)	-100%	-100%	-100%	-100%	-100%	-100%
O&M	Gas System Integrity	Pipeline Safety & Compliance	Non-RAMP	No	16	(37)	(11)	(21)	1	(52)	14%	-31%	-9%	-17%	1%	-9%
O&M	Gas System Integrity	Damage Prevention and Public Awareness	Non-RAMP	No	(106)	(109)	(111)	(114)	(116)	(556)	-100%	-100%	-100%	-100%	-100%	-100%
O&M	Gas System Integrity	Damage Prevention and Public Awareness	Public Awareness	No	(471)	(638)	(532)	(629)	(515)	(2,786)	-71%	-93%	-76%	-88%	-70%	-80%
O&M	Gas System Integrity	<b>Sub-Total Field O&amp;M -Damage Prevention And Public Awareness</b>		Yes	(577)	(747)	(644)	(743)	(631)	(3,342)	-75%	-94%	-79%	-90%	-75%	-82%
O&M	Gas System Integrity	Codes Standards and Records	Information Management Systems	No	(641)	(658)	(674)	(688)	(703)	(3,364)	-100%	-100%	-100%	-100%	-100%	-100%

C. SDG&E Gas System Integrity  
i. SDG&E Gas System Integrity O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
O&M	Gas System Integrity	Gas System Integrity		Yes																										
O&M	Gas System Integrity	Gas Contractor Controls	Safety Policies & Programs	No	FTE	—	—	—	—	—	—	2	2	2	2	2	10	(2)	(2)	(2)	(2)	(2)	(10)	-100%	-100%	-100%	-100%	-100%	-100%	
O&M	Gas System Integrity	Pipeline Safety & Compliance	Non-RAMP	No	FTE	1	1	1	1	1	5	1	1	1	1	1	5	—	—	—	—	—	—	—%	—%	—%	—%	—%	—%	
O&M	Gas System Integrity	Damage Prevention and Public Awareness	Non-RAMP	No	No single unit is available for this workpaper due to multiple activities including mailers sent and the number of customers.																									
O&M	Gas System Integrity	Damage Prevention and Public Awareness	Public Awareness	No	No single unit is available for this workpaper due to multiple activities including the number of mailers sent and the number of customers.																									
O&M	Gas System Integrity	<b>Sub-Total Field O&amp;M -Damage Prevention And Public Awareness</b>		Yes																										
O&M	Gas System Integrity	Codes Standards and Records	Information Management Systems	No	No single unit is available for this workpaper due to multiple activities including records digitized and the number of enhancements to the system.																									



C. SDG&E Gas System Integrity  
i. SDG&E Gas System Integrity O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Gas System Integrity	Gas System Integrity		Yes									
O&M	Gas System Integrity	Gas Contractor Controls	Safety Policies & Programs	No	No	Yes	N/A	Units forecasted in this area were instead recorded to cost centers in Safety (O&M Wkp 1HR000.000 Cctr 2100-4058 and the Capital Contractor Field Safety Management Pool), which are reported within the Human Resources section of the RSAR; thus, this activity was not canceled or deferred.	Under (U)	Under (U)	Under (U)	Other	Yes
O&M	Gas System Integrity	Pipeline Safety & Compliance	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas System Integrity	Damage Prevention and Public Awareness	Non-RAMP	No	No	No	N/A	N/A	Under (U)	Under (U)	Under (U)	Deferred	No
O&M	Gas System Integrity	Damage Prevention and Public Awareness	Public Awareness	No	Yes	No	This program was able to achieve cost efficiencies by leveraging existing outreach activities already performed through other programs/groups (e.g., Operations, Marketing and Communications, and Emergency Management).	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Gas System Integrity	<b>Sub-Total Field O&amp;M -Damage Prevention And Public Awareness</b>		Yes	Yes								No
O&M	Gas System Integrity	Codes Standards and Records	Information Management Systems	No	Yes	No	Costs forecasted in this area were recorded to cost centers in the SoCalGas Records Management organization (Wkp 2200-7242) that manages records on behalf of both companies; however, due to the delay in plan development and difficulties in recruiting and onboarding qualified personnel this activity was deferred.	N/A	Under (U)	Under (U)	Under (U)	Deferred	No

C. SDG&E Gas System Integrity  
i. SDG&E Gas System Integrity O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Gas System Integrity	Gas System Integrity		Yes				
O&M	Gas System Integrity	Gas Contractor Controls	Safety Policies & Programs	No	Activities in this area were instead recorded to cost centers in Safety (Wkp 1HR000.000 cost center (Cctr) 2100-4058), which is reported within the Human Resources section of the RSAR; thus, this activity was not canceled or deferred.	Gas Contractor Controls collaborates with Company and industry leaders and subject matter experts to formulate and promote policy related to construction contractor safety and pipeline safety/quality oversight.	SDG&E-05 OR-13 to OR-17 WP 1SI000.000	SDG&E-31-R KJD-42 to KJD-48 WP 1SM002.002
O&M	Gas System Integrity	Pipeline Safety & Compliance	Non-RAMP	No	N/A			
O&M	Gas System Integrity	Damage Prevention and Public Awareness	Non-RAMP	No	N/A			
O&M	Gas System Integrity	Damage Prevention and Public Awareness	Public Awareness	No	N/A	The Public Awareness program contributes to enhanced public safety by providing certain risk mitigation measures. The program includes activities to educate the public, appropriate government organizations, and persons engaged in excavation-related activities regarding: (1) use of the one-call notification system prior to excavation and other damage prevention activities; (2) possible hazards associated with unintended releases from a gas pipeline facility; (3) physical indications that such a release may have occurred; (4) steps that should be taken for public safety in the event of a gas pipeline release; and (5) procedures for reporting such an event.	SDG&E-05 OR-19 to OR-22 WP 1SI003.000	SDGE-05 WR-9 to WR-20 WP 1SI001.000
O&M	Gas System Integrity	<b>Sub-Total Field O&amp;M -Damage Prevention And Public Awareness</b>		Yes				
O&M	Gas System Integrity	Codes Standards and Records	Information Management Systems	No	N/A	Codes and Standards help the two utilities meet their regulatory obligations and allow for information exchange to enhance public and employee safety. The CPUC annually audits both companies and their gas standards. The cost reflects the non-labor support needed to manage and provide consistency across both companies with respect to the gas standards, and to prepare documentation and perform follow-up work resulting from CPUC audits.	SDG&E-05 OR-23 to OR-24 WP 2100-3563	SDGE-31-R KJD-73 to KJD-80 WP 2100-0414.000

D. SDG&E Gas Transmission  
i. SDG&E Gas Transmission O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Gas Transmission	Gas Transmission		Yes			4,839	5,291	6,004	6,514	6,055	28,703	5,504	5,650	5,790	5,905	6,038	28,887
O&M	Gas Transmission	Pipeline Operations	Non-RAMP	No	On-going	Annual	225	534	426	549	1,418	3,151	1,925	1,976	2,025	2,065	2,112	10,102
O&M	Gas Transmission	Pipeline Operations	Pipeline Patrol & Maintenance	No	On-going	Annual	66	709	750	568	—	2,093	21	22	22	23	23	110
O&M	Gas Transmission	Pipeline Operations	Cathodic Protection	No	On-going	Annual	41	80	77	117	0	316	29	30	31	31	32	152
O&M	Gas Transmission	Pipeline Operations	M&R (Maint. & Insp.)	No	On-going	Annual	1,509	527	747	450	361	3,594	8	8	8	9	9	42
O&M	Gas Transmission	<b>Sub-Total Pipeline Operations</b>		Yes			<b>1,841</b>	<b>1,850</b>	<b>2,000</b>	<b>1,684</b>	<b>1,779</b>	<b>9,153</b>	<b>1,983</b>	<b>2,035</b>	<b>2,086</b>	<b>2,127</b>	<b>2,175</b>	<b>10,407</b>
O&M	Gas Transmission	Compression Station Operations	Non-RAMP	No	On-going	Annual	2,936	3,399	3,959	4,709	4,227	19,230	3,361	3,450	3,536	3,606	3,687	17,640
O&M	Gas Transmission	Technical Services	Non-RAMP	No	On-going	Annual	44	2	2	81	4	134	8	8	8	9	9	42
O&M	Gas Transmission	Technical Services	Operator Qualification	No	On-going	Annual	7	—	—	—	—	7	117	120	123	126	128	614
O&M	Gas Transmission	Technical Services	Engineering, Supervision, Oversight & Review	No	On-going	Annual	11	40	43	39	46	179	35	36	37	38	38	184
O&M	Gas Transmission	<b>Sub-Total Technical Services</b>		Yes			<b>62</b>	<b>43</b>	<b>45</b>	<b>120</b>	<b>50</b>	<b>320</b>	<b>160</b>	<b>164</b>	<b>168</b>	<b>172</b>	<b>176</b>	<b>840</b>

D. SDG&E Gas Transmission  
i. SDG&E Gas Transmission O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Gas Transmission	Gas Transmission		Yes	(666)	(359)	215	609	17	(183)	-12%	-6%	4%	10%	0%	-1%
O&M	Gas Transmission	Pipeline Operations	Non-RAMP	No	(1,700)	(1,442)	(1,599)	(1,516)	(694)	(6,951)	-88%	-73%	-79%	-73%	-33%	-69%
O&M	Gas Transmission	Pipeline Operations	Pipeline Patrol & Maintenance	No	45	687	728	545	(23)	1,983	214%	3187%	3297%	2421%	-100%	1799%
O&M	Gas Transmission	Pipeline Operations	Cathodic Protection	No	12	51	47	86	(32)	163	41%	170%	153%	276%	-99%	107%
O&M	Gas Transmission	Pipeline Operations	M&R (Maint. & Insp.)	No	1,501	518	739	441	352	3,552	18763%	6312%	8779%	5144%	4014%	8460%
O&M	Gas Transmission	Sub-Total Pipeline Operations		Yes	(142)	(186)	(85)	(443)	(396)	(1,253)	-7%	-9%	-4%	-21%	-18%	-12%
O&M	Gas Transmission	Compression Station Operations	Non-RAMP	No	(426)	(51)	424	1,104	540	1,590	-13%	-1%	12%	31%	15%	9%
O&M	Gas Transmission	Technical Services	Non-RAMP	No	36	(6)	(6)	73	(5)	92	452%	-71%	-74%	848%	-60%	218%
O&M	Gas Transmission	Technical Services	Operator Qualification	No	(110)	(120)	(123)	(126)	(128)	(607)	-94%	-100%	-100%	-100%	-100%	-99%
O&M	Gas Transmission	Technical Services	Engineering, Supervision, Oversight & Review	No	(24)	4	6	1	8	(5)	-69%	12%	16%	4%	20%	-3%
O&M	Gas Transmission	Sub-Total Technical Services		Yes	(98)	(122)	(124)	(51)	(126)	(520)	-61%	-74%	-73%	-30%	-72%	-62%

D. SDG&E Gas Transmission  
i. SDG&E Gas Transmission O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance		
O&M	Gas Transmission	Gas Transmission		Yes																											
O&M	Gas Transmission	Pipeline Operations	Non-RAMP	No	FTEs	2	4	3	4	4	17	10	10	10	10	10	50	(8)	(6)	(7)	(6)	(6)	(33)	-80%	-60%	-70%	-60%	-60%	-66%		
O&M	Gas Transmission	Pipeline Operations	Pipeline Patrol & Maintenance	No	FTEs	1	4	4	4	4	17	1	1	1	1	1	5	—	3	3	3	3	12	—%	300%	300%	300%	300%	240%		
O&M	Gas Transmission	Pipeline Operations	Cathodic Protection	No	FTEs	1	1	1	1	1	5	1	1	1	1	1	5	—	—	—	—	—	—	—%	—%	—%	—%	—%	—%		
O&M	Gas Transmission	Pipeline Operations	M&R (Maint. & Insp.)	No	FTEs	9	3	4	3	3	22	1	1	1	1	1	5	8	2	3	2	2	17	800%	200%	300%	200%	200%	340%		
O&M	Gas Transmission	Sub-Total Pipeline Operations		Yes																											
O&M	Gas Transmission	Compression Station Operations	Non-RAMP	No	This workpaper activities include Compressor Station Operation activities. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																										
O&M	Gas Transmission	Technical Services	Non-RAMP	No	This workpaper activities include the support of the day-to-day operations and maintenance of the gas transmission system include design and engineering, instrumentation, control, project support, and environmental services. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																										
O&M	Gas Transmission	Technical Services	Operator Qualification	No	This workpaper activities include the support of the day-to-day operations and maintenance of the gas transmission system include design and engineering, instrumentation, control, project support, and environmental services. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																										
O&M	Gas Transmission	Technical Services	Engineering, Supervision, Oversight & Review	No	This workpaper activities include the support of the day-to-day operations and maintenance of the gas transmission system include design and engineering, instrumentation, control, project support, and environmental services. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																										
O&M	Gas Transmission	Sub-Total Technical Services		Yes																											

D. SDG&E Gas Transmission  
i. SDG&E Gas Transmission O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Gas Transmission	Gas Transmission		Yes									
O&M	Gas Transmission	Pipeline Operations	Non-RAMP	No	Yes	Yes	The costs associated with RAMP activities under this workpaper (i.e., 1GT000.000 - Pipeline Operations) were moved to identified RAMP activities under the same workpaper. Most O&M activities in Pipeline Operations in Gas Transmission are mitigations to address the risk of catastrophic high-pressure pipeline failure. This adjustment led to this category having lower spending than was originally forecast.	The units associated with RAMP activities under this workpaper (i.e., 1GT000.000 - Pipeline Operations) were moved to identified RAMP activities under the same workpaper. Most O&M activities in Pipeline Operations in Gas Transmission are mitigations to address the risk of catastrophic high-pressure pipeline failure. This adjustment led to this category having lower units than was originally forecast. The imputed authorized units have been aligned with the imputed authorized dollars, which resulted in a unit variance. When considered at the workpaper level, no unit variance would be required for Pipeline Operations.	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Gas Transmission	Pipeline Operations	Pipeline Patrol & Maintenance	No	No	Yes	N/A	The unit variance in this category is due to the risk mitigation units for Pipeline Operations, non-RAMP being spread over the respective RAMP categories rather than collected in the non-RAMP expense category. The imputed authorized units have been aligned with the imputed authorized dollars, which resulted in a unit variance. When considered at the workpaper level, no unit variance would be required for Pipeline Operations.	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	Yes
O&M	Gas Transmission	Pipeline Operations	Cathodic Protection	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	Yes
O&M	Gas Transmission	Pipeline Operations	M&R (Maint. & Insp.)	No	No	Yes	N/A	The unit variance in this category is due to the risk mitigation units for Pipeline Operations, non-RAMP being spread over the respective RAMP categories rather than collected in the non-RAMP expense category. The imputed authorized units have been aligned with the imputed authorized dollars, which resulted in a unit variance. When considered at the workpaper level, no unit variance would be required for Pipeline Operations.	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Gas Transmission	Sub-Total Pipeline Operations		Yes	No								No
O&M	Gas Transmission	Compression Station Operations	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Gas Transmission	Technical Services	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Gas Transmission	Technical Services	Operator Qualification	No	No	No	N/A	N/A	Under (U)	Under (U)	Under (U)	Canceled	No
O&M	Gas Transmission	Technical Services	Engineering, Supervision, Oversight & Review	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas Transmission	Sub-Total Technical Services		Yes	No								No

D. SDG&E Gas Transmission  
i. SDG&E Gas Transmission O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Gas Transmission	Gas Transmission		Yes				
O&M	Gas Transmission	Pipeline Operations	Non-RAMP	No	N/A	Gas Transmission Pipelines Operations is responsible for the safe day-to-day operation and maintenance of gas transmission pipeline facilities and related infrastructure. This includes, but is not limited to, leak surveys, valve inspections, cathodic protection systems, locate and mark, stand-by, and maintaining equipment at pipeline receipt points that includes odorization equipment and real-time operating data telemetry communication equipment.	SDG&E-06 EAM-8 to EAM-10 WP 1GT000.000	SDG&E-06-E RC-SH-13 to RC-SH-17 WP 1GT000.000
O&M	Gas Transmission	Pipeline Operations	Pipeline Patrol & Maintenance	No	No work was completed in this category in 2023.			
O&M	Gas Transmission	Pipeline Operations	Cathodic Protection	No	No work was completed in this category in 2023.			
O&M	Gas Transmission	Pipeline Operations	M&R (Maint. & Insp.)	No	N/A			
O&M	Gas Transmission	<b>Sub-Total Pipeline Operations</b>		<b>Yes</b>				
O&M	Gas Transmission	Compression Station Operations	Non-RAMP	No	N/A			
O&M	Gas Transmission	Technical Services	Non-RAMP	No	N/A			
O&M	Gas Transmission	Technical Services	Operator Qualification	No	N/A			
O&M	Gas Transmission	Technical Services	Engineering, Supervision, Oversight & Review	No	N/A			
O&M	Gas Transmission	<b>Sub-Total Technical Services</b>		<b>Yes</b>				

ii. SDG&E Gas Transmission Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
Capital	Gas Transmission	Gas Transmission		Yes			12,178	15,387	25,337	36,792	54,871	144,565	9,253	10,440	10,605	10,730	10,959	51,988
Capital	Gas Transmission	New Gas Transmission Pipeline	Non-RAMP	No	On-going	Annual	(37)	—	—	—	—	(37)	2,304	2,659	2,701	2,733	2,791	13,189
Capital	Gas Transmission	GT Relocation	Non-RAMP	No	On-going	Annual	—	—	—	—	—	—	2	1	1	1	1	6
Capital	Gas Transmission	GT Cathodic Protection	Requirements for corrosion control	No	On-going	Annual	263	1,711	1,148	437	215	3,773	208	238	242	245	250	1,182
Capital	Gas Transmission	GT M&R Stations	Non-RAMP	No	On-going	Annual	3,181	3,850	1,756	944	954	10,684	549	555	564	570	582	2,819
Capital	Gas Transmission	GT Replacements	Non-RAMP	No	On-going	Annual	1,624	1,626	4,052	938	10,448	18,689	—	—	—	—	—	—
Capital	Gas Transmission	GT Replacements	HCA Class Location Follow-up Mitigation	No	On-going	Annual	—	—	—	14,060	9,206	23,266	1,703	1,969	2,001	2,024	2,067	9,765
<b>Capital</b>	<b>Gas Transmission</b>	<b>Sub-Total GT Replacements</b>		<b>Yes</b>			<b>1,624</b>	<b>1,626</b>	<b>4,052</b>	<b>14,998</b>	<b>19,654</b>	<b>41,955</b>	<b>1,703</b>	<b>1,969</b>	<b>2,001</b>	<b>2,024</b>	<b>2,067</b>	<b>9,765</b>
Capital	Gas Transmission	Compressor Stations (BC 415)	Non-RAMP	No	On-going	Annual	3,147	2,818	10,299	15,511	4,822	36,598	1,756	1,975	2,006	2,029	2,073	9,839
Capital	Gas Transmission	Compressor Stations (BC 435)	Non-RAMP	No	On-going	Annual	3,377	2,753	38	31	—	6,199	2,730	3,043	3,092	3,128	3,195	15,188
Capital	Gas Transmission	Moreno Modernization Project	Non-RAMP	No		12	9	623	2,629	8,044	4,870	29,226	45,393	—	—	—	—	—



ii. SDG&E Gas Transmission Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
Capital	Gas Transmission	Gas Transmission		Yes	2,926	4,947	14,732	26,061	43,912	92,578	32%	47%	139%	243%	401%	178%
Capital	Gas Transmission	New Gas Transmission Pipeline	Non-RAMP	No	(2,341)	(2,659)	(2,701)	(2,733)	(2,791)	(13,225)	-102%	-100%	-100%	-100%	-100%	-100%
Capital	Gas Transmission	GT Relocation	Non-RAMP	No	(2)	(1)	(1)	(1)	(1)	(6)	-100%	-100%	-100%	-100%	-100%	-100%
Capital	Gas Transmission	GT Cathodic Protection	Requirements for corrosion control	No	54	1,474	906	192	(35)	2,591	26%	619%	375%	79%	-14%	219%
Capital	Gas Transmission	GT M&R Stations	Non-RAMP	No	2,632	3,295	1,192	374	371	7,865	480%	594%	212%	66%	64%	279%
Capital	Gas Transmission	GT Replacements	Non-RAMP	No	1,624	1,626	4,052	938	10,448	18,689	100%	100%	100%	100%	100%	100%
Capital	Gas Transmission	GT Replacements	HCA Class Location Follow-up Mitigation	No	(1,703)	(1,969)	(2,001)	12,036	7,139	13,501	-100%	-100%	-100%	595%	345%	138%
<b>Capital</b>	<b>Gas Transmission</b>	<b>Sub-Total GT Replacements</b>		<b>Yes</b>	<b>(79)</b>	<b>(344)</b>	<b>2,052</b>	<b>12,974</b>	<b>17,587</b>	<b>32,190</b>	<b>-5%</b>	<b>-17%</b>	<b>103%</b>	<b>641%</b>	<b>851%</b>	<b>330%</b>
Capital	Gas Transmission	Compressor Stations (BC 415)	Non-RAMP	No	1,391	843	8,293	13,482	2,750	26,760	79%	43%	413%	664%	133%	272%
Capital	Gas Transmission	Compressor Stations (BC 435)	Non-RAMP	No	647	(290)	(3,053)	(3,097)	(3,195)	(8,989)	24%	-10%	-99%	-99%	-100%	-59%
Capital	Gas Transmission	Moreno Modernization Project	Non-RAMP	No	623	2,629	8,044	4,870	29,226	45,393	100%	100%	100%	100%	100%	100%

ii. SDG&E Gas Transmission Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
Capital	Gas Transmission	Gas Transmission		Yes																										
Capital	Gas Transmission	New Gas Transmission Pipeline	Non-RAMP	No	This activity includes projects that are initiated due to costs associated with the installation and of new pipeline to provide increased resiliency, capacity, and reliability. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Gas Transmission	GT Relocation	Non-RAMP	No	This activity includes projects that are initiated due to costs associated with the modification and relocation of transmission pipelines to accommodate planned private property development, municipal public works and street improvement projects, and other work required due to right-of-way agreements, contract, and franchise requirements. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Gas Transmission	GT Cathodic Protection	Requirements for corrosion control	No	This activity is associated with the installation of cathodic protection equipment used to preserve transmission pipelines such as anodes, rectifiers, and cathodic protection stations. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Gas Transmission	GT M&R Stations	Non-RAMP	No	This activity is associated with installing and rebuilding meter set assemblies (MSA) and pressure limiting stations. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Gas Transmission	GT Replacements	Non-RAMP	No	This activity is associated with the replacement of pipelines due to the condition or hazardous conditions affecting the pipeline such as leaks, poor coating, erosion, etc. as well as changes to the class location of the pipeline. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Gas Transmission	GT Replacements	HCA Class Location Follow-up Mitigation	No	This activity is associated with the replacement of pipelines due to the condition or hazardous conditions affecting the pipeline such as leaks, poor coating, erosion, etc. as well as changes to the class location of the pipeline in high consequence areas (HCA).																									
<b>Capital</b>	<b>Gas Transmission</b>	<b>Sub-Total GT Replacements</b>		<b>Yes</b>																										
Capital	Gas Transmission	Compressor Stations (BC 415)	Non-RAMP	No	This activity in this category is costs associated with the replacement of compressor station equipment such as relief valves, fire suppression systems, compressor station decommissioning, combustion modifications, critical spares purchases and upgrades, re-pavement and radiator and catalyst upgrades. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Gas Transmission	Compressor Stations (BC 435)	Non-RAMP	No	This activity includes projects that are initiated due to upgrading and replacement of outdated control technology that is critical to efficient station operation. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Gas Transmission	Moreno Modernization Project	Non-RAMP	No	The Moreno Compressor Station Modernization (MCM) project consists of a variety of activities such as: install four new compressor drive units, decommission nine existing compressors, install auxiliary systems and infrastructure to support four new compressors, install two new backup generators. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									

ii. SDG&E Gas Transmission Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
Capital	Gas Transmission	Gas Transmission		Yes									
Capital	Gas Transmission	New Gas Transmission Pipeline	Non-RAMP	No	Yes	No	In 2023, there was no activity related to new transmission pipeline additions.	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	Yes
Capital	Gas Transmission	GT Relocation	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	Yes
Capital	Gas Transmission	GT Cathodic Protection	Requirements for corrosion control	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Gas Transmission	GT M&R Stations	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Gas Transmission	GT Replacements	Non-RAMP	No	Yes	No	Higher than anticipated spending was due to an increase in shallow pipeline mitigation projects. These projects were needed to address safety concerns related to exposed pipelines. Increased spending during the construction phase of the L2010 Access Road Repair at Camp Elliot also affected the spending in this category. This work was restricted to evenings and weekends which caused higher than anticipated costs.	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Gas Transmission	GT Replacements	HCA Class Location Follow-up Mitigation	No	Yes	No	The variance is due to a change order resulting from the retrofit of 3400 ft of a 30" line. The scope of work increased during the construction phase leading to several change orders.	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
<b>Capital</b>	<b>Gas Transmission</b>	<b>Sub-Total GT Replacements</b>		<b>Yes</b>	<b>Yes</b>								<b>No</b>
Capital	Gas Transmission	Compressor Stations (BC 415)	Non-RAMP	No	Yes	No	The costs in this category include dollars that were forecasted for both Compressor Stations (BC415) and Compressor Stations (BC435). When combined together this category is underspent for 2023.	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Gas Transmission	Compressor Stations (BC 435)	Non-RAMP	No	Yes	No	The costs that were forecast in this category were reallocated to Compressor stations (BC415) in 2023 due to shifting priorities. When combined together this category is underspent for 2023.	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	Yes
Capital	Gas Transmission	Moreno Modernization Project	Non-RAMP	No	Yes	No	The Moreno Compressor Station Modernization (MCM) project is compliance driven and required to be completed and placed in service within 36 months of receiving an Air Quality Management District Permit to Construct. It is also exempt from GO 177 because the application to the AQMD was submitted prior to the effective date of the General Order. The MCM project was projected to be in-service outside of the TY 2019 GRC cycle, however the CPUC recognized in Decision 19-09-051 the importance of the proposed project and the role of compressor stations in maintaining operational reliability and safety of the gas transmission system. The CPUC found the planning of the MCM project to be prudent and reasonable. The costs incurred in 2023 are associated with execution of the agreement with the Engineering Procurement and Construction contractor to kickoff detailed engineering and procurement; associated company labor and support services; continued environmental evaluation and land and right-of-way assessment associated with an electrical interconnect to the Southern California Edison electric grid; all of which related to the safety and reliability of the compressor station.	N/A	Over (O)	Over (O)	Over (O)	Emergent	No

ii. SDG&E Gas Transmission Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
Capital	Gas Transmission	Gas Transmission		Yes				
Capital	Gas Transmission	New Gas Transmission Pipeline	Non-RAMP	No	The costs in this category are driven by customer requests. Projects associated with New Gas Transmission Pipelines were lower than forecasted due to fewer customer requests than were anticipated at the time of the 2019 GRC filing.	The New Construction Pipeline cost category provides funding for the backbone and local natural gas transmission system with additional resiliency, capacity, and reliability in order to serve new or increased loads or to provide natural gas supply reinforcement to an existing area.	SDG&E-07-R JGT-9 to JGT-10 WP 004010	N/A
Capital	Gas Transmission	GT Relocation	Non-RAMP	No	The costs in this category are driven by customer requests to modify and relocate transmission pipelines to accommodate planned private property development, municipal public works and street improvement projects, and other work required due to right-of-way agreements, contract, and franchise requirements. Projects associated with GT Relocations have been lower than forecasted due to fewer customer requests than were anticipated at the time of the 2019 GRC filing.			
Capital	Gas Transmission	GT Cathodic Protection	Requirements for corrosion control	No	N/A			
Capital	Gas Transmission	GT M&R Stations	Non-RAMP	No	N/A			
Capital	Gas Transmission	GT Replacements	Non-RAMP	No	N/A	High Consequence Areas (HCA) for natural gas pipeline focus on populated areas which affects class location. HCA identification relies on pipeline-specific information regarding the location, size, and operating characteristics of the line, as well as the identification of structures, specified sites, and their intended usage along the pipeline right-of-way	SDG&E-07-R JGT-10 to JGT-11 WP M04120	SDG&E-06-E RC-SH-25 to SH-28 WP 04120
Capital	Gas Transmission	GT Replacements	HCA Class Location Follow-up Mitigation	No	N/A	High Consequence Areas (HCA) for natural gas pipeline focus on populated areas which affects class location. HCA identification relies on pipeline-specific information regarding the location, size, and operating characteristics of the line, as well as the identification of structures, specified sites, and their intended usage along the pipeline right-of-way	SDG&E-07-R JGT-10 to JGT-11 WP M04120	SDG&E-06-E RC-SH-25 to SH-28 WP 04120
<b>Capital</b>	<b>Gas Transmission</b>	<b>Sub-Total GT Replacements</b>		<b>Yes</b>				
Capital	Gas Transmission	Compressor Stations (BC 415)	Non-RAMP	No	N/A	Compressor station operation requires consistent maintenance and replacement of key engine components and controls in order to maintain the reliability and safety of the facility. This work is driven by air quality regulations that require emissions monitoring and reporting equipment, as well as catalyst and combustion technologies.	SDG&E-07-R JGT-13 to JGT-15 WP M04150	SDG&E-06-E RC-SH-28 to SH-29 WP 04150
Capital	Gas Transmission	Compressor Stations (BC 435)	Non-RAMP	No	All Compressor Station work in 2023 was compliance-driven and these costs are accounted for under BC 415. Costs in this category are designated for economically driven projects. None of the projects in 2023 were solely economically driven, therefore this category is underspent.	Compressor station operation requires consistent maintenance and replacement of key engine components and controls in order to maintain efficiency. This work is needed to ensure the station operates at a high level of efficiency.	SDG&E-07-R JGT-13 to JGT-15 WP M04350	SDG&E-06-E RC-SH-28 to SH-29 WP 04350
Capital	Gas Transmission	Moreno Modernization Project	Non-RAMP	No	N/A	The purpose of the Moreno Compressor Replacement project is to replace aging, inefficient equipment with new equipment that will provide additional reliability while reducing emissions and lowering the overall operational cost of the facility. Currently, the Moreno station is operating with insufficient capacity to allow the station to move the design flow of 800 million standard cubic feet per day (MMSCFD) at 440 psig suction on a peak day, when any one of ten existing large compressors is out of service. This current situation poses an operation risk to SoCalGas and SDG&E's ability to meet tariff obligations and serve customers if any single large compressor is out of service for extended periods.	SDG&E-07-R JGT-13 to JGT-15 WP M04350	SDG&E-06-E RC-SH-28 to SH-29 WP 04350

3. SDG&E OTHER  
A. SDG&E Customer Services  
i. SDG&E Customer Services O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Customer Services	Customer Services		Yes			60,788	65,457	68,427	70,508	74,266	339,446	73,280	75,218	77,076	78,608	80,381	384,563
O&M	Customer Services	Customer Services Field		Yes			21,707	22,529	24,050	25,673	26,537	120,497	25,751	26,432	27,085	27,624	28,247	135,140
O&M	Customer Services	Customer Services Field - Operations	Non-RAMP	No	On-going	Annual	9,321	9,750	9,950	11,234	11,943	52,199	12,049	12,367	12,673	12,925	13,216	63,230
O&M	Customer Services	Customer Services Field - Operations	CSF Emergency Orders - include carbon monoxide, fumigation and hazardous and non hazardous gas leaks and atmospheric corrosion orders	No	On-going	Annual	5,091	5,290	5,766	5,864	6,418	28,429	4,973	5,105	5,231	5,335	5,455	26,098
O&M	Customer Services	Customer Services Field - Operations	Job Observation and Behavior Based Safety.	No	On-going	Annual	133	127	136	192	230	818	160	164	168	172	176	840
O&M	Customer Services	Customer Services Field - Operations	Workforce Planning Technical Training for Critical Roles - Service Technicians and Appliance Mechanics backfill for retirements	No	On-going	Annual	214	339	288	204	180	1,225	54	55	57	58	59	283
O&M	Customer Services	Sub-Total Customer Services Field - Operations		Yes			14,759	15,506	16,140	17,494	18,771	82,671	17,236	17,691	18,129	18,489	18,906	90,451
O&M	Customer Services	Customer Services Field - Supervision	Non-RAMP	No	On-going	Annual	1,084	1,257	1,255	1,368	1,457	6,420	1,544	1,585	1,624	1,657	1,694	8,104
O&M	Customer Services	Customer Services Field - Dispatch	Non-RAMP	No	On-going	Annual	3,244	3,795	3,338	3,185	2,838	16,401	4,242	4,355	4,462	4,551	4,654	22,264
O&M	Customer Services	Customer Services Field - Dispatch	Job observations of employee and contractor activities and safety behaviors	No	On-going	Annual	1	1	2	2	1	7	1	1	1	1	1	5
O&M	Customer Services	Sub-Total Customer Services Field - Dispatch		Yes			3,245	3,797	3,340	3,187	2,839	16,408	4,243	4,356	4,463	4,552	4,655	22,269
O&M	Customer Services	Customer Services Field - Support	Non-RAMP	No	On-going	Annual	2,525	1,865	3,182	3,507	3,346	14,425	2,648	2,718	2,785	2,840	2,905	13,896
O&M	Customer Services	Customer Services Field - Support	Field observations of employee and contractor activities and safety behaviors	No	On-going	Annual	94	105	132	116	125	572	80	82	84	86	88	420
O&M	Customer Services	Sub-Total Customer Services Field - Support		Yes			2,619	1,970	3,314	3,623	3,471	14,997	2,728	2,800	2,869	2,926	2,992	14,316
O&M	Customer Services	Customer Service Information & Technology		Yes			14,665	17,173	17,803	15,227	15,060	79,928	21,924	22,504	23,060	23,518	24,049	115,054

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Customer Services	Marketing Research & Analytics	Non-RAMP	No	On-going	Annual	6,834	6,974	7,177	8,001	6,650	35,637	8,182	8,398	8,606	8,777	8,975	42,938
O&M	Customer Services	Marketing Research & Analytics	Safety Communications (Summer/Winter Preparedness; Emergency Preparedness)	No	On-going	Annual	340	266	336	342	350	1,634	319	327	336	342	350	1,674
O&M	Customer Services	Marketing Research & Analytics	Safety Communications (Wire Down)	No	On-going	Annual	1,852	3,796	4,362	783	1,465	12,258	6,499	6,671	6,836	6,972	7,129	34,106
<b>O&amp;M</b>	<b>Customer Services</b>	<b>Sub-Total Marketing Research &amp; Analytics</b>		<b>Yes</b>			<b>9,026</b>	<b>11,036</b>	<b>11,875</b>	<b>9,127</b>	<b>8,465</b>	<b>49,529</b>	<b>15,000</b>	<b>15,397</b>	<b>15,777</b>	<b>16,091</b>	<b>16,454</b>	<b>78,718</b>
O&M	Customer Services	Customer Programs Pricing And Other Office	Non-RAMP	No	On-going	Annual	5,451	6,026	5,767	5,949	6,289	29,482	6,615	6,790	6,958	7,096	7,256	34,715
O&M	Customer Services	Customer Programs Pricing And Other Office	Natural Gas Appliance Testing (NGAT) is a safety-related program for Customer Assistance's Energy Savings Assistance (ESA) Program participants.	No	On-going	Annual	188	111	161	151	306	917	309	317	325	331	339	1,622
<b>O&amp;M</b>	<b>Customer Services</b>	<b>Sub-Total Customer Programs Pricing And Other Office</b>		<b>Yes</b>			<b>5,639</b>	<b>6,137</b>	<b>5,928</b>	<b>6,100</b>	<b>6,595</b>	<b>30,399</b>	<b>6,924</b>	<b>7,107</b>	<b>7,283</b>	<b>7,428</b>	<b>7,595</b>	<b>36,336</b>
<b>O&amp;M</b>	<b>Customer Services</b>	<b>Customer Service - Office Operations</b>		<b>Yes</b>			<b>24,415</b>	<b>25,754</b>	<b>26,574</b>	<b>29,609</b>	<b>32,669</b>	<b>139,021</b>	<b>25,604</b>	<b>26,281</b>	<b>26,931</b>	<b>27,466</b>	<b>28,086</b>	<b>134,369</b>
O&M	Customer Services	Advanced Metering Ops	Non-RAMP	No	On-going	Annual	7,659	8,592	9,400	9,650	10,374	45,675	8,915	9,150	9,376	9,563	9,779	46,783
O&M	Customer Services	Advanced Metering Ops	Job Observation and Behavior Based Safety.	No	On-going	Annual	118	147	192	188	204	849	40	41	42	43	44	210
O&M	Customer Services	Advanced Metering Ops	Workforce Planning	No	On-going	Annual	100	—	—	—	362	462	117	120	123	126	128	614
<b>O&amp;M</b>	<b>Customer Services</b>	<b>Sub-Total Advanced Metering Op</b>		<b>Yes</b>			<b>7,877</b>	<b>8,739</b>	<b>9,592</b>	<b>9,837</b>	<b>10,941</b>	<b>46,986</b>	<b>9,072</b>	<b>9,312</b>	<b>9,542</b>	<b>9,731</b>	<b>9,951</b>	<b>47,607</b>
O&M	Customer Services	Credit & Collections	Non-RAMP	No	On-going	Annual	2,092	2,667	2,861	2,944	3,248	13,811	3,064	3,145	3,223	3,287	3,361	16,079
O&M	Customer Services	Credit & Collections	Meter Tampering and meter bypass investigation and remediation.	No	On-going	Annual	279	298	310	210	261	1,357	258	265	271	277	283	1,354
<b>O&amp;M</b>	<b>Customer Services</b>	<b>Sub-Total Credit &amp; Collections</b>		<b>Yes</b>			<b>2,371</b>	<b>2,965</b>	<b>3,171</b>	<b>3,154</b>	<b>3,508</b>	<b>15,169</b>	<b>3,322</b>	<b>3,410</b>	<b>3,494</b>	<b>3,564</b>	<b>3,644</b>	<b>17,433</b>

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Customer Services	CCC - Operations	Non-RAMP	No	On-going	Annual	10,587	10,279	9,685	11,921	14,256	56,728	9,720	9,977	10,223	10,426	10,661	51,007
O&M	Customer Services	CCC - Operations	Emergency calls taken by the Customer Contact Center including outage calls	No	On-going	Annual	280	354	392	411	311	1,748	403	414	424	432	442	2,115
O&M	Customer Services	CCC - Operations	Capture Customer Email Program to update customer contact information	No	On-going	Annual	164	133	200	190	184	871	180	185	189	193	197	945
O&M	Customer Services	CCC - Operations	ESS Emergency call training: 5 hrs per ESS.	No	On-going	Annual	24	29	28	35	37	152	25	26	27	27	28	134
<b>O&amp;M</b>	<b>Customer Services</b>	<b>Sub-Total CCC - Operations</b>		<b>Yes</b>			<b>11,055</b>	<b>10,795</b>	<b>10,305</b>	<b>12,557</b>	<b>14,788</b>	<b>59,500</b>	<b>10,328</b>	<b>10,601</b>	<b>10,863</b>	<b>11,079</b>	<b>11,329</b>	<b>54,200</b>
O&M	Customer Services	CCC - Support	Non-RAMP	No	On-going	Annual	3,112	3,255	3,507	4,061	3,432	17,366	2,883	2,959	3,032	3,092	3,162	15,128

3. SDG&E OTHER  
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Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Customer Services	Customer Services		Yes	(12,492)	(9,761)	(8,649)	(8,100)	(6,115)	(45,117)	-17%	-13%	-11%	-10%	-8%	-12%
O&M	Customer Services	Customer Services Field		Yes	(4,044)	(3,903)	(3,035)	(1,951)	(1,710)	(14,643)	-16%	-15%	-11%	-7%	-6%	-11%
O&M	Customer Services	Customer Services Field - Operations	Non-RAMP	No	(2,727)	(2,617)	(2,722)	(1,691)	(1,273)	(11,031)	-23%	-21%	-21%	-13%	-10%	-17%
O&M	Customer Services	Customer Services Field - Operations	CSF Emergency Orders - include carbon monoxide, fumigation and hazardous and non hazardous gas leaks and atmospheric corrosion orders	No	118	185	535	529	963	2,331	2%	4%	10%	10%	18%	9%
O&M	Customer Services	Customer Services Field - Operations	Job Observation and Behavior Based Safety.	No	(27)	(37)	(32)	20	54	(22)	-17%	-23%	-19%	12%	31%	-3%
O&M	Customer Services	Customer Services Field - Operations	Workforce Planning Technical Training for Critical Roles - Service Technicians and Appliance Mechanics backfill for retirements	No	160	284	231	146	121	942	296%	512%	407%	252%	204%	332%
O&M	Customer Services	Sub-Total Customer Services Field - Operations		Yes	(2,476)	(2,185)	(1,988)	(995)	(135)	(7,780)	-14%	-12%	-11%	-5%	-1%	-9%
O&M	Customer Services	Customer Services Field - Supervision	Non-RAMP	No	(460)	(329)	(369)	(289)	(237)	(1,684)	-30%	-21%	-23%	-17%	-14%	-21%
O&M	Customer Services	Customer Services Field - Dispatch	Non-RAMP	No	(999)	(559)	(1,124)	(1,366)	(1,816)	(5,863)	-24%	-13%	-25%	-30%	-39%	-26%
O&M	Customer Services	Customer Services Field - Dispatch	Job observations of employee and contractor activities and safety behaviors	No	—	0	1	1	(0)	2	—%	36%	90%	86%	-9%	41%
O&M	Customer Services	Sub-Total Customer Services Field - Dispatch		Yes	(999)	(559)	(1,123)	(1,365)	(1,816)	(5,861)	-24%	-13%	-25%	-30%	-39%	-26%
O&M	Customer Services	Customer Services Field - Support	Non-RAMP	No	(123)	(853)	397	667	441	529	-5%	-31%	14%	23%	15%	4%
O&M	Customer Services	Customer Services Field - Support	Field observations of employee and contractor activities and safety behaviors	No	14	23	48	30	37	152	18%	28%	57%	35%	42%	36%
O&M	Customer Services	Sub-Total Customer Services Field - Support		Yes	(109)	(830)	445	697	479	681	-4%	-30%	16%	24%	16%	5%
O&M	Customer Services	Customer Service Information & Technology		Yes	(7,259)	(5,331)	(5,257)	(8,291)	(8,988)	(35,126)	-33%	-24%	-23%	-35%	-37%	-31%



Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Customer Services	Marketing Research & Analytics	Non-RAMP	No	(1,348)	(1,424)	(1,429)	(776)	(2,325)	(7,301)	-16%	-17%	-17%	-9%	-26%	-17%
O&M	Customer Services	Marketing Research & Analytics	Safety Communications (Summer/Winter Preparedness; Emergency Preparedness)	No	21	(61)	0	0	—	(40)	7%	-19%	0%	0%	—%	-2%
O&M	Customer Services	Marketing Research & Analytics	Safety Communications (Wire Down)	No	(4,647)	(2,875)	(2,474)	(6,188)	(5,664)	(21,848)	-72%	-43%	-36%	-89%	-79%	-64%
O&M	Customer Services	<b>Sub-Total Marketing Research &amp; Analytics</b>		Yes	(5,974)	(4,360)	(3,902)	(6,964)	(7,989)	(29,189)	-40%	-28%	-25%	-43%	-49%	-37%
O&M	Customer Services	Customer Programs Pricing And Other Office	Non-RAMP	No	(1,164)	(764)	(1,191)	(1,147)	(967)	(5,233)	-18%	-11%	-17%	-16%	-13%	-15%
O&M	Customer Services	Customer Programs Pricing And Other Office	Natural Gas Appliance Testing (NGAT) is a safety-related program for Customer Assistance's Energy Savings Assistance (ESA) Program participants.	No	(121)	(206)	(164)	(180)	(33)	(704)	-39%	-65%	-50%	-54%	-10%	-43%
O&M	Customer Services	<b>Sub-Total Customer Programs Pricing And Other Office</b>		Yes	(1,285)	(970)	(1,355)	(1,327)	(1,000)	(5,937)	-19%	-14%	-19%	-18%	-13%	-16%
O&M	Customer Services	<b>Customer Service - Office Operations</b>		Yes	(1,189)	(527)	(357)	2,143	4,583	4,653	-5%	-2%	-1%	8%	16%	3%
O&M	Customer Services	Advanced Metering Ops	Non-RAMP	No	(1,255)	(559)	24	87	596	(1,108)	-14%	-6%	0%	1%	6%	-2%
O&M	Customer Services	Advanced Metering Ops	Job Observation and Behavior Based Safety.	No	78	106	150	145	160	639	195%	258%	356%	338%	366%	304%
O&M	Customer Services	Advanced Metering Ops	Workforce Planning	No	(17)	(120)	(123)	(126)	234	(152)	-15%	-100%	-100%	-100%	182%	-25%
O&M	Customer Services	<b>Sub-Total Advanced Metering Op</b>		Yes	(1,194)	(573)	51	106	990	(621)	-13%	-6%	1%	1%	10%	-1%
O&M	Customer Services	Credit & Collections	Non-RAMP	No	(972)	(478)	(362)	(343)	(113)	(2,268)	-32%	-15%	-11%	-10%	-3%	-14%
O&M	Customer Services	Credit & Collections	Meter Tampering and meter bypass investigation and remediation.	No	21	33	39	(67)	(22)	4	8%	13%	14%	-24%	-8%	0%
O&M	Customer Services	<b>Sub-Total Credit &amp; Collections</b>		Yes	(951)	(444)	(324)	(410)	(136)	(2,265)	-29%	-13%	-9%	-12%	-4%	-13%

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Customer Services	CCC - Operations	Non-RAMP	No	868	302	(538)	1,495	3,595	5,722	9%	3%	-5%	14%	34%	11%
O&M	Customer Services	CCC - Operations	Emergency calls taken by the Customer Contact Center including outage calls	No	(123)	(60)	(32)	(21)	(131)	(367)	-31%	-14%	-8%	-5%	-30%	-17%
O&M	Customer Services	CCC - Operations	Capture Customer Email Program to update customer contact information	No	(16)	(52)	11	(3)	(13)	(73)	-9%	-28%	6%	-2%	-7%	-8%
O&M	Customer Services	CCC - Operations	ESS Emergency call training: 5 hrs per ESS.	No	(1)	3	1	8	9	19	-6%	11%	5%	28%	31%	14%
<b>O&amp;M</b>	<b>Customer Services</b>	<b>Sub-Total CCC - Operations</b>		<b>Yes</b>	<b>727</b>	<b>194</b>	<b>(558)</b>	<b>1,478</b>	<b>3,459</b>	<b>5,300</b>	<b>7%</b>	<b>2%</b>	<b>-5%</b>	<b>13%</b>	<b>31%</b>	<b>10%</b>
O&M	Customer Services	CCC - Support	Non-RAMP	No	229	296	474	968	270	2,238	8%	10%	16%	31%	9%	15%

3. SDG&E OTHER  
A. SDG&E Customer Services  
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Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
O&M	Customer Services	Customer Services		Yes																										
O&M	Customer Services	Customer Services Field		Yes																										
O&M	Customer Services	Customer Services Field - Operations	Non-RAMP	No	Orders	175,962	158,865	152,250	158,389	170,013	815,479	255,346	255,346	255,346	255,346	255,346	1,276,730	(79,384)	(96,481)	(103,096)	(96,957)	(85,333)	(461,251)	-31%	-38%	-40%	-38%	-33%	-36%	
O&M	Customer Services	Customer Services Field - Operations	CSF Emergency Orders - include carbon monoxide, fumigation and hazardous and non hazardous gas leaks and atmospheric corrosion orders	No	Orders	75,211	67,500	67,760	64,807	65,578	340,856	78,871	78,871	78,871	78,871	78,871	394,355	(3,660)	(11,371)	(11,111)	(14,064)	(13,293)	(53,499)	-5%	-14%	-14%	-18%	-17%	-14%	
O&M	Customer Services	Customer Services Field - Operations	Job Observation and Behavior Based Safety.	No	Job Observations	932	1,324	1,322	1,247	1,726	6,551	765	765	765	765	765	3,825	167	559	557	482	961	2,726	22%	73%	73%	63%	126%	71%	
O&M	Customer Services	Customer Services Field - Operations	Workforce Planning Technical Training for Critical Roles - Service Technicians and Appliance Mechanics backfill for retirements	No	Workforce Training FTE	3	4	3	2	2	14	2	2	2	2	2	10	1	2	1	0	(0)	4	45%	85%	60%	10%	-10%	38%	
O&M	Customer Services	Sub-Total Customer Services Field - Operations		Yes																										
O&M	Customer Services	Customer Services Field - Supervision	Non-RAMP	No	Supervisor FTE	10	10	11	11	12	54	14	14	14	14	14	71	(4)	(4)	(3)	(3)	(3)	(16)	-28%	-26%	-21%	-23%	-18%	-23%	
O&M	Customer Services	Customer Services Field - Dispatch	Non-RAMP	No	Dispatch FTE	31	30	29	25	21	137	43	43	43	43	43	213	(11)	(13)	(14)	(18)	(21)	(77)	-26%	-29%	-33%	-41%	-50%	-36%	
O&M	Customer Services	Customer Services Field - Dispatch	Job observations of employee and contractor activities and safety behaviors	No	Job Observations	40	52	71	80	18	261	56	56	56	56	56	280	(16)	(4)	15	24	(38)	(19)	-29%	-7%	27%	43%	-68%	-7%	
O&M	Customer Services	Sub-Total Customer Services Field - Dispatch		Yes																										
O&M	Customer Services	Customer Services Field - Support	Non-RAMP	No	Support FTE	24	18	23	23	24	112	26	26	26	26	26	131	(2)	(8)	(3)	(3)	(2)	(19)	-8%	-31%	-13%	-11%	-8%	-14%	
O&M	Customer Services	Customer Services Field - Support	Field observations of employee and contractor activities and safety behaviors	No	BBS Instructor FTE	1	1	1	1	1	5	1	1	1	1	1	5	0	0	0	0	(0)	1	11%	11%	33%	11%	-11%	11%	
O&M	Customer Services	Sub-Total Customer Services Field - Support		Yes																										
O&M	Customer Services	Customer Service Information & Technology		Yes																										

WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
Marketing Research & Analytics	Non-RAMP	No	Marketing, Research, & Analytics activities included those described in testimony and workpapers such as: Developing strategic marketing plans, execution of communication tactics across various channels such as mass, direct, digital, and social, oversight and management of SDG&E's websites, conducting qualitative and quantitative research and analytics, and providing key services through mobile application development and management. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Marketing Research & Analytics	Safety Communications (Summer/Winter Preparedness; Emergency Preparedness)	No	Marketing, Research & Analytics Safety Communication activities included those described in testimony and workpapers such as summer and winter season messaging pertaining to the importance of safety energy usage and changes that occur during the season. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Marketing Research & Analytics	Safety Communications (Wire Down)	No	Campaigns	1	1	1	1	1	5	1	1	1	1	1	5	—	—	—	—	—	—	—%	—%	—%	—%	—%	—%	
<b>Sub-Total Marketing Research &amp; Analytics</b>			<b>Yes</b>																									
Customer Programs Pricing And Other Office	Non-RAMP	No	Customer Programs Pricing and Other Office activities included those described in testimony and workpapers such as: Program management, enrollment, and outreach for Medical Baseline, Neighbor to Neighbor, and Low-Income Energy Assistance Program (LIHEAP); Customer Solutions; Customer Pricing; Electric Rates, Rate Design & Strategy, Electric Load Analysis (Measurement & Evaluation studies), Electric Demand Forecasting. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Customer Programs Pricing And Other Office	Natural Gas Appliance Testing (NGAT) is a safety-related program for Customer Assistance's Energy Savings Assistance (ESA) Program participants.	No	NGAT's (tests) Completed	4,972	2,838	3,238	2,974	2,619	16,641	7,391	7,391	7,391	7,391	7,391	36,955	(2,419)	(4,553)	(4,153)	(4,417)	(4,772)	(20,314)	-33%	-62%	-56%	-60%	-65%	-55%	
<b>Sub-Total Customer Programs Pricing And Other Office</b>			<b>Yes</b>																									
<b>Customer Service - Office Operations</b>			<b>Yes</b>																									
Advanced Metering Ops	Non-RAMP	No	Orders	38,999	44,673	31,463	41,052	41,543	197,730	38,307	38,307	38,307	38,307	38,307	191,534	692	6,366	(6,844)	2,745	3,236	6,196	2%	17%	-18%	7%	8%	3%	
Advanced Metering Ops	Job Observation and Behavior Based Safety.	No	Job Observations	645	812	896	737	570	3,660	238	238	238	238	238	1,190	407	574	658	499	332	2,470	171%	241%	276%	210%	139%	208%	
Advanced Metering Ops	Workforce Planning	No	Workforce Training FTE	1	—	—	—	2	3	1	1	1	1	1	5	—	(1)	(1)	(1)	1	(2)	—%	-100%	-100%	-100%	89%	-42%	
<b>Sub-Total Advanced Metering Op</b>			<b>Yes</b>																									
Credit & Collections	Non-RAMP	No	Credit and Collections activities included those described in testimony and workpapers such as: Credit Accounts; Credit Policy, Management reporting and analysis, management of collection agencies, skip tracing, delinquent bill collection, bankruptcy processing. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Credit & Collections	Meter Tampering and meter bypass investigation and remediation.	No	Investigations/Leads	2,652	1,965	1,659	1,338	1,748	9,362	2,208	2,208	2,208	2,208	2,208	11,040	444	(243)	(549)	(870)	(460)	(1,678)	20%	-11%	-25%	-39%	-21%	-15%	
<b>Sub-Total Credit &amp; Collections</b>			<b>Yes</b>																									

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance
O&M	Customer Services	CCC - Operations	Non-RAMP	No	Non-RAMP Calls	1,444,436	1,369,195	1,445,662	1,305,559	1,172,844	6,737,696	1,340,342	1,340,342	1,340,342	1,340,342	1,340,342	6,701,710	104,094	28,853	105,320	(34,783)	(167,498)	35,986	8%	2%	8%	-3%	-12%	1%
O&M	Customer Services	CCC - Operations	Emergency calls taken by the Customer Contact Center including outage calls	No	Emergency/ Outage Calls	142,618	152,394	138,827	136,504	111,538	681,881	185,605	185,605	185,605	185,605	185,605	928,025	(42,987)	(33,211)	(46,778)	(49,101)	(74,067)	(246,144)	-23%	-18%	-25%	-26%	-40%	-27%
O&M	Customer Services	CCC - Operations	Capture Customer Email Program to update customer contact information	No	Email Solicitation/ Verification Residential Non-move Calls	1,138,569	938,615	1,073,836	1,046,717	968,486	5,166,223	1,053,335	1,053,335	1,053,335	1,053,335	1,053,335	5,266,675	85,234	(114,720)	20,501	(6,618)	(84,849)	(100,452)	8%	-11%	2%	-1%	-8%	-2%
O&M	Customer Services	CCC - Operations	ESS Emergency call training: 5 hrs per ESS.	No	FTE	1	1	0	1	1	3	0	0	0	0	0	2	0	0	0	0	0	0	18%	16%	2%	27%	32%	19%
O&M	Customer Services	<b>Sub-Total CCC - Operations</b>		<b>Yes</b>																									
O&M	Customer Services	CCC - Support	Non-RAMP	No	Calls	1,587,054	1,521,589	1,584,489	1,442,063	1,284,382	7,419,577	1,525,947	1,525,947	1,525,947	1,525,947	1,525,947	7,629,735	61,107	(4,358)	58,542	(83,884)	(241,565)	(210,158)	4%	-0%	4%	-5%	-16%	-3%

3. SDG&E OTHER  
A. SDG&E Customer Services  
i. SDG&E Customer Services O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Customer Services	Customer Services		Yes									
O&M	Customer Services	Customer Services Field		Yes									
O&M	Customer Services	Customer Services Field - Operations	Non-RAMP	No	No	Yes	N/A	Collection orders were lower than forecasted by 20,756 due to the temporary suspension of collection activities attributed to the COVID-related disconnection moratorium. The moratorium for residential customers was lifted for remote disconnect in Q2 2023, but with minimum fielded orders in latter part of the year. The customer generated work orders were lower by 66,151 primarily due to fewer customer requested orders. The compliance and meter work were also lower by 22,190 due to suspension of Code 1 meter replacements per Resolution G-3587. The lower orders were partially offset by 28,903 increases in read verify orders due to non-communicating meters. Finally, the incomplete job orders were lower than forecasted by 5,138 due to proactive resolution of access issues and lower orders overall as compared to a predominantly three-year average (2014-2016) activity-based forecast in the TY 2019 GRC.	Under (U)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Customer Services	Customer Services Field - Operations	CSF Emergency Orders - include carbon monoxide, fumigation and hazardous and non hazardous gas leaks and atmospheric corrosion orders	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Customer Services	Customer Services Field - Operations	Job Observation and Behavior Based Safety.	No	No	Yes	N/A	Higher than forecasted job observations were realized as part of SDG&E's continued efforts to enhance safety engagement with field employees primarily through the following actions: (1) consistent scheduling to ensure observations are performed; (2) continually improving the contact rate with each employee by having regularly occurring peer to peer observations in all districts; and (3) performing full-scale observations of both vehicle parking/driving skills and technical field activities.	Over (O)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Customer Services	Customer Services Field - Operations	Workforce Planning Technical Training for Critical Roles - Service Technicians and Appliance Mechanics backfill for retirements	No	No	No	N/A	N/A	Over (O)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Customer Services	Sub-Total Customer Services Field - Operations		Yes	No								No
O&M	Customer Services	Customer Services Field - Supervision	Non-RAMP	No	No	No	N/A	N/A	Under (U)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Customer Services	Customer Services Field - Dispatch	Non-RAMP	No	No	Yes	N/A	Lower than forecasted dispatch FTE due to a higher than forecast allocation of labor to the Capital Department Overhead Pool based on a recent labor study.	Under (U)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Customer Services	Customer Services Field - Dispatch	Job observations of employee and contractor activities and safety behaviors	No	No	Yes	N/A	Lower than forecasted job observations due to new Supervisor onboarding as a result of organizational restructuring.	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Customer Services	Sub-Total Customer Services Field - Dispatch		Yes	No								No
O&M	Customer Services	Customer Services Field - Support	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Customer Services	Customer Services Field - Support	Field observations of employee and contractor activities and safety behaviors	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Customer Services	Sub-Total Customer Services Field - Support		Yes	No								No
O&M	Customer Services	Customer Service Information & Technology		Yes									

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Customer Services	Marketing Research & Analytics	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Customer Services	Marketing Research & Analytics	Safety Communications (Summer/Winter Preparedness; Emergency Preparedness)	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Customer Services	Marketing Research & Analytics	Safety Communications (Wire Down)	No	Yes	No	SDG&E's Gas & Electric Safety marketing and communications activities transcend GRC cycles and should be looked at holistically versus within the silo of a calendar year. Because safety messages tend to be more evergreen, we were able to create efficiencies in our safety communications while remaining effective, including using existing creative assets. Additionally, we found new and innovative ways to effectively communicate safety messages that are more cost efficient such as social media and digital advertising. Finally, in addition to the reuse of campaign assets over multiple years and executing more cost-effective tactics, overall spend was reduced by ongoing low-cost and no-cost alternatives such as community outreach, email and social media.	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Customer Services	<b>Sub-Total Marketing Research &amp; Analytics</b>		Yes	Yes								No
O&M	Customer Services	Customer Programs Pricing And Other Office	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Customer Services	Customer Programs Pricing And Other Office	Natural Gas Appliance Testing (NGAT) is a safety-related program for Customer Assistance's Energy Savings Assistance (ESA) Program participants.	No	No	Yes	N/A	The primary reason for the variance between 2023 authorized NGAT units of 7,391 and the actual number of NGATs performed in 2023 of 2,619 was due to the continued ramp up activities of Multifamily Whole Building (MFWB) Program with no in-units or buildings treated in 2023. Also, the ESA Main program underperformed in homes treated. In 2023, the ESA portfolio goal was to treat 11,711 under D.21-06-015. SDG&E treated 4,082 homes resulting in 35% of the homes treated and therefore less billed NGATs. Lastly, RHA is the implementor for ESA Main and ESA MFWB under two different contracts. RHA had some staffing challenges reported in 2023 that were also attributed to the number of homes treated.	Under (U)	Under (U)	Under (U)	Proceeding as Planned	No
O&M	Customer Services	<b>Sub-Total Customer Programs Pricing And Other Office</b>		Yes	No								No
O&M	Customer Services	<b>Customer Service - Office Operations</b>		Yes									
O&M	Customer Services	Advanced Metering Ops	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Customer Services	Advanced Metering Ops	Job Observation and Behavior Based Safety.	No	No	Yes	N/A	Higher than forecasted job observations were conducted as part of the continued effort to enhance SDG&E's safety engagement for field employees primarily due to the following: (1) Consistent with monthly scheduling to make sure that observations are being performed; (2) Continued to improve contact rate by having each observer to go out two times per month in all districts, which led to the increase; (3) Field and shop observations were all conducted and the observations were also distinguished among a stationary parking, at the job sites, and a driving situation.	Over (O)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Customer Services	Advanced Metering Ops	Workforce Planning	No	No	Yes	N/A	Higher than forecasted workforce training required due to higher attrition.	Under (U)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Customer Services	<b>Sub-Total Advanced Metering Op</b>		Yes	No								No
O&M	Customer Services	Credit & Collections	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Customer Services	Credit & Collections	Meter Tampering and meter bypass investigation and remediation.	No	No	Yes	N/A	Lower than forecasted leads/investigations worked due to emergency customer protections. These protections ensured customers received service without disruption. In addition, Meter Revenue Protection (MRP) reduced the number of leads/investigations as work was focused only on the most critical activities to ensure safety and reliability. MRP employees' activities were reallocated to meet other business needs.	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Customer Services	<b>Sub-Total Credit &amp; Collections</b>		Yes	No								No

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Customer Services	CCC - Operations	Non-RAMP	No	Yes	No	The variance is due to higher than forecast staffing levels due to increased handle time.	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Customer Services	CCC - Operations	Emergency calls taken by the Customer Contact Center including outage calls	No	No	Yes	N/A	Lower than forecasted emergency and outage calls due to improvements made in previous years in outage notifications; SDG&E.com, outage map, and SDG&E mobile app enhancements; and continued updates to customer contact information. Additionally, in 2023, SDG&E experienced zero Public Safety Power Shutoff (PSPS) related events.	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Customer Services	CCC - Operations	Capture Customer Email Program to update customer contact information	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Customer Services	CCC - Operations	ESS Emergency call training: 5 hrs per ESS.	No	No	Yes	N/A	The variance is due to higher than forecasted staffing levels due to increased handle time.	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Customer Services	<b>Sub-Total CCC - Operations</b>		<b>Yes</b>	<b>Yes</b>								<b>No</b>
O&M	Customer Services	CCC - Support	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No



3. SDG&E OTHER

A. SDG&E Customer Services

i. SDG&E Customer Services O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Customer Services	Customer Services		Yes				
O&M	Customer Services	Customer Services Field		Yes				
O&M	Customer Services	Customer Services Field - Operations	Non-RAMP	No	N/A	The CS-F Operations cost category consists of labor and non-labor expenses for field technicians to provide service at customer premises, including both customer and company generated work orders. Examples of customer-generated work orders include requests to establish or remove gas and electric service, light gas pilots, check gas appliances, shut off and restore gas service for fumigation, investigate the potential causes of high bills, respond to emergency incidents, investigate potential gas leaks, and other services. Examples of company generated work include meter and regulator changes, and other meter work necessary to maintain company assets, and collecting customer payments for delinquent bills. Non-labor costs include items such as uniform expenses, small tools and miscellaneous supplies used on the job.	SDG&E-17-R GRM-B-9 to GRM-B-14 WP 1FC001.000	SDG&E-17-R DHT-13 to DHT-19 WP 1FC001.000
O&M	Customer Services	Customer Services Field - Operations	CSF Emergency Orders - include carbon monoxide, fumigation and hazardous and non hazardous gas leaks and atmospheric corrosion orders	No	N/A			
O&M	Customer Services	Customer Services Field - Operations	Job Observation and Behavior Based Safety.	No	N/A	SDG&E-3 - Employee, Contractor, Customer, and Public Safety - This addresses the risk of non-adherence to safety programs, policies and procedures, which may result in severe harm to employees, contractors and the general public.	SDG&E-17-R GRM-B-5 to GRM-B-8 WP 1FC001.000	SDG&E-17-R DHT-7 to DHT-9 WP 1FC001.000
O&M	Customer Services	Customer Services Field - Operations	Workforce Planning Technical Training for Critical Roles - Service Technicians and Appliance Mechanics backfill for retirements	No	N/A			
O&M	Customer Services	Sub-Total Customer Services Field - Operations		Yes				
O&M	Customer Services	Customer Services Field - Supervision	Non-RAMP	No	N/A			
O&M	Customer Services	Customer Services Field - Dispatch	Non-RAMP	No	N/A	Dispatch personnel route and dispatch work orders to CS-F employees, electric troubleshooters, electric crews and Gas Distribution field employees on a day before and same day basis, 24 hours a day, 365 days a year. Dispatchers handle all matters that arise during the day, including dispatch of emergency orders real time as they are received; redistribution of work when employees call in sick or otherwise are unavailable; redistribution of work orders when employees are not able to complete all work that has been assigned for the day; coordination of logistics such as material an equipment ordering, no park sign, traffic control, etc.; and employee availability and schedule of field employees. Non-labor expenses include cell phones, office supplies, and other miscellaneous expenses.	SDG&E-17-R GRM-B-21 to GRM-B-23 WP 1FC003.000	SDG&E-17-R DHT-22 to DHT-24 WP 1FC003.000
O&M	Customer Services	Customer Services Field - Dispatch	Job observations of employee and contractor activities and safety behaviors	No	N/A	SDG&E-3 - Employee, Contractor, Customer, and Public Safety - This addresses the risk of non-adherence to safety programs, policies and procedures, which may result in severe harm to employees, contractors and the general public.	SDG&E-17-R GRM-B-5 to GRM-B-8 WP 1FC003.000	N/A
O&M	Customer Services	Sub-Total Customer Services Field - Dispatch		Yes				
O&M	Customer Services	Customer Services Field - Support	Non-RAMP	No	N/A			
O&M	Customer Services	Customer Services Field - Support	Field observations of employee and contractor activities and safety behaviors	No	N/A			
O&M	Customer Services	Sub-Total Customer Services Field - Support		Yes				
O&M	Customer Services	Customer Service Information & Technology		Yes				

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Customer Services	Marketing Research & Analytics	Non-RAMP	No	N/A			
O&M	Customer Services	Marketing Research & Analytics	Safety Communications (Summer/Winter Preparedness; Emergency Preparedness)	No	N/A			
O&M	Customer Services	Marketing Research & Analytics	Safety Communications (Wire Down)	No	N/A	The Marketing, Research, & Analytics (MRA) department is responsible for a wide variety of activities, which include developing strategic marketing plans, execution of communication tactics across various channels (such as mass, direct, social and digital), oversight and management of SDG&E's websites, conducting qualitative and quantitative customer research and analytics, supporting statewide collaboration regarding various marketing initiatives, and providing key services through mobile application development and management. This workpaper is in scope of the spending accountability report due to the wire down campaign safety messaging in customer communications and on the web.	SDG&E-19 LCD-27 to LCD-44 WP 11N003.000	SDG&E-19-E SFB-12 to SFB-26 WP 11N001.001
<b>O&amp;M</b>	<b>Customer Services</b>	<b>Sub-Total Marketing Research &amp; Analytics</b>		<b>Yes</b>				
O&M	Customer Services	Customer Programs Pricing And Other Office	Non-RAMP	No	N/A			
O&M	Customer Services	Customer Programs Pricing And Other Office	Natural Gas Appliance Testing (NGAT) is a safety-related program for Customer Assistance's Energy Savings Assistance (ESA) Program participants.	No	N/A	Customer Programs, Pricing, and Other Office (CP&P) consists of the Vice President of Customer Services and three key groups: Customer Assistance Programs (CAP), Customer Solutions and Customer Pricing. These groups are collectively responsible for analytical, technical and policy support for development of value-added customer solutions as well as rate design, strategy, electric load analysis, and demand forecasting. This workpaper is in scope of the spending accountability report due to Natural Gas Appliance Testing (NGAT) conducted for Energy Savings Assistance (ESA) program participants as described, designed to mitigate safety risks.	SDG&E-19 LCD-44 to LCD-49 WP 11N004.000	SDG&E-19-E SFB-26 to SFB-38 WP 11N002.001
<b>O&amp;M</b>	<b>Customer Services</b>	<b>Sub-Total Customer Programs Pricing And Other Office</b>		<b>Yes</b>				
<b>O&amp;M</b>	<b>Customer Services</b>	<b>Customer Service - Office Operations</b>		<b>Yes</b>				
O&M	Customer Services	Advanced Metering Ops	Non-RAMP	No	N/A			
O&M	Customer Services	Advanced Metering Ops	Job Observation and Behavior Based Safety.	No	N/A	SDG&E-3 - Employee, Contractor, Customer, and Public Safety - This addresses the risk of non-adherence to safety programs, policies and procedures, which may result in severe harm to employees, contractors and the general public.	SDG&E-18 JDS-9 to JDS-18 WP 10O001.000	SDG&E-17-R DHT-7 to DHT-9 WP 1FC005.000
O&M	Customer Services	Advanced Metering Ops	Workforce Planning	No	N/A	SDG&E-17 - Workforce Planning - This addresses risk of the loss of employees with deep knowledge, understanding and experience in operations due to retirements.	SDG&E-18 JDS-9 to JDS-18 WP 10O001.000	N/A
<b>O&amp;M</b>	<b>Customer Services</b>	<b>Sub-Total Advanced Metering Op</b>		<b>Yes</b>				
O&M	Customer Services	Credit & Collections	Non-RAMP	No	N/A			
O&M	Customer Services	Credit & Collections	Meter Tampering and meter bypass investigation and remediation.	No	N/A	Credit & Collections consists of Credit and Collections, Customer Payment Services, and Meter Revenue Protection. This workpaper is in scope of the spending accountability report due to meter tampering and meter bypass as described, designed to mitigate safety risks.	SDG&E-18 JDS-25 to JDS-30 WP 10O003.000	SDG&E-18-E SFB-11 to SFB-17 WP 10O001.001
<b>O&amp;M</b>	<b>Customer Services</b>	<b>Sub-Total Credit &amp; Collections</b>		<b>Yes</b>				

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Customer Services	CCC - Operations	Non-RAMP	No	N/A	The Customer Contact Center (CCC) expenses cover the costs of answering customer telephone calls; responding to incoming email from customers; responding to customer inquiries through on-line chat features; answering written customer correspondence regarding customer account activity; following up on all CPUC telephone referrals and informal and formal customer complaints; and responding to other customer account-related inquiries.	SDG&E-18 JDS-49 to JDS-56 WP 100006.000	SDG&E-18-E SFB-21 to SFB-26 WP100004.000
O&M	Customer Services	CCC - Operations	Emergency calls taken by the Customer Contact Center including outage calls	No	N/A	The Customer Contact Center (CCC) expenses cover the costs of answering customer telephone calls; responding to incoming email from customers; responding to customer inquiries through on-line chat features; answering written customer correspondence regarding customer account activity; following up on all CPUC telephone referrals and informal and formal customer complaints; and responding to other customer account-related inquiries. This workpaper is in scope of the spending accountability report due to ESS emergency call training, emergency and outage calls handled by the CCC, and post filing mitigation program.	SDG&E-18 JDS-49 to JDS-56 WP 100006.000	SDG&E-18-E SFB-21 to SFB-26 WP100004.000
O&M	Customer Services	CCC - Operations	Capture Customer Email Program to update customer contact information	No	N/A			
O&M	Customer Services	CCC - Operations	ESS Emergency call training: 5 hrs per ESS.	No	N/A	SDG&E-3 - Employee, Contractor, Customer, and Public Safety – This addresses the risk of non-adherence to safety programs, policies and procedures, which may result in severe harm to employees, contractors and the general public. Mandatory employee training programs and standardized policies are in place.	SDG&E-18 JDS-49 to JDS-56 WP 100006.000	SDG&E-18-E SFB-21 to SFB-26 WP100004.000
O&M	Customer Services	<b>Sub-Total CCC - Operations</b>		Yes				
O&M	Customer Services	CCC - Support	Non-RAMP	No	N/A			

**B. SDG&E Information Technology & Cyber Security**  
**i. SDG&E Information Technology & Cyber Security O&M**

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Information Technology & Cybersecurity	Information Technology & Cybersecurity		Yes			75,581	86,871	86,929	76,418	81,768	407,567	92,298	94,739	97,079	99,009	101,243	484,368
O&M	Information Technology & Cybersecurity	Information Technology		Yes			66,322	75,314	74,120	63,388	66,882	346,026	84,081	86,304	88,436	90,195	92,229	441,245
O&M	Information Technology & Cybersecurity	IT Applications NSS	Non-RAMP	No	On-going	Annual	17,098	13,707	14,060	9,751	9,175	63,791	18,748	19,244	19,719	20,111	20,565	98,387
O&M	Information Technology & Cybersecurity	IT Infrastructure NSS	Non-RAMP	No	On-going	Annual	5,843	6,811	8,221	7,269	9,027	37,171	12,934	13,276	13,604	13,875	14,188	67,877
O&M	Information Technology & Cybersecurity	Telecom Field Voice - SDG&E	Non-RAMP	No	On-going	Annual	1,563	1,186	1,303	1,107	1,414	6,573	2,185	2,243	2,298	2,344	2,397	11,466
O&M	Information Technology & Cybersecurity	Enterprise Integration Services	Non-RAMP	No	On-going	Annual	1,373	1,299	1,596	1,258	1,415	6,941	1,766	1,813	1,858	1,895	1,938	9,270
O&M	Information Technology & Cybersecurity	SSDS Project Office	Non-RAMP	No	On-going	Annual	1,115	994	838	751	829	4,526	698	717	734	749	766	3,664
O&M	Information Technology & Cybersecurity	Software Dev - Work Meas Systems	Non-RAMP	No	On-going	Annual	782	757	545	665	790	3,539	347	357	365	373	381	1,823
O&M	Information Technology & Cybersecurity	Software Dev - Database Administrator	Non-RAMP	No	On-going	Annual	595	682	320	471	490	2,557	2,211	2,269	2,325	2,371	2,425	11,602
O&M	Information Technology & Cybersecurity	Network Communication Services Director	Non-RAMP	No	On-going	Annual	2,470	7,370	1,157	298	754	12,049	36	37	38	39	39	189
O&M	Information Technology & Cybersecurity	Client Technology & Depot Services	Non-RAMP	No	On-going	Annual	1,355	1,592	2,182	1,346	1,063	7,538	1,768	1,815	1,860	1,897	1,940	9,280
O&M	Information Technology & Cybersecurity	Middleware and Internet Engineering	Non-RAMP	No	On-going	Annual	424	1,197	1,716	2,556	2,841	8,734	608	624	640	652	667	3,191
O&M	Information Technology & Cybersecurity	Infrastructure Eng & Ops Director	Non-RAMP	No	On-going	Annual	361	340	568	287	385	1,941	580	595	610	622	636	3,043
O&M	Information Technology & Cybersecurity	Network/Telecom Services - SDG&E	Non-RAMP	No	On-going	Annual	7,738	8,710	8,556	8,728	9,256	42,988	6,354	6,522	6,683	6,816	6,969	33,343
O&M	Information Technology & Cybersecurity	Enterprise Operations	Non-RAMP	No	On-going	Annual	(0)	(2)	0	0	0	(2)	2	2	2	2	2	11

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Information Technology & Cybersecurity	Server Management	Non-RAMP	No	On-going	Annual	481	1,091	953	601	271	3,396	949	974	998	1,018	1,041	4,978
O&M	Information Technology & Cybersecurity	Infrastructure Program Office	Non-RAMP	No	On-going	Annual	51	16	14	12	14	108	393	404	414	422	431	2,063
O&M	Information Technology & Cybersecurity	IT Network Field - LAN/WAN Voice	Non-RAMP	No	On-going	Annual	—	—	—	—	—	—	1	1	1	1	1	3
O&M	Information Technology & Cybersecurity	Enterprise Command Center	Non-RAMP	No	On-going	Annual	1,298	2,138	1,862	1,992	1,879	9,168	2,230	2,289	2,345	2,392	2,446	11,701
O&M	Information Technology & Cybersecurity	Shared Software Development Contracts	Non-RAMP	No	On-going	Annual	5,468	6,337	6,146	4,559	5,032	27,542	6,679	6,856	7,025	7,165	7,327	35,053
O&M	Information Technology & Cybersecurity	Project Improvement Office-NCS	Non-RAMP	No	On-going	Annual	192	—	190	198	197	777	231	237	243	248	253	1,213
O&M	Information Technology & Cybersecurity	Service Delivery - NCS	Non-RAMP	No	On-going	Annual	736	1,755	1,861	1,689	665	6,706	820	842	862	880	899	4,303
O&M	Information Technology & Cybersecurity	Service Development Program Management	Non-RAMP	No	On-going	Annual	343	343	381	385	350	1,801	313	322	329	336	344	1,644
O&M	Information Technology & Cybersecurity	Customer Analytics System	Non-RAMP	No	On-going	Annual	534	920	871	1,011	1,888	5,224	520	533	546	557	570	2,727
O&M	Information Technology & Cybersecurity	Field Force Program Delivery Team	Non-RAMP	No	On-going	Annual	540	897	440	261	228	2,365	59	60	62	63	64	308
O&M	Information Technology & Cybersecurity	SVP & CITO	Non-RAMP	No	On-going	Annual	906	609	691	738	971	3,916	459	471	483	492	503	2,408
O&M	Information Technology & Cybersecurity	Director IT Infrastructure	Non-RAMP	No	On-going	Annual	1,336	2,949	3,063	3,081	2,343	12,771	1,173	1,204	1,234	1,259	1,287	6,158
O&M	Information Technology & Cybersecurity	Infrast Prgrm Office	Non-RAMP	No	On-going	Annual	711	645	742	426	636	3,160	809	831	851	868	888	4,247
O&M	Information Technology & Cybersecurity	Client Services Maintenance & Support	Non-RAMP	No	On-going	Annual	—	—	—	—	—	—	2	2	2	3	3	12
O&M	Information Technology & Cybersecurity	Voice Leased Circuits	Non-RAMP	No	On-going	Annual	983	370	926	1,088	1,169	4,536	1,041	1,069	1,095	1,117	1,142	5,463
O&M	Information Technology & Cybersecurity	Managed Services Voice Enterprise	Non-RAMP	No	On-going	Annual	842	856	1,224	296	347	3,566	2,561	2,629	2,694	2,747	2,809	13,440
O&M	Information Technology & Cybersecurity	Voice Enterp Support	Non-RAMP	No	On-going	Annual	158	175	87	213	82	716	537	551	565	576	589	2,817
O&M	Information Technology & Cybersecurity	Client Tech Svcs	Non-RAMP	No	On-going	Annual	—	—	—	—	—	—	72	74	76	77	79	378
O&M	Information Technology & Cybersecurity	IT Portfolio Management	Non-RAMP	No	On-going	Annual	132	1	—	10	76	219	308	316	324	330	338	1,615

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Information Technology & Cybersecurity	Bi & Analytics Engineering-SAS Contracts	Non-RAMP	No	On-going	Annual	5,167	5,183	5,651	4,299	3,717	24,018	5,147	5,284	5,414	5,522	5,646	27,013
O&M	Information Technology & Cybersecurity	IT&OTI Contracts SS	Non-RAMP	No	On-going	Annual	5,382	5,762	7,028	7,028	7,381	32,582	11,152	11,446	11,729	11,962	12,232	58,522
O&M	Information Technology & Cybersecurity	IT Telecom PMO	Non-RAMP	No	On-going	Annual	65	89	44	152	165	515	94	97	99	101	103	495
O&M	Information Technology & Cybersecurity	DCAM Program	Non-RAMP	No	On-going	Annual	—	14	19	9	—	43	—	—	—	—	—	—
O&M	Information Technology & Cybersecurity	IT Serv Contin Mgmt	Non-RAMP	No	On-going	Annual	—	51	244	589	1,104	1,989	—	—	—	—	—	—
O&M	Information Technology & Cybersecurity	Infrastructure Portf	Non-RAMP	No	On-going	Annual	—	54	225	53	—	332	—	—	—	—	—	—
O&M	Information Technology & Cybersecurity	SDG&E Network Engineering	Non-RAMP	No	On-going	Annual	282	416	395	208	928	2,229	293	301	308	314	321	1,538
<b>O&amp;M</b>	<b>Information Technology &amp; Cybersecurity</b>	<b>Cybersecurity</b>		<b>Yes</b>			<b>9,259</b>	<b>11,557</b>	<b>12,809</b>	<b>13,029</b>	<b>14,886</b>	<b>61,540</b>	<b>8,217</b>	<b>8,434</b>	<b>8,643</b>	<b>8,815</b>	<b>9,013</b>	<b>43,123</b>
O&M	Information Technology & Cybersecurity	Security Policy and Awareness	Cybersecurity risk and vulnerability	No	On-going	Annual	1,402	1,485	1,599	1,877	2,202	8,566	1,022	1,049	1,075	1,097	1,121	5,365
O&M	Information Technology & Cybersecurity	Director - Information Security	Cybersecurity risk and vulnerability	No	On-going	Annual	400	309	523	469	988	2,690	392	402	412	421	430	2,058
O&M	Information Technology & Cybersecurity	Security Engineering	Cybersecurity risk and vulnerability	No	On-going	Annual	1,435	2,612	2,487	2,328	3,660	12,521	1,532	1,573	1,611	1,643	1,680	8,040
O&M	Information Technology & Cybersecurity	Security Operations	Cybersecurity risk and vulnerability	No	On-going	Annual	2,460	3,243	2,918	2,962	3,761	15,345	1,877	1,927	1,974	2,013	2,059	9,850
O&M	Information Technology & Cybersecurity	Critical Infrastructure Protection	Cybersecurity risk and vulnerability	No	On-going	Annual	2,636	3,409	4,017	4,214	2,781	17,056	2,950	3,028	3,103	3,164	3,236	15,481
O&M	Information Technology & Cybersecurity	Critical Infrastructure Protection	Incremental maintenance costs associated with Grid Modernization capital projects	No	On-going	Annual	—	194	223	—	—	417	420	431	442	451	461	2,204
<b>O&amp;M</b>	<b>Information Technology &amp; Cybersecurity</b>	<b>Sub-Total Critical Infrastructure Protection</b>		<b>Yes</b>			<b>2,636</b>	<b>3,603</b>	<b>4,240</b>	<b>4,214</b>	<b>2,781</b>	<b>17,473</b>	<b>3,370</b>	<b>3,459</b>	<b>3,545</b>	<b>3,615</b>	<b>3,697</b>	<b>17,685</b>
O&M	Information Technology & Cybersecurity	Information Security Programs	Cybersecurity risk and vulnerability	No	On-going	Annual	927	109	323	380	459	2,199	24	24	25	25	26	124
O&M	Information Technology & Cybersecurity	Identity & Access Management	Cybersecurity risk and vulnerability	No	On-going	Annual	—	195	719	799	1,034	2,747	—	—	—	—	—	—

**B. SDG&E Information Technology & Cyber Security**  
**i. SDG&E Information Technology & Cyber Security O&M**

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Information Technology & Cybersecurity	Information Technology & Cybersecurity		Yes	(16,717)	(7,867)	(10,150)	(22,591)	(19,475)	(76,801)	-18%	-8%	-10%	-23%	-19%	-16%
O&M	Information Technology & Cybersecurity	Information Technology		Yes	(17,759)	(10,990)	(14,317)	(26,806)	(25,347)	(95,219)	-21%	-13%	-16%	-30%	-27%	-22%
O&M	Information Technology & Cybersecurity	IT Applications NSS	Non-RAMP	No	(1,650)	(5,537)	(5,660)	(10,360)	(11,390)	(34,596)	-9%	-29%	-29%	-52%	-55%	-35%
O&M	Information Technology & Cybersecurity	IT Infrastructure NSS	Non-RAMP	No	(7,092)	(6,465)	(5,383)	(6,606)	(5,161)	(30,706)	-55%	-49%	-40%	-48%	-36%	-45%
O&M	Information Technology & Cybersecurity	Telecom Field Voice - SDG&E	Non-RAMP	No	(622)	(1,057)	(995)	(1,236)	(983)	(4,893)	-28%	-47%	-43%	-53%	-41%	-43%
O&M	Information Technology & Cybersecurity	Enterprise Integration Services	Non-RAMP	No	(394)	(514)	(262)	(637)	(523)	(2,329)	-22%	-28%	-14%	-34%	-27%	-25%
O&M	Information Technology & Cybersecurity	SSDS Project Office	Non-RAMP	No	417	277	103	2	63	862	60%	39%	14%	0%	8%	24%
O&M	Information Technology & Cybersecurity	Software Dev - Work Meas Systems	Non-RAMP	No	434	401	180	292	409	1,717	125%	112%	49%	78%	107%	94%
O&M	Information Technology & Cybersecurity	Software Dev - Database Administrator	Non-RAMP	No	(1,615)	(1,588)	(2,005)	(1,901)	(1,935)	(9,044)	-73%	-70%	-86%	-80%	-80%	-78%
O&M	Information Technology & Cybersecurity	Network Communication Services Director	Non-RAMP	No	2,434	7,333	1,119	260	715	11,860	6759%	19842%	2955%	672%	1810%	6277%
O&M	Information Technology & Cybersecurity	Client Technology & Depot Services	Non-RAMP	No	(413)	(224)	322	(550)	(877)	(1,742)	-23%	-12%	17%	-29%	-45%	-19%
O&M	Information Technology & Cybersecurity	Middleware and Internet Engineering	Non-RAMP	No	(185)	573	1,077	1,904	2,173	5,543	-30%	92%	168%	292%	326%	174%
O&M	Information Technology & Cybersecurity	Infrastructure Eng & Ops Director	Non-RAMP	No	(218)	(256)	(42)	(335)	(251)	(1,102)	-38%	-43%	-7%	-54%	-39%	-36%
O&M	Information Technology & Cybersecurity	Network/Telecom Services - SDG&E	Non-RAMP	No	1,384	2,189	1,873	1,912	2,287	9,645	22%	34%	28%	28%	33%	29%
O&M	Information Technology & Cybersecurity	Enterprise Operations	Non-RAMP	No	(2)	(4)	(2)	(2)	(2)	(13)	-100%	-201%	-100%	-100%	-100%	-120%

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Information Technology & Cybersecurity	Server Management	Non-RAMP	No	(468)	117	(45)	(417)	(770)	(1,582)	-49%	12%	-5%	-41%	-74%	-32%
O&M	Information Technology & Cybersecurity	Infrastructure Program Office	Non-RAMP	No	(342)	(388)	(399)	(409)	(417)	(1,956)	-87%	-96%	-97%	-97%	-97%	-95%
O&M	Information Technology & Cybersecurity	IT Network Field - LAN/WAN Voice	Non-RAMP	No	(1)	(1)	(1)	(1)	(1)	(3)	-100%	-100%	-100%	-100%	-100%	-100%
O&M	Information Technology & Cybersecurity	Enterprise Command Center	Non-RAMP	No	(932)	(151)	(483)	(400)	(567)	(2,533)	-42%	-7%	-21%	-17%	-23%	-22%
O&M	Information Technology & Cybersecurity	Shared Software Development Contracts	Non-RAMP	No	(1,212)	(519)	(879)	(2,606)	(2,295)	(7,511)	-18%	-8%	-13%	-36%	-31%	-21%
O&M	Information Technology & Cybersecurity	Project Improvement Office-NCS	Non-RAMP	No	(39)	(237)	(53)	(50)	(57)	(436)	-17%	-100%	-22%	-20%	-22%	-36%
O&M	Information Technology & Cybersecurity	Service Delivery - NCS	Non-RAMP	No	(84)	913	999	810	(234)	2,404	-10%	109%	116%	92%	-26%	56%
O&M	Information Technology & Cybersecurity	Service Development Program Management	Non-RAMP	No	30	21	52	49	6	157	9%	7%	16%	15%	2%	10%
O&M	Information Technology & Cybersecurity	Customer Analytics System	Non-RAMP	No	14	387	324	454	1,319	2,498	3%	73%	59%	81%	231%	92%
O&M	Information Technology & Cybersecurity	Field Force Program Delivery Team	Non-RAMP	No	481	836	378	198	164	2,058	820%	1389%	613%	315%	255%	668%
O&M	Information Technology & Cybersecurity	SVP & CITO	Non-RAMP	No	447	138	209	246	468	1,508	97%	29%	43%	50%	93%	63%
O&M	Information Technology & Cybersecurity	Director IT Infrastructure	Non-RAMP	No	162	1,744	1,829	1,822	1,056	6,613	14%	145%	148%	145%	82%	107%
O&M	Information Technology & Cybersecurity	Infrast Prgrm Office	Non-RAMP	No	(99)	(185)	(110)	(442)	(252)	(1,087)	-12%	-22%	-13%	-51%	-28%	-26%
O&M	Information Technology & Cybersecurity	Client Services Maintenance & Support	Non-RAMP	No	(2)	(2)	(2)	(3)	(3)	(12)	-100%	-100%	-100%	-100%	-100%	-100%
O&M	Information Technology & Cybersecurity	Voice Leased Circuits	Non-RAMP	No	(58)	(699)	(169)	(29)	27	(928)	-6%	-65%	-15%	-3%	2%	-17%
O&M	Information Technology & Cybersecurity	Managed Services Voice Enterprise	Non-RAMP	No	(1,719)	(1,772)	(1,470)	(2,451)	(2,462)	(9,874)	-67%	-67%	-55%	-89%	-88%	-73%
O&M	Information Technology & Cybersecurity	Voice Enterp Support	Non-RAMP	No	(379)	(376)	(477)	(362)	(507)	(2,101)	-71%	-68%	-85%	-63%	-86%	-75%
O&M	Information Technology & Cybersecurity	Client Tech Svcs	Non-RAMP	No	(72)	(74)	(76)	(77)	(79)	(378)	-100%	-100%	-100%	-100%	-100%	-100%
O&M	Information Technology & Cybersecurity	IT Portfolio Management	Non-RAMP	No	(175)	(315)	(324)	(321)	(261)	(1,396)	-57%	-100%	-100%	-97%	-77%	-86%



Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Information Technology & Cybersecurity	Bi & Analytics Engineering-SAS Contracts	Non-RAMP	No	20	(100)	237	(1,223)	(1,929)	(2,995)	0%	-2%	4%	-22%	-34%	-11%
O&M	Information Technology & Cybersecurity	IT&OTI Contracts SS	Non-RAMP	No	(5,769)	(5,684)	(4,701)	(4,934)	(4,851)	(25,939)	-52%	-50%	-40%	-41%	-40%	-44%
O&M	Information Technology & Cybersecurity	IT Telecom PMO	Non-RAMP	No	(29)	(8)	(55)	51	61	20	-31%	-8%	-55%	50%	59%	4%
O&M	Information Technology & Cybersecurity	DCAM Program	Non-RAMP	No	—	14	19	9	—	43	—%	100%	100%	100%	—%	100%
O&M	Information Technology & Cybersecurity	IT Serv Contin Mgmt	Non-RAMP	No	—	51	244	589	1,104	1,989	—%	100%	100%	100%	100%	100%
O&M	Information Technology & Cybersecurity	Infrastructure Portf	Non-RAMP	No	—	54	225	53	—	332	—%	100%	100%	100%	—%	100%
O&M	Information Technology & Cybersecurity	SDG&E Network Engineering	Non-RAMP	No	(11)	115	87	(106)	607	691	-4%	38%	28%	-34%	189%	45%
<b>O&amp;M</b>	<b>Information Technology &amp; Cybersecurity</b>	<b>Cybersecurity</b>		<b>Yes</b>	<b>1,042</b>	<b>3,122</b>	<b>4,166</b>	<b>4,215</b>	<b>5,872</b>	<b>18,418</b>	<b>13%</b>	<b>37%</b>	<b>48%</b>	<b>48%</b>	<b>65%</b>	<b>43%</b>
O&M	Information Technology & Cybersecurity	Security Policy and Awareness	Cybersecurity risk and vulnerability	No	380	436	523	780	1,081	3,201	37%	42%	49%	71%	96%	60%
O&M	Information Technology & Cybersecurity	Director - Information Security	Cybersecurity risk and vulnerability	No	8	(93)	111	49	558	632	2%	-23%	27%	12%	130%	31%
O&M	Information Technology & Cybersecurity	Security Engineering	Cybersecurity risk and vulnerability	No	(97)	1,039	875	684	1,980	4,481	-6%	66%	54%	42%	118%	56%
O&M	Information Technology & Cybersecurity	Security Operations	Cybersecurity risk and vulnerability	No	583	1,317	944	949	1,702	5,494	31%	68%	48%	47%	83%	56%
O&M	Information Technology & Cybersecurity	Critical Infrastructure Protection	Cybersecurity risk and vulnerability	No	(314)	381	914	1,049	(455)	1,575	-11%	13%	29%	33%	-14%	10%
O&M	Information Technology & Cybersecurity	Critical Infrastructure Protection	Incremental maintenance costs associated with Grid Modernization capital projects	No	(420)	(237)	(219)	(451)	(461)	(1,787)	-100%	-55%	-50%	-100%	-100%	-81%
<b>O&amp;M</b>	<b>Information Technology &amp; Cybersecurity</b>	<b>Sub-Total Critical Infrastructure Protection</b>		<b>Yes</b>	<b>(734)</b>	<b>144</b>	<b>696</b>	<b>599</b>	<b>(916)</b>	<b>(212)</b>	<b>-22%</b>	<b>4%</b>	<b>20%</b>	<b>17%</b>	<b>-25%</b>	<b>-1%</b>
O&M	Information Technology & Cybersecurity	Information Security Programs	Cybersecurity risk and vulnerability	No	903	85	298	354	433	2,074	3807%	349%	1196%	1393%	1666%	1666%
O&M	Information Technology & Cybersecurity	Identity & Access Management	Cybersecurity risk and vulnerability	No	—	195	719	799	1,034	2,747	—%	100%	100%	100%	100%	100%

B. SDG&E Information Technology & Cyber Security  
i. SDG&E Information Technology & Cyber Security O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
O&M	Information Technology & Cybersecurity	Information Technology & Cybersecurity		Yes																										
O&M	Information Technology & Cybersecurity	Information Technology		Yes																										
O&M	Information Technology & Cybersecurity	IT Applications NSS	Non-RAMP	No	This workpaper encompasses software maintenance, managed services, and internal labor related to application support services. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Information Technology & Cybersecurity	IT Infrastructure NSS	Non-RAMP	No	This workpaper encompasses Data Center / Infrastructure enhancements, incremental resources to support new functions / features implemented by capital projects, subscriptions, and other non-labor services. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Information Technology & Cybersecurity	Telecom Field Voice - SDG&E	Non-RAMP	No	FTE	12	9	9	7	9	46	15	15	15	15	15	75	(3)	(6)	(6)	(8)	(6)	(29)	-20%	-40%	-40%	-53%	-37%	-38%	
O&M	Information Technology & Cybersecurity	Enterprise Integration Services	Non-RAMP	No	FTE	11	10	12	9	10	52	14	14	14	14	14	70	(3)	(4)	(2)	(5)	(4)	(18)	-21%	-29%	-14%	-36%	-31%	-26%	
O&M	Information Technology & Cybersecurity	SSDS Project Office	Non-RAMP	No	FTE	9	8	7	6	6	36	5	5	5	5	5	25	4	3	2	1	1	11	80%	60%	40%	20%	10%	42%	
O&M	Information Technology & Cybersecurity	Software Dev - Work Meas Systems	Non-RAMP	No	FTE	6	6	3	4	4	23	3	3	3	3	3	15	3	3	0	1	1	8	100%	100%	—%	33%	37%	54%	
O&M	Information Technology & Cybersecurity	Software Dev - Database Administrator	Non-RAMP	No	FTE	5	4	2	3	3	17	16	16	16	16	4	68	(11)	(12)	(14)	(13)	(1)	(51)	-69%	-75%	-88%	-81%	-33%	-75%	
O&M	Information Technology & Cybersecurity	Network Communication Services Director	Non-RAMP	No	FTE	2	4	2	2	2	12	0	0	0	0	0	0	2	4	2	2	2	12	100%	100%	100%	100%	100%	100%	
O&M	Information Technology & Cybersecurity	Client Technology & Depot Services	Non-RAMP	No	FTE	2	4	2	2	2	12	0	0	0	0	0	0	2	4	2	2	2	12	100%	100%	100%	100%	100%	100%	
O&M	Information Technology & Cybersecurity	Middleware and Internet Engineering	Non-RAMP	No	FTE	3	8	5	10	10	36	5	5	5	5	5	25	(2)	3	0	5	5	11	-40%	60%	—%	100%	102%	44%	
O&M	Information Technology & Cybersecurity	Infrastructure Eng & Ops Director	Non-RAMP	No	FTE	2	2	3	2	2	11	4	4	4	4	4	20	(2)	(2)	(1)	(2)	(2)	(9)	-50%	-50%	-25%	-50%	-48%	-45%	
O&M	Information Technology & Cybersecurity	Network/Telecom Services - SDG&E	Non-RAMP	No	This workpaper includes multiple types of lines of services from voice to data as well as various third-party support services. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Information Technology & Cybersecurity	Enterprise Operations	Non-RAMP	No	Employee Cell Phones	—	—	—	—	—	—	0	1	1	1	1	4	0	(1)	(1)	(1)	(1)	(4)	—%	-100%	-100%	-100%	-100%	-100%	

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
O&M	Information Technology & Cybersecurity	Server Management	Non-RAMP	No	FTE	4	7	4	1	—	16	8	8	8	8	8	40	(4)	(1)	(4)	(7)	(8)	(24)	-50%	-13%	-50%	-88%	-100%	-60%	
O&M	Information Technology & Cybersecurity	Infrastructure Program Office	Non-RAMP	No	FTE	—	—	—	—	—	—	2	2	2	2	2	10	(2)	(2)	(2)	(2)	(2)	(10)	-100%	-100%	-100%	-100%	-100%	-100%	
O&M	Information Technology & Cybersecurity	IT Network Field - LAN/WAN Voice	Non-RAMP	No	FTE	—	—	—	—	—	—	0	0	0	0	0	0	0	0	0	0	0	0	—%	—%	—%	—%	—%	—%	
O&M	Information Technology & Cybersecurity	Enterprise Command Center	Non-RAMP	No	FTE	9	8	12	11	11	51	17	17	17	17	17	85	(8)	(9)	(5)	(6)	(6)	(34)	-47%	-53%	-29%	-35%	-38%	-40%	
O&M	Information Technology & Cybersecurity	Shared Software Development Contracts	Non-RAMP	No	This workpaper contains variable O&M software maintenance and renewal costs for multiple IT systems. The maintenance pertains to financial, enterprise, and field operation applications. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Information Technology & Cybersecurity	Project Improvement Office-NCS	Non-RAMP	No	FTE	2	—	2	2	1	7	2	2	2	2	2	10	0	(2)	0	(0)	(1)	(3)	—%	-100%	—%	-15%	-40%	-31%	
O&M	Information Technology & Cybersecurity	Service Delivery - NCS	Non-RAMP	No	FTE	5	4	4	2	2	17	7	7	7	7	7	35	(2)	(3)	(3)	(5)	(5)	(18)	-29%	-43%	-43%	-71%	-71%	-51%	
O&M	Information Technology & Cybersecurity	Service Development Program Management	Non-RAMP	No	FTE	3	3	3	2	3	14	3	3	3	3	3	15	0	0	0	(1)	0	(1)	—%	—%	—%	-33%	—%	-7%	
O&M	Information Technology & Cybersecurity	Customer Analytics System	Non-RAMP	No	FTE	2	3	3	4	7	19	2	2	2	2	2	10	0	1	1	2	5	9	—%	50%	45%	100%	230%	85%	
O&M	Information Technology & Cybersecurity	Field Force Program Delivery Team	Non-RAMP	No	FTE	3	4	3	2	1	13	0	0	0	0	0	0	3	4	3	2	1	13	100%	100%	100%	100%	100%	100%	
O&M	Information Technology & Cybersecurity	SVP & CITO	Non-RAMP	No	FTE	2	2	2	2	3	10	2	2	2	2	2	9	0	0	0	0	1	2	18%	18%	—%	—%	59%	19%	
O&M	Information Technology & Cybersecurity	Director IT Infrastructure	Non-RAMP	No	This workpaper encompasses contracts, managed services, and internal labor related to Data Analytics. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Information Technology & Cybersecurity	Infrastr Prgm Office	Non-RAMP	No	FTE	6	5	5	3	4	23	5	5	5	5	5	25	1	0	(0)	(2)	(1)	(2)	20%	—%	-8%	-44%	-16%	-10%	
O&M	Information Technology & Cybersecurity	Client Services Maintenance & Support	Non-RAMP	No	Employee Cell Phones	—	—	—	—	—	—	1	1	1	1	1	5	(1)	(1)	(1)	(1)	(1)	(5)	-100%	-100%	-100%	-100%	-100%	-100%	
O&M	Information Technology & Cybersecurity	Voice Leased Circuits	Non-RAMP	No	This workpaper includes multiple types of lines of services from voice to data as well as various third-party support services. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Information Technology & Cybersecurity	Managed Services Voice Enterprise	Non-RAMP	No	This workpaper includes third party support services to meet required service level agreements on system reliability such as operations support and maintenance of the Avaya Enterprise phone system and call recording software for customer call centers. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Information Technology & Cybersecurity	Voice Enterp Support	Non-RAMP	No	FTE	1	1	1	1	1	4	3	3	3	3	3	15	(2)	(2)	(2)	(2)	(2)	(11)	-67%	-67%	-77%	-80%	-80%	-74%	
O&M	Information Technology & Cybersecurity	Client Tech Svcs	Non-RAMP	No	FTE	—	—	—	—	—	—	1	1	1	1	1	5	(1)	(1)	(1)	(1)	(1)	(5)	-100%	-100%	-100%	-100%	-100%	-100%	
O&M	Information Technology & Cybersecurity	IT Portfolio Management	Non-RAMP	No	FTE	—	—	—	—	—	—	2	2	2	2	2	10	(2)	(2)	(2)	(2)	(2)	(10)	-100%	-100%	-100%	-100%	-100%	-100%	

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
O&M	Information Technology & Cybersecurity	Bi & Analytics Engineering-SAS Contracts	Non-RAMP	No	This workpaper contains software and hardware maintenance costs across multiple contracts/and purchase orders. The cost basis for these systems vary – some are based on capacity, some on user count, some a fixed annual fee. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Information Technology & Cybersecurity	IT&OTI Contracts SS	Non-RAMP	No	This workpaper contains O&M software and hardware maintenance costs across multiple contracts and purchase orders. The cost basis for these systems vary – some are based on capacity, some on user count, some a fixed annual fee. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Information Technology & Cybersecurity	IT Telecom PMO	Non-RAMP	No	FTE	—	1	1	1	2	5	1	1	1	1	1	5	(1)	0	0	0	1	(0)	-100%	—%	—%	—%	60%	-8%	
O&M	Information Technology & Cybersecurity	DCAM Program	Non-RAMP	No	This workpaper contains internal labor and various third-party support services across multiple contracts and purchase orders related to data center and application modernization capital projects. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Information Technology & Cybersecurity	IT Serv Contin Mgmt	Non-RAMP	No	FTE	—	—	2	4	5	11	0	0	0	0	0	0	0	0	2	4	5	11	—%	—%	100%	100%	100%	100%	
O&M	Information Technology & Cybersecurity	Infrastructure Portf	Non-RAMP	No	FTE	—	—	1	—	—	1	0	0	0	0	0	0	0	0	1	0	0	1	—%	—%	100%	—%	—%	100%	
O&M	Information Technology & Cybersecurity	SDG&E Network Engineering	Non-RAMP	No	FTE	2	3	3	1	2	10	1	1	1	1	1	5	1	2	2	0	1	5	100%	200%	150%	—%	70%	104%	
O&M	Information Technology & Cybersecurity	Cybersecurity		Yes																										
O&M	Information Technology & Cybersecurity	Security Policy and Awareness	Cybersecurity risk and vulnerability	No	FTE	8	7	8	10	11	44	8	8	8	8	8	40	0	(1)	0	2	3	4	—%	-13%	—%	25%	39%	10%	
O&M	Information Technology & Cybersecurity	Director - Information Security	Cybersecurity risk and vulnerability	No	FTE	2	2	2	2	2	10	2	2	2	2	2	10	0	0	0	0	(0)	(0)	—%	—%	—%	—%	-15%	-3%	
O&M	Information Technology & Cybersecurity	Security Engineering	Cybersecurity risk and vulnerability	No	FTE	10	13	14	12	12	61	10	10	10	10	10	50	0	3	4	2	2	11	—%	30%	40%	20%	16%	21%	
O&M	Information Technology & Cybersecurity	Security Operations	Cybersecurity risk and vulnerability	No	FTE	16	18	19	16	15	84	16	16	16	16	16	80	0	2	3	0	(1)	4	—%	13%	19%	—%	-5%	5%	
O&M	Information Technology & Cybersecurity	Critical Infrastructure Protection	Cybersecurity risk and vulnerability	No	This workpaper contains various O&M costs pertaining to cybersecurity systems maintenance and related professional services. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Information Technology & Cybersecurity	Critical Infrastructure Protection	Incremental maintenance costs associated with Grid Modernization capital projects	No	This workpaper contains various O&M costs pertaining to cybersecurity systems maintenance and related professional services. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Information Technology & Cybersecurity	Sub-Total Critical Infrastructure Protection		Yes																										
O&M	Information Technology & Cybersecurity	Information Security Programs	Cybersecurity risk and vulnerability	No	FTE	1	1	2	1	2	7	0	0	0	0	0	0	1	1	2	1	2	7	100%	100%	100%	100%	100%	100%	
O&M	Information Technology & Cybersecurity	Identity & Access Management	Cybersecurity risk and vulnerability	No	FTE	—	2	5	6	6	19	0	0	0	0	0	0	0	2	5	6	6	19	—%	100%	100%	100%	100%	100%	

B. SDG&E Information Technology & Cyber Security  
i. SDG&E Information Technology & Cyber Security O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Information Technology & Cybersecurity	Information Technology & Cybersecurity		Yes									
O&M	Information Technology & Cybersecurity	Information Technology		Yes									
O&M	Information Technology & Cybersecurity	IT Applications NSS	Non-RAMP	No	Yes	No	Negotiated significant reduction in O&M for legacy Customer Information System (CIS) maintenance and enhancements due to new CIS system replacement. In addition, the CISCO Wellness initiative was completed prior to 2020.	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Information Technology & Cybersecurity	IT Infrastructure NSS	Non-RAMP	No	Yes	No	Shifted work from O&M to Infrastructure capital projects in response to significant infrastructure outage. In addition, Microsoft Office 365 costs were capitalized per SDG&E's software capitalization policy.	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Information Technology & Cybersecurity	Telecom Field Voice - SDG&E	Non-RAMP	No	No	Yes	N/A	Internal resources charged more labor to Network capital projects undertaken to reduce technical obsolescence resulting in the end of ongoing vendor support.	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Information Technology & Cybersecurity	Enterprise Integration Services	Non-RAMP	No	No	Yes	N/A	Internal resources were re-prioritized to the CIS support team following the CIS replacement project.	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Information Technology & Cybersecurity	SSDS Project Office	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Information Technology & Cybersecurity	Software Dev - Work Meas Systems	Non-RAMP	No	No	Yes	N/A	There was a shift from capital to O&M support for Construction, Planning & Design (CPD) applications.	Over (O)	On Target (T)	Over (O)	Expanded	No
O&M	Information Technology & Cybersecurity	Software Dev - Database Administrator	Non-RAMP	No	No	Yes	N/A	Underrun in FTEs is driven by a shift from internal labor to external resources.	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Information Technology & Cybersecurity	Network Communication Services Director	Non-RAMP	No	No	Yes	N/A	Additional costs to operationalize and run a center of excellence around the scanning, analysis, validation, and remediation of open vulnerabilities, as well as increase compliance with Cybersecurity policies & procedures. In addition, implemented improved process and automation around IT Change management in order to reduce risk, decrease unplanned outages and downtime associated with IT-related production changes. FTEs added to focus on design, build, implementation and management of system-wide network and telecommunications infrastructure.	Over (O)	Over (O)	Over (O)	Expanded	No
O&M	Information Technology & Cybersecurity	Client Technology & Depot Services	Non-RAMP	No	No	Yes	N/A	Underrun in FTEs is driven by a shift from internal labor to external resources.	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Information Technology & Cybersecurity	Middleware and Internet Engineering	Non-RAMP	No	No	Yes	N/A	Work scope expanded to include Cloud Platform Engineering Support.	Over (O)	Over (O)	Over (O)	Expanded	No
O&M	Information Technology & Cybersecurity	Infrastructure Eng & Ops Director	Non-RAMP	No	No	Yes	N/A	Additional FTEs forecasted in director cost center were filled in other groups within the Utility and Financial Application Operation department.	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Information Technology & Cybersecurity	Network/Telecom Services - SDG&E	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Proceeding as Planned	No
O&M	Information Technology & Cybersecurity	Enterprise Operations	Non-RAMP	No	No	Yes	N/A	This cost center is now retired.	Under (U)	Under (U)	Under (U)	Canceled	No

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Information Technology & Cybersecurity	Server Management	Non-RAMP	No	No	Yes	N/A	Underrun in FTEs is driven by a shift from internal labor to external resources. This shift was due to the IT outsourced managed services agreement, where internal resources would focus on Capital-related work.	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Information Technology & Cybersecurity	Infrastructure Program Office	Non-RAMP	No	No	Yes	N/A	Underrun in FTEs due to the launch of the Data Center and Application Modernization (DCAM) program, which became the hub for Infrastructure Project Management work.	Under (U)	Under (U)	Under (U)	Canceled	No
O&M	Information Technology & Cybersecurity	IT Network Field - LAN/WAN Voice	Non-RAMP	No	No	No	N/A	N/A	Under (U)	Under (U)	Under (U)	Canceled	No
O&M	Information Technology & Cybersecurity	Enterprise Command Center	Non-RAMP	No	No	Yes	N/A	Underrun in FTEs is driven by a shift from internal labor to external resources.	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Information Technology & Cybersecurity	Shared Software Development Contracts	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Information Technology & Cybersecurity	Project Improvement Office-NCS	Non-RAMP	No	No	Yes	N/A	FTE were re-organized to SDG&E Network Engineering workpaper to support the growth in network infrastructure and operational needs in the network engineering function.	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Information Technology & Cybersecurity	Service Delivery - NCS	Non-RAMP	No	No	Yes	N/A	Underrun in FTEs is driven by a shift from internal labor to external resources.	Over (O)	On Target (T)	Over (O)	Expanded	No
O&M	Information Technology & Cybersecurity	Service Development Program Management	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Information Technology & Cybersecurity	Customer Analytics System	Non-RAMP	No	No	Yes	N/A	Additional FTEs needed for architectural framework support.	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Information Technology & Cybersecurity	Field Force Program Delivery Team	Non-RAMP	No	No	Yes	N/A	Additional FTEs due to de-centralization of the IT Portfolio Management workpaper.	Over (O)	On Target (T)	Over (O)	Expanded	No
O&M	Information Technology & Cybersecurity	SVP & CITO	Non-RAMP	No	No	Yes	N/A	Additional FTE to meet business requirements for oversight of technology architecture.	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Information Technology & Cybersecurity	Director IT Infrastructure	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Expanded	No
O&M	Information Technology & Cybersecurity	Infrastr Prgm Office	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Information Technology & Cybersecurity	Client Services Maintenance & Support	Non-RAMP	No	No	Yes	N/A	This cost center is now retired, the trailing employee cell phone charges were canceled.	Under (U)	Under (U)	Under (U)	Canceled	No
O&M	Information Technology & Cybersecurity	Voice Leased Circuits	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Information Technology & Cybersecurity	Managed Services Voice Enterprise	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Information Technology & Cybersecurity	Voice Enterp Support	Non-RAMP	No	No	Yes	N/A	Internal resources charged more labor to customer service capital projects undertaken to enhance customer self service and experience.	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Information Technology & Cybersecurity	Client Tech Svcs	Non-RAMP	No	No	Yes	N/A	This cost center is now retired, the function continues in the Service Delivery - NCS workpaper.	Under (U)	Under (U)	Under (U)	Canceled	No
O&M	Information Technology & Cybersecurity	IT Portfolio Management	Non-RAMP	No	No	Yes	N/A	These 2 positions have been transferred to the Field Force Program Delivery Team workpaper.	Under (U)	Under (U)	Under (U)	Canceled	No

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Information Technology & Cybersecurity	BI & Analytics Engineering-SAS Contracts	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Information Technology & Cybersecurity	IT&OTI Contracts SS	Non-RAMP	No	Yes	No	Lower than forecasted software and hardware costs resulting from successful contract negotiations and shift to IT capital project work.	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Information Technology & Cybersecurity	IT Telecom PMO	Non-RAMP	No	No	Yes	N/A	Additional FTEs required to meet the increased need in contracts & vendor management driven by expanded support from third-part vendor to ITQA (Quality Assurance).	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Information Technology & Cybersecurity	DCAM Program	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Completed	No
O&M	Information Technology & Cybersecurity	IT Serv Contin Mgmt	Non-RAMP	No	No	Yes	N/A	Additional resources added focusing primarily on oversight and governance for the IT service continuity management function.	Over (O)	Over (O)	Over (O)	Emergent	No
O&M	Information Technology & Cybersecurity	Infrastructure Portf	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
O&M	Information Technology & Cybersecurity	SDG&E Network Engineering	Non-RAMP	No	No	Yes	N/A	Additional FTEs were re-organized from Project Improvement Office-NCS workpaper to support the growth in network infrastructure and operational needs in the network engineering function.	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
<b>O&amp;M</b>	<b>Information Technology &amp; Cybersecurity</b>	<b>Cybersecurity</b>		<b>Yes</b>									
O&M	Information Technology & Cybersecurity	Security Policy and Awareness	Cybersecurity risk and vulnerability	No	No	Yes	N/A	Additional FTE required to meet the increased need in Cybersecurity awareness, which drove more security training and user outreach to ensure the integrity of the organization	Over (O)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Information Technology & Cybersecurity	Director - Information Security	Cybersecurity risk and vulnerability	No	No	No	N/A	N/A	Over (O)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Information Technology & Cybersecurity	Security Engineering	Cybersecurity risk and vulnerability	No	No	No	N/A	N/A	Over (O)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Information Technology & Cybersecurity	Security Operations	Cybersecurity risk and vulnerability	No	No	No	N/A	N/A	Over (O)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Information Technology & Cybersecurity	Critical Infrastructure Protection	Cybersecurity risk and vulnerability	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Information Technology & Cybersecurity	Critical Infrastructure Protection	Incremental maintenance costs associated with Grid Modernization capital projects	No	No	No	N/A	N/A	Under (U)	Under (U)	Under (U)	Other	Yes
<b>O&amp;M</b>	<b>Information Technology &amp; Cybersecurity</b>	<b>Sub-Total Critical Infrastructure Protection</b>		<b>Yes</b>	<b>No</b>								<b>No</b>
O&M	Information Technology & Cybersecurity	Information Security Programs	Cybersecurity risk and vulnerability	No	No	Yes	N/A	Additional FTE to meet business requirements for oversight of contracts and maintenance activities.	Over (O)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Information Technology & Cybersecurity	Identity & Access Management	Cybersecurity risk and vulnerability	No	No	Yes	N/A	Additional resources added focusing primarily on the support of evolving needs of identity life-cycle management process improvements, access and governance enforcement, engineering of new processes, and increasing our solution migration for broader cloud adoption.	Over (O)	Over (O)	Over (O)	Emergent	No

**B. SDG&E Information Technology & Cyber Security**  
**i. SDG&E Information Technology & Cyber Security O&M**

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Information Technology & Cybersecurity	Information Technology & Cybersecurity		Yes				
O&M	Information Technology & Cybersecurity	Information Technology		Yes				
O&M	Information Technology & Cybersecurity	IT Applications NSS	Non-RAMP	No	N/A	The Non-Shared SDG&E IT Applications costs represent labor and non-labor for systems where 100% of the activities directly support SDG&E. The types of systems supported in this area include customer field operations, work order management, smart meter data management, customer billing, service order routing, scheduling and dispatching, revenue cycle processing, and customer assistance and customer contact functions, including self-service capabilities via MyAccount.	SDG&E-24-R CRO-11 to CRO-12 WP 11T001.000	SDG&E-25 TLB/WJE-13 to TLB/WJE-14 WP 11T002.000
O&M	Information Technology & Cybersecurity	IT Infrastructure NSS	Non-RAMP	No	N/A	These Non-Shared SDG&E IT Infrastructure costs represent labor and non-labor for the infrastructure area where 100% of the activities are for SDG&E. These costs are typically related to providing service to SDG&E-only facilities (e.g., construction and operations districts, and customer contact centers) and include network engineering infrastructure support.	SDG&E-24-R CRO-12 WP 11T002.000	SDG&E-25 TLB/WJE-14 to TLB/WJE-15 WP 11T004.000
O&M	Information Technology & Cybersecurity	Telecom Field Voice - SDG&E	Non-RAMP	No	N/A	This cost center is responsible for the installation and maintenance of telecom equipment including PBXs, microwave, data and mobile radio services across the SDG&E service territory, including Corporate Center (parent).	SDG&E-24-R CRO-14 WP 2100-0207.000	SDG&E-25 TLB/WJE-18 WP 2100-0207.000
O&M	Information Technology & Cybersecurity	Enterprise Integration Services	Non-RAMP	No	N/A	This cost center is responsible for performance monitoring, tuning, problem resolution and software installation for the SAP environment. This cost center is also responsible for providing and securing access to all systems in the SAP environment.	SDG&E-24-R CRO-14 WP 2100-3073.000	SDG&E-25 TLB/WJE-17 WP 2100-3073.000
O&M	Information Technology & Cybersecurity	SSDS Project Office	Non-RAMP	No	N/A			
O&M	Information Technology & Cybersecurity	Software Dev - Work Meas Systems	Non-RAMP	No	N/A	This cost center represents support services for a broad range of client organizations, including: Gas Operations / Distribution, Construction, Generation and Environmental Services. The application services are based on several enterprise systems, including: SAP Plant Maintenance and Click Scheduling and Mobility. In addition, the legacy support services include Distribution Planning Scheduling System (DPSS).	SDG&E-24-R CRO-14 WP 2100-3088.000	SDG&E-25 TLB/WJE-17 WP 2100-3073.000
O&M	Information Technology & Cybersecurity	Software Dev - Database Administrator	Non-RAMP	No	N/A	This cost center provides maintenance and enhancement support for system wide database administration.	SDG&E-24-R CRO-13 WP 2100-3091.000	SDG&E-25 TLB/WJE-18 WP 2100-0207.000
O&M	Information Technology & Cybersecurity	Network Communication Services Director	Non-RAMP	No	N/A	This cost center includes the Director of ITOTI and his administrative support. Activities include department level management for plan, design, build, implementation and management of system-wide network and telecommunications infrastructure.	SDG&E-24-R CRO-14 to CRO-15 WP 2100-3095.000	SDG&E-25 TLB/WJE-18 WP 2100-0207.000
O&M	Information Technology & Cybersecurity	Client Technology & Depot Services	Non-RAMP	No	N/A	Provides management and support services for system-wide Client Technology and Depot services.	SDG&E-24-R CRO-14 to CRO-15 WP 2100-3097.000	SDG&E-25 TLB/WJE-18 WP 2100-3097.000
O&M	Information Technology & Cybersecurity	Middleware and Internet Engineering	Non-RAMP	No	N/A	Infrastructure engineering support for the following systems: email, Gateways, FTP, Enterprise System Management, middleware and Internet technologies such as directories and web and application servers that are used on a system-wide basis.	SDG&E-24-R CRO-14 WP 2100-3100.000	SDG&E-25 TLB/WJE-18 WP 2100-0207.000
O&M	Information Technology & Cybersecurity	Infrastructure Eng & Ops Director	Non-RAMP	No	N/A	The director cost center manages the work activities and prioritization of the UOFAS department for project, operational and system support activities.	SDG&E-24-R CRO-14 WP 2100-3102.000	SDG&E-25 TLB/WJE-17 WP 2100-3073.000
O&M	Information Technology & Cybersecurity	Network/Telecom Services - SDG&E	Non-RAMP	No	N/A			
O&M	Information Technology & Cybersecurity	Enterprise Operations	Non-RAMP	No	N/A	This Operations support group is responsible for providing 24/7 coverage and maintainability for distributive UNIX class servers at prime locations of Rancho Bernardo, Century Park, San Diego Headquarters, Monterrey Park, and Gas Company Tower. This group also has the same responsibility for remote locations, such as company bases and payment offices.	SDG&E-24-R CRO-14 to CRO-15 WP 2100-3107.000	SDG&E-25 TLB/WJE-18 WP 2100-0207.000



Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Information Technology & Cybersecurity	Server Management	Non-RAMP	No	N/A	This Operations support group is responsible for providing 24/7 coverage and maintainability for distributive UNIX class servers at prime locations of RB, CP, SD Headquarters, MPK, and GCT. This group also has this same responsibility for remote locations, such as company Bases and Payment Offices.	SDG&E-24-R CRO-14 to CRO-15 WP 2100-3334	SDG&E-25 TLB/WJE-18 to TLB/WJE-19 WP 2100-0207.000 & 2100-0460.000
O&M	Information Technology & Cybersecurity	Infrastructure Program Office	Non-RAMP	No	N/A	The Infrastructure PMO provides project management and development for IT Related Projects enterprise-wide.	SDG&E-24-R CRO-14 to CRO-15 WP 2100-3498.000	SDG&E-25 TLB/WJE-18 WP 2100-0207.000
O&M	Information Technology & Cybersecurity	IT Network Field - LAN/WAN Voice	Non-RAMP	No	N/A			
O&M	Information Technology & Cybersecurity	Enterprise Command Center	Non-RAMP	No	N/A	The Enterprise command center organization provides 7/24 operation system-wide services to ensure network/telecom availability for all related business applications and services that are dependent upon voice, data, microwave, etc., category of communication services.	SDG&E-24-R CRO-14 to CRO-15 WP 2100-3502.000	SDG&E-25 TLB/WJE-18 WP 2100-0207.000
O&M	Information Technology & Cybersecurity	Shared Software Development Contracts	Non-RAMP	No	N/A			
O&M	Information Technology & Cybersecurity	Project Improvement Office-NCS	Non-RAMP	No	N/A	Preventive maintenance activities on network and telecom infrastructure (i.e. hardware, software, facilities, services). This cost center is responsible for the design and implementation of collaboration infrastructure projects for Local Area and Wide Area networks and voice systems that link all company facilities.	SDG&E-24-R CRO-14 WP 2100-3683.000	SDG&E-25 TLB/WJE-18 WP 2100-0207.000
O&M	Information Technology & Cybersecurity	Service Delivery - NCS	Non-RAMP	No	N/A	Network and systems engineering, operations and maintenance activities to support the messaging and collaboration infrastructure, including E-mail, Instant Message, Conferencing and SharePoint services on a system-wide basis across Corporate Center, SDG&E, and SoCalGas.	SDG&E-24-R CRO-14 to CRO-15 WP 2100-3684.000	SDG&E-25 TLB/WJE-18 WP 2100-3097.000
O&M	Information Technology & Cybersecurity	Service Development Program Management	Non-RAMP	No	N/A			
O&M	Information Technology & Cybersecurity	Customer Analytics System	Non-RAMP	No	N/A	This cost center provides leadership in establishing policies, strategies, and architectural framework that help guide technology adoptions and alignment with the overall business. It develops awareness and statements of direction for emerging technology opportunities to enable key business strategies and goals.	SDG&E-24-R CRO-15 WP 2100-3699.000	SDG&E-25 TLB/WJE-19 WP 2100-0460.000
O&M	Information Technology & Cybersecurity	Field Force Program Delivery Team	Non-RAMP	No	N/A	This cost center is a part of the Project Management Office (PMO) dedicated to the build of IT Assets. It specifically manages the programming and coding for the various capital application builds.	SDG&E-24-R CRO-15 WP 2100-3713.000	SDG&E-25 TLB/WJE-17 WP 2100-3073.000
O&M	Information Technology & Cybersecurity	SVP & CITO	Non-RAMP	No	N/A	The SVP and CITO cost center contains the Officer, his support staff, and related expenses necessary to manage the entire IT organization.	SDG&E-24-R CRO-14 to CRO-15 WP 2100-3733.000	SDG&E-25 TLB/WJE-19 WP 2100-0460.000
O&M	Information Technology & Cybersecurity	Director IT Infrastructure	Non-RAMP	No	N/A			
O&M	Information Technology & Cybersecurity	Infrast Prgrm Office	Non-RAMP	No	N/A			
O&M	Information Technology & Cybersecurity	Client Services Maintenance & Support	Non-RAMP	No	N/A	This cost center performs system services on a system-wide basis across Corporate Center, SDG&E, and SoCalGas.	SDG&E-24-R CRO-14 to CRO-15 WP 2100-3855.000	N/A
O&M	Information Technology & Cybersecurity	Voice Leased Circuits	Non-RAMP	No	N/A			
O&M	Information Technology & Cybersecurity	Managed Services Voice Enterprise	Non-RAMP	No	N/A			
O&M	Information Technology & Cybersecurity	Voice Enterp Support	Non-RAMP	No	N/A	This cost center supports the managed services of Enterprise Voice support costs, Customer Contact Centers Voice and Computer Telephony Integration support costs and the Enterprise and Customer Contact Centers call recording support costs.	SDG&E-24-R CRO-14 to CRO-15 WP 2100-3885.000	SDG&E-25 TLB/WJE-17 WP 2100-3073.000
O&M	Information Technology & Cybersecurity	Client Tech Svcs	Non-RAMP	No	N/A	This cost center manages Client Technology Support and Solutions, SempraHelp & IT Service Management, and IT Communications system-wide.	SDG&E-24-R CRO-14 to CRO-15 WP 2100-3888.000	N/A
O&M	Information Technology & Cybersecurity	IT Portfolio Management	Non-RAMP	No	N/A	This cost center includes the PMO Director and her administrative support. The IT PMO & QA Director provides project management and development for IT Related Projects enterprise wide, as well as documentation for all business case and concepts. Also, project management for several SDG&E-funded projects.	SDG&E-24-R CRO-14 to CRO-15 WP 2100-3900.000	SDG&E-25 TLB/WJE-19 WP 2100-0460.000

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Information Technology & Cybersecurity	BI & Analytics Engineering-SAS Contracts	Non-RAMP	No	N/A			
O&M	Information Technology & Cybersecurity	IT&OTI Contracts SS	Non-RAMP	No	N/A	This cost center will contain all Computing Infrastructure contract costs that are shared between SDG&E, SoCalGas, and the Parent. These contracts support system-wide resources and benefit the utilities and parent.	SDG&E-24-R CRO-14 to CRO-15 WP 2100-3921.000	SDG&E-25 TLB/WJE-18 WP 2100-0207.000
O&M	Information Technology & Cybersecurity	IT Telecom PMO	Non-RAMP	No	N/A	The Telecom PMO provides project management and development for IT Telecom Related Projects enterprise wide.	SDG&E-24-R CRO-14 WP 2100-3954.000	SDG&E-25 TLB/WJE-18 WP 2100-0207.000
O&M	Information Technology & Cybersecurity	DCAM Program	Non-RAMP	No	N/A			
O&M	Information Technology & Cybersecurity	IT Serv Contin Mgmt	Non-RAMP	No	N/A	Oversight and governance for the IT service continuity management function.	N/A	SDG&E-26 LRM - 15 WP 2100-3101.000
O&M	Information Technology & Cybersecurity	Infrastructure Portf	Non-RAMP	No	N/A			
O&M	Information Technology & Cybersecurity	SDG&E Network Engineering	Non-RAMP	No	N/A	Responsible for IT Network Engineering services at both SDG&E and the Parent. Preventive maintenance activities on network infrastructure (i.e. hardware, software, facilities, services).	SDG&E-24-R CRO-14 WP 2100-3975.000	SDG&E-25 TLB/WJE-18 WP 2100-0207.000
<b>O&amp;M</b>	<b>Information Technology &amp; Cybersecurity</b>	<b>Cybersecurity</b>		<b>Yes</b>				
O&M	Information Technology & Cybersecurity	Security Policy and Awareness	Cybersecurity risk and vulnerability	No	N/A	This cost center provides Data & Privacy Governance support, including IT security awareness and training, and Privacy, Legislative, and Data Governance enterprise wide.	SDG&E-25 GW-27 to GW-30 WP 2100-3101.000	SDG&E-26-R LRM -15 to LRM-19 WP 2100-3101.000
O&M	Information Technology & Cybersecurity	Director - Information Security	Cybersecurity risk and vulnerability	No	N/A			
O&M	Information Technology & Cybersecurity	Security Engineering	Cybersecurity risk and vulnerability	No	N/A			
O&M	Information Technology & Cybersecurity	Security Operations	Cybersecurity risk and vulnerability	No	N/A			
O&M	Information Technology & Cybersecurity	Critical Infrastructure Protection	Cybersecurity risk and vulnerability	No	N/A			
O&M	Information Technology & Cybersecurity	Critical Infrastructure Protection	Incremental maintenance costs associated with Grid Modernization capital projects	No	Activity was completed as part of SoCalGas workpaper IT Information Security - Firewall Admin.	This cost center contains all IT Security Contracts, including system-wide hardware and software maintenance agreements.	SDG&E 25 GW-36 to GW-37 WP 2100-3781.000	SDG&E-26-R LRM -15 to LRM-19 WP 2100-3101.000
<b>O&amp;M</b>	<b>Information Technology &amp; Cybersecurity</b>	<b>Sub-Total Critical Infrastructure Protection</b>		<b>Yes</b>				
O&M	Information Technology & Cybersecurity	Information Security Programs	Cybersecurity risk and vulnerability	No	N/A	This cost center contains provides support for the Information Security portfolio of capital projects and maintenance contracts.	SDG&E 25 GW-25 to GW-27 WP 2100-3976.000	SDG&E-26-R LRM -15 to LRM-19 WP 2100-3101.000
O&M	Information Technology & Cybersecurity	Identity & Access Management	Cybersecurity risk and vulnerability	No	N/A	This cost center is responsible for expanding opportunities to improve the identity lifecycle with emphasis in onboarding, continuous end-user authentication improvements, new policy frameworks and standards for Identity & Access Management at the utilities, expanding governance initiatives for access enforcement, furthering our integration models for application and data synchronization, and alignment and support of strategic company initiatives.	N/A	SDG&E-26-R LRM -15 to LRM-19 WP 2100-3101.000

ii. SDG&E Information Technology & Cyber Security Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
Capital	IT & Cybersecurity	IT & Cybersecurity		Yes			83,282	113,242	130,138	113,988	97,746	538,384	74,088	73,350	75,318	76,925	78,848	378,530
Capital	IT & Cybersecurity	Total Information Technology		Yes			81,105	103,568	119,162	108,226	93,085	505,134	68,643	70,206	72,090	73,627	75,468	360,034
Capital	IT & Cybersecurity	IT - Enterprise - Application	Records Management	No	On-going	Annual	6,633	7,501	15,122	4,757	14,604	48,617	2,152	9,430	9,683	9,889	10,137	41,290
Capital	IT & Cybersecurity	IT - Enterprise - Application	Electric Infrastructure Integrity	No	Emergent	Annual	5,158	9,393	4,580	7,283	5,959	32,374	—	—	—	—	—	—
Capital	IT & Cybersecurity	IT - Enterprise - Application	Non-RAMP	No	On-going	Annual	10,996	24,819	44,124	58,857	44,260	183,058	2,081	6,507	6,681	6,824	6,994	29,086
Capital	IT & Cybersecurity	Sub-Total IT Applications		Yes			22,787	41,714	63,827	70,898	64,824	264,049	4,233	15,936	16,364	16,713	17,131	70,376
Capital	IT & Cybersecurity	IT - Enterprise - Network - RAMP	Records Management	No	On-going	Annual	—	—	—	—	—	—	4,494	2,931	3,010	3,074	3,151	16,660
Capital	IT & Cybersecurity	IT - Enterprise - Network	Non-RAMP	No	On-going	Annual	25,482	41,295	29,111	19,613	9,205	124,706	40,655	37,453	38,458	39,278	40,260	196,105
Capital	IT & Cybersecurity	Sub-Total IT Network		Yes			25,482	41,295	29,111	19,613	9,205	124,706	45,150	40,384	41,468	42,352	43,411	212,765
Capital	IT & Cybersecurity	IT - Enterprise - Infrastructure	Non-RAMP	No	On-going	Annual	25,012	15,748	23,662	12,587	10,544	87,553	7,244	5,501	5,649	5,770	5,914	30,078
Capital	IT & Cybersecurity	IT - Enterprise - Infrastructure	Records Management	No	Emergent	Completed	13	—	—	—	—	13	—	—	—	—	—	—
Capital	IT & Cybersecurity	Sub-Total IT - Enterprise - Infrastructure		Yes			25,025	15,748	23,662	12,587	10,544	87,553	7,244	5,501	5,649	5,770	5,914	30,078
Capital	IT & Cybersecurity	Customer Services	Non-RAMP	No	On-going	Annual	7,811	4,812	2,563	5,128	8,512	28,826	12,017	8,384	8,609	8,792	9,012	46,814
Capital	IT & Cybersecurity	IT - Enterprise - Cyber - RAMP	Cybersecurity	No	On-going	Annual	2,177	9,675	10,976	5,762	4,661	33,250	5,445	3,144	3,229	3,298	3,380	18,496

ii. SDG&E Information Technology & Cyber Security Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
Capital	IT & Cybersecurity	IT & Cybersecurity		Yes	9,181	39,892	54,820	37,063	18,897	159,854	12%	54%	73%	48%	24%	42%
Capital	IT & Cybersecurity	<b>Total Information Technology</b>		Yes	<b>12,450</b>	<b>33,362</b>	<b>47,073</b>	<b>34,599</b>	<b>17,617</b>	<b>145,100</b>	<b>18%</b>	<b>48%</b>	<b>65%</b>	<b>47%</b>	<b>23%</b>	<b>40%</b>
Capital	IT & Cybersecurity	IT - Enterprise - Application	Records Management	No	4,481	(1,929)	5,440	(5,132)	4,467	7,327	208%	-20%	56%	-52%	44%	18%
Capital	IT & Cybersecurity	IT - Enterprise - Application	Electric Infrastructure Integrity	No	5,158	9,393	4,580	7,283	5,959	32,374	100%	100%	100%	100%	100%	100%
Capital	IT & Cybersecurity	IT - Enterprise - Application	Non-RAMP	No	8,915	18,313	37,443	52,034	37,266	153,971	428%	281%	560%	763%	533%	529%
Capital	IT & Cybersecurity	<b>Sub-Total IT Applications</b>		Yes	<b>18,555</b>	<b>25,777</b>	<b>47,463</b>	<b>54,185</b>	<b>47,693</b>	<b>193,672</b>	<b>438%</b>	<b>162%</b>	<b>290%</b>	<b>324%</b>	<b>278%</b>	<b>275%</b>
Capital	IT & Cybersecurity	IT - Enterprise - Network - RAMP	Records Management	No	(4,494)	(2,931)	(3,010)	(3,074)	(3,151)	(16,660)	-100%	-100%	-100%	-100%	-100%	-100%
Capital	IT & Cybersecurity	IT - Enterprise - Network	Non-RAMP	No	(15,173)	3,842	(9,347)	(19,665)	(31,055)	(71,399)	-37%	10%	-24%	-50%	-77%	-36%
Capital	IT & Cybersecurity	<b>Sub-Total IT Network</b>		Yes	<b>(19,667)</b>	<b>911</b>	<b>(12,357)</b>	<b>(22,740)</b>	<b>(34,206)</b>	<b>(88,059)</b>	<b>-44%</b>	<b>2%</b>	<b>-30%</b>	<b>-54%</b>	<b>-79%</b>	<b>-41%</b>
Capital	IT & Cybersecurity	IT - Enterprise - Infrastructure	Non-RAMP	No	17,769	10,246	18,013	6,818	4,630	57,475	245%	186%	319%	118%	78%	191%
Capital	IT & Cybersecurity	IT - Enterprise - Infrastructure	Records Management	No	13	—	—	—	—	13	100%	—%	—%	—%	—%	100%
Capital	IT & Cybersecurity	<b>Sub-Total IT - Enterprise - Infrastructure</b>		Yes	<b>17,769</b>	<b>10,246</b>	<b>18,013</b>	<b>6,818</b>	<b>4,630</b>	<b>57,475</b>	<b>245%</b>	<b>186%</b>	<b>319%</b>	<b>118%</b>	<b>78%</b>	<b>191%</b>
Capital	IT & Cybersecurity	Customer Services	Non-RAMP	No	(4,206)	(3,572)	(6,046)	(3,664)	(500)	(17,988)	-35%	-43%	-70%	-42%	-6%	-38%
Capital	IT & Cybersecurity	IT - Enterprise - Cyber - RAMP	Cybersecurity	No	(3,268)	6,530	7,747	2,464	1,281	14,754	-60%	208%	240%	75%	38%	80%

ii. SDG&E Information Technology & Cyber Security Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance						
Capital	IT & Cybersecurity	IT & Cybersecurity		Yes																															
Capital	IT & Cybersecurity	Total Information Technology		Yes																															
Capital	IT & Cybersecurity	IT - Enterprise - Application	Records Management	No	This workpaper for the Application - RAMP portfolio contains various projects within the following categories: (1.) Work management enhancement; (2.) Geographic Information System (GIS) applications, portals and mobile communications modernization; and (3) Telecommunications Attachment Management System (TAMS) modernization. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																														
Capital	IT & Cybersecurity	IT - Enterprise - Application	Electric Infrastructure Integrity	No	This workpaper for the Application - EII portfolio contains various projects that relate to the modernization of decision support for capital and O&M maintenance and replacement strategies. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																														
Capital	IT & Cybersecurity	IT - Enterprise - Application	Non-RAMP	No	This workpaper for the Application portfolio contains various projects within the following categories: (1) Scheduling & Dispatch modernization; (2) Application Modernization & Vulnerability Reduction; (3) Data Foundation, Digitalization and Analytics Solution; (4) Smart Grid operation enhancement and Distribution Interconnection Information System enhancement; (5) Builder Customer portal modernization; (6) Equipment inspections and damage detection; and (7) CAISO-mandated. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																														
Capital	IT & Cybersecurity	Sub-Total IT Applications		Yes																															
Capital	IT & Cybersecurity	IT - Enterprise - Network - RAMP	Records Management	No	This workpaper for the Network - RAMP portfolio contains various projects which relate to the modernization of the Smart Meter analytics platform that enables data processing, enhanced reporting and analytics capabilities. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																														
Capital	IT & Cybersecurity	IT - Enterprise - Network	Non-RAMP	No	This workpaper for the Network portfolio contains various projects within the following categories: (1) Field Area Network modernization; (2) Wide Area Network modernization; (3) Local Area Network modernization; and (4) Network core modernization. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																														
Capital	IT & Cybersecurity	Sub-Total IT Network		Yes																															
Capital	IT & Cybersecurity	IT - Enterprise - Infrastructure	Non-RAMP	No	This workpaper for the Infrastructure portfolio contains various projects within the following categories: (1) Enterprise PC refresh; (2) Virtual Desktop Infrastructure modernization; and (3) Network-attached storage modernization. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																														
Capital	IT & Cybersecurity	IT - Enterprise - Infrastructure	Records Management	No	This workpaper for the Infrastructure - RAMP portfolio contains various projects that relate to the enhancements of Transmission and Substation Projects Integration (TSPI) System. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																														
Capital	IT & Cybersecurity	Sub-Total IT - Enterprise - Infrastructure		Yes																															
Capital	IT & Cybersecurity	Customer Services	Non-RAMP	No	This workpaper for the Customer Services portfolio contains various projects within the following categories: (1) Smart Meter modernizations; and (2) Demand Response Management System modernization. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																														
Capital	IT & Cybersecurity	IT - Enterprise - Cyber - RAMP	Cybersecurity	No	This workpaper for the Cyber portfolio contains various projects within the following categories: (1) Internal Defense; (2) Perimeter Defense; (3) Obsolete IT Systems; and (4) Operational Technology (OT) Cybersecurity. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																														

ii. SDG&E Information Technology & Cyber Security Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
Capital	IT & Cybersecurity	IT & Cybersecurity		Yes									
<b>Capital</b>	<b>IT &amp; Cybersecurity</b>	<b>Total Information Technology</b>		<b>Yes</b>									
Capital	IT & Cybersecurity	IT - Enterprise - Application	Records Management	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Proceeding as Planned	No
Capital	IT & Cybersecurity	IT - Enterprise - Application	Electric Infrastructure Integrity	No	Yes	No	Variance due to Enterprise Asset Management Project expansion.	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	IT & Cybersecurity	IT - Enterprise - Application	Non-RAMP	No	Yes	No	Variance due to emergent needs and new technology availability driving business value, such as Scheduling & Dispatch modernization, Smart Grid Operation, Application Vulnerability & Modernization and Data Foundation and Analytics Solution.	N/A	Over (O)	Over (O)	Over (O)	Expanded	No
<b>Capital</b>	<b>IT &amp; Cybersecurity</b>	<b>Sub-Total IT Applications</b>		<b>Yes</b>	<b>Yes</b>								<b>No</b>
Capital	IT & Cybersecurity	IT - Enterprise - Network - RAMP	Records Management	No	No	No	N/A	N/A	Under (U)	Under (U)	Under (U)	Canceled	No
Capital	IT & Cybersecurity	IT - Enterprise - Network	Non-RAMP	No	Yes	No	The variance is due to the cancellation of the non-WMP portion of the Private Long-Term Evolution project, the reduction in scope of the Transmission Communications Reliability Enhancement project, and the completion of the Field Area Network (FAN) Voice and Dispatch projects. The remaining IT authorized capital dollars were re-prioritized within IT and Cybersecurity to address emergent projects.	N/A	Under (U)	Under (U)	Under (U)	Proceeding as Planned	No
<b>Capital</b>	<b>IT &amp; Cybersecurity</b>	<b>Sub-Total IT Network</b>		<b>Yes</b>	<b>Yes</b>								<b>No</b>
Capital	IT & Cybersecurity	IT - Enterprise - Infrastructure	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Expanded	No
Capital	IT & Cybersecurity	IT - Enterprise - Infrastructure	Records Management	No	No	No	N/A	N/A	Under (U)	Under (U)	Under (U)	Completed	No
<b>Capital</b>	<b>IT &amp; Cybersecurity</b>	<b>Sub-Total IT - Enterprise - Infrastructure</b>		<b>Yes</b>	<b>No</b>								<b>No</b>
Capital	IT & Cybersecurity	Customer Services	Non-RAMP	No	No	No	N/A	N/A	Under (U)	Under (U)	Under (U)	Proceeding as Planned	No
<b>Capital</b>	<b>IT &amp; Cybersecurity</b>	<b>IT - Enterprise - Cyber - RAMP</b>	<b>Cybersecurity</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>N/A</b>	<b>N/A</b>	<b>Over (O)</b>	<b>Over (O)</b>	<b>Over (O)</b>	<b>Proceeding as Planned</b>	<b>No</b>

ii. SDG&E Information Technology & Cyber Security Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
Capital	IT & Cybersecurity	IT & Cybersecurity		Yes				
<b>Capital</b>	<b>IT &amp; Cybersecurity</b>	<b>Total Information Technology</b>		<b>Yes</b>				
Capital	IT & Cybersecurity	IT - Enterprise - Application	Records Management	No	N/A			
Capital	IT & Cybersecurity	IT - Enterprise - Application	Electric Infrastructure Integrity	No	N/A	This workpaper for the Application - EII portfolio contains various projects that relate to the modernization of decision support for capital and O&M maintenance and replacement strategies.	SDG&E-24-R CRO-16 to CRO-31	SDG&E-25 TLB/WJE-21 to TLB/WJE-75
Capital	IT & Cybersecurity	IT - Enterprise - Application	Non-RAMP	No	N/A	This workpaper for the Application portfolio contains various projects within the following categories: (1) Scheduling & Dispatch modernization; (2) Application Modernization & Vulnerability Reduction; (3) Data Foundation, Digitalization and Analytics Solution; (4) Smart Grid operation enhancement and Distribution Interconnection Information System enhancement;(5) Builder Customer portal modernization; (6) Equipment inspections and damage detection; and (7) CAISO-mandated.	SDG&E-24-R CRO-16 to CRO-31	SDG&E-25 TLB/WJE-21 to TLB/WJE-75
<b>Capital</b>	<b>IT &amp; Cybersecurity</b>	<b>Sub-Total IT Applications</b>		<b>Yes</b>				
Capital	IT & Cybersecurity	IT - Enterprise - Network - RAMP	Records Management	No	N/A			
Capital	IT & Cybersecurity	IT - Enterprise - Network	Non-RAMP	No	N/A	This workpaper for the Network portfolio contains various projects within the following categories: (1) Field Area Network modernization; (2) Wide Area Network modernization; (3) Local Area Network modernization; and (4) Network core modernization.	SDG&E-24-R CRO-16 to CRO-31	SDG&E-25 TLB/WJE-21 to TLB/WJE-75
<b>Capital</b>	<b>IT &amp; Cybersecurity</b>	<b>Sub-Total IT Network</b>		<b>Yes</b>				
Capital	IT & Cybersecurity	IT - Enterprise - Infrastructure	Non-RAMP	No	N/A			
Capital	IT & Cybersecurity	IT - Enterprise - Infrastructure	Records Management	No	N/A			
<b>Capital</b>	<b>IT &amp; Cybersecurity</b>	<b>Sub-Total IT - Enterprise - Infrastructure</b>		<b>Yes</b>				
Capital	IT & Cybersecurity	Customer Services	Non-RAMP	No	N/A			
<b>Capital</b>	<b>IT &amp; Cybersecurity</b>	<b>IT - Enterprise - Cyber - RAMP</b>	<b>Cybersecurity</b>	<b>No</b>	<b>N/A</b>			

C. SDG&E Support Services  
i. SDG&E Support Services O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Support Services	Support Services		Yes			37,278	36,857	38,841	39,744	43,504	196,225	37,378	38,366	39,314	40,096	41,000	196,154
O&M	Support Services	Fleet Services		Yes			—	210	548	589	488	1,835	—	—	—	—	—	—
O&M	Support Services	Telematics Service Fees	Employee Safe Driving Training/Telematics	No	Emergent	4	—	210	548	589	488	1,835	—	—	—	—	—	—
O&M	Support Services	Environmental		Yes			4,401	4,852	5,189	5,413	6,059	25,914	5,043	5,176	5,304	5,409	5,531	26,463
O&M	Support Services	Environmental SDG&E NSS Cost Center	Non-RAMP	No	On-going	Annual	4,401	4,852	5,189	5,413	6,059	25,914	5,043	5,176	5,304	5,409	5,531	26,463
O&M	Support Services	Real Estate and Facilities		Yes			32,877	31,796	33,104	33,742	36,957	168,476	32,335	33,190	34,010	34,686	35,469	169,691
O&M	Support Services	SDG&E Facility Operations	Non-RAMP	No	On-going	Annual	5,413	6,179	5,389	6,365	6,959	30,306	5,133	5,269	5,399	5,506	5,630	26,937
O&M	Support Services	SDG&E Facility Operations	Physical Security	No	On-going	Annual	3,176	2,985	3,031	3,109	3,363	15,664	3,814	3,915	4,012	4,091	4,184	20,015
O&M	Support Services	Sub-Total SDG&E Facility Operations		Yes			8,589	9,164	8,420	9,474	10,322	45,971	8,947	9,184	9,410	9,598	9,814	46,953
O&M	Support Services	Land Services	Non-RAMP	No	On-going	Annual	845	1,280	908	880	935	4,848	742	761	780	796	814	3,892
O&M	Support Services	SDG&E Rents & Maintenance	Non-RAMP	No	On-going	Annual	19,092	17,539	19,707	19,335	20,686	96,360	17,513	17,976	18,420	18,786	19,210	91,906
O&M	Support Services	RE Planning	Non-RAMP	No	On-going	Annual	876	490	486	591	659	3,104	1,134	1,164	1,193	1,217	1,244	5,952
O&M	Support Services	HQ Rent & Facilities Maintenance	Non-RAMP	No	On-going	Annual	1,283	1,201	1,165	1,223	1,964	6,837	2,372	2,435	2,495	2,544	2,602	12,447
O&M	Support Services	Facilities & Capital Programs - Admin	Non-RAMP	No	On-going	Annual	109	105	51	116	58	439	138	142	145	148	152	725
O&M	Support Services	RE Resources	Non-RAMP	No	On-going	Annual	248	322	300	299	433	1,602	525	539	552	563	576	2,755
O&M	Support Services	Facilities Operations South Manager	Non-RAMP	No	On-going	Annual	658	574	869	733	754	3,589	525	539	552	563	576	2,756
O&M	Support Services	RB Data Center	Non-RAMP	No	On-going	Annual	723	670	658	617	638	3,306	427	439	449	458	469	2,243
O&M	Support Services	RE Planning-Mac	Non-RAMP	No	On-going	Annual	453	448	539	473	508	2,421	12	12	13	13	13	63



C. SDG&E Support Services  
i. SDG&E Support Services O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Support Services	Support Services		Yes	(100)	(1,509)	(473)	(351)	2,504	71	-0%	-4%	-1%	-1%	6%	-0%
O&M	Support Services	Fleet Services		Yes	—	210	548	589	488	1,835	—%	100%	100%	100%	100%	100%
O&M	Support Services	Telematics Service Fees	Employee Safe Driving Training/Telematics	No	—	210	548	589	488	1,835	—%	100%	100%	100%	100%	100%
O&M	Support Services	Environmental		Yes	(641)	(324)	(115)	4	528	(549)	-13%	-6%	-2%	0%	10%	-2%
O&M	Support Services	Environmental SDG&E NSS Cost Center	Non-RAMP	No	(641)	(324)	(115)	4	528	(549)	-13%	-6%	-2%	0%	10%	-2%
O&M	Support Services	Real Estate and Facilities		Yes	542	(1,395)	(906)	(945)	1,489	(1,215)	2%	-4%	-3%	-3%	4%	-1%
O&M	Support Services	SDG&E Facility Operations	Non-RAMP	No	280	911	(10)	859	1,329	3,369	5%	17%	-0%	16%	24%	13%
O&M	Support Services	SDG&E Facility Operations	Physical Security	No	(638)	(930)	(981)	(982)	(821)	(4,351)	-17%	-24%	-24%	-24%	-20%	-22%
O&M	Support Services	Sub-Total SDG&E Facility Operations		Yes	(358)	(19)	(990)	(123)	508	(982)	-4%	-0%	-11%	-1%	5%	-2%
O&M	Support Services	Land Services	Non-RAMP	No	103	519	128	85	121	955	14%	68%	16%	11%	15%	25%
O&M	Support Services	SDG&E Rents & Maintenance	Non-RAMP	No	1,579	(437)	1,287	549	1,476	4,454	9%	-2%	7%	3%	8%	5%
O&M	Support Services	RE Planning	Non-RAMP	No	(258)	(674)	(706)	(625)	(585)	(2,848)	-23%	-58%	-59%	-51%	-47%	-48%
O&M	Support Services	HQ Rent & Facilities Maintenance	Non-RAMP	No	(1,089)	(1,233)	(1,329)	(1,321)	(637)	(5,610)	-46%	-51%	-53%	-52%	-24%	-45%
O&M	Support Services	Facilities & Capital Programs - Admin	Non-RAMP	No	(29)	(36)	(94)	(32)	(94)	(286)	-21%	-26%	-65%	-22%	-62%	-39%
O&M	Support Services	RE Resources	Non-RAMP	No	(277)	(217)	(253)	(264)	(143)	(1,153)	-53%	-40%	-46%	-47%	-25%	-42%
O&M	Support Services	Facilities Operations South Manager	Non-RAMP	No	133	35	317	169	178	833	25%	7%	57%	30%	31%	30%
O&M	Support Services	RB Data Center	Non-RAMP	No	296	232	209	158	169	1,064	69%	53%	46%	35%	36%	47%
O&M	Support Services	RE Planning-Mac	Non-RAMP	No	441	436	526	460	494	2,358	3652%	3519%	4146%	3553%	3732%	3721%

C. SDG&E Support Services  
i. SDG&E Support Services O&M

O&M Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
O&M	Support Services	Support Services		Yes																										
O&M	Support Services	Fleet Services		Yes																										
O&M	Support Services	Telematics Service Fees	Employee Safe Driving Training/Telematics	No	Number of company vehicles with telematics	—	2,100	2,100	2,100	2,100	8,400	—	—	—	—	—	—	—	2,100	2,100	2,100	2,100	8,400	—%	100%	100%	100%	100%	100%	100%
O&M	Support Services	Environmental		Yes																										
O&M	Support Services	Environmental SDG&E NSS Cost Center	Non-RAMP	No	FTE	26	29	30	30	30	145	28	28	28	28	28	140	(2)	1	2	2	2	5	-7%	4%	7%	7%	7%	4%	
O&M	Support Services	Real Estate and Facilities		Yes																										
O&M	Support Services	SDG&E Facility Operations	Non-RAMP	No	FTE	13	11	12	12	11	59	13	13	13	13	13	65	—	(2)	(1)	(1)	(2)	(6)	—%	-15%	-8%	-8%	-15%	-9%	
O&M	Support Services	SDG&E Facility Operations	Physical Security	No	Security Guards	76	86	60	65	72	359	91	91	91	91	91	455	(15)	(5)	(31)	(26)	(19)	(96)	-16%	-5%	-34%	-29%	-21%	-21%	
O&M	Support Services	Sub-Total SDG&E Facility Operations		Yes																										
O&M	Support Services	Land Services	Non-RAMP	No	FTE	3	3	2	2	3	13	3	3	3	3	3	15	—	—	(1)	(1)	—	(2)	—%	—%	-33%	-33%	—%	-13%	
O&M	Support Services	SDG&E Rents & Maintenance	Non-RAMP	No	Sq Footage	31,000	31,000	31,000	31,000	31,000	155,000	28,400	28,400	28,400	28,400	28,400	142,000	2,600	2,600	2,600	2,600	2,600	13,000	9%	9%	9%	9%	9%	9%	
O&M	Support Services	RE Planning	Non-RAMP	No	FTE	5	2	3	3	3	16	5	5	5	5	5	25	—	(3)	(2)	(2)	(2)	(9)	—%	-60%	-40%	-40%	-40%	-36%	
O&M	Support Services	HQ Rent & Facilities Maintenance	Non-RAMP	No	Sq Footage	4,200	4,200	4,200	4,200	4,200	21,000	7,800	7,800	7,800	7,800	7,800	39,000	(3,600)	(3,600)	(3,600)	(3,600)	(3,600)	(18,000)	-46%	-46%	-46%	-46%	-46%	-46%	
O&M	Support Services	Facilities & Capital Programs - Admin	Non-RAMP	No	FTE	1	1	1	1	1	5	1	1	1	1	1	5	—	—	—	—	—	—	—%	—%	—%	—%	—%	—%	
O&M	Support Services	RE Resources	Non-RAMP	No	FTE	1	1	1	1	1	5	2	2	2	2	2	10	(1)	(1)	(1)	(1)	(1)	(5)	-50%	-50%	-50%	-50%	-50%	-50%	
O&M	Support Services	Facilities Operations South Manager	Non-RAMP	No	FTE	4	4	5	5	6	24	4	4	4	4	4	20	—	—	1	1	2	4	—%	—%	25%	25%	50%	20%	
O&M	Support Services	RB Data Center	Non-RAMP	No	Sq Footage	12,000	12,000	12,000	12,000	12,000	60,000	7,100	7,100	7,100	7,100	7,100	35,500	4,900	4,900	4,900	4,900	4,900	24,500	69%	69%	69%	69%	69%	69%	
O&M	Support Services	RE Planning-Mac	Non-RAMP	No	FTE	2	2	2	1	2	9	—	—	—	—	—	—	2	2	2	1	2	9	100%	100%	100%	100%	100%	100%	

C. SDG&E Support Services  
i. SDG&E Support Services O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Support Services	Support Services		Yes									
O&M	Support Services	Fleet Services		Yes									
O&M	Support Services	Telematics Service Fees	Employee Safe Driving Training/Telematics	No	No	Yes	N/A	This is an emergent program driven by employee incident safety risks. SDG&E proactively implemented a Telematics program. The data from the Telematics Service is used in a variety of ways to improve safety, sustainability, and operational improvements throughout the organization. Number of units with telematics is consistent from 2020 thru 2023.	Over (O)	Over (O)	Over (O)	Emergent	No
O&M	Support Services	Environmental		Yes									
O&M	Support Services	Environmental SDG&E NSS Cost Center	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Support Services	Real Estate and Facilities		Yes									
O&M	Support Services	SDG&E Facility Operations	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Support Services	SDG&E Facility Operations	Physical Security	No	No	Yes	N/A	The under run in the unit variance for this workpaper is due to fewer guards at facilities as a result of SDG&E employees working in a hybrid environment.	Under (U)	Under (U)	Under (U)	Proceeding as Planned	No
O&M	Support Services	Sub-Total SDG&E Facility Operations		Yes	No								No
O&M	Support Services	Land Services	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Support Services	SDG&E Rents & Maintenance	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Support Services	RE Planning	Non-RAMP	No	No	Yes	N/A	The underrun in the unit variance for this workpaper is due to a reorganization which split this department into a second group associated with move management functions (RE Planning-MAC). 2 out of the 5 FTEs that were authorized in this workpaper have been reassigned to the RE Planning-MAC workpaper.	Under (U)	Under (U)	Under (U)	Proceeding as Planned	No
O&M	Support Services	HQ Rent & Facilities Maintenance	Non-RAMP	No	No	Yes	N/A	The underrun in the unit variance for this workpaper is due to a lower occupancy in the HQ building downtown.	Under (U)	Under (U)	Under (U)	Proceeding as Planned	No
O&M	Support Services	Facilities & Capital Programs - Admin	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Support Services	RE Resources	Non-RAMP	No	No	Yes	N/A	The underrun in the unit variance for this workpaper is a result of a shifted focus to capital in order to develop the software system module for Building Information Management (BIM) Archibus platform to manage facility operations.	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Support Services	Facilities Operations South Manager	Non-RAMP	No	No	Yes	N/A	The overrun in the unit variance is due to the addition of a FTE by converting an external resource coordinator to manage facility work order requests.	Over (O)	Over (O)	Over (O)	Proceeding as Planned	No
O&M	Support Services	RB Data Center	Non-RAMP	No	No	Yes	N/A	The overrun in the unit variance for this workpaper is due to occupying additional space at the RB Data Center to accommodate additional hosting of applications, servers and equipment.	Over (O)	Over (O)	Over (O)	Expanded	No
O&M	Support Services	RE Planning-Mac	Non-RAMP	No	No	Yes	N/A	The overrun in the unit variance for this workpaper is due the reorganization of RE Planning group. The authorized dollars and units for this workpaper were included in the authorized amounts of the RE Planning workpaper.	Over (O)	Over (O)	Over (O)	Proceeding as Planned	No

C. SDG&E Support Services  
i. SDG&E Support Services O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Support Services	Support Services		Yes				
O&M	Support Services	Fleet Services		Yes				
O&M	Support Services	Telematics Service Fees	Employee Safe Driving Training/Telematics	No	N/A	The Telematics Services Fees activity consists of the monthly lines of service fees incurred by Fleet Services for the Telematics program. Each vehicle equipped with a Telematics device and an active line of service incurs a fixed monthly fee for the use of the Telematics cloud application, cellular data, and application maintenance and support. The data from the Telematics Service is used in a variety of ways to improve safety, sustainability, and operational improvements throughout the organization.	N/A	SDG&E-22-R-E AA-33 to AA-39 WP 1FS008.000
O&M	Support Services	Environmental		Yes				
O&M	Support Services	Environmental SDG&E NSS Cost Center	Non-RAMP	No	N/A			
O&M	Support Services	Real Estate and Facilities		Yes				
O&M	Support Services	SDG&E Facility Operations	Non-RAMP	No	N/A			
O&M	Support Services	SDG&E Facility Operations	Physical Security	No	N/A	This workpaper funds the company contracted security guards who secure and physically protect assets and people.	SDG&E-22 RDT-7 to RDT-9 WP 1RE001.000	SDG&E-23 DT-17 to DT-18 WP 1RE004.000
O&M	Support Services	Sub-Total SDG&E Facility Operations		Yes				
O&M	Support Services	Land Services	Non-RAMP	No	N/A			
O&M	Support Services	SDG&E Rents & Maintenance	Non-RAMP	No	N/A			
O&M	Support Services	RE Planning	Non-RAMP	No	N/A	The Real Estate Planning group provides space planning services for SDG&E and Corporate Center. Long-term facility space plans are developed with operating and support departments and alternatives are explored with respect to property acquisitions and facility expansions or upgrades.	SDG&E-22 RDT-23 to RDT-24 WP 2100-0706.000	SDG&E-23 DT-25 to DT-26 WP 2100-0706.000
O&M	Support Services	HQ Rent & Facilities Maintenance	Non-RAMP	No	N/A	This cost center manages the building maintenance services for the Semptra HQ building.	SDG&E-22 RDT-25 to RDT-26 WP 2100-0708.000	SDG&E-23 DT-19 to DT-21 WP 2100-0708.000
O&M	Support Services	Facilities & Capital Programs - Admin	Non-RAMP	No	N/A			
O&M	Support Services	RE Resources	Non-RAMP	No	N/A	Real Estate Resources supports the workplace technology tools that supports and manage all aspects of Corporate Real Estate including maintenance management, sustainability management, and space planning.	SDG&E-22 RDT-24 to RDT-25 WP 2100-3303.000	SDG&E-23 DT-19 to DT-21 WP 2100-3323.000
O&M	Support Services	Facilities Operations South Manager	Non-RAMP	No	N/A	This cost center contains the area manager and support staff for the facility operations function at SDG&E.	SDG&E-22 RDT-20 to RDT-21 WP 2100-3323.000	SDG&E-23 DT-19 to DT-21 WP 2100-3323.000
O&M	Support Services	RB Data Center	Non-RAMP	No	N/A	This cost center represents the facility maintenance costs for the Rancho Bernardo Data Center and the Rancho Bernardo Annex which are occupied by a portion of SDG&E's IT staff.	SDG&E-22 RDT-20 to RDT-21 WP 2100-3610.000	SDG&E-23 DT-19 to DT-21 WP 2100-3323.000
O&M	Support Services	RE Planning-Mac	Non-RAMP	No	N/A	This cost center contains the costs associated with coordinating employee moves involving furniture and equipment.	SDG&E-22 RDT-23 to RDT-24 WP 2100-3977.000	SDG&E-23 DT-25 to DT-26 WP 2100-0706.000

i. SDG&E Support Services Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)	
Capital	Support Services - Real Estate, Land Services & Facilities	Support Services - Real Estate, Land Services & Facilities			Yes		22,913	84,025	49,457	55,808	36,085	248,288	71,085	46,940	48,224	49,275	50,518	266,042	
Capital	Support Services - Real Estate, Land Services & Facilities	Land Blanket	Non-RAMP	No	On-going	Annual	159	223	316	47	—	745	339	335	344	352	361	1,731	
Capital	Support Services - Real Estate, Land Services & Facilities	Structures and Improvements	Non-RAMP	No	On-going	Annual	4,435	12,893	10,878	15,168	9,482	52,857	5,418	4,415	4,534	4,631	4,746	23,744	
Capital	Support Services - Real Estate, Land Services & Facilities	Environmental/Safety Blanket	Facility improvements necessary to comply with safety and environmental code or regulations and also to implement best practices towards mitigating risk to either the environment or safety of employees or the public	No	On-going	Annual	2,197	3,783	1,833	1,936	1,024	10,773	2,411	1,530	1,571	1,605	1,645	8,763	
Capital	Support Services - Real Estate, Land Services & Facilities	Environmental/Safety Blanket	Non-RAMP	No	On-going	Annual	—	506	1,835	106	63	2,510	—	161	165	169	173	667	
<b>Capital</b>	<b>Support Services - Real Estate, Land Services &amp; Facilities</b>	<b>Sub-Total Environmental/Safety Blanket</b>			<b>Yes</b>	<b>On-going</b>	<b>Annual</b>	<b>2,197</b>	<b>4,289</b>	<b>3,668</b>	<b>2,042</b>	<b>1,086</b>	<b>13,283</b>	<b>2,411</b>	<b>1,691</b>	<b>1,736</b>	<b>1,773</b>	<b>1,818</b>	<b>9,430</b>
Capital	Support Services - Real Estate, Land Services & Facilities	Misc. Equipment Blanket	Non-RAMP	No	On-going	Annual	831	2,000	2,335	4,511	659	10,336	2,320	1,749	1,796	1,834	1,880	9,578	
Capital	Support Services - Real Estate, Land Services & Facilities	Security Systems	Physical Security Systems	No	On-going	Annual	3,158	4,246	5,061	3,142	963	16,570	4,547	4,069	4,185	4,280	4,390	21,471	
Capital	Support Services - Real Estate, Land Services & Facilities	Infrastructure & Reliability	Non-RAMP	No	On-going	Annual	3,589	11,627	12,558	9,631	7,242	44,648	15,261	5,708	5,861	5,986	6,135	38,950	
Capital	Support Services - Real Estate, Land Services & Facilities	Remodel/Relocate/Reconfig Blanket	Non-RAMP	No	On-going	Annual	5,558	28,112	11,064	18,666	6,925	70,325	28,165	16,503	16,945	17,307	17,740	96,660	
Capital	Support Services - Real Estate, Land Services & Facilities	Remodel/Relocate/Reconfig Blanket	Modernization of Grid Control Centers	No	2	Complete	—	—	—	—	—	—	—	3,345	3,453	3,542	3,639	13,979	
Capital	Support Services - Real Estate, Land Services & Facilities	Business Unit Expansion Blanket 2017 - 2019	Non-RAMP	No	On-going	Annual	2,240	19,303	1,918	1,162	8,859	33,482	12,056	7,862	8,073	8,245	8,451	44,688	
Capital	Support Services - Real Estate, Land Services & Facilities	Archibus Business Systems Improvements	Non-RAMP	No	On-going	Annual	1,095	1,331	1,660	1,439	868	6,393	566	1,264	1,298	1,325	1,358	5,811	
Capital	Support Services - Real Estate, Land Services & Facilities	Mission Control Modernization	Modernization of Grid Control Centers	No	2	Complete	(102)	—	—	—	—	(102)	—	—	—	—	—	—	
Capital	Support Services - Real Estate, Land Services & Facilities	RBDC Power Reliability Improvements	Non-RAMP	No	3	Complete	(248)	—	—	—	—	(248)	—	—	—	—	—	—	

i. SDG&E Support Services Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
Capital	Support Services - Real Estate, Land Services & Facilities	Support Services - Real Estate, Land Services & Facilities		Yes	(48,171)	37,085	1,233	6,533	(14,433)	(17,754)	-68%	79%	3%	13%	-29%	-7%
Capital	Support Services - Real Estate, Land Services & Facilities	Land Blanket	Non-RAMP	No	(180)	(112)	(29)	(305)	(361)	(986)	-53%	-33%	-8%	-87%	-100%	-57%
Capital	Support Services - Real Estate, Land Services & Facilities	Structures and Improvements	Non-RAMP	No	(983)	8,478	6,344	10,538	4,736	29,113	-18%	192%	140%	228%	100%	123%
Capital	Support Services - Real Estate, Land Services & Facilities	Environmental/Safety Blanket	Facility improvements necessary to comply with safety and environmental code or regulations and also to implement best practices towards mitigating risk to either the environment or safety of employees or the public	No	(214)	2,253	262	331	(621)	2,010	-9%	147%	17%	21%	-38%	23%
Capital	Support Services - Real Estate, Land Services & Facilities	Environmental/Safety Blanket	Non-RAMP	No	—	345	1,670	(62)	(110)	1,843	—%	215%	1012%	-37%	-64%	276%
Capital	Support Services - Real Estate, Land Services & Facilities	<b>Sub-Total Environmental/Safety Blanket</b>		Yes	<b>(214)</b>	<b>2,598</b>	<b>1,932</b>	<b>269</b>	<b>(731)</b>	<b>3,853</b>	<b>-9%</b>	<b>154%</b>	<b>111%</b>	<b>15%</b>	<b>-40%</b>	<b>41%</b>
Capital	Support Services - Real Estate, Land Services & Facilities	Misc. Equipment Blanket	Non-RAMP	No	(1,489)	251	540	2,677	(1,221)	758	-64%	14%	30%	146%	-65%	8%
Capital	Support Services - Real Estate, Land Services & Facilities	Security Systems	Physical Security Systems	No	(1,389)	178	876	(1,138)	(3,428)	(4,901)	-31%	4%	21%	-27%	-78%	-23%
Capital	Support Services - Real Estate, Land Services & Facilities	Infrastructure & Reliability	Non-RAMP	No	(11,671)	5,919	6,697	3,645	1,107	5,697	-76%	104%	114%	61%	18%	15%
Capital	Support Services - Real Estate, Land Services & Facilities	Remodel/Relocate/Reconfig Blanket	Non-RAMP	No	(22,607)	11,610	(5,882)	1,359	(10,815)	(26,335)	-80%	70%	-35%	8%	-61%	-27%
Capital	Support Services - Real Estate, Land Services & Facilities	Remodel/Relocate/Reconfig Blanket	Modernization of Grid Control Centers	No	—	(3,345)	(3,453)	(3,542)	(3,639)	(13,979)	—%	-100%	-100%	-100%	-100%	-100%
Capital	Support Services - Real Estate, Land Services & Facilities	Business Unit Expansion Blanket 2017 - 2019	Non-RAMP	No	(9,816)	11,441	(6,155)	(7,084)	408	(11,206)	-81%	146%	-76%	-86%	5%	-25%
Capital	Support Services - Real Estate, Land Services & Facilities	Archibus Business Systems Improvements	Non-RAMP	No	529	68	362	113	(490)	582	93%	5%	28%	9%	-36%	10%
Capital	Support Services - Real Estate, Land Services & Facilities	Mission Control Modernization	Modernization of Grid Control Centers	No	(102)	—	—	—	—	(102)	100%	—%	—%	—%	—%	100%
Capital	Support Services - Real Estate, Land Services & Facilities	RBDC Power Reliability Improvements	Non-RAMP	No	(248)	—	—	—	—	(248)	100%	—%	—%	—%	—%	100%

i. SDG&E Support Services Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
Capital	Support Services - Real Estate, Land Services & Facilities	Support Services - Real Estate, Land Services & Facilities		Yes																										
Capital	Support Services - Real Estate, Land Services & Facilities	Land Blanket	Non-RAMP	No	Units not available for this workpaper due to highly diverse project scope and the absence of like units that would be comparable year over year. This capital blanket includes funding for the installation of new landscaping or renovation of existing landscape and irrigation systems and other improvements on existing Company property and various Company property works (i.e., Substations, transmission line right-of-way) including but not limited to fencing, masonry screening or retaining walls, access gates, signs, grading, paving, drainage improvements, landscaping and landscape irrigation.																									
Capital	Support Services - Real Estate, Land Services & Facilities	Structures and Improvements	Non-RAMP	No	Units not available for these workpapers due to highly diverse project scope and the absence of like units that would be comparable over a multi-year period. This capital blanket funds building shell modifications, site improvements and other facility upgrades of a structural, civil or weatherproofing nature. These projects vary year to year based on need, but address the capital replacement or addition of basic, individual interior and exterior facilities construction components, including site lighting, fencing, gates, paving, roofing, canopies, training areas, windows and storage racking or sheds.																									
Capital	Support Services - Real Estate, Land Services & Facilities	Environmental/Safety Blanket	Facility improvements necessary to comply with safety and environmental code or regulations and also to implement best practices towards mitigating risk to either the environment or safety of employees or the public	No	Units not available for this workpaper due to highly diverse project scope and the absence of like units that would be comparable year over year. This capital blanket funds the installation of concrete pads, hazardous waste storage and other requirements to mitigate environmental risks. Safety projects vary in nature but can include communication systems, fall protection, on-campus traffic improvements, canopies, or any other improvements to reduce employee risk.																									
Capital	Support Services - Real Estate, Land Services & Facilities	Environmental/Safety Blanket	Non-RAMP	No	Units not available for this workpaper due to highly diverse project scope and the absence of like units that would be comparable year over year. This capital blanket funds improvements to meet stormwater management regulations. Stormwater compliance includes physical changes to the site including drainage control, curbs and berms, coverings to manage the flow of stormwater and other best management practices.																									
Capital	Support Services - Real Estate, Land Services & Facilities	Sub-Total Environmental/Safety Blanket		Yes																										
Capital	Support Services - Real Estate, Land Services & Facilities	Misc. Equipment Blanket	Non-RAMP	No	Units not available for this workpaper due to highly diverse project scope and the absence of like units that would be comparable year over year. This capital blanket funds the purchase and installation of miscellaneous equipment that does not fall under the scope of any other capital project. Types of equipment included in this budget code are replacements of small equipment such as kitchen, audio-visual, specialized mechanical equipment used in the fleet garages.																									
Capital	Support Services - Real Estate, Land Services & Facilities	Security Systems	Physical Security Systems	No	Units not available for this workpaper due to highly diverse project scope and the absence of like units that would be comparable year over year. This capital blanket funds projects that address the security of the company employees, operations, and assets. Common project types covered in this budget code are card readers, cameras, video recorders, physical barriers, and controlled automated gates and turnstiles.																									
Capital	Support Services - Real Estate, Land Services & Facilities	Infrastructure & Reliability	Non-RAMP	No	Units not available for this workpaper due to highly diverse project scope and the absence of like units that would be comparable year over year. This capital blanket funds the purchase and installation of items such as chillers, boilers, air handlers, heating, ventilation and air conditioning (HVAC) replacements, generators, UPS (Uninterruptible Power Supply) and building management system (BMS) systems, electrical distribution systems and computer room infrastructure.																									
Capital	Support Services - Real Estate, Land Services & Facilities	Remodel/Relocate/Reconfig Blanket	Non-RAMP	No	Units not available for these workpapers due to highly diverse project scope and the absence of like units that would be comparable over a multi-year period. The remodel, reconfigure, and relocation blanket budget funds tenant improvement construction, spatial remodels and associated workstation moves, and changes needed to provide adequate and efficient office space and work environments for employees.																									
Capital	Support Services - Real Estate, Land Services & Facilities	Remodel/Relocate/Reconfig Blanket	Modernization of Grid Control Centers	No	This project was completed in 2018. There are no imputed units because the calculation used to impute authorized units at the activity level for the GRC post-test years incorporates aspects of the CPUC-approved post-test year mechanism for the SDG&E attrition years, which can result in imputed dollars when a project has been completed.																									
Capital	Support Services - Real Estate, Land Services & Facilities	Business Unit Expansion Blanket 2017 - 2019	Non-RAMP	No	Units not available for these workpapers due to highly diverse project scope and the absence of like units that would be comparable over a multi-year period. The purpose of this blanket is to fund building and facility expansions and improvements that are necessary to adequately support growing corporate business objectives and initiatives. The projects under this blanket include master planning, expansion, relocation, building construction and facility consolidation projects at various company buildings and facilities.																									
Capital	Support Services - Real Estate, Land Services & Facilities	Archibus Business Systems Improvements	Non-RAMP	No	Units not available for this workpaper due to highly diverse nature of the system development that takes place over a multi-year period. Archibus is an integrated work management system used by Real Estate & Facilities employees to capture support requests and manage preventative maintenance for real estate assets and facilities.																									
Capital	Support Services - Real Estate, Land Services & Facilities	Mission Control Modernization	Modernization of Grid Control Centers	No	This project was completed in 2018. There are no imputed units because the calculation used to impute authorized units at the activity level for the GRC post-test years incorporates aspects of the CPUC-approved post-test year mechanism for the SDG&E attrition years, which can result in imputed dollars when a project has been completed.																									
Capital	Support Services - Real Estate, Land Services & Facilities	RBDC Power Reliability Improvements	Non-RAMP	No	This project was completed in 2018. There are no imputed units because the calculation used to impute authorized units at the activity level for the GRC post-test years incorporates aspects of the CPUC-approved post-test year mechanism for the SDG&E attrition years, which can result in imputed dollars when a project has been completed.																									

i. SDG&E Support Services Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
Capital	Support Services - Real Estate, Land Services & Facilities	Support Services - Real Estate, Land Services & Facilities			Yes								
Capital	Support Services - Real Estate, Land Services & Facilities	Land Blanket	Non-RAMP	No	No	No	N/A	N/A	Under (U)	Under (U)	Under (U)	Other	Yes
Capital	Support Services - Real Estate, Land Services & Facilities	Structures and Improvements	Non-RAMP	No	No	No	N/A	N/A	Over (O)	On Target (T)	Over (O)	Expanded	No
Capital	Support Services - Real Estate, Land Services & Facilities	Environmental/Safety Blanket	Facility improvements necessary to comply with safety and environmental code or regulations and also to implement best practices towards mitigating risk to either the environment or safety of employees or the public	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Support Services - Real Estate, Land Services & Facilities	Environmental/Safety Blanket	Non-RAMP	No	No	No	N/A	N/A	Over (O)	On Target (T)	On Target (T)	Proceeding as Planned	No
<b>Capital</b>	<b>Support Services - Real Estate, Land Services &amp; Facilities</b>	<b>Sub-Total Environmental/Safety Blanket</b>			<b>Yes</b>	<b>No</b>							<b>No</b>
Capital	Support Services - Real Estate, Land Services & Facilities	Misc. Equipment Blanket	Non-RAMP	No	No	No	N/A	N/A	Under (U)	Under (U)	Under (U)	Proceeding as Planned	No
Capital	Support Services - Real Estate, Land Services & Facilities	Security Systems	Physical Security Systems	No	No	No	N/A	N/A	Under (U)	Under (U)	Under (U)	Proceeding as Planned	No
Capital	Support Services - Real Estate, Land Services & Facilities	Infrastructure & Reliability	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Support Services - Real Estate, Land Services & Facilities	Remodel/Relocate/Reconfig Blanket	Non-RAMP	No	Yes	No	The lower than authorized spend of \$10.8M was driven by the delay of the Century Park Building 4 tenant improvement project. The delay was driven primarily by the longer than anticipated delivery time on "critical path" electrical switchgear. The project is in the permitting phase and is expected to be complete in Q4 2024.	N/A	Under (U)	Under (U)	Under (U)	Deferred	No
Capital	Support Services - Real Estate, Land Services & Facilities	Remodel/Relocate/Reconfig Blanket	Modernization of Grid Control Centers	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Completed	Yes
Capital	Support Services - Real Estate, Land Services & Facilities	Business Unit Expansion Blanket 2017 - 2019	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Support Services - Real Estate, Land Services & Facilities	Archibus Business Systems Improvements	Non-RAMP	No	No	No	N/A	N/A	Under (U)	Under (U)	Under (U)	Proceeding as Planned	No
Capital	Support Services - Real Estate, Land Services & Facilities	Mission Control Modernization	Modernization of Grid Control Centers	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Completed	No
Capital	Support Services - Real Estate, Land Services & Facilities	RBDC Power Reliability Improvements	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Completed	No



i. SDG&E Support Services Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
Capital	Support Services - Real Estate, Land Services & Facilities	Support Services - Real Estate, Land Services & Facilities		Yes				
Capital	Support Services - Real Estate, Land Services & Facilities	Land Blanket	Non-RAMP	No	There were no CPUC related projects implemented in 2023.	This budget funds minor maintenance and landscape projects on fee owned unoccupied property in order to adequately support Company Operations, manage and protect Company property, and maintain or improve the value of Company real property. The funding provides the opportunity to maintain and/or improve the highest rate of return on rental, lease or sale of Company property, thereby increasing revenue and reducing customer rates.	SDG&E-22, RDT-28 WP 700A	SDG&E-23 DT-30 WP 700
Capital	Support Services - Real Estate, Land Services & Facilities	Structures and Improvements	Non-RAMP	No	N/A			
Capital	Support Services - Real Estate, Land Services & Facilities	Environmental/Safety Blanket	Facility improvements necessary to comply with safety and environmental code or regulations and also to implement best practices towards mitigating risk to either the environment or safety of employees or the public	No	N/A			
Capital	Support Services - Real Estate, Land Services & Facilities	Environmental/Safety Blanket	Non-RAMP	No	N/A			
Capital	Support Services - Real Estate, Land Services & Facilities	<b>Sub-Total Environmental/Safety Blanket</b>		Yes				
Capital	Support Services - Real Estate, Land Services & Facilities	Misc. Equipment Blanket	Non-RAMP	No	N/A			
Capital	Support Services - Real Estate, Land Services & Facilities	Security Systems	Physical Security Systems	No	N/A			
Capital	Support Services - Real Estate, Land Services & Facilities	Infrastructure & Reliability	Non-RAMP	No	N/A			
Capital	Support Services - Real Estate, Land Services & Facilities	Remodel/Relocate/Reconfig Blanket	Non-RAMP	No	N/A	This budget funds tenant improvement construction, spatial remodels and associated work station moves and changes needed to provide adequate and efficient office space and work environments for employees. Requirements are based on business needs and functionality needed to meet business and resource objectives. Space standards and guidelines are used to manage space allocations and modifications effectively in reconfigurations. Ergonomics are considered in the upgrades to provide improved working conditions for employees.	SDG&E-22, RDT-34 WP 709A	SDG&E-23 DT-38 WP 709
Capital	Support Services - Real Estate, Land Services & Facilities	Remodel/Relocate/Reconfig Blanket	Modernization of Grid Control Centers	No	This variance is not due to the project, program, or workpaper being canceled or deferred, but rather due to the calculation used to impute authorized funding at the activity level for the GRC post-test years. The CPUC approved a post-test year mechanism for the SDG&E attrition years rather than a specific funding level by activity for each year. This project was completed in 2018.			
Capital	Support Services - Real Estate, Land Services & Facilities	Business Unit Expansion Blanket 2017 - 2019	Non-RAMP	No	N/A			
Capital	Support Services - Real Estate, Land Services & Facilities	Archibus Business Systems Improvements	Non-RAMP	No	N/A			
Capital	Support Services - Real Estate, Land Services & Facilities	Mission Control Modernization	Modernization of Grid Control Centers	No	N/A			
Capital	Support Services - Real Estate, Land Services & Facilities	RBDC Power Reliability Improvements	Non-RAMP	No	N/A			

C. SDG&E Administrative & General  
i. SDG&E Administrative & General O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Administrative & General	Administrative & General		Yes			74,463	73,803	75,102	79,415	75,767	378,549	58,484	60,031	61,514	62,737	64,152	306,918
O&M	Administrative & General	Accounting & Finance, Legal, Regulatory Affairs, External Affairs		Yes			437	568	509	755	620	2,890	795	816	836	852	872	4,170
O&M	Administrative & General	Operations Cost Center -USS-Controllers-Business Controls	Non-RAMP	No	On-going	Annual	394	382	384	409	409	1,978	260	266	273	278	285	1,362
O&M	Administrative & General	Operations Cost Center -USS-Controllers-Business Controls	Consulting expertise to improve records management program	No	On-going	Annual	44	185	125	347	211	912	535	549	563	574	587	2,808
O&M	Administrative & General	Sub-Total Operations Cost Center -USS-Controllers-Business Controls		Yes			437	568	509	755	620	2,890	795	816	836	852	872	4,170
O&M	Administrative & General	Compensation & Benefits		Yes			161	160	166	321	618	1,426	279	286	293	299	306	1,464
O&M	Administrative & General	Health Benefits - Emp Assistance Program	Non-RAMP	No	On-going	Annual	161	160	166	321	618	1,426	279	286	293	299	306	1,464
O&M	Administrative & General	Corporate Center - General Administration		Yes			69,778	69,385	70,766	73,739	70,603	354,272	50,206	51,534	52,807	53,857	55,071	263,474
O&M	Administrative & General	SECC Outside Services Employees - F923.1	Non-RAMP	No	On-going	Annual	67,353	66,390	69,300	72,244	69,074	344,362	47,542	48,799	50,005	50,999	52,149	249,494
O&M	Administrative & General	SECC Outside Services Employees - F923.1	Records Management	No	On-going	Annual	103	106	108	110	113	540	103	106	108	110	113	541
O&M	Administrative & General	SECC Outside Services Employees - F923.1	Workplace Violence/Corporate Security	No	On-going	Annual	1,787	1,763	1,358	1,385	1,416	7,709	1,291	1,325	1,358	1,385	1,416	6,775
O&M	Administrative & General	SECC Outside Services Employees - F923.1	Cybersecurity	No	On-going	Annual	535	1,126	—	—	—	1,661	1,270	1,304	1,336	1,362	1,393	6,665
O&M	Administrative & General	Sub-Total SECC Outside Services Employees - F923.1		Yes			69,778	69,385	70,766	73,739	70,603	354,272	50,206	51,534	52,807	53,857	55,071	263,474
O&M	Administrative & General	Risk Management		Yes			4,086	3,690	3,660	4,599	3,926	19,961	7,205	7,395	7,578	7,729	7,903	37,810
O&M	Administrative & General	Risk Management	Non-RAMP	No	On-going	Annual	1,931	589	635	542	403	4,100	4,124	4,233	4,338	4,424	4,524	21,643
O&M	Administrative & General	VP Enterprise Risk Management	Non-RAMP	No	On-going	Annual	191	409	418	431	486	1,934	460	473	484	494	505	2,417
O&M	Administrative & General	Operations Risk Management SDG&E	Non-RAMP	No	On-going	Annual	1,965	2,692	2,607	3,626	3,037	13,927	2,620	2,689	2,756	2,811	2,874	13,750

C. SDG&E Administrative & General  
i. SDG&E Administrative & General O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Administrative & General	Administrative & General		Yes	15,979	13,772	13,588	16,678	11,615	71,631	27%	23%	22%	27%	18%	23%
O&M	Administrative & General	Accounting & Finance, Legal, Regulatory Affairs, External Affairs		Yes	(357)	(248)	(326)	(97)	(252)	(1,280)	-45%	-30%	-39%	-11%	-29%	-31%
O&M	Administrative & General	Operations Cost Center -USS- Controllers-Business Controls	Non-RAMP	No	134	116	111	130	124	616	52%	44%	41%	47%	44%	45%
O&M	Administrative & General	Operations Cost Center -USS- Controllers-Business Controls	Consulting expertise to improve records management program	No	(491)	(364)	(438)	(227)	(376)	(1,896)	-92%	-66%	-78%	-40%	-64%	-68%
O&M	Administrative & General	<b>Sub-Total Operations Cost Center -USS-Controllers- Business Controls</b>		Yes	(357)	(248)	(326)	(97)	(252)	(1,280)	-45%	-30%	-39%	-11%	-29%	-31%
O&M	Administrative & General	Compensation & Benefits		Yes	(118)	(127)	(128)	22	312	(38)	-42%	-44%	-43%	7%	102%	-3%
O&M	Administrative & General	Health Benefits - Emp Assistance Program	Non-RAMP	No	(118)	(127)	(128)	22	312	(38)	-42%	-44%	-43%	7%	102%	-3%
O&M	Administrative & General	Corporate Center - General Administration		Yes	19,572	17,852	17,959	19,883	15,532	90,798	39%	35%	34%	37%	28%	34%
O&M	Administrative & General	SECC Outside Services Employees - F923.1	Non-RAMP	No	19,811	17,591	19,295	21,246	16,925	94,868	42%	36%	39%	42%	32%	38%
O&M	Administrative & General	SECC Outside Services Employees - F923.1	Records Management	No	—	0	(0)	(0)	0	(1)	—%	0%	-0%	-0%	0%	-0%
O&M	Administrative & General	SECC Outside Services Employees - F923.1	Workplace Violence/Corporate Security	No	496	438	0	0	(0)	934	38%	33%	0%	0%	-0%	14%
O&M	Administrative & General	SECC Outside Services Employees - F923.1	Cybersecurity	No	(735)	(178)	(1,336)	(1,362)	(1,393)	(5,004)	-58%	-14%	-100%	-100%	-100%	-75%
O&M	Administrative & General	<b>Sub-Total SECC Outside Services Employees - F923.1</b>		Yes	19,572	17,852	17,959	19,883	15,532	90,798	39%	35%	34%	37%	28%	34%
O&M	Administrative & General	Risk Management		Yes	(3,119)	(3,705)	(3,918)	(3,130)	(3,977)	(17,849)	-43%	-50%	-52%	-40%	-50%	-47%
O&M	Administrative & General	Risk Management	Non-RAMP	No	(2,194)	(3,644)	(3,703)	(3,882)	(4,121)	(17,544)	-53%	-86%	-85%	-88%	-91%	-81%
O&M	Administrative & General	VP Enterprise Risk Management	Non-RAMP	No	(270)	(64)	(66)	(63)	(19)	(482)	-59%	-13%	-14%	-13%	-4%	-20%
O&M	Administrative & General	Operations Risk Management SDG&E	Non-RAMP	No	(655)	3	(148)	815	163	177	-25%	0%	-5%	29%	6%	1%

C. SDG&E Administrative & General  
i. SDG&E Administrative & General O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
O&M	Administrative & General	Administrative & General		Yes																										
O&M	Administrative & General	Accounting & Finance, Legal, Regulatory Affairs, External Affairs		Yes																										
O&M	Administrative & General	Operations Cost Center -USS-Controllers-Business Controls	Non-RAMP	No	FTE	3	3	2.9	3	2.76	15	3	3	3	3	3	15	—	—	(0.1)	—	(0.24)	(0)	—%	—%	-3%	—%	-8%	-2%	
O&M	Administrative & General	Operations Cost Center -USS-Controllers-Business Controls	Consulting expertise to improve records management program	No	Duties of the Record Management Consultant will be of the following: 1. Complete comprehensive external review of current records management program 2. Address effectiveness of current records management program 3. Provide best practice suggestions for improvements The variety of work scope and varying dollars associated with this activity make it impractical to identify an appropriate unit of measure.																									
O&M	Administrative & General	Sub-Total Operations Cost Center -USS-Controllers-Business Controls		Yes																										
O&M	Administrative & General	Compensation & Benefits		Yes																										
O&M	Administrative & General	Health Benefits - Emp Assistance Program	Non-RAMP	No	Average Employee Count	4,214	4,448	4,668	4,645	4,737	22,712	4,515	4,515	4,515	4,515	4,515	22,575	(301)	(67)	153	130	222	137	-7%	-1%	3%	3%	5%	1%	
O&M	Administrative & General	Corporate Center - General Administration		Yes																										
O&M	Administrative & General	SECC Outside Services Employees - F923.1	Non-RAMP	No	The costs include allocations from the following Sempra Energy Corporate Center (SECC) functions: Outside Legal, Cash/Finance Fees, Facilities, Long Term Incentive Plan (LTIP), Supplemental Executive Retirement Plan (SERP), Finance, Legal, External Affairs, and Human Resources. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Administrative & General	SECC Outside Services Employees - F923.1	Records Management	No	The costs include allocations from the following functions: administration of and adherence to its record management policy and practices, resources to manage records, internal audits, and records storage and retention. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Administrative & General	SECC Outside Services Employees - F923.1	Workplace Violence/Corporate Security	No	The costs include allocations from the following functions: Mitigation for Planning, Awareness, and Incident Management of Workplace Violence. These mitigation efforts are managed by Corporate Security. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Administrative & General	SECC Outside Services Employees - F923.1	Cybersecurity	No	The costs include allocations from the following functions: defining the technology architecture required to support the technology strategy and govern the selection, deployment, and use of applications, infrastructure, and tools. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Administrative & General	Sub-Total SECC Outside Services Employees - F923.1		Yes																										
O&M	Administrative & General	Risk Management		Yes																										
O&M	Administrative & General	Risk Management	Non-RAMP	No	FTE	1	1	1	1	1	5	1	1	1	1	1	5	—	—	—	—	—	—	—%	—%	—%	—%	—%	—%	
O&M	Administrative & General	VP Enterprise Risk Management	Non-RAMP	No	FTE	2	2	2	2	2	10	2	2	2	2	2	10	—	—	—	—	—	—	—%	—%	—%	—%	—%	—%	
O&M	Administrative & General	Operations Risk Management SDG&E	Non-RAMP	No	FTE	1	1	1	1	1	5	1	1	1	1	1	5	—	—	—	—	—	—	—%	—%	—%	—%	—%	—%	

C. SDG&E Administrative & General  
i. SDG&E Administrative & General O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Administrative & General	Administrative & General		Yes									
O&M	Administrative & General	Accounting & Finance, Legal, Regulatory Affairs, External Affairs		Yes									
O&M	Administrative & General	Operations Cost Center -USS-Controllers-Business Controls	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Administrative & General	Operations Cost Center -USS-Controllers-Business Controls	Consulting expertise to improve records management program	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Administrative & General	Sub-Total Operations Cost Center -USS-Controllers-Business Controls		Yes	No								No
O&M	Administrative & General	Compensation & Benefits		Yes									
O&M	Administrative & General	Health Benefits - Emp Assistance Program	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Administrative & General	Corporate Center - General Administration		Yes									
O&M	Administrative & General	SECC Outside Services Employees - F923.1	Non-RAMP	No	Yes	No	The variance in 2023 actuals is due to higher than authorized costs allocated to SDG&E by Corporate Center for the LTIP and SERP programs, higher finance and bank fees incurred, higher facilities and maintenance costs, and an increase in outside legal services.	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Administrative & General	SECC Outside Services Employees - F923.1	Records Management	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Administrative & General	SECC Outside Services Employees - F923.1	Workplace Violence/Corporate Security	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Administrative & General	SECC Outside Services Employees - F923.1	Cybersecurity	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	Yes
O&M	Administrative & General	Sub-Total SECC Outside Services Employees - F923.1		Yes	Yes								No
O&M	Administrative & General	Risk Management		Yes									
O&M	Administrative & General	Risk Management	Non-RAMP	No	Yes	No	Lower than imputed authorized costs are due to this workpaper being included in SDG&E's TY 2019 GRC as a shared service function. However, in 2020, SoCalGas began directly performing and accounting for portions of the costs for this activity.	N/A	Under (U)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Administrative & General	VP Enterprise Risk Management	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Administrative & General	Operations Risk Management SDG&E	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No

C. SDG&E Administrative & General  
i. SDG&E Administrative & GeneralO&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status	Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Administrative & General	Administrative & General		Yes					
O&M	Administrative & General	Accounting & Finance, Legal, Regulatory Affairs, External Affairs		Yes					
O&M	Administrative & General	Operations Cost Center -USS-Controllers-Business Controls	Non-RAMP	No	N/A				
O&M	Administrative & General	Operations Cost Center -USS-Controllers-Business Controls	Consulting expertise to improve records management program	No	N/A				
O&M	Administrative & General	Sub-Total Operations Cost Center -USS-Controllers-Business Controls		Yes					
O&M	Administrative & General	Compensation & Benefits		Yes					
O&M	Administrative & General	Health Benefits - Emp Assistance Program	Non-RAMP	No	N/A				
O&M	Administrative & General	Corporate Center - General Administration		Yes					
O&M	Administrative & General	SECC Outside Services Employees - F923.1	Non-RAMP	No	N/A	Corporate Center Shared Services Allocations - Outside Services Employed: Corporate center allocated costs include security services provided to protect corporate assets and employees, security systems, and the Corporate Security (CSS) department. The CSS department is responsible for the development and management of programs and policies for security systems, security investigations, workplace violence avoidance, as well as crisis and security risk management services. Corporate Center function is also actively involved in activities designed to mitigate the identified risk of workplace violence by supporting the planning and incident management investigation as well as programs designed to mitigate the risk event before it occurs. This includes training, investigation, employee awareness, new hire screening, employee assistance, and corporate security activities.	SDG&E-26-R (SCG-28-R) MLD-10 to MLD-14	SDG&E-27-R-E (SCG-23-R-E) DRC-5 to DRC-9	
O&M	Administrative & General	SECC Outside Services Employees - F923.1	Records Management	No	N/A				
O&M	Administrative & General	SECC Outside Services Employees - F923.1	Workplace Violence/Corporate Security	No	N/A				
O&M	Administrative & General	SECC Outside Services Employees - F923.1	Cybersecurity	No	The Cybersecurity group transferred staff from SECC to SDG&E at the end of 2020, with a small subset then returning to SECC in 2022. To be consistent with prior years, the 2023 actuals are reported in the Information Technology and Cybersecurity section.	Corporate Center Shared Services Allocations - Outside Services Employed: Corporate center allocated costs include security services provided to protect corporate assets and employees, security systems, and the Corporate Security (CSS) department. The CSS department is responsible for the development and management of programs and policies for security systems, security investigations, workplace violence avoidance, as well as crisis and security risk management services. Corporate Center function is also actively involved in activities designed to mitigate the identified risk of workplace violence by supporting the planning and incident management investigation as well as programs designed to mitigate the risk event before it occurs. This includes training, investigation, employee awareness, new hire screening, employee assistance, and corporate security activities.	SDG&E-26-R (SCG-28-R) MLD-10 to MLD-14	SDG&E-27-R-E (SCG-23-R-E) DRC-5 to DRC-9	
O&M	Administrative & General	Sub-Total SECC Outside Services Employees - F923.1		Yes					
O&M	Administrative & General	Risk Management		Yes					
O&M	Administrative & General	Risk Management	Non-RAMP	No	N/A	This cost center has focused on the development of risk frameworks and tools. As SoCalGas and SDG&E expand the implementation of risk management practices, the Director of Operational Risk Management cost center will have primary responsibility to refresh the risk registries, apply new risk models to the risk identification, analysis, and evaluation processes, and support the implementation of operating unit registries.	SDG&E-02-R GSF-3 to GSF-6 WP 2100-3590.000	SDG&E-31-R-E KJD-50 to KJD-60 WP 1SM005	
O&M	Administrative & General	VP Enterprise Risk Management	Non-RAMP	No	N/A				
O&M	Administrative & General	Operations Risk Management SDG&E	Non-RAMP	No	N/A				

E. SDG&E Human Resources  
i. SDG&E Human Resources O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Human Resources Dept, Safety, LTD & WC	Human Resources Dept, Safety, LTD & WC		Yes			7,017	8,673	8,028	7,086	7,655	38,459	7,639	7,841	8,034	8,194	8,379	40,087
O&M	Human Resources Dept, Safety, LTD & WC	Safety, Wellness & Disability Services	Non-RAMP	No	On-going	Annual	(0)	694	819	1,275	1,133	3,919	—	—	—	—	—	—
O&M	Human Resources Dept, Safety, LTD & WC	Safety, Wellness & Disability Services	Contractor Safety Oversight	No	On-going	Annual	221	1,023	201	51	51	1,546	257	264	271	276	282	1,351
O&M	Human Resources Dept, Safety, LTD & WC	Safety, Wellness & Disability Services	Safety Training, Workshops and campaigns	No	On-going	Annual	1,712	199	1,716	925	931	5,483	1,358	1,394	1,429	1,457	1,490	7,128
O&M	Human Resources Dept, Safety, LTD & WC	Safety, Wellness & Disability Services	AED Maintenance	No		2 3	17	26	43	22	35	143	43	44	45	46	47	225
O&M	Human Resources Dept, Safety, LTD & WC	Safety, Wellness & Disability Services	OSHA Voluntary Protection Programs	No		2 3	3	—	—	—	—	3	54	55	56	58	59	281
O&M	Human Resources Dept, Safety, LTD & WC	Safety, Wellness & Disability Services	VPP Application and Implementation	No		4 3	—	—	—	—	—	—	107	110	113	115	118	563
O&M	Human Resources Dept, Safety, LTD & WC	Safety, Wellness & Disability Services	Safety Management System (SMS)	No	Emergent		2	902	688	306	433	2,329	—	—	—	—	—	—
O&M	Human Resources Dept, Safety, LTD & WC	Safety, Wellness & Disability Services	OSHA Required Training and Training Required per Company Safety Standards	No	Emergent		4	—	5	14	14	32	—	—	—	—	—	—
O&M	Human Resources Dept, Safety, LTD & WC	<b>Sub-Total Safety, Wellness &amp; Disability Services</b>		<b>Yes</b>			<b>1,953</b>	<b>2,844</b>	<b>3,472</b>	<b>2,592</b>	<b>2,596</b>	<b>13,456</b>	<b>1,820</b>	<b>1,868</b>	<b>1,914</b>	<b>1,952</b>	<b>1,996</b>	<b>9,549</b>
O&M	Human Resources Dept, Safety, LTD & WC	Organizational Effectiveness	Non-RAMP	No	On-going	Annual	1,780	1,839	1,410	1,271	1,518	7,818	1,919	1,970	2,018	2,059	2,105	10,071
O&M	Human Resources Dept, Safety, LTD & WC	Organizational Effectiveness	Supervisor Effectiveness Training	No		4 4	—	—	291	264	213	767	107	110	113	115	117	562
O&M	Human Resources Dept, Safety, LTD & WC	Organizational Effectiveness	Training	No	Emergent		2	15	—	—	—	15	—	—	—	—	—	—
O&M	Human Resources Dept, Safety, LTD & WC	Organizational Effectiveness	Working Foreman Training and Human Performance	No		4 5	—	—	44	40	45	128	85	87	89	91	93	446
O&M	Human Resources Dept, Safety, LTD & WC	Organizational Effectiveness	Workforce Planning Efforts / Supervisor Effectiveness Program	No		4 4	42	—	73	66	74	255	241	247	253	259	264	1,265
O&M	Human Resources Dept, Safety, LTD & WC	<b>Sub-Total Organizational Effectiveness</b>		<b>Yes</b>			<b>1,822</b>	<b>1,854</b>	<b>1,818</b>	<b>1,640</b>	<b>1,850</b>	<b>8,984</b>	<b>2,352</b>	<b>2,414</b>	<b>2,474</b>	<b>2,523</b>	<b>2,580</b>	<b>12,343</b>
O&M	Human Resources Dept, Safety, LTD & WC	Offices Of The President And COO	Non-RAMP	No	On-going	Annual	1,490	1,824	1,413	1,378	1,495	7,601	1,474	1,513	1,550	1,581	1,616	7,733
O&M	Human Resources Dept, Safety, LTD & WC	SDG&E Field Safety	Safety Programs & Projects	No	On-going	Annual	886	1,038	1,023	1,085	1,318	5,348	1,038	1,065	1,091	1,113	1,138	5,445
O&M	Human Resources Dept, Safety, LTD & WC	Safety Compliance	Safety Regulations, Policies, and Guidelines	No	On-going	Annual	586	1,016	176	272	271	2,320	642	659	676	689	705	3,371
O&M	Human Resources Dept, Safety, LTD & WC	Employee Assistance Program (EAP) And Wellness Programs	Non-RAMP	No	On-going	Annual	280	97	127	120	125	749	314	322	330	336	344	1,646

E. SDG&E Human Resources  
i. SDG&E Human Resources O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Human Resources Dept, Safety, LTD & WC	Human Resources Dept, Safety, LTD & WC		Yes	(622)	832	(7)	(1,108)	(724)	(1,628)	-8%	11%	-9%	-14%	-9%	-4%
O&M	Human Resources Dept, Safety, LTD & WC	Safety, Wellness & Disability Services	Non-RAMP	No	(0)	694	819	1,275	1,133	3,919	100%	100%	100%	100%	100%	100%
O&M	Human Resources Dept, Safety, LTD & WC	Safety, Wellness & Disability Services	Contractor Safety Oversight	No	(36)	759	(70)	(226)	(232)	195	-14%	287%	-26%	-82%	-82%	14%
O&M	Human Resources Dept, Safety, LTD & WC	Safety, Wellness & Disability Services	Safety Training, Workshops and campaigns	No	354	(1,195)	287	(532)	(559)	(1,645)	26%	-86%	20%	-36%	-38%	-23%
O&M	Human Resources Dept, Safety, LTD & WC	Safety, Wellness & Disability Services	AED Maintenance	No	(26)	(18)	(2)	(24)	(12)	(82)	-60%	-41%	-5%	-52%	-26%	-36%
O&M	Human Resources Dept, Safety, LTD & WC	Safety, Wellness & Disability Services	OSHA Voluntary Protection Programs	No	(51)	(55)	(56)	(58)	(59)	(278)	-94%	-100%	-100%	-100%	-100%	-99%
O&M	Human Resources Dept, Safety, LTD & WC	Safety, Wellness & Disability Services	VPP Application and Implementation	No	(107)	(110)	(113)	(115)	(118)	(563)	-100%	-100%	-100%	-100%	-100%	-100%
O&M	Human Resources Dept, Safety, LTD & WC	Safety, Wellness & Disability Services	Safety Management System (SMS)	No	—	902	688	306	433	2,329	—%	100%	100%	100%	100%	100%
O&M	Human Resources Dept, Safety, LTD & WC	Safety, Wellness & Disability Services	OSHA Required Training and Training Required per Company Safety Standards	No	—	—	5	14	14	32	—%	—%	100%	100%	100%	100%
O&M	Human Resources Dept, Safety, LTD & WC	<b>Sub-Total Safety, Wellness &amp; Disability Services</b>		Yes	133	976	1,558	640	600	3,907	7%	52%	81%	33%	30%	41%
O&M	Human Resources Dept, Safety, LTD & WC	Organizational Effectiveness	Non-RAMP	No	(139)	(130)	(609)	(788)	(587)	(2,252)	-7%	-7%	-30%	-38%	-28%	-22%
O&M	Human Resources Dept, Safety, LTD & WC	Organizational Effectiveness	Supervisor Effectiveness Training	No	(107)	(110)	178	149	95	206	-100%	-100%	159%	130%	81%	37%
O&M	Human Resources Dept, Safety, LTD & WC	Organizational Effectiveness	Training	No	—	15	—	—	—	15	—%	100%	—%	—%	—%	100%
O&M	Human Resources Dept, Safety, LTD & WC	Organizational Effectiveness	Working Foreman Training and Human Performance	No	(85)	(87)	(45)	(52)	(49)	(318)	-100%	-100%	-51%	-57%	-52%	-71%
O&M	Human Resources Dept, Safety, LTD & WC	Organizational Effectiveness	Workforce Planning Efforts / Supervisor Effectiveness Program	No	(199)	(247)	(180)	(193)	(190)	(1,010)	-83%	-100%	-71%	-75%	-72%	-80%
O&M	Human Resources Dept, Safety, LTD & WC	<b>Sub-Total Organizational Effectiveness</b>		Yes	(530)	(560)	(656)	(883)	(730)	(3,359)	-23%	-23%	-27%	-35%	-28%	-27%
O&M	Human Resources Dept, Safety, LTD & WC	Offices Of The President And COO	Non-RAMP	No	16	312	(137)	(203)	(121)	(132)	1%	21%	-9%	-13%	-7%	-2%
O&M	Human Resources Dept, Safety, LTD & WC	SDG&E Field Safety	Safety Programs & Projects	No	(152)	(28)	(69)	(28)	179	(97)	-15%	-3%	-6%	-3%	16%	-2%
O&M	Human Resources Dept, Safety, LTD & WC	Safety Compliance	Safety Regulations, Policies, and Guidelines	No	(56)	356	(500)	(417)	(434)	(1,050)	-9%	54%	-74%	-61%	-62%	-31%
O&M	Human Resources Dept, Safety, LTD & WC	Employee Assistance Program (EAP) And Wellness Programs	Non-RAMP	No	(34)	(225)	(203)	(217)	(219)	(897)	-11%	-70%	-62%	-64%	-64%	-55%



E. SDG&E Human Resources  
i. SDG&E Human Resources O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
O&M	Human Resources Dept, Safety, LTD & WC	Human Resources Dept, Safety, LTD & WC		Yes																										
O&M	Human Resources Dept, Safety, LTD & WC	Safety, Wellness & Disability Services	Non-RAMP	No	SDG&E's Safety department provides leadership, administration, and strategy for employee and contractor safety, health, and well-being programs. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Human Resources Dept, Safety, LTD & WC	Safety, Wellness & Disability Services	Contractor Safety Oversight	No	The Contractor Safety Services (CSS) Department is dedicated to oversight of Contractors engaged with SDG&E. The CSS team is tasked with managing internal and external compliance with the SDG&E Contractor Safety Program. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Human Resources Dept, Safety, LTD & WC	Safety, Wellness & Disability Services	Safety Training, Workshops and campaigns	No	This workpaper includes activities such as workshops and campaigns covering Serious Injuries and Fatalities (SIF); Safety Congress; Smith Driving; Safety Barometer. The variety of work scope and varying dollars associated with this activity make it impractical to identify a single unit of measurement.																									
O&M	Human Resources Dept, Safety, LTD & WC	Safety, Wellness & Disability Services	AED Maintenance	No	This workpaper includes activities such as annual Automated External Defibrillator (AED) maintenance includes replacement pads, batteries, and additional AED's. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Human Resources Dept, Safety, LTD & WC	Safety, Wellness & Disability Services	OSHA Voluntary Protection Programs	No	This workpaper includes activities such as official OSHA recognition for achieving exemplary occupational safety and health competencies. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Human Resources Dept, Safety, LTD & WC	Safety, Wellness & Disability Services	VPP Application and Implementation	No	This workpaper includes activities such as onsite assessments to prepare for application and implementation. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Human Resources Dept, Safety, LTD & WC	Safety, Wellness & Disability Services	Safety Management System (SMS)	No	SDG&E's SMS is a process-based, systematic, integrated, continuous improvement framework aimed to reduce risk, enhance the Company's safety culture, and take proactive actions to prevent safety incidents. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Human Resources Dept, Safety, LTD & WC	Safety, Wellness & Disability Services	OSHA Required Training and Training Required per Company Safety Standards	No	This workpaper includes activities such as establishing and managing the programs, policies and guidelines to ensure the health and safety of SDG&E employees. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Human Resources Dept, Safety, LTD & WC	Sub-Total Safety, Wellness & Disability Services		Yes																										
O&M	Human Resources Dept, Safety, LTD & WC	Organizational Effectiveness	Non-RAMP	No	FTE	11	11	15	12	13	62	14	14	14	14	14	70	(3)	(3)	1	(2)	(1)	(8)	(21)%	(21)%	7%	(14)%	(7)%	(11)%	
O&M	Human Resources Dept, Safety, LTD & WC	Organizational Effectiveness	Supervisor Effectiveness Training	No	This workpaper consists of activities such as enhancement of supervisor knowledge, leadership skills, safety awareness, and policy knowledge. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Human Resources Dept, Safety, LTD & WC	Organizational Effectiveness	Training	No	This workpaper consists of activities such as a respectful workplace summit for all peer team members and field leaders/supervisors providing content including Safety Meeting Presentations; Tailgate Leadership; Field Visits; and Supporting New Safety initiatives. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Human Resources Dept, Safety, LTD & WC	Organizational Effectiveness	Working Foreman Training and Human Performance	No	This workpaper consists of activities such as providing working foreman trainings and assessments. The Human Performance Program has since been developed into a new training called "Just Culture". The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Human Resources Dept, Safety, LTD & WC	Organizational Effectiveness	Workforce Planning Efforts / Supervisor Effectiveness Program	No	This workpaper consists of techniques and methods such as analyzing staffing trends, economic drivers, and skill readiness of organizational groups to predict future attrition and gaps in talent availability. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Human Resources Dept, Safety, LTD & WC	Sub-Total Organizational Effectiveness		Yes																										
O&M	Human Resources Dept, Safety, LTD & WC	Offices Of The President And COO	Non-RAMP	No	FTE	5	5	4	4	4	22	4	4	4	4	4	20	1	1	—	—	—	2	25%	25%	—%	—%	—%	10%	
O&M	Human Resources Dept, Safety, LTD & WC	SDG&E Field Safety	Safety Programs & Projects	No	FTE	6	7	7	7	6	33	6	6	6	6	6	30	—	1	1	1	—	3	—%	17%	17%	17%	—%	10%	
O&M	Human Resources Dept, Safety, LTD & WC	Safety Compliance	Safety Regulations, Policies, and Guidelines	No	FTE	4	4	2	2	2	14	4	4	4	4	4	20	—	—	(2)	(2)	(2)	(6)	—%	—%	(50)%	(50)%	(50)%	(30)%	
O&M	Human Resources Dept, Safety, LTD & WC	Employee Assistance Program (EAP) And Wellness Programs	Non-RAMP	No	FTE	1	1	2	1	1	6	2	2	2	2	2	10	(1)	(1)	—	(1)	(1)	(4)	(50)%	(50)%	—%	(50)%	(50)%	(40)%	

E. SDG&E Human Resources  
i. SDG&E Human Resources O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Human Resources Dept, Safety, LTD & WC	Human Resources Dept, Safety, LTD & WC		Yes									
O&M	Human Resources Dept, Safety, LTD & WC	Safety, Wellness & Disability Services	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Expanded	No
O&M	Human Resources Dept, Safety, LTD & WC	Safety, Wellness & Disability Services	Contractor Safety Oversight	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Expanded	No
O&M	Human Resources Dept, Safety, LTD & WC	Safety, Wellness & Disability Services	Safety Training, Workshops and campaigns	No	No	No	N/A	N/A	Under (U)	Under (U)	Under (U)	Proceeding as Planned	No
O&M	Human Resources Dept, Safety, LTD & WC	Safety, Wellness & Disability Services	AED Maintenance	No	No	No	N/A	N/A	Under (U)	Under (U)	Under (U)	Proceeding as Planned	No
O&M	Human Resources Dept, Safety, LTD & WC	Safety, Wellness & Disability Services	OSHA Voluntary Protection Programs	No	No	No	N/A	N/A	Under (U)	Under (U)	Under (U)	Canceled	No
O&M	Human Resources Dept, Safety, LTD & WC	Safety, Wellness & Disability Services	VPP Application and Implementation	No	No	No	N/A	N/A	Under (U)	Under (U)	Under (U)	Canceled	No
O&M	Human Resources Dept, Safety, LTD & WC	Safety, Wellness & Disability Services	Safety Management System (SMS)	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
O&M	Human Resources Dept, Safety, LTD & WC	Safety, Wellness & Disability Services	OSHA Required Training and Training Required per Company Safety Standards	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
O&M	Human Resources Dept, Safety, LTD & WC	<b>Sub-Total Safety, Wellness &amp; Disability Services</b>		Yes	No								No
O&M	Human Resources Dept, Safety, LTD & WC	Organizational Effectiveness	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Human Resources Dept, Safety, LTD & WC	Organizational Effectiveness	Supervisor Effectiveness Training	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Human Resources Dept, Safety, LTD & WC	Organizational Effectiveness	Training	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
O&M	Human Resources Dept, Safety, LTD & WC	Organizational Effectiveness	Working Foreman Training and Human Performance	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Human Resources Dept, Safety, LTD & WC	Organizational Effectiveness	Workforce Planning Efforts / Supervisor Effectiveness Program	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Human Resources Dept, Safety, LTD & WC	<b>Sub-Total Organizational Effectiveness</b>		Yes	No								No
O&M	Human Resources Dept, Safety, LTD & WC	Offices Of The President And COO	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Human Resources Dept, Safety, LTD & WC	SDG&E Field Safety	Safety Programs & Projects	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Human Resources Dept, Safety, LTD & WC	Safety Compliance	Safety Regulations, Policies, and Guidelines	No	No	Yes	N/A	The variance is mainly due to revised scope, which does not require as many resources as the initial plan. The current effort encompasses Department of Transportation (DOT) testing and oversight of all pre-employment, random, and other required testing in safety-sensitive positions. The interpretation of safety-related rules and regulations and reviews of potential legislation efforts are being supported in the Safety, Wellness & Disability Services workpaper.	Under (U)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Human Resources Dept, Safety, LTD & WC	Employee Assistance Program (EAP) And Wellness Programs	Non-RAMP	No	No	Yes	N/A	Lower than forecasted staffing level during 2023 due to reprioritizing resources.	Under (U)	On Target (T)	Under (U)	Proceeding as Planned	No

E. SDG&E Human Resources  
i. SDG&E Human Resources O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Human Resources Dept, Safety, LTD & WC	Human Resources Dept, Safety, LTD & WC		Yes				
O&M	Human Resources Dept, Safety, LTD & WC	Safety, Wellness & Disability Services	Non-RAMP	No	N/A			
O&M	Human Resources Dept, Safety, LTD & WC	Safety, Wellness & Disability Services	Contractor Safety Oversight	No	N/A			
O&M	Human Resources Dept, Safety, LTD & WC	Safety, Wellness & Disability Services	Safety Training, Workshops and campaigns	No	N/A			
O&M	Human Resources Dept, Safety, LTD & WC	Safety, Wellness & Disability Services	AED Maintenance	No	N/A			
O&M	Human Resources Dept, Safety, LTD & WC	Safety, Wellness & Disability Services	OSHA Voluntary Protection Programs	No	N/A			
O&M	Human Resources Dept, Safety, LTD & WC	Safety, Wellness & Disability Services	VPP Application and Implementation	No	N/A			
O&M	Human Resources Dept, Safety, LTD & WC	Safety, Wellness & Disability Services	Safety Management System (SMS)	No	N/A			
O&M	Human Resources Dept, Safety, LTD & WC	Safety, Wellness & Disability Services	OSHA Required Training and Training Required per Company Safety Standards	No	N/A			
O&M	Human Resources Dept, Safety, LTD & WC	<b>Sub-Total Safety, Wellness &amp; Disability Services</b>		Yes				
O&M	Human Resources Dept, Safety, LTD & WC	Organizational Effectiveness	Non-RAMP	No	N/A			
O&M	Human Resources Dept, Safety, LTD & WC	Organizational Effectiveness	Supervisor Effectiveness Training	No	N/A			
O&M	Human Resources Dept, Safety, LTD & WC	Organizational Effectiveness	Training	No	N/A			
O&M	Human Resources Dept, Safety, LTD & WC	Organizational Effectiveness	Working Foreman Training and Human Performance	No	N/A			
O&M	Human Resources Dept, Safety, LTD & WC	Organizational Effectiveness	Workforce Planning Efforts / Supervisor Effectiveness Program	No	N/A			
O&M	Human Resources Dept, Safety, LTD & WC	<b>Sub-Total Organizational Effectiveness</b>		Yes				
O&M	Human Resources Dept, Safety, LTD & WC	Offices Of The President And COO	Non-RAMP	No	N/A			
O&M	Human Resources Dept, Safety, LTD & WC	SDG&E Field Safety	Safety Programs & Projects	No	N/A			
O&M	Human Resources Dept, Safety, LTD & WC	Safety Compliance	Safety Regulations, Policies, and Guidelines	No	N/A	The Safety Compliance program comprises the Mandatory Employee Health and Safety Training Programs and Standardized Policies.	SDG&E-30 TT-33 to TT-34 WP 2100-3414.000	SDG&E-31-R-E KJD-36 to KJD-42 WP 1SM002.001
O&M	Human Resources Dept, Safety, LTD & WC	Employee Assistance Program (EAP) And Wellness Programs	Non-RAMP	No	N/A	Wellness Programs is responsible for managing and administering the company's EAP services, back up care program, and company wellness programs and activities.	SDG&E-30 TT-36 WP 2100-3506.000	SDG&E-32-2E AGT-38 - AGT-40 WP 2100-3506

ii. SDG&E Human Resources Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
Capital	Human Resources	Human Resources		Yes			—	—	3,428	2,262	2,572	8,262	—	—	—	—	—	—
Capital	Human Resources	Contractor Field Safety Management Pool	Field Safety Oversight	No	Emergent	Annual	—	—	3,428	2,262	2,572	8,262	—	—	—	—	—	—

ii. SDG&E Human Resources Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
Capital	Human Resources	Human Resources		Yes	—	—	3,428	2,262	2,572	8,262	—%	—%	100%	100%	100%	100%
Capital	Human Resources	Contractor Field Safety Management Pool	Field Safety Oversight	No	—	—	3,428	2,262	2,572	8,262	—%	—%	100%	100%	100%	100%

ii. SDG&E Human Resources Capital

Capital Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
Capital	Human Resources	Human Resources		Yes																										
Capital	Human Resources	Contractor Field Safety Management Pool	Field Safety Oversight	No	This is a new overhead pool created to capture Contractor Safety Oversight expenses. Due to costs being spread across multiple business units and a mixture of 3rd party vendors and internal labor, it is infeasible to identify a single unit of measurement.																									

ii. SDG&E Human Resources Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
Capital	Human Resources	Human Resources		Yes									
Capital	Human Resources	Contractor Field Safety Management Pool	Field Safety Oversight	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No

ii. SDG&E Human Resources Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
Capital	Human Resources	Human Resources		Yes				
Capital	Human Resources	Contractor Field Safety Management Pool	Field Safety Oversight	No	N/A			



4. SDG&E BALANCED PROGRAMS - DIMP, TIMP, TREE TRIMMING, ELECTRIC DISTRIBUTION OVERHEAD POLES AND WILDFIRE MITIGATION  
A. SDG&E Balanced Programs Direct O&M Costs

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Balanced Program	Total TIMP & DIMP		Yes			8,826	9,792	10,934	10,937	30,781	71,270	11,758	12,069	12,367	12,613	12,897	61,703
O&M	Balanced Program	TIMP	Assessments of transmission pipelines in High Consequence Areas (49 CFR Part 192 Subpart O) to evaluate and remediate threats and minimize risk.	No	On-going	Annual	7,526	7,674	8,682	9,081	30,009	62,972	5,336	5,477	5,613	5,724	5,853	28,004
O&M	Balanced Program	DIMP	Programs in place to minimize integrity risks to distribution pipelines and minimize infrastructure damage.	No	On-going	Annual	1,300	2,118	2,252	1,856	772	8,298	6,421	6,591	6,754	6,888	7,044	33,698
O&M	Balanced Program	Total ED Wildfire Mitigation Balanced Program		Yes			82,256	184,977	173,328	200,145	224,139	864,844	60,382	61,979	63,510	64,773	66,234	316,877
O&M	Balanced Program	Wildfire Mitigation Program	Non-RAMP	No	2	Completed	21,445	76,209	(0)	0	0	97,655	433	444	—	—	—	877
O&M	Balanced Program	Wildfire Mitigation Program	Utility Asset Management - (WMP)	No	On-going	Annual	107	175	341	32	30	685	1,261	1,294	1,326	1,353	1,383	6,618
O&M	Balanced Program	Wildfire Mitigation Program	Wildfire Communications	No	On-going	Annual	2,527	8,754	9,702	8,642	8,836	38,461	264	271	278	283	290	1,385
O&M	Balanced Program	Wildfire Mitigation Program	Fire Science & Climate Adaptation	No	On-going	Annual	4,903	6,216	6,028	6,943	9,097	33,187	4,202	4,313	4,420	4,508	4,609	22,052
O&M	Balanced Program	Wildfire Mitigation Program	UAS Safety Program	No	On-going	Annual	277	290	177	802	1,170	2,716	174	179	183	187	191	913
O&M	Balanced Program	Wildfire Mitigation Program	System Hardening and Helo	No	On-going	Annual	11,032	13,724	9,562	14,339	11,187	59,844	11,523	11,828	12,120	12,361	12,640	60,470

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Balanced Program	Wildfire Mitigation Program	Inspection and Preventative Maintenance	No	On-going	Annual	2,254	2,053	1,733	1,736	1,429	9,205	12,197	12,519	12,828	13,083	13,379	64,006
O&M	Balanced Program	Wildfire Mitigation Program	Meteorology Studies and Education	No	2	Completed	325	1,095	—	—	—	1,420	432	443	454	463	474	2,267
O&M	Balanced Program	Wildfire Mitigation Program	Emergency Prep Trainings	No	On-going	Annual	1,006	2,818	9,165	11,180	17,280	41,449	1,256	1,289	1,776	1,811	1,852	7,985
O&M	Balanced Program	Wildfire Mitigation Program	Records Management	No	On-going	Annual	—	175	341	32	30	578	485	498	510	520	532	2,545
O&M	Balanced Program	Wildfire Mitigation Program	Fuels Management	No	On-going	Annual	—	—	4,416	8,097	4,068	16,581	—	—	—	—	—	—
O&M	Balanced Program	Wildfire Mitigation Program	Asset Management & Inspections	No	On-going	Annual	—	—	938	44	1	983	—	—	—	—	—	—
O&M	Balanced Program	Wildfire Mitigation Program	Drone Inspection Program	No	On-going	Annual	—	—	33,048	45,390	52,868	131,306	—	—	—	—	—	—
O&M	Balanced Program	Wildfire Mitigation Program	Hotline Clamps	No	On-going	Annual	—	—	3,648	1,694	1,608	6,950	—	—	—	—	—	—

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Balanced Program	Wildfire Mitigation Program	Resiliency Grant Programs	No	On-going	Annual	—	—	7,892	3,592	5,453	16,937	—	—	—	—	—	—
O&M	Balanced Program	Wildfire Mitigation Program	Standby Power Programs	No	On-going	Annual	—	—	8,934	12,048	12,681	33,663	—	—	—	—	—	—
O&M	Balanced Program	Wildfire Mitigation Program	Resiliency Assistance Programs	No	On-going	Annual	—	—	745	780	561	2,086	—	—	—	—	—	—
O&M	Balanced Program	Wildfire Mitigation Program	Microgrids	No	On-going	Annual	—	—	1,492	1,441	1,235	4,168	—	—	—	—	—	—
O&M	Balanced Program	Wildfire Mitigation Program	PSPS Communications Protocols	No	On-going	Annual	—	—	2	10	—	12	—	—	—	—	—	—
O&M	Balanced Program	Wildfire Mitigation Program	WMP Tribal Customer Support	No	On-going	Annual	—	—	54	126	129	309	—	—	—	—	—	—
O&M	Balanced Program	Wildfire Mitigation Program	WMP AFN Customer Support	No	On-going	Annual	—	—	1,127	1,306	1,804	4,237	—	—	—	—	—	—
O&M	Balanced Program	Wildfire Mitigation Program	Emergency Management Operations (PSPS)	No	On-going	Annual	—	—	3,793	637	1,083	5,513	—	—	—	—	—	—
O&M	Balanced Program	Wildfire Mitigation Program	Wildfire Mitigation Personnel	No	On-going	Annual	—	—	3,823	4,158	5,735	13,716	—	—	—	—	—	—
O&M	Balanced Program	Wildfire Mitigation Program	Risk Assessment & Mapping	No	On-going	Annual	—	—	608	1,916	4,001	6,525	—	—	—	—	—	—
O&M	Balanced Program	Wildfire Mitigation Program	Data Governance	No	On-going	Annual	—	—	1,082	1,374	1,736	4,192	—	—	—	—	—	—
O&M	Balanced Program	Wildfire Mitigation Program	LiDAR Flights	No	On-going	Annual	—	—	1,151	3,000	873	5,024	—	—	—	—	—	—
O&M	Balanced Program	Wildfire Mitigation Program	Covered Conductor	No	On-going	Annual	—	—	518	2,557	2,397	5,472	—	—	—	—	—	—

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Balanced Program	Wildfire Mitigation Program	Strategic Undergrounding	No	On-going	Annual	—	—	4,812	240	617	5,669	—	—	—	—	—	—

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Balanced Program	Wildfire Mitigation Program	Private LTE	No	On-going	Annual	—	—	—	714	910	1,624	—	—	—	—	—	—
O&M	Balanced Program	Wildfire Mitigation Program	Vegetation Restoration Initiative	No	On-going	Annual	—	—	393	877	1,214	2,484	—	—	—	—	—	—
<b>O&amp;M</b>	<b>Balanced Program</b>	<b>Sub-Total Wildfire Mitigation Program</b>		<b>Yes</b>			<b>43,876</b>	<b>111,510</b>	<b>115,526</b>	<b>133,708</b>	<b>148,033</b>	<b>552,652</b>	<b>32,226</b>	<b>33,078</b>	<b>33,895</b>	<b>34,569</b>	<b>35,349</b>	<b>169,118</b>
O&M	Balanced Program	Vegetation Management (Pole Brushing)	Safety Policies & Programs	No	On-going	Annual	3,835	5,241	5,555	6,210	8,441	29,283	3,950	4,055	4,155	4,238	4,333	20,731
O&M	Balanced Program	Vegetation Management (Pole Brushing)	Non-RAMP	No	On-going	Annual	—	—	(0)	—	(0)	(0)	—	—	—	—	—	—
O&M	Balanced Program	Vegetation Management (Pole Brushing)	Joint Power Line Inspections with CalFire	No	On-going	Annual	36	49	52	58	79	275	37	38	39	40	41	195
<b>O&amp;M</b>	<b>Balanced Program</b>	<b>Sub-Total Vegetation Management (Pole Brushing)</b>		<b>Yes</b>			<b>3,871</b>	<b>5,290</b>	<b>5,608</b>	<b>6,269</b>	<b>8,520</b>	<b>29,558</b>	<b>3,988</b>	<b>4,093</b>	<b>4,194</b>	<b>4,277</b>	<b>4,374</b>	<b>20,926</b>
O&M	Balanced Program	Vegetation Management (Tree Trimming)	Programs to inspect and maintain trees in SDG&E's service territory that have the potential to encroach within the minimum required compliance distance between vegetation and overhead power lines.	No	On-going	Annual	34,509	68,177	52,195	60,168	67,586	282,635	24,168	24,808	25,420	25,926	26,511	126,833

4. SDG&E BALANCED PROGRAMS - DIMP, TIMP, TREE TRIMMING, ELECTRIC DISTRIBUTION OVERHEAD POLE  
A. SDG&E Balanced Programs Direct O&M Costs

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Balanced Program	Total TIMP & DIMP		Yes	(2,932)	(2,277)	(1,432)	(1,675)	17,883	9,568	-25%	-19%	-12%	-13%	139%	16%
O&M	Balanced Program	TIMP	Assessments of transmission pipelines in High Consequence Areas (49 CFR Part 192 Subpart O) to evaluate and remediate threats and minimize risk.	No	2,190	2,197	3,069	3,357	24,155	34,968	41%	40%	55%	59%	413%	125%
O&M	Balanced Program	DIMP	Programs in place to minimize integrity risks to distribution pipelines and minimize infrastructure damage.	No	(5,121)	(4,473)	(4,502)	(5,032)	(6,272)	(25,400)	-80%	-68%	-67%	-73%	-89%	-75%
O&M	Balanced Program	Total ED Wildfire Mitigation Balanced Program		Yes	21,874	122,998	109,818	135,372	157,906	547,967	36%	198%	173%	209%	238%	173%
O&M	Balanced Program	Wildfire Mitigation Program	Non-RAMP	No	21,012	75,765	(0)	0	0	96,778	4855%	17054%	100%	100%	100%	11034%
O&M	Balanced Program	Wildfire Mitigation Program	Utility Asset Management - (WMP)	No	(1,154)	(1,119)	(985)	(1,321)	(1,354)	(5,932)	-92%	-86%	-74%	-98%	-98%	-90%
O&M	Balanced Program	Wildfire Mitigation Program	Wildfire Communications	No	2,263	8,483	9,424	8,359	8,546	37,075	857%	3131%	3394%	2952%	2951%	2676%
O&M	Balanced Program	Wildfire Mitigation Program	Fire Science & Climate Adaptation	No	701	1,903	1,608	2,436	4,488	11,135	17%	44%	36%	54%	97%	50%
O&M	Balanced Program	Wildfire Mitigation Program	UAS Safety Program	No	103	111	(6)	616	980	1,804	59%	62%	-3%	330%	514%	198%
O&M	Balanced Program	Wildfire Mitigation Program	System Hardening and Helo	No	(491)	1,897	(2,558)	1,978	(1,453)	(627)	-4%	16%	-21%	16%	-11%	-1%

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Balanced Program	Wildfire Mitigation Program	Inspection and Preventative Maintenance	No	(9,943)	(10,466)	(11,095)	(11,347)	(11,950)	(54,801)	-82%	-84%	-86%	-87%	-89%	-86%
O&M	Balanced Program	Wildfire Mitigation Program	Meteorology Studies and Education	No	(107)	652	(454)	(463)	(474)	(847)	-25%	147%	-100%	-100%	-100%	-37%
O&M	Balanced Program	Wildfire Mitigation Program	Emergency Prep Trainings	No	(250)	1,529	7,389	9,368	15,428	33,464	-20%	119%	416%	517%	833%	419%
O&M	Balanced Program	Wildfire Mitigation Program	Records Management	No	(485)	(323)	(169)	(488)	(502)	(1,967)	-100%	-65%	-33%	-94%	-94%	-77%
O&M	Balanced Program	Wildfire Mitigation Program	Fuels Management	No	—	—	4,416	8,097	4,068	16,581	—%	—%	100%	100%	100%	100%
O&M	Balanced Program	Wildfire Mitigation Program	Asset Management & Inspections	No	—	—	938	44	1	983	—%	—%	100%	100%	100%	100%
O&M	Balanced Program	Wildfire Mitigation Program	Drone Inspection Program	No	—	—	33,048	45,390	52,868	131,306	—%	—%	100%	100%	100%	100%
O&M	Balanced Program	Wildfire Mitigation Program	Hotline Clamps	No	—	—	3,648	1,694	1,608	6,950	—%	—%	100%	100%	100%	100%

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Balanced Program	Wildfire Mitigation Program	Resiliency Grant Programs	No	—	—	7,892	3,592	5,453	16,937	—%	—%	100%	100%	100%	100%
O&M	Balanced Program	Wildfire Mitigation Program	Standby Power Programs	No	—	—	8,934	12,048	12,681	33,663	—%	—%	100%	100%	100%	100%
O&M	Balanced Program	Wildfire Mitigation Program	Resiliency Assistance Programs	No	—	—	745	780	561	2,086	—%	—%	100%	100%	100%	100%
O&M	Balanced Program	Wildfire Mitigation Program	Microgrids	No	—	—	1,492	1,441	1,235	4,168	—%	—%	100%	100%	100%	100%
O&M	Balanced Program	Wildfire Mitigation Program	PSPS Communications Protocols	No	—	—	2	10	—	12	—%	—%	100%	100%	—%	100%
O&M	Balanced Program	Wildfire Mitigation Program	WMP Tribal Customer Support	No	—	—	54	126	129	309	—%	—%	100%	100%	100%	100%
O&M	Balanced Program	Wildfire Mitigation Program	WMP AFN Customer Support	No	—	—	1,127	1,306	1,804	4,237	—%	—%	100%	100%	100%	100%
O&M	Balanced Program	Wildfire Mitigation Program	Emergency Management Operations (PSPS)	No	—	—	3,793	637	1,083	5,513	—%	—%	100%	100%	100%	100%
O&M	Balanced Program	Wildfire Mitigation Program	Wildfire Mitigation Personnel	No	—	—	3,823	4,158	5,735	13,716	—%	—%	100%	100%	100%	100%
O&M	Balanced Program	Wildfire Mitigation Program	Risk Assessment & Mapping	No	—	—	608	1,916	4,001	6,525	—%	—%	100%	100%	100%	100%
O&M	Balanced Program	Wildfire Mitigation Program	Data Governance	No	—	—	1,082	1,374	1,736	4,192	—%	—%	100%	100%	100%	100%
O&M	Balanced Program	Wildfire Mitigation Program	LiDAR Flights	No	—	—	1,151	3,000	873	5,024	—%	—%	100%	100%	100%	100%
O&M	Balanced Program	Wildfire Mitigation Program	Covered Conductor	No	—	—	518	2,557	2,397	5,472	—%	—%	100%	100%	100%	100%



Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Balanced Program	Wildfire Mitigation Program	Strategic Undergrounding	No	—	—	4,812	240	617	5,669	—%	—%	100%	100%	100%	100%

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Balanced Program	Wildfire Mitigation Program	Private LTE	No	—	—	—	714	910	1,624	—%	—%	—%	100%	100%	100%
O&M	Balanced Program	Wildfire Mitigation Program	Vegetation Restoration Initiative	No	—	—	393	877	1,214	2,484	—%	—%	100%	100%	100%	100%
O&M	Balanced Program	<b>Sub-Total Wildfire Mitigation Program</b>		Yes	<b>11,650</b>	<b>78,431</b>	<b>81,630</b>	<b>99,138</b>	<b>112,684</b>	<b>383,534</b>	<b>36%</b>	<b>237%</b>	<b>241%</b>	<b>287%</b>	<b>319%</b>	<b>227%</b>
O&M	Balanced Program	Vegetation Management (Pole Brushing)	Safety Policies & Programs	No	(116)	1,186	1,400	1,973	4,108	8,551	-3%	29%	34%	47%	95%	41%
O&M	Balanced Program	Vegetation Management (Pole Brushing)	Non-RAMP	No	—	—	(0)	—	(0)	(0)	—%	—%	100%	—%	100%	100%
O&M	Balanced Program	Vegetation Management (Pole Brushing)	Joint Power Line Inspections with CalFire	No	(1)	11	13	19	39	80	-3%	29%	34%	47%	95%	41%
O&M	Balanced Program	<b>Sub-Total Vegetation Management (Pole Brushing)</b>		Yes	<b>(117)</b>	<b>1,197</b>	<b>1,414</b>	<b>1,991</b>	<b>4,146</b>	<b>8,632</b>	<b>-3%</b>	<b>29%</b>	<b>34%</b>	<b>47%</b>	<b>95%</b>	<b>41%</b>
O&M	Balanced Program	Vegetation Management (Tree Trimming)	Programs to inspect and maintain trees in SDG&E's service territory that have the potential to encroach within the minimum required compliance distance between vegetation and overhead power lines.	No	10,341	43,369	26,775	34,242	41,076	155,802	43%	175%	105%	132%	155%	123%

4. SDG&E BALANCED PROGRAMS - DIMP, TIMP, TREE TRIMMING, ELECTRIC DISTRIBUTION OVERHEAD POLE  
A. SDG&E Balanced Programs Direct O&M Costs

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
O&M	Balanced Program	Total TIMP & DIMP		Yes																										
O&M	Balanced Program	TIMP	Assessments of transmission pipelines in High Consequence Areas (49 CFR Part 192 Subpart O) to evaluate and remediate threats and minimize risk.	No	In-line Inspections (ILI)	7	4	3	3	13	30	1	1	1	1	1	5	6	3	2	2	12	25	600%	300%	200%	200%	1200%	500%	
					External Corrosion Direct Assessments (ECDA)	5	3	1	4	4	17	9	9	9	9	9	45	(4)	(6)	(8)	(5)	(5)	(28)	-44%	-67%	-89%	-56%	-56%	-62%	
O&M	Balanced Program	DIMP	Programs in place to minimize integrity risks to distribution pipelines and minimize infrastructure damage.	No	Work paper activity includes managing and developing programs/projects and activities to address risk (PAARs); it includes risk analysis, data collection and management, database maintenance, and reporting. The variety of work activities in this category makes it infeasible to identify a single unit of measurement																									
O&M	Balanced Program	Total ED Wildfire Mitigation Balanced Program		Yes																										
O&M	Balanced Program	Wildfire Mitigation Program	Non-RAMP	No	Beginning in 2021, the units related to this Non-RAMP line item are included in the various wildfire mitigation programs described herein.																									
O&M	Balanced Program	Wildfire Mitigation Program	Utility Asset Management - (WMP)	No	Consultant Contract	1	1	1	1	-	4	1	1	1	1	1	5	-	-	-	-	(1)	(1)	-%	-%	-%	-%	-100%	-20%	
O&M	Balanced Program	Wildfire Mitigation Program	Wildfire Communications	No	Gross Impressions	49,647,034	421,109,821	469,108,364	339,751,100	438,461,943	1,718,078,262	103,031,368	103,031,368	103,031,368	103,031,368	103,031,368	515,156,840	(53,384,334)	318,078,453	366,076,996	236,719,732	335,430,575	1,202,921,422	-52%	309%	355%	230%	326%	234%	
O&M	Balanced Program	Wildfire Mitigation Program	Fire Science & Climate Adaptation	No	There is no single number of like units that would be comparable year over year that can be identified because there are several activities such as Weather Monitoring & Forecasting; Forecast of Fire Potential Index (FPI) or similar; Contracted Firefighting Resources; Public Safety Power Shutoff (PSPS) Situational Awareness dashboards; etc.																									
O&M	Balanced Program	Wildfire Mitigation Program	UAS Safety Program	No	This workpaper includes Unmanned Aerial System (UAS) Safety Management System, which from years 2019 to 2023, have one continuous program annually. This workpaper also includes expanded activities such as support for PSPS, construction, capital projects, maintenance and repairs.																									
O&M	Balanced Program	Wildfire Mitigation Program	System Hardening and Helo	No	This workpaper includes months of helicopter availability. From years 2019 to 2023, there were 12 months of helicopter availability each year. This workpaper also includes new activities such as maintenance and support for overhead hardening, Avian and Advanced Protection capital programs.																									

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
O&M	Balanced Program	Wildfire Mitigation Program	Inspection and Preventative Maintenance	No	There is no single number of like units that would be comparable year over year that can be identified because there are several activities such as Detailed Inspections of Distribution Electric Lines & Equipment; Patrols of Distribution Lines & Equipment; High Fire Threat District (HFTD) Tier 3 Inspections; Infrared/Corona Inspections, etc.																									
O&M	Balanced Program	Wildfire Mitigation Program	Meteorology Studies and Education	No	Climate vulnerability assessment	1	1	-	-		2	1	1	1	1	1	5	—	—	(1)	(1)	(1)	(3)	—%	—%	-100%	-100%	-100%	-60%	
O&M	Balanced Program	Wildfire Mitigation Program	Emergency Prep Trainings	No	This workpaper includes number of training sessions for first responders and emergency response personnel (2020: 97 units, 2021: 121 units, 2022: 138 units, 2023: 111 units). In addition, this workpaper includes activities that are recently moved: Emergency Management department and other expenses related to our emergency response operations.																									
O&M	Balanced Program	Wildfire Mitigation Program	Records Management	No	Asset Management Risk Assessment and Mitigation Phase (RAMP) activity is annual records management compliance. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Balanced Program	Wildfire Mitigation Program	Fuels Management	No	Number of Structures Cleared	-	-	463	500	514	1,477	-	-	-	-	-	—	—	—	463	500	514	1,477	—%	—%	100%	100%	100%	100%	
O&M	Balanced Program	Wildfire Mitigation Program	Asset Management & Inspections	No	Activities include inspections like crossarm remediations and enhanced steel pole inspections. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Balanced Program	Wildfire Mitigation Program	Drone Inspection Program	No	Number of HFTD Inspections	-	-	21,420	30,044	15,311	66,775	-	-	-	-	-	—	—	—	21,420	30,044	15,311	66,775	—%	—%	100%	100%	100%	100%	
O&M	Balanced Program	Wildfire Mitigation Program	Hotline Clamps	No	Number of Hotline Clamps Removed	-	-	2,743	1,903	962	5,608	-	-	-	-	-	—	—	—	2,743	1,903	962	5,608	—%	—%	100%	100%	100%	100%	

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
O&M	Balanced Program	Wildfire Mitigation Program	Resiliency Grant Programs	No	Number of Generators	-	-	2,310	921	805	4,036	-	-	-	-	-	-	-	-	2,310	921	805	4,036	—%	—%	100%	100%	100%	100%	
O&M	Balanced Program	Wildfire Mitigation Program	Standby Power Programs	No	Number of Generators	-	-	355	376	362	1,093	-	-	-	-	-	-	-	-	355	376	362	1,093	—%	—%	100%	100%	100%	100%	
O&M	Balanced Program	Wildfire Mitigation Program	Resiliency Assistance Programs	No	Number of Rebates	-	-	735	140	251	1,126	-	-	-	-	-	-	-	-	735	140	251	1,126	—%	—%	100%	100%	100%	100%	
O&M	Balanced Program	Wildfire Mitigation Program	Microgrids	No	Number of Microgrids	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	1	-	1	—%	—%	—%	100%	—%	100%	
O&M	Balanced Program	Wildfire Mitigation Program	PSPS Communications Protocols	No	Activities include improving coordination and customer awareness during fires or PSPS events. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Balanced Program	Wildfire Mitigation Program	WMP Tribal Customer Support	No	This workpaper includes several initiatives aimed at reducing impacts, improving coordination and Tribal customer awareness during fires or PSPS events. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Balanced Program	Wildfire Mitigation Program	WMP AFN Customer Support	No	This workpaper includes several initiatives aimed at reducing impacts, improving coordination and Medical Baseline and Access and Functional Needs (AFN) customer awareness during fires or PSPS events. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Balanced Program	Wildfire Mitigation Program	Emergency Management Operations (PSPS)	No	Activities include reducing risk by effectively responding to fires or extreme fire potential events. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Balanced Program	Wildfire Mitigation Program	Wildfire Mitigation Personnel	No	Activities include several initiatives to track and report on wildfire mitigation programs through quarterly reports and annual Wildfire Mitigation Plan (WMP) filing. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Balanced Program	Wildfire Mitigation Program	Risk Assessment & Mapping	No	Activities include the development of specific risk modeling tools, Wildfire Risk Reduction Model (WRRM) and WRRM-Operational System (WRRM-Ops). The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Balanced Program	Wildfire Mitigation Program	Data Governance	No	Activities include the centralization of wildfire data, WMP metrics, data repository, and documentation of models. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Balanced Program	Wildfire Mitigation Program	LiDAR Flights	No	There is no single number of like units that would be comparable year over year that can be identified because light detection and ranging (LiDAR) inspections is a new and evolving initiative that uses LiDAR surveys. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Balanced Program	Wildfire Mitigation Program	Covered Conductor	No	Number of miles hardened (Capital)	-	-	21	61	60	142	-	-	-	-	-	-	-	-	21	61	60	142	—%	—%	100%	100%	100%	100%	

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance
O&M	Balanced Program	Wildfire Mitigation Program	Strategic Undergrounding	No	Number of Miles UG (Capital)	-	-	26	65	70	161	-	-	-	-	-	-	-	-	26	65	70	161	—%	—%	100%	100%	100%	100%

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
O&M	Balanced Program	Wildfire Mitigation Program	Private LTE	No	LTE Communication Network	-	-	-	1	1	2	-	-	-	-	-	-	-	-	-	1	1	2	-%	-%	-%	100%	100%	100%	
O&M	Balanced Program	Wildfire Mitigation Program	Vegetation Restoration Initiative	No	There is no reportable units for 2023, the Vegetation Restoration Initiative is a new program. In 2021, SDG&E established the 10,000 tree initiative and built the framework for the "Right Tree Right Place" program. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Balanced Program	Sub-Total Wildfire Mitigation Program		Yes																										
O&M	Balanced Program	Vegetation Management (Pole Brushing)	Safety Policies & Programs	No	Poles brushed	35,600	34,994	35,186	36,622	35,258	177,660	54,706	54,706	54,706	54,706	54,706	273,530	(19,106)	(19,712)	(19,520)	(18,084)	(19,448)	(95,870)	-35%	-36%	-36%	-33%	-36%	-35%	
O&M	Balanced Program	Vegetation Management (Pole Brushing)	Non-RAMP	No								-	-	-	-	-	-	-	-	-	-	-	-	-%	-%	-%	-%	-%	-%	
O&M	Balanced Program	Vegetation Management (Pole Brushing)	Joint Power Line Inspections with CalFire	No	FTEs utilized	0	0	0	0	0	2	0	0	0	0	0	2	-	-	-	-	-	-	-%	-%	-%	-%	-%	-%	
O&M	Balanced Program	Sub-Total Vegetation Management (Pole Brushing)		Yes																										
O&M	Balanced Program	Vegetation Management (Tree Trimming)	Programs to inspect and maintain trees in SDG&E's service territory that have the potential to encroach within the minimum required compliance distance between vegetation and overhead power lines.	No	Number of Trees Inspected	453,330	455,000	482,588	513,586	514,626	2,419,130	454,893	454,893	454,893	454,893	454,893	2,274,465	(1,563)	107	27,695	58,693	59,733	144,665	-0%	0%	6%	13%	13%	6%	

4. SDG&E BALANCED PROGRAMS - DIMP, TIMP, TREE TRIMMING, ELECTRIC DISTRIBUTION OVERHEAD POLE  
A. SDG&E Balanced Programs Direct O&M Costs

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Balanced Program	Total TIMP & DIMP		Yes									
O&M	Balanced Program	TIMP	Assessments of transmission pipelines in High Consequence Areas (49 CFR Part 192 Subpart O) to evaluate and remediate threats and minimize risk.	No	Yes	Yes	TIMP complies with 49 CFR §192, Subpart O—Gas Transmission Pipeline Integrity Management, and includes activities such as threat identification and risk assessment, pipeline assessments, remediation, and other actions that minimize threats and integrity concerns to reduce risk of pipeline failure. The number of assessment projects vary year to year primarily based on the timing and intervals of prior assessments and compliance dates. Furthermore, integrity assessments remain variable based on external factors (e.g., risks and threats) and individual project costs will differ. The 2023 variance in expenditures is due to an increase in baseline in-line inspection (ILI) assessments. Due to new federal regulations that had not been considered during the development of TY 2019 GRC forecast, additional data collection, analysis, and assessment activities have impacted actual costs incurred. These new regulations have driven the use of more advanced tools and assessment methods (e.g., ILI), which resulted in increased data analysis and threat management activities while also improving pipeline knowledge. Additionally, new technology (i.e., Electro Magnetic Acoustic Transducer [EMAT]) was required for pipelines with cracking (specifically, Stress Corrosion Cracking) and manufacturing threats. Actual costs reflect all costs as recorded in 2023. In Q1 of 2024, approximately \$472 of the actual costs incurred were reallocated to the Gas Transmission Safety Rule Part 1 activity (described in the SDG&E Gas Distribution section of this report). These costs were incurred for detailed planning of GTSR Part 1 Maximum Allowable Operating Pressure (MAOP) Reconfirmation scope.	2023 units were not proposed in SDG&E's TY 2019 GRC, and for the purposes of the RSAR, SDG&E adopted 2019 authorized units for 2023 reporting. As stated previously, the number of assessments vary year to year based on prescribed compliance-driven assessment cycles. Additionally, PHMSA allows the use of multiple assessment methods to comply with 49 CFR Part 192, Subpart O and the selected methods may vary depending on SDG&E's system knowledge, prior assessments, and findings. Units should be reviewed in aggregate rather than by assessment methods. The 2023 variance in ILI assessments is also driven by the new federal regulations discussed in the cost variance explanation. SDG&E has increased the use of advanced ILI tools to enhance the assessment and evaluation of pipeline threats in compliance with 49 CFR §192, Subpart O.	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Balanced Program	TIMP	Assessments of transmission pipelines in High Consequence Areas (49 CFR Part 192 Subpart O) to evaluate and remediate threats and minimize risk.	No	Yes	Yes	TIMP complies with 49 CFR §192, Subpart O—Gas Transmission Pipeline Integrity Management, and includes activities such as threat identification and risk assessment, pipeline assessments, remediation, and other actions that minimize threats and integrity concerns to reduce risk of pipeline failure. The number of assessment projects vary year to year primarily based on the timing and intervals of prior assessments and compliance dates. Furthermore, integrity assessments remain variable based on external factors (e.g., risks and threats) and individual project costs will differ. The 2023 variance in expenditures is due to an increase in baseline in-line inspection (ILI) assessments. Due to new federal regulations that had not been considered during the development of TY 2019 GRC forecast, additional data collection, analysis, and assessment activities have impacted actual costs incurred. These new regulations have driven the use of more advanced tools and assessment methods (e.g., ILI), which resulted in increased data analysis and threat management activities while also improving pipeline knowledge. Additionally, new technology (i.e., Electro Magnetic Acoustic Transducer [EMAT]) was required for pipelines with cracking (specifically, Stress Corrosion Cracking) and manufacturing threats. Actual costs reflect all costs as recorded in 2023. In Q1 of 2024, approximately \$472 of the actual costs incurred were reallocated to the Gas Transmission Safety Rule Part 1 activity (described in the SDG&E Gas Distribution section of this report). These costs were incurred for detailed planning of GTSR Part 1 Maximum Allowable Operating Pressure (MAOP) Reconfirmation scope.	2023 units were not proposed in SDG&E's TY 2019 GRC, and for the purposes of the RSAR, SDG&E adopted 2019 authorized units for 2023 reporting. As stated previously, the number of assessments vary year to year based on prescribed compliance-driven assessment cycles. Additionally, PHMSA allows the use of multiple assessment methods to comply with 49 CFR Part 192, Subpart O and the selected methods may vary depending on SDG&E's system knowledge, prior assessments, and findings. Units should be reviewed in aggregate rather than by assessment methods. In addition to the units listed on the template, 2 direct examination assessments were also completed in 2023.	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Balanced Program	DIMP	Programs in place to minimize integrity risks to distribution pipelines and minimize infrastructure damage.	No	Yes	No	As described in the TY 2019 GRC testimony, DIMP costs are driven by existing and new projects and activities to assess risk (PAARs); and, while SDG&E continues to develop PAARs to address distribution integrity risks, integrity management activity and expenditures remain variable. This year's lower than forecasted expenses are attributable to increased focus on other DIMP PAARs to address risk, as informed by the Distribution Risk Evaluation and Monitoring System (DREAMS) model.	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Balanced Program	Total ED Wildfire Mitigation Balanced Program		Yes									
O&M	Balanced Program	Wildfire Mitigation Program	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Other	No
O&M	Balanced Program	Wildfire Mitigation Program	Utility Asset Management - (WMP)	No	No	Yes	N/A	Decreased unit variance due to no consulting spend in 2023.	On Target (T)	On Target (T)	Under (U)	Other	Yes
O&M	Balanced Program	Wildfire Mitigation Program	Wildfire Communications	No	Yes	Yes	Increased cost variance due to expanded customer engagement efforts related to wildfire safety, including Public Safety Power Shutoff (PSPS) communications.	Increased unit variance due to expanded wildfire efforts, including Public Safety Power Shutoff (PSPS) communications.	Over (O)	Over (O)	Over (O)	Expanded	No
O&M	Balanced Program	Wildfire Mitigation Program	Fire Science & Climate Adaptation	No	Yes	No	Increased cost variance due to extended situational awareness observing and forecasting efforts, which includes an expanding comprehensive network of weather and fuels sensors stations, and the accumulation of detailed fire science data for scientific study and modeling. In addition, increased pricing under a new contract for Contracted Firefighting Resources in 2023.	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Balanced Program	Wildfire Mitigation Program	UAS Safety Program	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Balanced Program	Wildfire Mitigation Program	System Hardening and Helo	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No



Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Balanced Program	Wildfire Mitigation Program	Inspection and Preventative Maintenance	No	Yes	No	Variance is due to lower Wildfire Mitigation Plan (WMP) O&M associated with traditional inspection & preventative maintenance (e.g., HFTD Inspections & Repairs, infrared Inspections) and increased emergent related costs, such as the Drone Inspection Program.	N/A	On Target (T)	On Target (T)	Under (U)	Other	No
O&M	Balanced Program	Wildfire Mitigation Program	Meteorology Studies and Education	No	No	Yes	N/A	Decreased unit variance is due to the program being tracked outside of the Wildfire Mitigation Program. All costs associated with climate vulnerability assessment are reported and tracked within Climate Adaptation Vulnerability Assessment Memorandum Account (CAVAMA). In addition, the "1" unit represents the same unit SDG&E has been working on for the past few years, and not separate climate vulnerability assessments (CVAs).	On Target (T)	On Target (T)	Under (U)	Other	Yes
O&M	Balanced Program	Wildfire Mitigation Program	Emergency Prep Trainings	No	Yes	No	Increased cost pressures due to significantly expanded wildfire preparation and response efforts. The number of preparation and response efforts increased, and the dollars associated with these efforts significantly increased.	N/A	Over (O)	Over (O)	Over (O)	Expanded	No
O&M	Balanced Program	Wildfire Mitigation Program	Records Management	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Other	No
O&M	Balanced Program	Wildfire Mitigation Program	Fuels Management	No	Yes	Yes	After SDG&E filed its TY 2019 GRC Application, Senate Bill 901 required electric corporations, including SDG&E, to annually submit Wildfire Mitigation Plans. Therefore, SDG&E proposed additional wildfire mitigation activities beyond or incremental to those included in the GRC. The Fuels Management Program is an incremental activity managing fuel reduction involving thinning, pruning, and removal of vegetation along SDG&E rights of way and adjacent fire-prone corridors.	After SDG&E filed its TY 2019 GRC Application, Senate Bill 901 required electric corporations, including SDG&E, to annually submit Wildfire Mitigation Plans. Therefore, SDG&E proposed additional wildfire mitigation activities beyond or incremental to those included in the GRC. The Fuels Management Program is an incremental activity managing fuel reduction involving thinning, pruning, and removal of vegetation along SDG&E rights of way and adjacent fire-prone corridors.	Over (O)	Over (O)	Over (O)	Emergent	No
O&M	Balanced Program	Wildfire Mitigation Program	Asset Management & Inspections	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
O&M	Balanced Program	Wildfire Mitigation Program	Drone Inspection Program	No	Yes	Yes	After SDG&E filed its TY 2019 GRC Application, Senate Bill 901 required electric corporations, including SDG&E, to annually submit Wildfire Mitigation Plans. Accordingly, SDG&E proposed additional wildfire mitigation activities beyond or incremental to those included in the GRC. The Drone Inspection Program is an incremental activity deploying advanced inspection technologies to inspect and repair electrical infrastructure in the HFTD. The increase in costs is due to the use of external contracted pilots and qualified electric workers (QEWs) to perform enhanced inspections. In addition, increased costs were driven by follow-up repair work, whereas 2019 costs for "Inspection & Preventative Maintenance" were not inclusive of the follow-up repair costs. Lastly, much of the inspection costs were separated out between HFTD and non-HFTD, and the 2019 costs appear to be inclusive of all inspections that we used to perform under one budget prior to WMP filings. The increased spend in 2023 compared to prior years, with reduced amount of inspections are due to the increased rate of repairs from the beginning of the program and the transition to risk based inspections.	After SDG&E filed its TY 2019 GRC Application, Senate Bill 901 required electric corporations, including SDG&E, to annually submit Wildfire Mitigation Plans. Accordingly, SDG&E proposed additional wildfire mitigation activities beyond or incremental to those included in the GRC. The Drone Inspection Program is an incremental activity deploying advanced inspection technologies to inspect and repair electrical infrastructure in the HFTD. The decreased units from prior years is due to SDG&E adopting a risk-based approach to selecting the structures that will receive drone inspections each year.	Over (O)	Over (O)	Over (O)	Emergent	No
O&M	Balanced Program	Wildfire Mitigation Program	Hotline Clamps	No	No	Yes	N/A	After SDG&E filed its TY 2019 GRC Application, Senate Bill 901 required electric corporations, including SDG&E, to annually submit Wildfire Mitigation Plans. Accordingly, SDG&E proposed additional wildfire mitigation activities beyond or incremental to those included in the GRC. The Hotline Clamps (HLC) Replacement Program is an incremental activity that replaces HLC connections that are connected directly onto the overhead primary conductors with compression connections to eliminate the risk of the wire down failure and the associated wildfire risk.	Over (O)	Over (O)	Over (O)	Emergent	No

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Balanced Program	Wildfire Mitigation Program	Resiliency Grant Programs	No	Yes	Yes	After SDG&E filed its TY 2019 GRC Application, Senate Bill 901 required electric corporations, including SDG&E, to annually submit Wildfire Mitigation Plans. Accordingly, SDG&E proposed additional wildfire mitigation activities beyond or incremental to those included in the GRC. The Resiliency Grant Program is an incremental activity focused on enhancing PSPS resiliency among vulnerable customer segments and includes several projects aimed at providing customers with renewable backup power options during PSPS events.	After SDG&E filed its TY 2019 GRC Application, Senate Bill 901 required electric corporations, including SDG&E, to annually submit Wildfire Mitigation Plans. Accordingly, SDG&E proposed additional wildfire mitigation activities beyond or incremental to those included in the GRC. The Resiliency Grant Program is an incremental activity focused on enhancing PSPS resiliency among vulnerable customer segments and includes several projects aimed at providing customers with renewable backup power options during PSPS events.	Over (O)	Over (O)	Over (O)	Emergent	No
O&M	Balanced Program	Wildfire Mitigation Program	Standby Power Programs	No	Yes	Yes	After SDG&E filed its TY 2019 GRC Application, Senate Bill 901 required electric corporations, including SDG&E, to annually submit Wildfire Mitigation Plans. Accordingly, SDG&E proposed additional wildfire mitigation activities beyond or incremental to those included in the GRC. The Standby Power Program is an incremental activity aimed at providing alternative energy solutions to targeted participating customers ensuring a comprehensive source of power to energize their entire home or business.	After SDG&E filed its TY 2019 GRC Application, Senate Bill 901 required electric corporations, including SDG&E, to annually submit Wildfire Mitigation Plans. Accordingly, SDG&E proposed additional wildfire mitigation activities beyond or incremental to those included in the GRC. The Standby Power Program is an incremental activity aimed at providing alternative energy solutions to targeted participating customers ensuring a comprehensive source of power to energize their entire home or business.	Over (O)	Over (O)	Over (O)	Emergent	No
O&M	Balanced Program	Wildfire Mitigation Program	Resiliency Assistance Programs	No	No	Yes	N/A	After SDG&E filed its TY 2019 GRC Application, Senate Bill 901 required electric corporations, including SDG&E, to annually submit Wildfire Mitigation Plans. Accordingly, SDG&E proposed additional wildfire mitigation activities beyond or incremental to those included in the GRC. The Resiliency Assistance Program is an incremental activity that focuses on enhancing resiliency for customers who reside in the HFTD and may be impacted by PSPS events. The program offers a rebate to customers providing a 70-to-90 percent discount on average portable generator models to mitigate the impacts of PSPS.	Over (O)	Over (O)	Over (O)	Emergent	No
O&M	Balanced Program	Wildfire Mitigation Program	Microgrids	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
O&M	Balanced Program	Wildfire Mitigation Program	PSPS Communications Protocols	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
O&M	Balanced Program	Wildfire Mitigation Program	WMP Tribal Customer Support	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
O&M	Balanced Program	Wildfire Mitigation Program	WMP AFN Customer Support	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
O&M	Balanced Program	Wildfire Mitigation Program	Emergency Management Operations (PSPS)	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
O&M	Balanced Program	Wildfire Mitigation Program	Wildfire Mitigation Personnel	No	Yes	No	After SDG&E filed its TY 2019 GRC Application, Senate Bill 901 required electric corporations, including SDG&E, to annually submit Wildfire Mitigation Plans. Accordingly, SDG&E proposed additional wildfire mitigation activities beyond or incremental to those included in the GRC. Wildfire Mitigation Personnel is an incremental activity and includes costs for several initiatives to track and report on wildfire mitigation programs through quarterly reports and annual WMP filing. The increased costs in 2023 compared to prior years is due to the comprehensive cost review for WMP Track 2 application.	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
O&M	Balanced Program	Wildfire Mitigation Program	Risk Assessment & Mapping	No	Yes	No	After SDG&E filed its TY 2019 GRC Application, Senate Bill 901 required electric corporations, including SDG&E, to annually submit Wildfire Mitigation Plans. Accordingly, SDG&E proposed additional wildfire mitigation activities beyond or incremental to those included in the GRC. Risk Assessment & Mapping is an incremental activity and includes costs for several initiatives to support the company's goals of safety, reliability, and risk reduction through the enablement of data-driven, risk-informed decision making.	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
O&M	Balanced Program	Wildfire Mitigation Program	Data Governance	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
O&M	Balanced Program	Wildfire Mitigation Program	LiDAR Flights	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
O&M	Balanced Program	Wildfire Mitigation Program	Covered Conductor	No	No	Yes	N/A	After SDG&E filed its TY 2019 GRC Application, Senate Bill 901 required electric corporations, including SDG&E, to annually submit Wildfire Mitigation Plans. Accordingly, SDG&E proposed additional wildfire mitigation activities beyond or incremental to those included in the GRC. The Covered Conductor Program is an incremental activity utilizing conductors manufactured with an internal semiconducting layer and external insulating ultraviolet-resistant layers to provide incidental contact protection.	Over (O)	Over (O)	Over (O)	Emergent	No

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Balanced Program	Wildfire Mitigation Program	Strategic Undergrounding	No	No	Yes	N/A	After SDG&E filed its TY 2019 GRC Application, Senate Bill 901 required electric corporations, including SDG&E, to annually submit Wildfire Mitigation Plans. Accordingly, SDG&E proposed additional wildfire mitigation activities beyond or incremental to those included in the GRC. The Strategic Undergrounding program is an incremental activity converting overhead systems to underground, providing the dual benefits of nearly eliminating wildfire risk and the need for PSPS events in these areas.	Over (O)	Over (O)	Over (O)	Emergent	No

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Balanced Program	Wildfire Mitigation Program	Private LTE	No	No	Yes	N/A	After SDG&E filed its TY 2019 GRC Application, Senate Bill 901 required electric corporations, including SDG&E, to annually submit Wildfire Mitigation Plans. Accordingly, SDG&E proposed additional wildfire mitigation activities beyond or incremental to those included in the GRC. The privately-owned LTE network uses licensed radio frequency spectrum by means of the Distribution Communications Reliability Improvements (DCRI) program to support some of the technologies deployed as wildfire mitigations, including the Advanced Protection Program and Falling Conductor Protection.	Over (O)	Over (O)	Over (O)	Emergent	No
O&M	Balanced Program	Wildfire Mitigation Program	Vegetation Restoration Initiative	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
O&M	Balanced Program	Sub-Total Wildfire Mitigation Program		Yes	Yes								No
O&M	Balanced Program	Vegetation Management (Pole Brushing)	Safety Policies & Programs	No	Yes	Yes	Increased cost variance due to mandated, contractor labor wage increases related to Senate Bill 247, and an increase in the volume of work performed under a higher-cost Time and Equipment (hourly) rate. Increased cost variance also due to newly negotiated contract and rates to perform fieldwork.	Decreased unit variance is representative of the total poles brushed in 2023 versus imputed actual units that can include multiple activities for the same pole (e.g., Notification = inspect pole, notify customer, & check for ability to apply chemicals; Chemical Application; Mechanical Clearing; Re-Clearing; and Chemical Warranty).	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Balanced Program	Vegetation Management (Pole Brushing)	Non-RAMP	No	No	No	N/A	N/A					No
O&M	Balanced Program	Vegetation Management (Pole Brushing)	Joint Power Line Inspections with CalFire	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Balanced Program	Sub-Total Vegetation Management (Pole Brushing)		Yes	Yes								No
O&M	Balanced Program	Vegetation Management (Tree Trimming)	Programs to inspect and maintain trees in SDG&E's service territory that have the potential to encroach within the minimum required compliance distance between vegetation and overhead power lines.	No	Yes	No	Increased cost variance due to mandated, contractor labor wage increases related to Senate Bill 247, and an increase in the volume of work performed under a higher-cost Time and Equipment (hourly) rate. Increased cost variance also due to newly negotiated contract and rates to perform fieldwork.	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No

4. SDG&E BALANCED PROGRAMS - DIMP, TIMP, TREE TRIMMING, ELECTRIC DISTRIBUTION OVERHEAD POLE  
A. SDG&E Balanced Programs Direct O&M Costs

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Balanced Program	Total TIMP & DIMP		Yes				
O&M	Balanced Program	TIMP	Assessments of transmission pipelines in High Consequence Areas (49 CFR Part 192 Subpart O) to evaluate and remediate threats and minimize risk.	No	N/A	TIMP complies with 49 CFR 192, Subpart O—Gas Transmission Pipeline Integrity Management, and includes activities such as threat identification and risk assessment, pipeline assessments, remediation, and other actions that minimize threats and integrity concerns to reduce risk of pipeline failure.	SDGE-11 MTM-9 to MTM-16 WP 1TD000.000	SDGE-09-R AK-TS-19 to AK-TS-26 WP 1TD001.000
O&M	Balanced Program	TIMP	Assessments of transmission pipelines in High Consequence Areas (49 CFR Part 192 Subpart O) to evaluate and remediate threats and minimize risk.	No	N/A	TIMP complies with 49 CFR 192, Subpart O—Gas Transmission Pipeline Integrity Management, and includes activities such as threat identification and risk assessment, pipeline assessments, remediation, and other actions that minimize threats and integrity concerns to reduce risk of pipeline failure.	SDGE-11 MTM-9 to MTM-16 WP 1TD000.000	SDGE-09-R AK-TS-19 to AK-TS-26 WP 1TD001.000
O&M	Balanced Program	DIMP	Programs in place to minimize integrity risks to distribution pipelines and minimize infrastructure damage.	No	N/A	DIMP focuses on the entire distribution system since distribution pipelines are largely in developed, more-populated areas to deliver gas to those populations. SDG&E operates approximately 15,330 miles of interconnected gas mains and services. SDG&E's size and location of operations has a direct and significant bearing on overall costs to comply with federal DIMP requirements. SDG&E's DIMP is designed to meet these objectives to remain in compliance with federal regulations and to promote safety and reliability to its customers at reasonable rates.	SDGE-11 MTM-16 to MTM-21 WP 1TD000.001	SDGE-09-R AK-TS-26 to AK-TS-32 WP 1TD002
O&M	Balanced Program	Total ED Wildfire Mitigation Balanced Program		Yes				
O&M	Balanced Program	Wildfire Mitigation Program	Non-RAMP	No	Beginning in 2021, the costs and units related to this Non-RAMP line item are included in the various wildfire mitigation programs described herein.			
O&M	Balanced Program	Wildfire Mitigation Program	Utility Asset Management - (WMP)	No	The costs associated with this line item have been directly charged to the various Wildfire Mitigation Plan (WMP) programs described herein.	Asset Management is a newly formed group that will be involved in creating and developing a strategic asset management capability for SDG&E, in accordance with the world class standard of ISO 55000. ISO55000 compliance was recommended in a report by the Safety and Enforcement Division (SED) in March 2015. This new group will be the program structure that assesses, leverages and integrates the in-flight improvement work across all aspects of the business, and creates select new asset management capability.	SDG&E-15-2R Table WS-2 (see SDG&E-12 Electric Infrastructure Integrity), WHS-6 to WHS-12, and WHS-13	N/A
O&M	Balanced Program	Wildfire Mitigation Program	Wildfire Communications	No	N/A	This workpaper was created for purposes of this report to provide in a single workpaper for SDG&E's wildfire-related prevention and mitigation O&M activities and is consistent with the GRC activities that are now included in SDG&E's subsequently filed Wildfire Mitigation Plans (See Rulemaking (R.) 18-10-007).	SDG&E-15-2R Table WS-2 (see SDG&E-1 Wildfires Caused by SDG&E Equipment), WHS-6 to WHS-9, and WHS-13	SDG&E-13-2R-E JTW-86 to JTW-88 WP 1WM008.000
O&M	Balanced Program	Wildfire Mitigation Program	Fire Science & Climate Adaptation	No	N/A	The Fire Science & Climate Adaptation Department is comprised of meteorologists, community resiliency experts, fire coordinators, and project management personnel. Its purpose is promoting situational awareness, responding to threats posed by wildfire and climate change impacts, and strategizing for SDG&E's fire preparedness activities and programs.	SDG&E-15-2R Table WS-2 (see SDG&E-1 Wildfires Caused by SDG&E Equipment), WHS-6 to WHS-12, and WHS-13	SDG&E-13-2R-E JTW-44 to JTW-48 WP 1WM002.000
O&M	Balanced Program	Wildfire Mitigation Program	UAS Safety Program	No	N/A			
O&M	Balanced Program	Wildfire Mitigation Program	System Hardening and Helo	No	N/A			

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Balanced Program	Wildfire Mitigation Program	Inspection and Preventative Maintenance	No	The cost and units associated with this line item is for Wildfire Mitigation Plan (WMP) O&M associated with traditional inspection & preventative maintenance (e.g., HFTD Inspections & Repairs, infrared Inspections). These costs and efforts have shifted to emergent programs, such as the Drone Inspection Program.	This workpaper was created for purposes of this report to provide in a single workpaper for SDG&E's wildfire-related prevention and mitigation O&M activities and is consistent with the GRC activities that are now included in SDG&E's subsequently filed Wildfire Mitigation Plans (See Rulemaking (R.) 18-10-007).	SDG&E-15-2R Table WS-2 (see SDG&E-1 Wildfires Caused by SDG&E Equipment), WHS-6 to WHS-9, and WHS-13	SDG&E-13-2R-E JTW-54 to JTW-58 WP 1WM004.000
O&M	Balanced Program	Wildfire Mitigation Program	Meteorology Studies and Education	No	All costs associated with climate vulnerability assessment are reported and tracked within Climate Adaptation Vulnerability Assessment Memorandum Account (CAVAMA).	This workpaper was created for purposes of this report to provide in a single workpaper for SDG&E's wildfire-related prevention and mitigation O&M activities and is consistent with the GRC activities that are now included in SDG&E's subsequently filed Wildfire Mitigation Plans (See Rulemaking (R.) 18-10-007).	SDG&E-15-2R Table WS-2 (see SDG&E-1 Wildfires Caused by SDG&E Equipment), WHS-6 to WHS-9, and WHS-13	N/A
O&M	Balanced Program	Wildfire Mitigation Program	Emergency Prep Trainings	No	N/A	This workpaper was created for purposes of this report to provide in a single workpaper for SDG&E's wildfire-related prevention and mitigation O&M activities and is consistent with the GRC activities that are now included in SDG&E's subsequently filed Wildfire Mitigation Plans (See Rulemaking (R.) 18-10-007).	SDG&E-15-2R Table WS-2 (see SDG&E-1 Wildfires Caused by SDG&E Equipment), WHS-6 to WHS-9, and WHS-13	SDG&E-13 -2R JTW-31 to JTW-43 WP 1WM001.000
O&M	Balanced Program	Wildfire Mitigation Program	Records Management	No	The costs associated with this line item have been directly charged to the various Wildfire Mitigation Plan (WMP) programs described herein.			
O&M	Balanced Program	Wildfire Mitigation Program	Fuels Management	No	N/A	Protecting SDG&E's electric system from wildfires is critical to system reliability and first responder and public safety. SDG&E's Fuels Management program sustainably manages land through selective vegetation thinning to mitigate the risk of wildfire affecting SDG&E's energy infrastructure and the communities it serves. Wildland fuel reduction involves the thinning, pruning, and in some cases, removal of vegetation along SDG&E rights-of-way and adjacent fire-prone corridors to minimize source material that could ignite and propagate a wildfire. The reduction of wildland fuel in these areas has the potential to slow the spread of a fire and make it more likely to be contained.	N/A	SDG&E-13 -2R JTW-62 to JTW-64 WP 1WM005.000
O&M	Balanced Program	Wildfire Mitigation Program	Asset Management & Inspections	No	N/A			
O&M	Balanced Program	Wildfire Mitigation Program	Drone Inspection Program	No	N/A	The O&M costs associated with the Drone Investigation, Assessment and Repair (DIAR) program include performing the drone flights, assessing the drone imagery, performing minor repairs, and maintenance to keep running machine learning models that review drone imagery for infractions. Documentation of forecasted DIAR O&M costs are included with supplemental capital workpapers. See SDG&E-13-CWP Budget Code 202480.	N/A	SDG&E-13-2R-E JTW-55 to JTW-56 WP 1WM004.000
O&M	Balanced Program	Wildfire Mitigation Program	Hotline Clamps	No	N/A	Replacement of hotline clamps with compression connections to eliminate the risk of the wire down failure associated with hotline clamps, which in turn will reduce wire down events and ignitions associated with connection failures.	N/A	SDG&E-13-2R-E JTW-48 to JTW-54 WP 1WM003.000

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Balanced Program	Wildfire Mitigation Program	Resiliency Grant Programs	No	N/A	SDG&E's Resiliency Grant Programs focus on enhancing PSPS resiliency among vulnerable customer segments in SDG&E's territory. This program consists of several projects aimed at providing customers with renewable backup power options during PSPS events. The primary initiative in this category is the Generator Grant Program (GGP), which was launched in 2019. The GGP offers portable battery units with solar charging capacity to customers, leveraging cleaner, renewable generator options to give vulnerable customers a means to keep small devices and appliances charged and powered during PSPS events. While these are not whole facility solutions, they allow vulnerable customers access to needed power to support life saving devices and means of communication.	N/A	SDG&E-13-2R-E JTW-48 to JTW-54 WP 1WM003.000
O&M	Balanced Program	Wildfire Mitigation Program	Standby Power Programs	No	N/A	SDG&E's Standby Power Programs provide alternative energy solutions aimed at providing the participating customer a comprehensive source of power to energize their entire home or business. Targeted customers –residential, small commercial, critical facilities, and mobile home park clubhouses will experience fewer PSPS risks as a result of this program. This program is aimed at providing whole facility power solutions for backcountry residences, businesses, and local communities in the HFTD that may not benefit from planned hardening initiatives.	N/A	SDG&E-13-2R-E JTW-48 to JTW-54 WP 1WM003.000
O&M	Balanced Program	Wildfire Mitigation Program	Resiliency Assistance Programs	No	N/A	SDG&E is also minimizing risk by increasing customer resilience through its Resiliency Assistance Programs, which provide eligible customers point-of-sale rebates for generators purchased through traditional retailers. The Resiliency Assistance Programs were enhanced in several ways starting 2021. Expansion of the type of offered rebates allowed customers more choice and opened supply chain options to additional local and national retailers by allowing customers to purchase generators at their preferred stores and then redeem coupons post purchase. In an effort to provide new options for customers, SDG&E also added portable batteries and power station options to the rebate program, following demonstrated demand for these products at other utilities in California and beyond.	N/A	SDG&E-13-2R-E JTW-48 to JTW-54 WP 1WM003.000
O&M	Balanced Program	Wildfire Mitigation Program	Microgrids	No	N/A			
O&M	Balanced Program	Wildfire Mitigation Program	PSPS Communications Protocols	No	N/A			
O&M	Balanced Program	Wildfire Mitigation Program	WMP Tribal Customer Support	No	N/A			
O&M	Balanced Program	Wildfire Mitigation Program	WMP AFN Customer Support	No	N/A			
O&M	Balanced Program	Wildfire Mitigation Program	Emergency Management Operations (PSPS)	No	N/A			
O&M	Balanced Program	Wildfire Mitigation Program	Wildfire Mitigation Personnel	No	N/A	Wildfire Mitigation Personnel consists of three departments overseen by the Director of Wildfire Mitigation: (1)The Wildfire Mitigation Programs group is involved with the various regulatory proceedings that address wildfire and de-energization as well as legislative and media inquiries; (2)The Wildfire Mitigation Strategy group develops metrics, leads vision projects, promotes new ways to enhance fire safety, and explores advancements to further drive improvement and change including risk modeling capabilities; (3) The Wildfire Mitigation Accountability group is responsible for monitoring fire-related metrics, tracking WMP activities, complying with reporting requirements, and providing for governance specifications and procedures.	N/A	SDG&E-13-2R-E JTW-77 to JTW-80 WP 1WM007.000
O&M	Balanced Program	Wildfire Mitigation Program	Risk Assessment & Mapping	No	N/A	Risk Assessment and Mapping includes the ongoing development and implementation of SDG&E's wildfire modeling. SDG&E continues to refine a primarily automated risk assessment and mapping methodology to analytically evaluate and prioritize proposed grid hardening projects and emergency actions from the standpoint of reducing fire risk potential from overhead electric facilities.	N/A	SDG&E-13-2R-E JTW-80 to JTW-83 WP 1WM007.001
O&M	Balanced Program	Wildfire Mitigation Program	Data Governance	No	N/A			
O&M	Balanced Program	Wildfire Mitigation Program	LiDAR Flights	No	N/A			
O&M	Balanced Program	Wildfire Mitigation Program	Covered Conductor	No	N/A	SDG&E has a number of initiatives, including covered conductor and strategic undergrounding that reduce risk events on utility equipment, thus lowering the likelihood of ignition. Protection and equipment programs such as advanced protection, the expulsion fuse replacement program, and the lightning arrester program further aid in reducing ignition risk. These programs reduce the chance that a risk event results in an ignition by utilizing protection settings and/or equipment that address a specific failure mode known to lead to ignition. Replacement of hotline clamps with compression connections to eliminate the risk of the wire down failure associated with hotline clamps, which in turn will reduce wire down events and ignitions associated with connection failures.	N/A	SDG&E-13-2R-E JTW-48 to JTW-54 WP 1WM003.000

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Balanced Program	Wildfire Mitigation Program	Strategic Undergrounding	No	N/A	SDG&E has a number of initiatives, including covered conductor and strategic undergrounding that reduce risk events on utility equipment, thus lowering the likelihood of ignition. Protection and equipment programs such as advanced protection, the expulsion fuse replacement program, and the lightning arrestor program further aid in reducing ignition risk. These programs reduce the chance that a risk event results in an ignition by utilizing protection settings and/or equipment that address a specific failure mode known to lead to ignition. Replacement of hotline clamps with compression connections to eliminate the risk of the wire down failure associated with hotline clamps, which in turn will reduce wire down events and ignitions associated with connection failures.	N/A	SDG&E-13-2R-E JTW-48 to JTW-54 WP 1WM003.000



Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Balanced Program	Wildfire Mitigation Program	Private LTE	No	N/A	Existing wireless communications infrastructure is increasingly inadequate to meet the demand for greater volumes of high-speed data. Expanding existing systems can provide coverage over a larger area but cannot meet the demand for high volume low latency data and control. To address this, this project will implement a privately-owned LTE network using licensed radio frequency spectrum by means of the DCRI program.	N/A	SDG&E-13-2R-E JTW-112 to JTW-113 CWP 198730
O&M	Balanced Program	Wildfire Mitigation Program	Vegetation Restoration Initiative	No	N/A			
O&M	Balanced Program	<b>Sub-Total Wildfire Mitigation Program</b>		Yes				
O&M	Balanced Program	Vegetation Management (Pole Brushing)	Safety Policies & Programs	No	N/A	Pole brushing for SDG&E involves the clearing of flammable brush and vegetation away from SDG&E distribution poles subject to the California Public Resource Code (PRC), section 4292. PRC 4292 is intended to prevent energized electrical hardware from igniting a fire by keeping the area under the subject poles clear of flammable vegetation at all times.	SDG&E-15-2R WHS-66 to WHS-69 WP 1ED021.000	SDG&E-13-2R-E JTW-61 to JTW-62 WP 1WM005.000
O&M	Balanced Program	Vegetation Management (Pole Brushing)	Non-RAMP	No	N/A			
O&M	Balanced Program	Vegetation Management (Pole Brushing)	Joint Power Line Inspections with CalFire	No	N/A			
O&M	Balanced Program	<b>Sub-Total Vegetation Management (Pole Brushing)</b>		Yes				
O&M	Balanced Program	Vegetation Management (Tree Trimming)	Programs to inspect and maintain trees in SDG&E's service territory that have the potential to encroach within the minimum required compliance distance between vegetation and overhead power lines.	No	N/A	SDG&E's Vegetation Management program complies with CPUC GO 95, Rule 35; Public Resources 25 Code, sections 4292 and 4293; and NERC FAC-003 and is responsible for inspecting and maintaining an inventory of approximately 450,000 trees. The tree trimming work includes pruning healthy trees growing into overhead power lines as well as the pruning or removal of dead, dying, diseased, or structurally unsound trees with the potential to fall into overhead lines.	SDG&E-15-2R WHS-69 to WHS-72 WP 1ED021.000	SDG&E-13-2R-E JTW-68 to JTW-71 WP 1WM005.001

B. SDG&E Balanced Programs Direct Capital Costs

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
Capital	Balanced Program	TIMP & DIMP		Yes			47,247	45,629	60,551	80,133	104,656	338,216	55,444	27,368	27,801	28,129	28,729	167,471
Capital	Balanced Program	TIMP	TIMP ILI/ECDA	No	On-going	Annual	5,435	3,818	2,290	12,442	26,998	50,983	4,526	8,236	8,366	8,465	8,645	38,237
Capital	Balanced Program	DIMP	DIMP DREAMS	No	On-going	Annual	41,812	41,811	58,261	67,690	77,658	287,232	50,918	19,133	19,435	19,665	20,084	129,234
Capital	Balanced Program	IT WMP - Balanced		Yes			9,066	55,234	80,348	80,619	115,655	340,921	56,474	13,156	13,509	13,798	14,143	111,080
Capital	Balanced Program	Customer Services	Stakeholder Cooperation & Community Engagement	No	Emergent	Completed	—	5,224	4,488	1,587	—	11,300	—	—	—	—	—	—
Capital	Balanced Program	PSPP Enhancements	Communication Practices	No	Emergent	Completed	—	—	528	859	6	1,393	—	—	—	—	—	—
Capital	Balanced Program	IT WMP - Balanced	LTE Communication Network	No	2	5	8,242	36,343	49,902	46,602	79,049	220,137	56,474	13,156	13,509	13,798	14,143	111,080
Capital	Balanced Program	IT - Enterprise - Application	Emergency Planning & Preparedness	No	Emergent	Completed	—	1,748	349	—	—	2,097	—	—	—	—	—	—
Capital	Balanced Program	IT - Enterprise - Application	Data Governance (BC 208750)	No	Emergent	Completed	—	7,336	(162)	8	—	7,182	—	—	—	—	—	—
Capital	Balanced Program	IT - Enterprise - Application	Data Governance (BC 208910)	No	Emergent	Completed	—	2,585	3,691	4,622	363	11,261	—	—	—	—	—	—
Capital	Balanced Program	IT - Enterprise - Application	Data Governance (BC 208890)	No	Emergent	Completed	22	293	—	—	—	315	—	—	—	—	—	—
Capital	Balanced Program	IT - Enterprise - Application	Asset 360 WMP	No	Emergent	2	—	—	—	2,003	5,033	7,036	—	—	—	—	—	—
Capital	Balanced Program	IT - Enterprise - Application	Investmnt Portfolio Optimization WMP	No	Emergent	2	—	—	—	792	1,519	2,311	—	—	—	—	—	—
Capital	Balanced Program	IT - Enterprise - Application	Situational Awareness & Forecasting	No	Emergent	Completed	4	424	54	—	—	481	—	—	—	—	—	—
Capital	Balanced Program	IT - Enterprise - Application	Resource Allocation Methodology	No	Emergent	Completed	—	444	159	—	—	602	—	—	—	—	—	—
Capital	Balanced Program	IT - Enterprise - Application	Asset Management	No	Emergent	Completed	—	—	2,047	2,519	(74)	4,493	—	—	—	—	—	—
Capital	Balanced Program	IT - Enterprise - Application	Emergency Management Operations	No	Emergent	Completed	—	—	3,140	2,016	—	5,156	—	—	—	—	—	—
Capital	Balanced Program	IT - Enterprise - Application	Communication Practices	No	Emergent	Completed	—	—	1,083	—	—	1,083	—	—	—	—	—	—
Capital	Balanced Program	IT - Enterprise - Application	Inspection, Repair, Maintenance & Replacement Programs	No	Emergent	Completed	783	48	—	—	—	831	—	—	—	—	—	—
Capital	Balanced Program	IT - Enterprise - Application	Grid Operations & Operating Protocols	No	Emergent	Completed	15	789	—	—	—	804	—	—	—	—	—	—
Capital	Balanced Program	IT - Enterprise - Application	AQI Notifications	No	Emergent	Completed	—	—	—	399	101	500	—	—	—	—	—	—
Capital	Balanced Program	IT - Enterprise - Application	ENS Enhancement WMP	No	Emergent	Completed	—	—	—	1,844	421	2,265	—	—	—	—	—	—
Capital	Balanced Program	IT - Enterprise - Application	PSPP Mobile App	No	Emergent	Completed	—	—	—	2,422	500	2,922	—	—	—	—	—	—
Capital	Balanced Program	IT - Enterprise - Application	Digital Fortress Ph2	No	Emergent	2	—	—	—	1,344	2,786	4,130	—	—	—	—	—	—
Capital	Balanced Program	IT - Enterprise - Application	Advanced Analytics	No	Emergent	1	—	—	—	—	2,607	2,607	—	—	—	—	—	—
Capital	Balanced Program	IT - Enterprise - Application	WMP Foundation & Reporting	No	Emergent	1	—	—	—	—	3,998	3,998	—	—	—	—	—	—

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
Capital	Balanced Program	IT - Enterprise - Application	WMP Vegetation Management Service	No	Emergent	1	—	—	—	—	1,107	1,107	—	—	—	—	—	—
Capital	Balanced Program	IT - Enterprise - Application	PSPP All Hazards & K2	No	Emergent	1	—	—	—	—	10,974	10,974	—	—	—	—	—	—
Capital	Balanced Program	IT - Enterprise - Application	WMP Operation Megaphone	No	Emergent	1	—	—	—	—	1,638	1,638	—	—	—	—	—	—
Capital	Balanced Program	IT - Enterprise - Application	Centralized Repository for Data	No	Emergent	3	—	—	15,071	13,601	5,627	34,299	—	—	—	—	—	—
<b>Capital</b>	<b>Balanced Program</b>	<b>Sub-Total IT - Enterprise - Application</b>		<b>Yes</b>			<b>824</b>	<b>13,667</b>	<b>25,430</b>	<b>31,571</b>	<b>36,600</b>	<b>108,092</b>	—	—	—	—	—	—
Capital	Balanced Program	Facilities WMP - Balanced	Emergency Management Operations	No	1	1	(0)	—	—	—	16,477	16,477	3,175	670	688	703	721	5,957
Capital	Balanced Program	Electric Distribution Balanced Projects		Yes			331,706	481,401	482,288	544,091	621,902	2,461,389	378,354	212,259	219,069	224,765	230,873	1,265,320
Capital	Balanced Program	RAMP Base - Annual Pole Reinforcement (WMP)	GO165: Distribution Inspect and Repair program	No	On-going	Annual	10,573	10,121	13,180	12,691	9,797	56,362	9,404	10,783	11,129	11,419	11,729	54,464
Capital	Balanced Program	RAMP Base - Wireless Fault Indicators	Design and Engineering Approaches	No	On-going	Annual	799	837	1,106	852	5	3,600	4,884	1,726	1,781	1,827	1,877	12,095
Capital	Balanced Program	Overhead System Hardening	System Hardening	No	On-going	Annual	124,163	139,673	132,705	111,879	86,221	594,641	114,399	54,759	56,516	57,986	59,561	343,221
Capital	Balanced Program	HFTD Fuse Replacements	Expulsion Fuse Replacements	No	On-going	Annual	3,595	6,291	6,053	623	47	16,608	—	—	—	—	—	—

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
Capital	Balanced Program	PSPS Engineering Enhancements	PSPS Sectionalizing	No	On-going	Annual	1,302	5,072	1,904	2,361	2,031	12,670	—	—	—	—	—	—
Capital	Balanced Program	HFTD Undergrounding	Strategic Undergrounding	No	On-going	Annual	194	38,896	69,538	127,058	171,282	406,969	—	—	—	—	—	—
Capital	Balanced Program	Meteorology - Fire Science Enhancements	WRRM - OPS	No	Emergent	5	270	1,191	1,446	1,633	1,280	5,820	—	—	—	—	—	—
Capital	Balanced Program	Backup Power for Resiliency	Microgrids	No	Emergent	5	201	3,608	13,053	2,719	3,291	22,872	—	—	—	—	—	—
Capital	Balanced Program	CNF - RAMP	System Hardening	No	6	Completed	52,316	80,339	11,265	1,230	1,080	146,229	45,003	12,384	12,781	13,113	13,470	96,751
Capital	Balanced Program	TL649 Otay-San Ysidro-Border SW Pole Repl - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	1	Completed	1,917	1,279	10	—	—	3,206	—	—	—	—	—	—
Capital	Balanced Program	TL691 Avo-Mon Wood to Steel - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	3	8	58	192	109	254	3,910	4,524	—	—	—	—	—	—
Capital	Balanced Program	TL6912 Wood to Steel Pole Replacement - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	2	Completed	528	2,782	267	(37)	15	3,555	—	—	—	—	—	—
Capital	Balanced Program	TL6926 Rincon to Valley Center Fire Hardening	OH Trans Fire Hardening Dist Underbuild	No	Emergent	4	0	78	1,536	66	3,749	5,430	—	—	—	—	—	—
Capital	Balanced Program	TL690E - Camp Pendleton - Wood to Steel	Inspection, Repair, Maintenance & Replacement Programs	No	Emergent	5	160	164	146	170	161	801	—	—	—	—	—	—
Capital	Balanced Program	TL692 Horno Pulgas (Camp Pend)	Inspection, Repair, Maintenance & Replacement Programs	No	Emergent	Completed	101	69	2,225	157	6	2,557	—	—	—	—	—	—
Capital	Balanced Program	TL639 Wood to Steel Replacement	Inspection, Repair, Maintenance & Replacement Programs	No	Emergent	5	3	37	81	355	868	1,345	—	—	—	—	—	—
Capital	Balanced Program	TL636 Wood to Steel Replacement	Inspection, Repair, Maintenance & Replacement Programs	No	Emergent	5	12	60	39	288	14	411	—	—	—	—	—	—
Capital	Balanced Program	TL13831 Wood to Steel Replacement (Talega - Rancho Mission Viejo)	Inspection, Repair, Maintenance & Replacement Programs	No	Emergent	Completed	7	38	133	471	2,046	2,695	—	—	—	—	—	—
Capital	Balanced Program	TL23001 TL23004 Wood to Steel Replacement (Mission - San Luis Rey)	Inspection, Repair, Maintenance & Replacement Programs	No	Emergent	Completed	—	37	6	—	—	43	—	—	—	—	—	—
Capital	Balanced Program	Lightning Arrestor Replacement Program	Inspection, Repair, Maintenance & Replacement Programs	No	Emergent	4	—	20	1,795	3,275	3,010	8,099	—	—	—	—	—	—

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
Capital	Balanced Program	Aerial Mesh Network Expansion	Aviation Firefighting Program	No	Emergent	5	64	185	15	21	7	291	—	—	—	—	—	—
Capital	Balanced Program	Drone Investigation Assessment And Repair	Distribution System Inspection Drone Inspections	No	Emergent	4	—	15,899	12,386	51,457	69,565	149,306	—	—	—	—	—	—
Capital	Balanced Program	Aviation Firefighting Program	Grid Operations & Operating Protocols	No	Emergent	4	—	7,092	10,461	591	201	18,346	—	—	—	—	—	—
Capital	Balanced Program	Aviation Training Area	Aviation Training Area	No	Emergent	2	—	—	—	5	964	969	—	—	—	—	—	—
Capital	Balanced Program	Aviation Crossing Markers	Aviation Crossing Markers	No	Emergent	2	—	—	—	966	1,061	2,028	—	—	—	—	—	—

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
Capital	Balanced Program	Avian Protection WMP	Avian Protection WMP	No	On-going	Annual	—	—	—	1,843	1,395	3,238	1,103	950	981	1,006	1,034	5,075
Capital	Balanced Program	Elect Transmission Line Reliability Projects	Transmission System Inspection	No	On-going	Annual	442	1,479	337	489	1,120	3,866	674	548	566	581	596	2,966
Capital	Balanced Program	Trans Fiber Links HFTD	LTE Communication Network	No	On-going	Annual	1,018	4,304	6,642	5,554	8,648	26,166	264	190	196	201	207	1,059
Capital	Balanced Program	Ramp Base - Install SCADA On-Line Capacitors	Expand and Maintain Distribution Advanced SCADA infrastructure	No	On-going	Annual	189	1,032	1,945	3,481	1,454	8,101	3,571	1,728	1,784	1,830	1,880	10,794
Capital	Balanced Program	RAMP Base - Weather Station Adv Detection	Advanced Detection	No	On-going	Annual	544	1,032	392	207	92	2,266	1,111	536	554	568	583	3,352
Capital	Balanced Program	TL6916 Sycamore Canyon to Scripps Wood to Steel	OH Trans Fire Hardening Dist Underbuild	No	1	Completed	(15)	68	427	889	26	1,394	290	50	52	53	54	499
Capital	Balanced Program	TL698 Monserate - Avocado Wood to Steel	OH Trans Fire Hardening Dist Underbuild	No	1	5	105	148	272	482	2,488	3,494	857	296	305	313	322	2,093
Capital	Balanced Program	TL694 Wood To Steel	OH Trans Fire Hardening Dist Underbuild	No	1	5	—	—	—	—	—	—	857	148	153	157	161	1,475
Capital	Balanced Program	TL13838 Wood to Steel Replacement (Magarita - Rancho Mission Viejo)	OH Trans Fire Hardening Dist Underbuild	No	1	Completed	—	—	93	20	10	123	—	—	—	—	—	—
Capital	Balanced Program	TL690C Camp Pendleton Wood to Steel	OH Trans Fire Hardening Dist Underbuild	No	Emergent	3	—	—	8	13	19	41	—	—	—	—	—	—
Capital	Balanced Program	Helicopter HD/IR Cameras	Aviation Firefighting Program	No	Emergent	Completed	—	—	817	365	—	1,182	—	—	—	—	—	—
Capital	Balanced Program	TwinEngine Med Lift Helicopter	Aviation Firefighting Program	No	Emergent	3	—	—	2,182	9,468	1,221	12,871	—	—	—	—	—	—
Capital	Balanced Program	Transmission DIAR UAS Purchase	Aviation Firefighting Program	No	Emergent	Completed	—	—	113	—	—	113	—	—	—	—	—	—
Capital	Balanced Program	IR Flir Monocular	Inspection, Repair, Maintenance & Replacement Programs	No	Emergent	Completed	—	—	175	—	—	175	—	—	—	—	—	—
Capital	Balanced Program	SDG&E ENS Enhancements	Non-RAMP	No	Emergent	Completed	757	—	—	—	—	757	—	—	—	—	—	—
Capital	Balanced Program	TL695 Talega Wood to Steel - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	2	5	110	87	126	107	84	514	—	—	—	—	—	—
Capital	Balanced Program	WMP ENHANCED COMM 800MHZ RADIO SYSTEMS	Emergency Planning & Preparedness	No	Emergent	Completed	—	225	—	—	—	225	—	—	—	—	—	—

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
Capital	Balanced Program	Meteorology Super Computer Replacements	Meteorology Super Computer Replacements	No	Emergent	Completed	—	—	—	5,224	10	5,234	—	—	—	—	—	—
Capital	Balanced Program	Mobile IR Sub Cameras WMP	Mobile IR Sub Cameras WMP	No	Emergent	2	—	—	—	4	115	119	—	—	—	—	—	—
Capital	Balanced Program	Wildfire Resiliency Platform (WiNGS)	Wildfire Resiliency Platform (WiNGS)	No	Emergent	2	—	—	—	1,486	2,434	3,920	—	—	—	—	—	—
Capital	Balanced Program	Early Fault Detection	Early Fault Detection	No	Emergent	2	—	—	—	6,552	6,025	12,577	—	—	—	—	—	—
Capital	Balanced Program	TL686-W2S_Wind	TL686-W2S_Wind	No	Emergent	1	—	—	—	—	13	13	—	—	—	—	—	—
Capital	Balanced Program	Strategic Pole Replacement Program (SPRP) - WMP	Strategic Pole Replacement Program (SPRP) - WMP	No	Emergent	1	—	—	—	—	69	69	—	—	—	—	—	—
Capital	Balanced Program	Risk Drone Inspection	Risk Drone Inspection	No	Emergent	1	—	—	—	—	5,057	5,057	—	—	—	—	—	—
Capital	Balanced Program	HFTD RFS Projects	HFTD RFS Projects	No	Emergent	1	—	—	—	—	114	114	—	—	—	—	—	—
Capital	Balanced Program	Advanced Protection	Inspection, Repair, Maintenance & Replacement Programs	No	On-going	Annual	3,494	9,164	10,787	17,274	16,111	56,830	23,533	10,568	10,907	11,190	11,494	67,692
<b>Capital</b>	<b>Balanced Program</b>	<b>Sub-Total WMP Projects (Balanced Costs)</b>		<b>Yes</b>			<b>202,908</b>	<b>331,497</b>	<b>303,773</b>	<b>372,543</b>	<b>407,114</b>	<b>1,617,835</b>	<b>205,950</b>	<b>94,667</b>	<b>97,704</b>	<b>100,245</b>	<b>102,969</b>	<b>601,535</b>
Capital	Balanced Program	Local Engineering Pool - Electric Distribution	Non-RAMP	No	On-going	Annual	94,109	114,865	143,137	131,960	157,781	641,852	102,725	80,633	83,220	85,384	87,705	439,667
Capital	Balanced Program	Local Engineering Pool - ED RAMP	Works Standards and Methods	No	On-going	Annual	3,146	2,442	599	30	—	6,216	849	814	840	862	886	4,251
<b>Capital</b>	<b>Balanced Program</b>	<b>Sub-Total Local Engineering Pool – Electric Distribution</b>		<b>Yes</b>			<b>97,255</b>	<b>117,306</b>	<b>143,736</b>	<b>131,990</b>	<b>157,781</b>	<b>648,068</b>	<b>103,574</b>	<b>81,447</b>	<b>84,060</b>	<b>86,246</b>	<b>88,590</b>	<b>443,918</b>

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
Capital	Balanced Program	Local Engineering Pool - Substation	Non-RAMP	No	On-going	Annual	2,464	3,872	3,296	3,927	4,637	18,196	51,296	22,864	23,598	24,212	24,870	146,839
Capital	Balanced Program	Department Overhead Pool	Non-RAMP	No	On-going	Annual	12,460	13,581	18,306	24,201	35,566	104,115	7,594	5,431	5,605	5,751	5,907	30,287
Capital	Balanced Program	Contract Admin Pool - RAMP Base	Administration of Projects performed by Contractors	No	On-going	Annual	16,619	15,145	13,177	11,430	16,804	73,175	9,942	7,849	8,101	8,311	8,537	42,740
<b>Capital</b>	<b>Balanced Program</b>	<b>Sub-Total ED Overhead Pools (Balanced Costs)</b>		<b>Yes</b>			<b>128,798</b>	<b>149,905</b>	<b>178,515</b>	<b>171,548</b>	<b>214,788</b>	<b>843,554</b>	<b>172,405</b>	<b>117,592</b>	<b>121,365</b>	<b>124,520</b>	<b>127,904</b>	<b>663,785</b>



B. SDG&E Balanced Programs Direct Capital Costs

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
Capital	Balanced Program	TIMP & DIMP		Yes	(8,197)	18,261	32,750	52,003	75,927	170,744	-15%	67%	118%	185%	264%	102%
Capital	Balanced Program	TIMP	TIMP IL/ECDA	No	909	(4,418)	(6,076)	3,978	18,353	12,746	20%	-54%	-73%	47%	212%	33%
Capital	Balanced Program	DIMP	DIMP DREAMS	No	(9,106)	22,678	38,825	48,026	57,574	157,998	-18%	119%	200%	244%	287%	122%
Capital	Balanced Program	IT WMP - Balanced		Yes	(47,409)	42,077	66,838	66,822	101,512	229,841	-84%	320%	495%	484%	718%	207%
Capital	Balanced Program	Customer Services	Stakeholder Cooperation & Community Engagement	No	—	5,224	4,488	1,587	—	11,300	0%	100%	100%	100%	0%	100%
Capital	Balanced Program	PSPP Enhancements	Communication Practices	No	—	—	528	859	6	1,393	0%	0%	100%	100%	100%	100%
Capital	Balanced Program	IT WMP - Balanced	LTE Communication Network	No	(48,232)	23,187	36,392	32,804	64,906	109,057	-85%	176%	269%	238%	459%	98%
Capital	Balanced Program	IT - Enterprise - Application	Emergency Planning & Preparedness	No	—	1,748	349	—	—	2,097	0%	100%	100%	0%	0%	100%
Capital	Balanced Program	IT - Enterprise - Application	Data Governance (BC 208750)	No	—	7,336	(162)	8	—	7,182	0%	100%	100%	100%	0%	100%
Capital	Balanced Program	IT - Enterprise - Application	Data Governance (BC 208910)	No	—	2,585	3,691	4,622	363	11,261	0%	100%	100%	100%	100%	100%
Capital	Balanced Program	IT - Enterprise - Application	Data Governance (BC 208890)	No	22	293	—	—	—	315	100%	100%	0%	0%	0%	100%
Capital	Balanced Program	IT - Enterprise - Application	Asset 360 WMP	No	—	—	—	2,003	5,033	7,036	0%	0%	0%	100%	100%	100%
Capital	Balanced Program	IT - Enterprise - Application	Investmnt Portfolio Optimization WMP	No	—	—	—	792	1,519	2,311	0%	0%	0%	100%	100%	100%
Capital	Balanced Program	IT - Enterprise - Application	Situational Awareness & Forecasting	No	4	424	54	—	—	481	100%	100%	100%	0%	0%	100%
Capital	Balanced Program	IT - Enterprise - Application	Resource Allocation Methodology	No	—	444	159	—	—	602	0%	100%	100%	0%	0%	100%
Capital	Balanced Program	IT - Enterprise - Application	Asset Management	No	—	—	2,047	2,519	(74)	4,493	0%	0%	100%	100%	100%	100%
Capital	Balanced Program	IT - Enterprise - Application	Emergency Management Operations	No	—	—	3,140	2,016	—	5,156	0%	0%	100%	100%	0%	100%
Capital	Balanced Program	IT - Enterprise - Application	Communication Practices	No	—	—	1,083	—	—	1,083	0%	0%	100%	0%	0%	100%
Capital	Balanced Program	IT - Enterprise - Application	Inspection, Repair, Maintenance & Replacement Programs	No	783	48	—	—	—	831	100%	100%	0%	0%	0%	100%
Capital	Balanced Program	IT - Enterprise - Application	Grid Operations & Operating Protocols	No	15	789	—	—	—	804	100%	100%	0%	0%	0%	100%
Capital	Balanced Program	IT - Enterprise - Application	AQI Notifications	No	—	—	—	399	101	500	0%	0%	0%	100%	100%	100%
Capital	Balanced Program	IT - Enterprise - Application	ENS Enhancement WMP	No	—	—	—	1,844	421	2,265	0%	0%	0%	100%	100%	100%
Capital	Balanced Program	IT - Enterprise - Application	PSPP Mobile App	No	—	—	—	2,422	500	2,922	0%	0%	0%	100%	100%	100%
Capital	Balanced Program	IT - Enterprise - Application	Digital Fortress Ph2	No	—	—	—	1,344	2,786	4,130	0%	0%	0%	100%	100%	100%
Capital	Balanced Program	IT - Enterprise - Application	Advanced Analytics	No	—	—	—	—	2,607	2,607	0%	0%	0%	0%	100%	100%
Capital	Balanced Program	IT - Enterprise - Application	WMP Foundation & Reporting	No	—	—	—	—	3,998	3,998	0%	0%	0%	0%	100%	100%

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
Capital	Balanced Program	IT - Enterprise - Application	WMP Vegetation Management Service	No	—	—	—	—	1,107	1,107	0%	0%	0%	0%	100%	100%
Capital	Balanced Program	IT - Enterprise - Application	PSPP All Hazards & K2	No	—	—	—	—	10,974	10,974	0%	0%	0%	0%	100%	100%
Capital	Balanced Program	IT - Enterprise - Application	WMP Operation Megaphone	No	—	—	—	—	1,638	1,638	0%	0%	0%	0%	100%	100%
Capital	Balanced Program	IT - Enterprise - Application	Centralized Repository for Data	No	—	—	15,071	13,601	5,627	34,299	0%	0%	100%	100%	100%	100%
<b>Capital</b>	<b>Balanced Program</b>	<b>Sub-Total IT - Enterprise - Application</b>		<b>Yes</b>	<b>824</b>	<b>13,667</b>	<b>25,430</b>	<b>31,571</b>	<b>36,600</b>	<b>108,092</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
Capital	Balanced Program	Facilities WMP - Balanced	Emergency Management Operations	No	(3,175)	(670)	(688)	(703)	15,756	10,519	-100%	-100%	-100%	-100%	2187%	177%
Capital	Balanced Program	Electric Distribution Balanced Projects		Yes	(46,648)	269,143	263,219	319,326	391,029	1,196,069	-12%	127%	120%	142%	169%	95%
Capital	Balanced Program	RAMP Base - Annual Pole Reinforcement (WMP)	GO165: Distribution Inspect and Repair program	No	1,168	(662)	2,051	1,272	(1,932)	1,897	12%	-6%	18%	11%	-16%	3%
Capital	Balanced Program	RAMP Base - Wireless Fault Indicators	Design and Engineering Approaches	No	(4,085)	(888)	(675)	(975)	(1,872)	(8,495)	-84%	-51%	-38%	-53%	-100%	-70%
Capital	Balanced Program	Overhead System Hardening	System Hardening	No	9,764	84,913	76,189	53,894	26,659	251,420	9%	155%	135%	93%	45%	73%
Capital	Balanced Program	HFTD Fuse Replacements	Expulsion Fuse Replacements	No	3,595	6,291	6,053	623	47	16,608	100%	100%	100%	100%	100%	100%

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Capital	Balanced Program	PSPS Engineering Enhancements	PSPS Sectionalizing	No	1,302	5,072	1,904	2,361	2,031	12,670	100%	100%	100%	100%	100%	100%
Capital	Balanced Program	HFTD Undergrounding	Strategic Undergrounding	No	194	38,896	69,538	127,058	171,282	406,969	100%	100%	100%	100%	100%	100%
Capital	Balanced Program	Meteorology - Fire Science Enhancements	WRRM - OPS	No	270	1,191	1,446	1,633	1,280	5,820	100%	100%	100%	100%	100%	100%
Capital	Balanced Program	Backup Power for Resiliency	Microgrids	No	201	3,608	13,053	2,719	3,291	22,872	100%	100%	100%	100%	100%	100%
Capital	Balanced Program	CNF - RAMP	System Hardening	No	7,313	67,955	(1,516)	(11,883)	(12,389)	49,479	16%	549%	-12%	-91%	-92%	51%
Capital	Balanced Program	TL649 Otay-San Ysidro-Border SW Pole Repl - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	1,917	1,279	10	—	—	3,206	100%	100%	100%	0%	0%	100%
Capital	Balanced Program	TL691 Avo-Mon Wood to Steel - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	58	192	109	254	3,910	4,524	100%	100%	100%	100%	100%	100%
Capital	Balanced Program	TL6912 Wood to Steel Pole Replacement - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	528	2,782	267	(37)	15	3,555	100%	100%	100%	100%	100%	100%
Capital	Balanced Program	TL6926 Rincon to Valley Center Fire Hardening	OH Trans Fire Hardening Dist Underbuild	No	0	78	1,536	66	3,749	5,430	100%	100%	100%	100%	100%	100%
Capital	Balanced Program	TL690E – Camp Pendleton – Wood to Steel	Inspection, Repair, Maintenance & Replacement Programs	No	160	164	146	170	161	801	100%	100%	100%	100%	100%	100%
Capital	Balanced Program	TL692 Horno Pulgas (Camp Pend)	Inspection, Repair, Maintenance & Replacement Programs	No	101	69	2,225	157	6	2,557	100%	100%	100%	100%	100%	100%
Capital	Balanced Program	TL639 Wood to Steel Replacement	Inspection, Repair, Maintenance & Replacement Programs	No	3	37	81	355	868	1,345	100%	100%	100%	100%	100%	100%
Capital	Balanced Program	TL636 Wood to Steel Replacement	Inspection, Repair, Maintenance & Replacement Programs	No	12	60	39	288	14	411	100%	100%	100%	100%	100%	100%
Capital	Balanced Program	TL13831 Wood to Steel Replacement (Talega - Rancho Mission Viejo)	Inspection, Repair, Maintenance & Replacement Programs	No	7	38	133	471	2,046	2,695	100%	100%	100%	100%	100%	100%
Capital	Balanced Program	TL23001 TL23004 Wood to Steel Replacement (Mission - San Luis Rey)	Inspection, Repair, Maintenance & Replacement Programs	No	—	37	6	—	—	43	0%	100%	100%	0%	0%	100%
Capital	Balanced Program	Lightning Arrester Replacement Program	Inspection, Repair, Maintenance & Replacement Programs	No	—	20	1,795	3,275	3,010	8,099	0%	100%	100%	100%	100%	100%

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Capital	Balanced Program	Aerial Mesh Network Expansion	Aviation Firefighting Program	No	64	185	15	21	7	291	100%	100%	100%	100%	100%	100%
Capital	Balanced Program	Drone Investigation Assessment And Repair	Distribution System Inspection Drone Inspections	No	—	15,899	12,386	51,457	69,565	149,306	0%	100%	100%	100%	100%	100%
Capital	Balanced Program	Aviation Firefighting Program	Grid Operations & Operating Protocols	No	—	7,092	10,461	591	201	18,346	0%	100%	100%	100%	100%	100%
Capital	Balanced Program	Aviation Training Area	Aviation Training Area	No	—	—	—	5	964	969	0%	0%	0%	100%	100%	100%
Capital	Balanced Program	Aviation Crossing Markers	Aviation Crossing Markers	No	—	—	—	966	1,061	2,028	0%	0%	0%	100%	100%	100%

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
Capital	Balanced Program	Avian Protection WMP	Avian Protection WMP	No	(1,103)	(950)	(981)	837	361	(1,837)	-100%	-100%	-100%	83%	35%	-36%
Capital	Balanced Program	Elect Transmission Line Reliability Projects	Transmission System Inspection	No	(232)	930	(229)	(91)	523	901	-34%	170%	-41%	-16%	88%	30%
Capital	Balanced Program	Trans Fiber Links HFTD	LTE Communication Network	No	754	4,114	6,446	5,353	8,442	25,108	286%	2163%	3283%	2657%	4080%	2372%
Capital	Balanced Program	Ramp Base - Install SCADA On-Line Capacitors	Expand and Maintain Distribution Advanced SCADA infrastructure	No	(3,382)	(697)	161	1,650	(426)	(2,693)	-95%	-40%	9%	90%	-23%	-25%
Capital	Balanced Program	RAMP Base - Weather Station Adv Detection	Advanced Detection	No	(567)	496	(162)	(361)	(491)	(1,086)	-51%	92%	-29%	-64%	-84%	-32%
Capital	Balanced Program	TL6916 Sycamore Canyon to Scripps Wood to Steel	OH Trans Fire Hardening Dist Underbuild	No	(305)	18	375	836	(28)	895	-105%	35%	725%	1575%	-52%	179%
Capital	Balanced Program	TL698 Monserate - Avocado Wood to Steel	OH Trans Fire Hardening Dist Underbuild	No	(752)	(148)	(34)	168	2,166	1,401	-88%	-50%	-11%	54%	673%	67%
Capital	Balanced Program	TL694 Wood To Steel	OH Trans Fire Hardening Dist Underbuild	No	(857)	(148)	(153)	(157)	(161)	(1,475)	-100%	-100%	-100%	-100%	-100%	-100%
Capital	Balanced Program	TL13838 Wood to Steel Replacement (Magarita - Rancho Mission Viejo)	OH Trans Fire Hardening Dist Underbuild	No	—	—	93	20	10	123	0%	0%	100%	100%	100%	100%
Capital	Balanced Program	TL690C Camp Pendleton Wood to Steel	OH Trans Fire Hardening Dist Underbuild	No	—	—	8	13	19	41	0%	0%	100%	100%	100%	100%
Capital	Balanced Program	Helicopter HD/IR Cameras	Aviation Firefighting Program	No	—	—	817	365	—	1,182	0%	0%	100%	100%	0%	100%
Capital	Balanced Program	TwinEngine Med Lift Helicopter	Aviation Firefighting Program	No	—	—	2,182	9,468	1,221	12,871	0%	0%	100%	100%	100%	100%
Capital	Balanced Program	Transmission DIAR UAS Purchase	Aviation Firefighting Program	No	—	—	113	—	—	113	0%	0%	100%	0%	0%	100%
Capital	Balanced Program	IR Flir Monocular	Inspection, Repair, Maintenance & Replacement Programs	No	—	—	175	—	—	175	0%	0%	100%	0%	0%	100%
Capital	Balanced Program	SDG&E ENS Enhancements	Non-RAMP	No	757	—	—	—	—	757	100%	0%	0%	0%	0%	100%
Capital	Balanced Program	TL695 Talega Wood to Steel - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	110	87	126	107	84	514	100%	100%	100%	100%	100%	100%
Capital	Balanced Program	WMP ENHANCED COMM 800MHZ RADIO SYSTEMS	Emergency Planning & Preparedness	No	—	225	—	—	—	225	0%	100%	0%	0%	0%	100%

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
Capital	Balanced Program	Meteorology Super Computer Replacements	Meteorology Super Computer Replacements	No	—	—	—	5,224	10	5,234	0%	0%	0%	100%	100%	100%
Capital	Balanced Program	Mobile IR Sub Cameras WMP	Mobile IR Sub Cameras WMP	No	—	—	—	4	115	119	0%	0%	0%	100%	100%	100%
Capital	Balanced Program	Wildfire Resiliency Platform (WiNGS)	Wildfire Resiliency Platform (WiNGS)	No	—	—	—	1,486	2,434	3,920	0%	0%	0%	100%	100%	100%
Capital	Balanced Program	Early Fault Detection	Early Fault Detection	No	—	—	—	6,552	6,025	12,577	0%	0%	0%	100%	100%	100%
Capital	Balanced Program	TL686-W2S_Wind	TL686-W2S_Wind	No	—	—	—	13	13	13	0%	0%	0%	0%	100%	100%
Capital	Balanced Program	Strategic Pole Replacement Program (SPRP) - WMP	Strategic Pole Replacement Program (SPRP) - WMP	No	—	—	—	69	69	69	0%	0%	0%	0%	100%	100%
Capital	Balanced Program	Risk Drone Inspection	Risk Drone Inspection	No	—	—	—	5,057	5,057	5,057	0%	0%	0%	0%	100%	100%
Capital	Balanced Program	HFTD RFS Projects	HFTD RFS Projects	No	—	—	—	114	114	114	0%	0%	0%	0%	100%	100%
Capital	Balanced Program	Advanced Protection	Inspection, Repair, Maintenance & Replacement Programs	No	(20,039)	(1,404)	(120)	6,084	4,617	(10,861)	-85%	-13%	-1%	54%	40%	-16%
<b>Capital</b>	<b>Balanced Program</b>	<b>Sub-Total WMP Projects (Balanced Costs)</b>		<b>Yes</b>	<b>(3,041)</b>	<b>236,829</b>	<b>206,069</b>	<b>272,298</b>	<b>304,145</b>	<b>1,016,300</b>	<b>-1%</b>	<b>250%</b>	<b>211%</b>	<b>272%</b>	<b>295%</b>	<b>169%</b>
Capital	Balanced Program	Local Engineering Pool - Electric Distribution	Non-RAMP	No	(8,616)	34,231	59,917	46,575	70,076	202,185	-8%	42%	72%	55%	80%	46%
Capital	Balanced Program	Local Engineering Pool - ED RAMP	Works Standards and Methods	No	2,297	1,628	(242)	(832)	(886)	1,965	271%	200%	-29%	-97%	-100%	46%
<b>Capital</b>	<b>Balanced Program</b>	<b>Sub-Total Local Engineering Pool – Electric Distribution</b>		<b>Yes</b>	<b>(6,318)</b>	<b>35,859</b>	<b>59,676</b>	<b>45,743</b>	<b>69,191</b>	<b>204,150</b>	<b>-6%</b>	<b>44%</b>	<b>71%</b>	<b>53%</b>	<b>78%</b>	<b>46%</b>

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
Capital	Balanced Program	Local Engineering Pool - Substation	Non-RAMP	No	(48,831)	(18,993)	(20,302)	(20,285)	(20,233)	(128,643)	-95%	-83%	-86%	-84%	-81%	-88%
Capital	Balanced Program	Department Overhead Pool	Non-RAMP	No	4,866	8,151	12,701	18,451	29,659	73,828	64%	150%	227%	321%	502%	244%
Capital	Balanced Program	Contract Admin Pool - RAMP Base	Administration of Projects performed by Contractors	No	6,677	7,296	5,076	3,118	8,267	30,435	67%	93%	63%	38%	97%	71%
<b>Capital</b>	<b>Balanced Program</b>	<b>Sub-Total ED Overhead Pools (Balanced Costs)</b>		<b>Yes</b>	<b>(43,606)</b>	<b>32,313</b>	<b>57,150</b>	<b>47,028</b>	<b>86,885</b>	<b>179,770</b>	<b>-25%</b>	<b>27%</b>	<b>47%</b>	<b>38%</b>	<b>68%</b>	<b>27%</b>

B. SDG&E Balanced Programs Direct Capital Costs

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
Capital	Balanced Program	TIMP & DIMP		Yes																										
Capital	Balanced Program	TIMP	TIMP ILI/ECDA	No	This activity and the work completed in 2019-2023 consists of pipeline remediation work as a result of integrity assessment findings. The number and types of remediation are driven by each assessment. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Balanced Program	DIMP	DIMP DREAMS	No	DIMP DREAMS Miles	47	51	52	55	56	261	27	27	27	27	27	135	20	24	25	28	29	126	74%	90%	93%	103%	108%	93%	
Capital	Balanced Program	IT WMP - Balanced		Yes																										
Capital	Balanced Program	Customer Services	Stakeholder Cooperation & Community Engagement	No	The workpaper contains multiple components of Public Safety Power Shutoff (PSPS) mobile app and the Enterprise Notification System (ENS) for our customers and employees during times of emergency and other events that require mass notifications, including integration, event locker files, data saving, messaging and reporting. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Balanced Program	PSPP Enhancements	Communication Practices	No	The workpaper contains several components of the enhanced the Public Safety Partner Portal, including a PSPP event outage map, urgent news module, view of critical facilities, source code management improvements, data automation and resource center locations. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Balanced Program	IT WMP - Balanced	LTE Communication Network	No	The workpaper contains several foundational components of the LTE network, including spectrum license acquisition, data center core implementation and field deployment. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Balanced Program	IT - Enterprise - Application	Emergency Planning & Preparedness	No	The workpaper contains activities to implement core ICS based incident management system to capture data during EOC activations. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Balanced Program	IT - Enterprise - Application	Data Governance (BC 208750)	No	The workpaper contains activities to consolidate disparate data, develop dashboards and reporting for electric distribution and transmission. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Balanced Program	IT - Enterprise - Application	Data Governance (BC 208910)	No	The workpaper contains activities to build out central data repository, reporting and analytics solutions across variety of WMP related initiatives. Project includes ingestion of raw data into central repository from multiple source systems, development of logical views, visualizations and advanced analytics models to provide actionable insights. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Balanced Program	IT - Enterprise - Application	Data Governance (BC 208890)	No	The workpaper contains multiple components of the GIS Web Viewer system, including deployment of a series of GIS portal based web applications, optimization of the data services architecture to improve performance, upgrade, design and publishment of secure data/web services. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Balanced Program	IT - Enterprise - Application	Asset 360 WMP	No	The workpaper contains activities to integrate asset, risk event, outage, and maintenance and inspection data including build consolidated views, data catalogues, data cleansing and data governance for asset data. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Balanced Program	IT - Enterprise - Application	Investmt Portfolio Optimization WMP	No	The workpaper contains activities to replace existing application to use a new value-based decision model approach for capital investment decisions and/or prioritization. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Balanced Program	IT - Enterprise - Application	Situational Awareness & Forecasting	No	The workpaper contains multiple components of creation of a Circuit Risk Index (CRI) that would allow quick consolidation of multiple data points into a single index that could be quickly interpreted. Data points that could be incorporated to create this Circuit Risk Index include but are not limited to circuit spans subject to temporary construction/configuration that have mechanically de-rated facilities, inspection infractions, asset condition, age, or fire hardening structures, overloaded structures, outage history, network assets, electric system conditions and characteristics, and at risk parameters. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Balanced Program	IT - Enterprise - Application	Resource Allocation Methodology	No	The workpaper contains multiple components of providing checkbox functionality for unplanned activation work during red flag warning weather events, including activation refundable accounting functionality and tools and reporting for financial and operational metrics. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Balanced Program	IT - Enterprise - Application	Asset Management	No	The workpaper contains activities to replace existing application for Electric Distribution to use a value-based decision model approach for capital investment decisions and/or prioritization. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Balanced Program	IT - Enterprise - Application	Emergency Management Operations	No	The workpaper contains activities to implement high-availability environments for EOC applications and dashboards. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Balanced Program	IT - Enterprise - Application	Communication Practices	No	The workpaper contains activities to implement a new web portal to communicate with safety partners during a Public Safety Power Shutoff event including outage notifications, de-energization notices, and data import API. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Balanced Program	IT - Enterprise - Application	Inspection, Repair, Maintenance & Replacement Programs	No	The workpaper contains multiple components of a mobile application for SDG&E Electric Distribution, including mobile app for circuit data entry, executive and management dashboards and database to house and report on new circuit data. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Balanced Program	IT - Enterprise - Application	Grid Operations & Operating Protocols	No	The workpaper contains multiple components of Fire Patrol system, including moving all electric inspections into a single mobile technology platform, creating framework and electronic (more automated) system/application for processing, tracking and reporting on Fire Patrol records. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Balanced Program	IT - Enterprise - Application	AQI Notifications	No	The workpaper contains activities to automate notifications to employees when Air Quality Index reaches specific thresholds. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Balanced Program	IT - Enterprise - Application	ENS Enhancement WMP	No	The workpaper contains activities to enhance the existing SDG&E Emergency Notification System (ENS) by implementing automations and mandatory CPUC reporting requirements. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Balanced Program	IT - Enterprise - Application	PSPP Mobile App	No	The workpaper contains activities to implement Mobile Application for Public Safety Partner Portal enabling "Push" notifications regarding PSPP to Partners. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Balanced Program	IT - Enterprise - Application	Digital Fortress Ph2	No	The workpaper contains activities to implement AWS cloud platform including Migrate EOC application into AWS cloud, process improvements for pre-activation, post-activation, analyzing and reporting. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Balanced Program	IT - Enterprise - Application	Advanced Analytics	No	The workpaper contains activities to build out machine learning models and pipelines and develop advanced analytics/predictive use cases to proactively identify, reduce and manage wildfire-related risk. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Balanced Program	IT - Enterprise - Application	WMP Foundation & Reporting	No	The workpaper contains activities to centralize and catalogue data from multiple WMP-related source systems in primary data repository, complete initial reporting and automation of various wildfire metrics mandated by the OEIS. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									



Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
Capital	Balanced Program	IT - Enterprise - Application	WMP Vegetation Management Service	No	The workpaper contains activities to upgrade Vegetation Management Services (VMS) to deliver an automated environmental data update for Wood Pole Intrusive inspections and develop VMS Patrols and TCM workflows, and regulatory reporting mandates. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Balanced Program	IT - Enterprise - Application	PSPP All Hazards & K2	No	The workpaper contains activities to implement and evolve the Public Safety Partner Portal and mobile app into a one-stop-shop solution for Partners to access All-hazard related information to implement All-hazard solutions. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Balanced Program	IT - Enterprise - Application	WMP Operation Megaphone	No	The workpaper contains activities to enhance customer notification and increase capacity for customer notifications voice calling and text messaging to full-service territory. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Balanced Program	IT - Enterprise - Application	Centralized Repository for Data	No	This workpaper for Wildfire Mitigation IT Application contains various projects within the following categories: 1. Electric Distribution Asset Investment Prioritization. 2. WSD Data Schema. 3. Wildfire Mitigation Advanced Analytics. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Balanced Program	Sub-Total IT - Enterprise - Application		Yes																										
Capital	Balanced Program	Facilities WMP - Balanced	Emergency Management Operations	No	Wildfire and Climate Resiliency Center (WCRC)	—	—	—	—	—	—	1	—	—	—	—	1	(1)	—	—	—	—	(1)	-100%	—%	—%	—%	—%	-100%	
Capital	Balanced Program	Electric Distribution Balanced Projects		Yes																										
Capital	Balanced Program	RAMP Base - Annual Pole Reinforcement (WMP)	GO165: Distribution Inspect and Repair program	No	Poles Replacements	748	666	665	592	407	3,078	600	600	600	600	600	3,000	148	66	65	(8)	(193)	78	25%	11%	11%	-1%	-32%	3%	
Capital	Balanced Program	RAMP Base - Wireless Fault Indicators	Design and Engineering Approaches	No	Wireless Fault Indicators	—	564	548	595	—	1,707	1484	504	500	516	516	3,520	(1,484)	60	48	79	(516)	(1,813)	-100%	12%	10%	15%	-100%	-52%	
Capital	Balanced Program	Overhead System Hardening	System Hardening	No	Circuit Miles	95	96	127	92	64	474	114	53	52	52	52	323	(19)	43	75	40	12	151	-17%	81%	144%	77%	23%	47%	
Capital	Balanced Program	HFTD Fuse Replacements	Expulsion Fuse Replacements	No	Fuses Replaced	—	3180	3477	225	36	6,918	—	—	—	—	—	—	—	3,180	3,477	225	36	6,918	—%	100%	100%	100%	100%	100%	

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
Capital	Balanced Program	PSPS Engineering Enhancements	PSPS Sectionalizing	No	Sectionalizing Devices	—	23	13	12	10	58	—	—	—	—	—	—	—	23	13	12	10	58	—%	100%	100%	100%	100%	100%	
Capital	Balanced Program	HFTD Undergrounding	Strategic Undergrounding	No	Circuit Miles	0	16	26	65	73	180	0	0	0	0	0	—	—	16	26	65	73	180	—%	100%	100%	100%	100%	100%	
Capital	Balanced Program	Meteorology - Fire Science Enhancements	WRRM - OPS	No	Registered Users	—	47	62	63	63	235	—	—	—	—	—	—	—	47	62	63	63	235	—%	100%	100%	100%	100%	100%	
Capital	Balanced Program	Backup Power for Resiliency	Microgrids	No	Microgrids	0	0	0	1	0	1	0	0	0	0	0	—	—	—	—	—	1	—	1	—%	—%	—%	100%	—%	100%
Capital	Balanced Program	CNF - RAMP	System Hardening	No	Distribution Circuit Miles	38	81	36	0	0	155	45	12	13	13	13	96	(7)	69	23	(13)	(13)	59	-16%	575%	177%	-100%	-100%	61%	
Capital	Balanced Program	TL649 Otay-San Ysidro-Border SW Pole Repl - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	Distribution Underbuild Miles	—	4	—	—	—	4	—	—	—	—	—	—	—	4	—	—	—	4	—%	100%	—%	—%	—%	100%	
Capital	Balanced Program	TL691 Avo-Mon Wood to Steel - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	Distribution Underbuild Miles	—	—	—	—	7	7	—	—	—	—	—	—	—	—	—	—	—	7	7	—%	—%	—%	—%	100%	100%
Capital	Balanced Program	TL6912 Wood to Steel Pole Replacement - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	Distribution Underbuild Miles	0	5	0	0	0	5	0	0	0	0	0	—	—	—	5	—	—	—	5	—%	100%	—%	—%	—%	100%
Capital	Balanced Program	TL6926 Rincon to Valley Center Fire Hardening	OH Trans Fire Hardening Dist Underbuild	No	This is a transmission driven project. Distribution work under this project includes distribution underbuild related to the replacement of poles, insulators, conductor and other electric infrastructure. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Balanced Program	TL690E – Camp Pendleton – Wood to Steel	Inspection, Repair, Maintenance & Replacement Programs	No	This is a transmission driven project. Distribution work under this project will include distribution underbuild related to the replacement of poles, insulators, conductor and other electric infrastructure. This project is in the pre-construction phase, current spend is associated with engineering and pre-construction activities.																									
Capital	Balanced Program	TL692 Horno Pulgas (Camp Pend)	Inspection, Repair, Maintenance & Replacement Programs	No	Distribution Underbuild Miles	—	—	3	—	—	3	—	—	—	—	—	—	—	—	—	3	—	3	—%	—%	100%	—%	—%	100%	
Capital	Balanced Program	TL639 Wood to Steel Replacement	Inspection, Repair, Maintenance & Replacement Programs	No	Distribution Underbuild Miles	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—%	—%	—%	—%	—%	—%
Capital	Balanced Program	TL636 Wood to Steel Replacement	Inspection, Repair, Maintenance & Replacement Programs	No	This is a transmission driven project. Distribution work under this project includes distribution underbuild related to the replacement of poles, insulators, conductor and other electric infrastructure. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Balanced Program	TL13831 Wood to Steel Replacement (Talega - Rancho Mission Viejo)	Inspection, Repair, Maintenance & Replacement Programs	No	This is a transmission driven project. Distribution work under this project includes distribution underbuild related to the replacement of poles, insulators, conductor and other electric infrastructure. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Balanced Program	TL23001 TL23004 Wood to Steel Replacement (Mission - San Luis Rey)	Inspection, Repair, Maintenance & Replacement Programs	No	This is a transmission driven project. Distribution work under this project includes distribution underbuild related to the replacement of poles, insulators, conductor and other electric infrastructure. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Balanced Program	Lightning Arrestor Replacement Program	Inspection, Repair, Maintenance & Replacement Programs	No	Lightning Arrestors	—	16	1798	2660	2216	6,690	—	—	—	—	—	—	—	—	16	1,798	2,660	2,216	6,690	—%	100%	100%	100%	100%	100%

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance		
Capital	Balanced Program	Aerial Mesh Network Expansion	Aviation Firefighting Program	No	Mesh Network																										
					This is an emergent project. The activity in this workpaper is related to initial purchase and setup of the mesh network. Upon Federal Communications Commission (FCC) approval, the network will be used as a unit of measure.																										
Capital	Balanced Program	Drone Investigation Assessment And Repair	Distribution System Inspection Drone Inspections	No	Pole Replacements	5	306	365	341	1281	2,298	0	0	0	0	0		5	306	365	341	1,281	2,298	100%	100%	100%	100%	100%	100%	100%	
Capital	Balanced Program	Aviation Firefighting Program	Grid Operations & Operating Protocols	No	Helicopter																										
					This is an emergent project. The activity in this workpaper is related to initial purchase of the helicopter and modification costs. Upon the receipt of the helicopter as a used and useful item, the helicopter will be used as a unit of measure.																										
Capital	Balanced Program	Aviation Training Area	Aviation Training Area	No	Training Area					1	1											1	1	-%	-%	-%	-%	100%	100%		
Capital	Balanced Program	Aviation Crossing Markers	Aviation Crossing Markers	No	Crossing Markers Locations				127	170	297											127	170	297	-%	-%	-%	100%	100%	100%	

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance						
Capital	Balanced Program	Avian Protection WMP	Avian Protection WMP	No	Number of poles protected	0	0	0	967	657	1,624	554	478	478	478	478	2,466	(554)	(478)	(478)	489	179	(842)	-100%	-100%	-100%	102%	37%	-34%						
Capital	Balanced Program	Elect Transmission Line Reliability Projects	Transmission System Inspection	No	The variety of work activities in this program makes it infeasible to identify a single unit of measurement. The purpose of this transmission driven program is to restore degraded transmission facilities, repair the system in the event of storms, to restore transmission wood poles, and cover restoration projects under \$750K not identified in other programs. All related distribution costs for these transmission projects within the High Fire Threat District are included in this program.																														
Capital	Balanced Program	Trans Fiber Links HFTD	LTE Communication Network	No	ADSS Miles	20	12	31	0	0	63	1	1	1	1	1	5	19	11	30	(1)	(1)	58	1900%	1100%	3000%	-100%	-100%	1160%						
Capital	Balanced Program	Ramp Base - Install SCADA On-Line Capacitors	Expand and Maintain Distribution Advanced SCADA infrastructure	No	Number of SCADA Capacitors Installed	0	30	50	58	20	158	115	53	53	53	53	327	(115)	(23)	(3)	5	(33)	(169)	-100%	-43%	-6%	9%	-62%	-52%						
Capital	Balanced Program	RAMP Base - Weather Station Adv Detection	Advanced Detection	No	Weather Stations Installed	13	31	1	1	0	46	23	11	11	11	11	67	(10)	20	(10)	(10)	(11)	(21)	-43%	182%	-91%	-91%	-100%	-31%						
Capital	Balanced Program	TL6916 Sycamore Canyon to Scripps Wood to Steel	OH Trans Fire Hardening Dist Underbuild	No	This is a transmission driven project. Distribution work under this project includes distribution underbuild related to the replacement of poles, insulators, conductor and other electric infrastructure. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																														
Capital	Balanced Program	TL698 Monserate - Avocado Wood to Steel	OH Trans Fire Hardening Dist Underbuild	No	This is a transmission driven project. Distribution work under this project includes distribution underbuild related to the replacement of poles, insulators, conductor and other electric infrastructure. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																														
Capital	Balanced Program	TL694 Wood To Steel	OH Trans Fire Hardening Dist Underbuild	No	This is a transmission driven project. Distribution work under this project includes distribution underbuild related to the replacement of poles, insulators, conductor and other electric infrastructure. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																														
Capital	Balanced Program	TL13838 Wood to Steel Replacement (Magarita - Rancho Mission Viejo)	OH Trans Fire Hardening Dist Underbuild	No	This is a transmission driven project. Distribution work under this project includes distribution underbuild related to the replacement of poles, insulators, conductor and other electric infrastructure. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																														
Capital	Balanced Program	TL690C Camp Pendleton Wood to Steel	OH Trans Fire Hardening Dist Underbuild	No	This is a transmission driven project. Distribution work under this project includes distribution underbuild related to the replacement of poles, insulators, conductor and other electric infrastructure. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																														
Capital	Balanced Program	Helicopter HD/IR Cameras	Aviation Firefighting Program	No	HD/IR Camera	0	0	0	2	0	2	0	0	0	0	0	—	—	—	—	—	—	2	—	—	—	—	—	100%	—	100%				
Capital	Balanced Program	TwinEngine Med Lift Helicopter	Aviation Firefighting Program	No	Helicopter	—	—	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	1	1	—	—	—	—	100%	100%					
Capital	Balanced Program	Transmission DIAR UAS Purchase	Aviation Firefighting Program	No	Unmanned Aerial Systems	—	—	5	—	—	5	—	—	—	—	—	—	—	—	—	—	—	5	—	—	—	—	—	100%	—	—	100%			
Capital	Balanced Program	IR Flir Monocular	Inspection, Repair, Maintenance & Replacement Programs	No	Monoculars	—	—	40	—	—	40	—	—	—	—	—	—	—	—	—	—	—	40	—	—	—	—	—	—	100%	—	—	100%		
Capital	Balanced Program	SDG&E ENS Enhancements	Non-RAMP	No	The workpaper contains activities to enhance the existing SDG&E Emergency Notification System (ENS) by implementing automations and mandatory CPUC reporting requirements. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																														
Capital	Balanced Program	TL695 Talega Wood to Steel - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	This project is in the pre-construction phase and has recorded dollars through 2023 for Engineering & Design. The underlying cost drivers for this project include replacing distribution facilities that are underbuilt in a transmission circuit upgrade project. There are imputed costs because the calculation used to impute authorized costs at the activity level for the GRC post-test years incorporates aspects of the CPUC-approved post-test year mechanism for the SDG&E attrition years, which can result in imputed dollars when a project has not yet begun construction. Distribution Underbuild Miles will be used as the unit of measure.																														
Capital	Balanced Program	WMP ENHANCED COMM 800MHZ RADIO SYSTEMS	Emergency Planning & Preparedness	No	Number of radios	—	54	—	—	—	54	—	—	—	—	—	—	—	—	—	—	—	54	—	—	—	—	—	—	100%	—	—	100%		

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
Capital	Balanced Program	Meteorology Super Computer Replacements	Meteorology Super Computer Replacements	No	Supercomputer	—	—	—	—	2	2	—	—	—	—	—	—	—	—	—	—	—	2	2	—%	—%	—%	—%	100%	100%
Capital	Balanced Program	Mobile IR Sub Cameras WMP	Mobile IR Sub Cameras WMP	No	This is an emergent project. The activity in this workpaper is related to initial scoping related to the purchase of the camera units. Upon the purchase of the cameras, the mobile cameras will be used as a unit of measure.																									
Capital	Balanced Program	Wildfire Resiliency Platform (WiNGS)	Wildfire Resiliency Platform (WiNGS)	No	The workpaper contains activities to provide a cloud-enabled platform for existing WiNGS models with insights on historical, current, and forecasted trends to make strategic and data-informed decisions on wildfire mitigation and mitigation planning. This includes centralizing data from both internal and external datasets. The variety of work activities in this																									
Capital	Balanced Program	Early Fault Detection	Early Fault Detection	No	Number of power quality meters and radio frequency sensors	0	0	0	64	32	96	0	0	0	0	0	—	—	—	—	—	64	32	96	—%	—%	—%	100%	100%	100%
Capital	Balanced Program	TL686-W2S_Wind	TL686-W2S_Wind	No	Number of Miles	0	0	0	0	0	—	0	0	0	0	0	—	—	—	—	—	—	—	—	—%	—%	—%	—%	—%	—%
Capital	Balanced Program	Strategic Pole Replacement Program (SPRP) - WMP	Strategic Pole Replacement Program (SPRP) - WMP	No	Pole Replacements	0	0	0	0	1	1	0	0	0	0	0	—	—	—	—	—	—	1	1	—%	—%	—%	—%	100%	100%
Capital	Balanced Program	Risk Drone Inspection	Risk Drone Inspection	No	Pole Replacements	0	0	0	0	183	183	0	0	0	0	0	—	—	—	—	—	—	183	183	—%	—%	—%	—%	100%	100%
Capital	Balanced Program	HFTD RFS Projects	HFTD RFS Projects	No	Poles Removed from HFTD	0	0	0	0	42	42	0	0	0	0	0	—	—	—	—	—	—	42	42	—%	—%	—%	—%	100%	100%
Capital	Balanced Program	Advanced Protection	Inspection, Repair, Maintenance & Replacement Programs	No	Number of Circuits	2	3	5	3	4	17	9	4	4	4	4	25	(7)	(1)	1	(1)	—	(8)	-78%	-25%	25%	-25%	—%	-32%	
Capital	Balanced Program	<b>Sub-Total WMP Projects (Balanced Costs)</b>		<b>Yes</b>																										
Capital	Balanced Program	Local Engineering Pool - Electric Distribution	Non-RAMP	No	The Local Engineering – ED Pool consists of the pool 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 reliability projects. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Balanced Program	Local Engineering Pool - ED RAMP	Works Standards and Methods	No	This category encompasses the Work Standards and Methods Portion of the Local Engineering Pool, including the development and evaluation of data-informed asset risk analytics to evaluate the current Enterprise Asset Management system for efficiency and identify potential areas of optimization. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Balanced Program	<b>Sub-Total Local Engineering Pool – Electric Distribution</b>		<b>Yes</b>																										

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
Capital	Balanced Program	Local Engineering Pool - Substation	Non-RAMP	No	The Local Engineering – Substation Pool consists of activities supporting substation capital project design, engineering and construction that cannot easily be associated with single job orders and therefore are not fit for direct-charging. Examples of these types of activities include management and administrative labor and meetings and functions covering a wide range of substation engineering-related capital projects and topics. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Balanced Program	Department Overhead Pool	Non-RAMP	No	Department Overheads are those costs for supervision and administration of crews in the SDG&E Construction and Operation (C&O) districts. Department Overhead is charged for expenses that are not attributable to one particular project but benefit many projects, or the Construction and Operation (C&O) districts as a whole. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Balanced Program	Contract Admin Pool - RAMP Base	Administration of Projects performed by Contractors	No	The Contract Administration (CA) pool consists of those expenses necessary for the administration of projects that are performed by contractors for SDG&E. The expenses to this pool consist of labor for Contract Administrators and support personnel, as well as the associated non-labor support costs such as office and field supplies. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
<b>Capital</b>	<b>Balanced Program</b>	<b>Sub-Total ED Overhead Pools (Balanced Costs)</b>		<b>Yes</b>																										

B. SDG&E Balanced Programs Direct Capital Costs

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
Capital	Balanced Program	TIMP & DIMP		Yes									
Capital	Balanced Program	TIMP	TIMP ILI/ECDA	No	Yes	No	<p>TIMP complies with 49 CFR 192, Subpart O - Gas Transmission Pipeline Integrity Management and includes threat identification, risk analysis, pipeline assessments, remediation, and other actions that minimize threats and integrity concerns to reduce risk of pipeline failure.</p> <p>Due to new regulations published during the TY 2019 GRC period, actual activities and costs have increased for the SDG&amp;E TIMP. The variance in expenditures is primarily due to an increase in baseline in-line inspection (ILI) assessments, most of which required retrofits, and the substantial changes to the program resulting from new regulations published during this TY2019 GRC cycle. SDG&amp;E has expanded ILI assessments to more comprehensively manage threats and risks on pipelines, which aligns with the expanded threat management requirements of the new regulations such as those enhancing the activities required to assess and remediate stress corrosion cracking (SCC) and manufacturing threats. The expanded utilization of advanced inspection tools increased the number of immediate repair conditions discovered which resulted in additional remediation work.</p> <p>In general, the TIMP activity level is driven by assessment requirements and pipeline safety considerations, as well as the resulting remediation and repair needs. TIMP remediation activities are informed by assessment findings and may vary from pipeline to pipeline and year to year, and in some cases, remediation activities are a result of the previous year's assessment findings.</p>	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Balanced Program	DIMP	DIMP DREAMS	No	Yes	Yes	<p>DIMP complies with 49 CFR 192, Subpart P - Gas Distribution Pipeline Integrity Management and includes threat identification, risk assessment, and various programs to minimize threats and integrity concerns to reduce risk of pipeline incidents. The cost variance is attributed, in part, to the calculation used to impute authorized funding at the activity level for the GRC post-test years. The CPUC approved a post-test year mechanism for the SDG&amp;E attrition years rather than a specific funding level by activity for each year. This is described in further detail in section 2D above. Additionally, SDG&amp;E's year-over-year replacements have increased as further discussed in the unit variance explanation.</p>	The units identified in this report are a component and not the entirety of activities and costs supporting the DIMP; they represent the Vintage Integrity Plastic Plan (VIP) work on non-state-of-the-art distribution pipeline. SDG&E's year-over-year replacements are informed by the Distribution Risk Evaluation and Monitoring System (DREAMS) model, and activity levels have increased since TY2019 in alignment with D.19-09 051. Additionally, the variance is driven by the calculation used to impute authorized units for the GRC post-test years.	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Balanced Program	IT WMP - Balanced		Yes									
Capital	Balanced Program	Customer Services	Stakeholder Cooperation & Community Engagement	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	PSPP Enhancements	Communication Practices	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	IT WMP - Balanced	LTE Communication Network	No	Yes	No	The 2023 overrun against imputed authorized reflects a ramp up in the build out/deployment of the network assets and the spectrum license purchase. In addition, the calculation used to impute authorized funding at the activity level for the GRC post-test years is contributing to the variance.	N/A	Over (O)	Over (O)	Over (O)	Expanded	No
Capital	Balanced Program	IT - Enterprise - Application	Emergency Planning & Preparedness	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	IT - Enterprise - Application	Data Governance (BC 208750)	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	IT - Enterprise - Application	Data Governance (BC 208910)	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	IT - Enterprise - Application	Data Governance (BC 208890)	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	IT - Enterprise - Application	Asset 360 WMP	No	Yes	No	Variance is due to emergent need to consolidate data models for critical distribution and substation assets and develop asset health and risk indices to understand current asset performance and predict asset condition and impact/risk.	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	IT - Enterprise - Application	Investmnt Portfolio Optimization WMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	IT - Enterprise - Application	Situational Awareness & Forecasting	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	IT - Enterprise - Application	Resource Allocation Methodology	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	IT - Enterprise - Application	Asset Management	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	IT - Enterprise - Application	Emergency Management Operations	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	IT - Enterprise - Application	Communication Practices	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	IT - Enterprise - Application	Inspection, Repair, Maintenance & Replacement Programs	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	IT - Enterprise - Application	Grid Operations & Operating Protocols	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	IT - Enterprise - Application	AQI Notifications	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	IT - Enterprise - Application	ENS Enhancement WMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	IT - Enterprise - Application	PSPP Mobile App	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	IT - Enterprise - Application	Digital Fortress Ph2	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	IT - Enterprise - Application	Advanced Analytics	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	IT - Enterprise - Application	WMP Foundation & Reporting	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
Capital	Balanced Program	IT - Enterprise - Application	WMP Vegetation Management Service	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	IT - Enterprise - Application	PSPP All Hazards & K2	No	Yes	No	Variance due to emergent need to develop the Public Safety Partner Portal and mobile app into a one-stop-shop solution for Partners to access All-hazard related information to implement All-hazard solutions.	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	IT - Enterprise - Application	WMP Operation Megaphone	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	IT - Enterprise - Application	Centralized Repository for Data	No	Yes	No	Variance due to emergent need to implement systems to support wildfire mitigation activities	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
<b>Capital</b>	<b>Balanced Program</b>	<b>Sub-Total IT - Enterprise - Application</b>		<b>Yes</b>	<b>Yes</b>								<b>No</b>
Capital	Balanced Program	Facilities WMP - Balanced	Emergency Management Operations	No	Yes	No	Rapidly changing climate conditions affect the way SDG&E maintains and operates the electric system, and the Wildfire and Climate Resilience Center (WCRC) will be a physical space committed to the climate resilience of our organization and the communities we serve. This includes housing the Emergency Operation Center (EOC) as well as the Wildfire Science and Innovation Lab which collaborates with academia to advance climate science. The WCRC will be a resilience center focused on fostering community partnerships and educating stakeholders in the wildfire and climate community. SDG&E will also use this facility as a training center for safety and emergency preparedness. Importantly, this space will house the primary EOC and will be the central response hub when emergencies occur. Lastly, the WCRC will serve as a centralized work space for all employees in Wildfire Mitigation, Emergency Management, and Fire Science and Climate Adaptation, increasing employee collaboration and innovation.	N/A	Over (O)	Over (O)	Over (O)	Expanded	No
Capital	Balanced Program	Electric Distribution Balanced Projects		Yes									
Capital	Balanced Program	RAMP Base - Annual Pole Reinforcement (WMP)	GO165: Distribution Inspect and Repair program	No	No	Yes	N/A	This project provides funding for the pole replacements and reinforcement activities within the HFTD of overhead and electric distribution facilities. This program is mandated under CPUC GO 165 to promote safe, high-quality electrical service and compliance with SDG&E and CPUC construction standards found in GO 95 and 128. The unit variance is primarily due to the calculation used to impute authorized units at the activity level, which uses the CPUC-approved post-test year mechanism for the SDG&E attrition years.	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Balanced Program	RAMP Base - Wireless Fault Indicators	Design and Engineering Approaches	No	No	Yes	N/A	The Wireless Fault Indicator Program was paused due to manufacturer upgrades to the currently used WFIs. Upgraded WFIs require different communication specifications not currently employed, therefore, the feasibility of implementing this type of equipment is being evaluated. In addition, other types of WFIs from various manufacturers will be evaluated to determine the best approach. In the interim, supervisory control and data acquisition (SCADA) devices and existing WFIs will be utilized to provide situational awareness and guide first responders to the likely location of a fault. This change is not expected to impact wildfire risk reduction within the current WMP cycle.	Under (U)	Under (U)	Under (U)	Deferred	No
Capital	Balanced Program	Overhead System Hardening	System Hardening	No	Yes	Yes	Since filing the TY 2019 GRC Application, SDG&E has consolidated multiple overhead fire hardening programs as described in the 2021 and 2022 WMP to mitigate wildfire-related risk. These programs are called Traditional Hardening and Covered Conductor. Higher than authorized units and capital investment due to the increase of fire hardening projects within the High Fire Threat District (HFTD). This initiative has replaced aged conductor, aged splices, overloaded poles, as well as other conditions that are known to be a risk in the fire-prone areas.	Since filing the TY 2019 GRC Application, SDG&E has consolidated multiple overhead fire hardening programs as described in the 2021 and 2022 WMP to mitigate wildfire-related risk. These programs are called Traditional Hardening and Covered Conductor. The variance is due to higher than authorized units and capital investment due to the increase of fire hardening projects within the High Fire Threat District (HFTD). This initiative has replaced aged conductor, aged splices, overloaded poles, as well as other conditions that are known to be a risk in the fire-prone areas.	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Balanced Program	HFTD Fuse Replacements	Expulsion Fuse Replacements	No	No	Yes	N/A	Since filing the TY 2019 GRC Application, SDG&E has implemented this program within its Wildfire Mitigation Plan to mitigate wildfire-related risk. This project has replaced at-risk electric distribution cutout bodies and fuses in HFTD Tier 2 and Tier 3 with Cal Fire-approved devices in order to reduce the risk of wildfire ignition.	Over (O)	Over (O)	Over (O)	Emergent	No



Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
Capital	Balanced Program	PSPS Engineering Enhancements	PSPS Sectionalizing	No	No	Yes	N/A	Since filing the TY 2019 GRC Application, SDG&E has implemented this program within its Wildfire Mitigation Plan to mitigate wildfire-related risk. This project has placed distribution sectionalizing devices in the High Fire Threat District (HFTD) areas to minimize customer impacts during Public Safety Power Shut-Off (PSPS) events.	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	HFTD Undergrounding	Strategic Undergrounding	No	Yes	Yes	Since filing the TY 2019 GRC Application, SDG&E has implemented this emergent program within its Wildfire Mitigation Plan to mitigate wildfire-related risk. Overhead to underground infrastructure conversions are performed to mitigate risk of wildfire ignitions caused by overhead infrastructure failures.	Since filing the TY 2019 GRC Application, SDG&E has implemented this emergent program within its Wildfire Mitigation Plan to mitigate wildfire-related risk. Overhead to underground infrastructure conversions are performed to mitigate risk of wildfire ignitions caused by overhead infrastructure failures.	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	Meteorology - Fire Science Enhancements	WRRM - OPS	No	No	Yes	N/A	Since filing the TY 2019 GRC Application, SDG&E has implemented this emergent program within its Wildfire Mitigation Plan to mitigate wildfire-related risk. New tools and technologies are being developed to enhance current technologies such as the Fire Potential Index and create the next generation of fire weather tools.	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	Backup Power for Resiliency	Microgrids	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	CNF - RAMP	System Hardening	No	Yes	Yes	This project is complete. The 2023 costs represent post construction remediation activities that are required by the Forest Service. There is a cost variance because the calculation used to impute authorized dollars at the activity level for the GRC post-test years incorporates aspects of the CPUC approved post-test year mechanism for the SDG&E attrition years, which can result in imputed dollars when a project has been completed.	This project is complete. There is a unit variance because the calculation used to impute authorized units at the activity level for the GRC post-test years incorporates aspects of the CPUC approved post-test year mechanism for the SDG&E attrition years, which can result in imputed units when a project has been completed.	On Target (T)	On Target (T)	On Target (T)	Completed	No
Capital	Balanced Program	TL649 Otay-San Ysidro-Border SW Pole Repl - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Balanced Program	TL691 Avo-Mon Wood to Steel - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	No	Yes	N/A	In the 2019 TY GRC, this wood to steel project on TL691 was anticipated to be placed in service by 2018; however was previously delayed due to permitting/easements with military base.	Over (O)	Over (O)	Over (O)	Other	No
Capital	Balanced Program	TL6912 Wood to Steel Pole Replacement - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Balanced Program	TL6926 Rincon to Valley Center Fire Hardening	OH Trans Fire Hardening Dist Underbuild	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	TL690E - Camp Pendleton - Wood to Steel	Inspection, Repair, Maintenance & Replacement Programs	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	TL692 Horno Pulgas (Camp Pend)	Inspection, Repair, Maintenance & Replacement Programs	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	TL639 Wood to Steel Replacement	Inspection, Repair, Maintenance & Replacement Programs	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	TL636 Wood to Steel Replacement	Inspection, Repair, Maintenance & Replacement Programs	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	TL13831 Wood to Steel Replacement (Talega - Rancho Mission Viejo)	Inspection, Repair, Maintenance & Replacement Programs	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	TL23001 TL23004 Wood to Steel Replacement (Mission - San Luis Rey)	Inspection, Repair, Maintenance & Replacement Programs	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	Lightning Arrestor Replacement Program	Inspection, Repair, Maintenance & Replacement Programs	No	No	Yes	N/A	Since filing the TY 2019 GRC Application, SDG&E has implemented this emergent program within its Wildfire Mitigation Plan to mitigate wildfire-related risk. This program has replaced outdated lightning arrestors with CAL FIRE-approved lightning arrestors within the HFTD and WUI.	Over (O)	Over (O)	Over (O)	Emergent	No

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
Capital	Balanced Program	Aerial Mesh Network Expansion	Aviation Firefighting Program	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	Drone Investigation Assessment And Repair	Distribution System Inspection Drone Inspections	No	Yes	Yes	Since filing the TY 2019 GRC Application, SDG&E has identified this program within its Wildfire Mitigation Plan to mitigate wildfire-related risk. This emergent program consists of replacement of electrical distribution poles in the HFTD that have been evaluated by qualified electrical workers who have concluded the pole has reached the end of its useful life.	Since filing the TY 2019 GRC Application, SDG&E has identified this program within its Wildfire Mitigation Plan to mitigate wildfire-related risk. This emergent program consists of replacement of electrical distribution poles in the HFTD that have been evaluated by qualified electrical workers who have concluded the pole has reached the end of its useful life.	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	Aviation Firefighting Program	Grid Operations & Operating Protocols	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	Aviation Training Area	Aviation Training Area	No	No	Yes	N/A	Since filing the TY 2019 GRC Application, SDG&E has implemented this emergent program within its Wildfire Mitigation Plan to mitigate wildfire-related risk and potential safety hazards. This project will include the acquisition and improvement of land for the training of helicopter and UAS (unmanned aircraft systems) pilots for the reduction of risks associated with aviation incidents during SDG&E work such as helicopter crashes and resulting fires by offering a controlled environment for personnel training for aviation.	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	Aviation Crossing Markers	Aviation Crossing Markers	No	No	Yes	N/A	Since filing the TY 2019 GRC Application, SDG&E has implemented this emergent program within its Wildfire Mitigation Plan to mitigate wildfire-related risk and potential safety hazards. This project installs crossing signs where transmission lines intersect with distribution lines and is particularly important when helicopters are flying patrols in the High Fire Threat District (HFTD).	Over (O)	Over (O)	Over (O)	Emergent	No

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
Capital	Balanced Program	Avian Protection WMP	Avian Protection WMP	No	No	Yes	N/A	When SDG&E presented this program in the TY 2019 GRC Application, it was intended to cover work completed in both the High-Fire Threat District (HFTD) and non-HFTD areas. Since then, SDG&E has split the program to track the HFTD spend and scope separately. Additional avian protection has continued to be performed within the HFTD due to the importance of system protection within the HFTD.	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Balanced Program	Elect Transmission Line Reliability Projects	Transmission System Inspection	No	No	No	N/A		On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Balanced Program	Trans Fiber Links HFTD	LTE Communication Network	No	Yes	Yes	When SDG&E presented this program in the TY 2019 GRC Application, it was intended to cover work completed in both the HFTD and non-HFTD areas. Since then, SDG&E has split the program to track the HFTD spend and scope separately. Additional fiber optic work has continued to be performed within the HFTD due to the importance of system protection and controls, automation, and communications.	When SDG&E presented this program in the TY 2019 GRC Application, it was intended to cover work completed in both the HFTD and non-HFTD areas. Since then, SDG&E has split the program to track the HFTD spend and scope separately. Additional fiber optic work has continued to be performed within the HFTD due to the importance of system protection and controls, automation, and communications.	Over (O)	Over (O)	Over (O)	Expanded	No
Capital	Balanced Program	Ramp Base - Install SCADA On-Line Capacitors	Expand and Maintain Distribution Advanced SCADA infrastructure	No	No	Yes	N/A		On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Balanced Program	RAMP Base - Weather Station Adv Detection	Advanced Detection	No	No	Yes	N/A		Under (U)	Under (U)	On Target (T)	Proceeding as Planned	No
Capital	Balanced Program	TL6916 Sycamore Canyon to Scripps Wood to Steel	OH Trans Fire Hardening Dist Underbuild	No	No	No	N/A		On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Balanced Program	TL698 Monserate - Avocado Wood to Steel	OH Trans Fire Hardening Dist Underbuild	No	No	No	N/A		On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Balanced Program	TL694 Wood To Steel	OH Trans Fire Hardening Dist Underbuild	No	No	No	N/A		Under (U)	Under (U)	Under (U)	Deferred	No
Capital	Balanced Program	TL13838 Wood to Steel Replacement (Magarita - Rancho Mission Viejo)	OH Trans Fire Hardening Dist Underbuild	No	No	No	N/A		Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	TL690C Camp Pendleton Wood to Steel	OH Trans Fire Hardening Dist Underbuild	No	No	No	N/A		Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	Helicopter HD/IR Cameras	Aviation Firefighting Program	No	No	No	N/A		Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	TwinEngine Med Lift Helicopter	Aviation Firefighting Program	No	No	Yes	N/A	Since filing the TY 2019 GRC Application, SDG&E has implemented this emergent program within its Wildfire Mitigation Plan to mitigate wildfire-related risk and potential safety hazards. This project includes the acquisition of a twin engine, medium lift Bell 412 EPX helicopter necessary to provide an increase in lifting capability for construction work. This helicopter addresses the gaps between the H145 and the Blackhawk.	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	Transmission DIAR UAS Purchase	Aviation Firefighting Program	No	No	No	N/A		Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	IR Flir Monocular	Inspection, Repair, Maintenance & Replacement Programs	No	No	No	N/A		Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	SDG&E ENS Enhancements	Non-RAMP	No	No	No	N/A		Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	TL695 Talega Wood to Steel - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	No	No	N/A		Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	WMP ENHANCED COMM 800MHZ RADIO SYSTEMS	Emergency Planning & Preparedness	No	No	No	N/A		Over (O)	Over (O)	Over (O)	Emergent	No

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Capital	Balanced Program	Meteorology Super Computer Replacements	Meteorology Super Computer Replacements	No	No	Yes	N/A	Since filing the TY 2019 GRC Application, SDG&E has identified this program within its Wildfire Mitigation Plan to mitigate wildfire-related risk. This emergent project has replaced high performance computing clusters that have reached the end of operational life. 2 computers were purchased in 2022 and brought online in 2023.	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	Mobile IR Sub Cameras WMP	Mobile IR Sub Cameras WMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	Wildfire Resiliency Platform (WiNGS)	Wildfire Resiliency Platform (WiNGS)	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	Early Fault Detection	Early Fault Detection	No	Yes	Yes	Since filing the TY 2019 GRC Application, SDG&E has implemented this emergent program within its Wildfire Mitigation Plan to mitigate wildfire-related risk. The variance is due to the emergent need to implement early fault detection for wildfire mitigation activities. This project will deploy Power Quality Meters and advanced Radio Frequency (RF) Sensors in SDG&E electric substations and electric distribution circuits within the High Fire Threat District to enable the collection of time-series analog data used to detect incipient failures of electrical equipment and locate that failing equipment before it can cause significant damage.	Since filing the TY 2019 GRC Application, SDG&E has implemented this emergent program within its Wildfire Mitigation Plan to mitigate wildfire-related risk. The variance is due to the emergent need to implement early fault detection for wildfire mitigation activities. This project will deploy Power Quality Meters and advanced Radio Frequency (RF) Sensors in SDG&E electric substations and electric distribution circuits within the High Fire Threat District to enable the collection of time-series analog data used to detect incipient failures of electrical equipment and locate that failing equipment before it can cause significant damage.	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	TL686-W2S_Wind	TL686-W2S_Wind	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	Strategic Pole Replacement Program (SPRP) - WMP	Strategic Pole Replacement Program (SPRP) - WMP	No	No	Yes	N/A	Since filing the TY 2019 GRC Application, SDG&E has identified this program within its Wildfire Mitigation Plan to mitigate wildfire-related risk. This emergent project will target high risk poles located throughout SDG&E service territory for replacement. This will continue SDG&E's efforts in hardening the system within the HFTD. Examples of poles this program will focus on will include but not be limited to, gas-treated poles (may be known as Cellon treatment), steel reinforced and poles that are set in concrete. These identified poles are also nearing the end of their useful life and are known to have a higher failure potential than average.	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	Risk Drone Inspection	Risk Drone Inspection	No	Yes	Yes	Since filing the TY 2019 GRC Application, SDG&E has identified this program within its Wildfire Mitigation Plan to mitigate wildfire-related risk. This emergent project will prioritize and inspect 15 percent of SDG&E's overhead structure segments in the HFTD Tier 2, HFTD Tier 3, and coastal canyons regions based on various risk and health factors including probability of failure, damage detection, ignition, and consequences of failure through collaboration with risk analytics and intelligent image processing teams.	Since filing the TY 2019 GRC Application, SDG&E has identified this program within its Wildfire Mitigation Plan to mitigate wildfire-related risk. This emergent project will prioritize and inspect 15 percent of SDG&E's overhead structure segments in the HFTD Tier 2, HFTD Tier 3, and coastal canyons regions based on various risk and health factors including probability of failure, damage detection, ignition, and consequences of failure through collaboration with risk analytics and intelligent image processing teams.	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	HFTD RFS Projects	HFTD RFS Projects	No	No	Yes	N/A	Since filing the TY 2019 GRC Application, SDG&E has identified this program within its Wildfire Mitigation Plan to mitigate wildfire-related risk. This emergent project includes Removal from Service (RFS) jobs within the HFTD Tier 2.	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Balanced Program	Advanced Protection	Inspection, Repair, Maintenance & Replacement Programs	No	No	No	N/A	N/A	Under (U)	On Target (T)	Under (U)	Proceeding as Planned	No
<b>Capital</b>	<b>Balanced Program</b>	<b>Sub-Total WMP Projects (Balanced Costs)</b>		<b>Yes</b>	<b>Yes</b>								<b>No</b>
Capital	Balanced Program	Local Engineering Pool - Electric Distribution	Non-RAMP	No	Yes	No	This pool spent more than imputed authorized levels due to an increase of wildfire-related work, higher than expected inflationary pressures, and the calculation used to impute authorized funding at the activity level for the GRC post-test years. The CPUC approved a post-test year mechanism for the SDG&E attrition years. Authorization and cost tracking of the four balanced pools is done on a collective basis within the framework of the TY2019 GRC.	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Balanced Program	Local Engineering Pool - ED RAMP	Works Standards and Methods	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Completed	Yes
<b>Capital</b>	<b>Balanced Program</b>	<b>Sub-Total Local Engineering Pool – Electric Distribution</b>		<b>Yes</b>	<b>Yes</b>								<b>No</b>

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Capital	Balanced Program	Local Engineering Pool - Substation	Non-RAMP	No	Yes	No	The Local Engineering - Substation pool is loaded onto electric distribution substation capital jobs and electric transmission substation capital jobs. The cost variance under this pool is primarily due to the calculation used to impute authorized funding at the activity level for the GRC post-test years. Authorization and cost tracking of the four balanced pools is done on a collective basis within the framework of the TY2019 GRC.	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
Capital	Balanced Program	Department Overhead Pool	Non-RAMP	No	Yes	No	The variance under this pool is primarily driven by accounting reclassification allocating training costs to the functional areas being benefitted. It is also the result of the calculation used to impute authorized funding at the activity level for the GRC post-test years. Authorization and cost tracking of the four balanced pools is done on a collective basis within the framework of the TY2019 GRC.	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Balanced Program	Contract Admin Pool - RAMP Base	Administration of Projects performed by Contractors	No	Yes	No	The variance under this pool is primarily driven by the acceleration of microgrid projects, the Drone Investigation Assessment and Repair (DIAR) program, and higher responsive new business activity. It is also the result of the calculation used to impute authorized funding at the activity level for the GRC post-test years. Authorization and cost tracking of the four balanced pools is done on a collective basis within the framework of the TY2019 GRC.	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
<b>Capital</b>	<b>Balanced Program</b>	<b>Sub-Total ED Overhead Pools (Balanced Costs)</b>		<b>Yes</b>	<b>Yes</b>								<b>No</b>

B. SDG&E Balanced Programs Direct Capital Costs

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
Capital	Balanced Program	TIMP & DIMP		Yes				
Capital	Balanced Program	TIMP	TIMP ILI/ECDA	No	N/A	TIMP complies with 49 CFR 192, Subpart O—Gas Transmission Pipeline Integrity Management, and includes activities such as threat identification and risk assessment, pipeline assessments, remediation, and other actions that minimize threats and integrity concerns to reduce risk of pipeline failure.	SDGE-11 MTM-22 to MTM-23 WP 034680	SDGE-09-R AK-TS-47 to AK-TS-51 CWP 034680
Capital	Balanced Program	DIMP	DIMP DREAMS	No	N/A	DIMP focuses on the entire distribution system since distribution pipelines are largely in developed, more-populated areas to deliver gas to those populations. SDG&E operates approximately 15,330 miles of interconnected gas mains and services. SDG&E's size and location of operations has a direct and significant bearing on overall costs to comply with federal DIMP requirements. SDG&E's DIMP is designed to meet these objectives to remain in compliance with federal regulations and to promote safety and reliability to its customers at reasonable rates.	SDGE-11 MTM-24 WP 095460	SDGE-09-R AK-TS-51 to AK-TS-52 WP 095460
Capital	Balanced Program	IT WMP - Balanced		Yes				
Capital	Balanced Program	Customer Services	Stakeholder Cooperation & Community Engagement	No	N/A			
Capital	Balanced Program	PSPP Enhancements	Communication Practices	No	N/A			
Capital	Balanced Program	IT WMP - Balanced	LTE Communication Network	No	N/A	The workpaper contains several foundational components of the LTE network, including spectrum license acquisition, data center core implementation and field deployment.	SDG&E-24-R CRO-16 to CRO-31 CWP 00834E	SDG&E-13-2R-E JTW-112 to JTW-113 CWP 198730
Capital	Balanced Program	IT - Enterprise - Application	Emergency Planning & Preparedness	No	N/A			
Capital	Balanced Program	IT - Enterprise - Application	Data Governance (BC 208750)	No	N/A			
Capital	Balanced Program	IT - Enterprise - Application	Data Governance (BC 208910)	No	N/A			
Capital	Balanced Program	IT - Enterprise - Application	Data Governance (BC 208890)	No	N/A			
Capital	Balanced Program	IT - Enterprise - Application	Asset 360 WMP	No	N/A	The workpaper contains activities to integrate asset, risk event, outage, and maintenance and inspection data including build consolidated views, data catalogues, data cleansing and data governance for asset data.	N/A	N/A
Capital	Balanced Program	IT - Enterprise - Application	Investmt Portfolio Optimization WMP	No	N/A			
Capital	Balanced Program	IT - Enterprise - Application	Situational Awareness & Forecasting	No	N/A			
Capital	Balanced Program	IT - Enterprise - Application	Resource Allocation Methodology	No	N/A			
Capital	Balanced Program	IT - Enterprise - Application	Asset Management	No	N/A			
Capital	Balanced Program	IT - Enterprise - Application	Emergency Management Operations	No	N/A			
Capital	Balanced Program	IT - Enterprise - Application	Communication Practices	No	N/A			
Capital	Balanced Program	IT - Enterprise - Application	Inspection, Repair, Maintenance & Replacement Programs	No	N/A			
Capital	Balanced Program	IT - Enterprise - Application	Grid Operations & Operating Protocols	No	N/A			
Capital	Balanced Program	IT - Enterprise - Application	AQI Notifications	No	N/A			
Capital	Balanced Program	IT - Enterprise - Application	ENS Enhancement WMP	No	N/A			
Capital	Balanced Program	IT - Enterprise - Application	PSPP Mobile App	No	N/A			
Capital	Balanced Program	IT - Enterprise - Application	Digital Fortress Ph2	No	N/A			
Capital	Balanced Program	IT - Enterprise - Application	Advanced Analytics	No	N/A			
Capital	Balanced Program	IT - Enterprise - Application	WMP Foundation & Reporting	No	N/A			

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
Capital	Balanced Program	IT - Enterprise - Application	WMP Vegetation Management Service	No	N/A			
Capital	Balanced Program	IT - Enterprise - Application	PSPP All Hazards & K2	No	N/A	The workpaper contains activities to implement and evolve the Public Safety Partner Portal and mobile app into a one-stop-shop solution for Partners to access All-hazard related information to implement All-hazard solutions.	N/A	N/A
Capital	Balanced Program	IT - Enterprise - Application	WMP Operation Megaphone	No	N/A			
Capital	Balanced Program	IT - Enterprise - Application	Centralized Repository for Data	No	N/A	This workpaper for Wildfire Mitigation IT Application contains various projects within the following categories: 1. Electric Distribution Asset Investment Prioritization 2. WSD Data Schema 3. Wildfire Mitigation Advanced Analytics	N/A	SDG&E-13-2R-E JTW-152 to JTW-155 CWP 208910 and 218840
<b>Capital</b>	<b>Balanced Program</b>	<b>Sub-Total IT - Enterprise - Application</b>		<b>Yes</b>				
Capital	Balanced Program	Facilities WMP - Balanced	Emergency Management Operations	No	N/A	The existing Emergency Operations Center at SDG&E Century Park corporate headquarters campus was last remodeled more than 17 years ago. The existing workstations and peripheral equipment (phones, keyboards, storage, etc.) for the emergency responders in the situation room do not meet current company ergonomic standards and in an effort to make the work environment more appropriate for extended shift work (12 hours on / 12 hours off) during emergency activations, the project will reconfigure the raised floor to provide more space between rows of furniture, provide new adjustable work surfaces to allow sit/stand functionality, revise existing electrical work to accommodate the new equipment and reconfigurations, and install new carpet and stair nosing for better wear and visibility. The spatial layout of the Situation and Executive conference rooms will also be reconfigured and upgraded with new audio visual technologies to allow for improved presentation and awareness of increased real-time information (news, weather, field reports, etc.), and enhanced exchange of information between subject matter experts monitoring evolving conditions and strategic decision makers.	SDG&E-22 RDT-34 to RDT-35 CWP 00709A.004	SDG&E-13-2R-E JTW-161 to JTW-162 CWP 197800
Capital	Balanced Program	Electric Distribution Balanced Projects		Yes				
Capital	Balanced Program	RAMP Base - Annual Pole Reinforcement (WMP)	GO165: Distribution Inspect and Repair program	No	N/A	Short and long term deterioration of equipment can increase the likelihood of asset failure and cause potential risk, including injury, to the public, contractors, and employees. This program is mandated per GO 165 and non-compliance poses risk of regulatory action, including fines.	SDG&E-14-R AFC-52 to AFC-54 CWP 872320	SDG&E-13-2R-E JTW-138 to JTW-139 CWP 002390
Capital	Balanced Program	RAMP Base - Wireless Fault Indicators	Design and Engineering Approaches	No	N/A	This program mitigates the risk of wildfire by providing awareness to where faults occurred so that remote cameras can be directed to see if an ignition took place. This program aims to mitigate the consequence of a fire should it occur. SDG&E will deploy new network devices throughout the HFTD to strengthen and modernize Low Power Communication Network (LPCN) coverage and reliability, and install SEL wireless fault indicator devices in strategic locations throughout HFTD Tier 3 and Tier 2.	SDG&E-14-R AFC-88 to AFC-89 CWP 112530	SDG&E-13-2R-E JTW-100 to JTW-102 CWP 112530
Capital	Balanced Program	Overhead System Hardening	System Hardening	No	N/A	To address Wildfire risk, this initiative will address aged conductor, aged splices, overloaded poles, as well as other conditions that are known to be a risk in the fire-prone areas. The combination of these fire mitigation methods effectively and efficiently reduces the risk of fire initiation and propagation while prioritizing the highest risk assets for strategic targeting by the FiRM project. When replacing these high-risk assets, poles, conductor, and other hardware are designed and constructed in accordance with current regulatory requirements as well as known local weather conditions for increased preparedness. In all, the FiRM project provides substantive fire risk reduction for SDG&E and its customers.	SDG&E-14-R AFC-123 to AFC-126; AFC-111 to AFC-112 CWP 132470 & 17254A	SDG&E-13-2R-E JTW-109 to JTW-111 JTW-115 to JTW-117 CWP 202840 and CWP 202850
Capital	Balanced Program	HFTD Fuse Replacements	Expulsion Fuse Replacements	No	N/A	This project will proactively replace at risk electric distribution cutout bodies and fuses in HFTD Tier 2 and Tier 3 with Cal Fire approved devices in order to reduce the risk of wildfire ignition. Infrastructure upgrades as required to facilitate these fuse changeouts may also be implemented. This work is pursuant to Wildfire Mitigation Plan (WMP) scoping.	N/A	SDG&E-13-2R-E JTW-118 to JTW-119 CWP 192420

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
Capital	Balanced Program	PSPS Engineering Enhancements	PSPS Sectionalizing	No	N/A	Installing distribution sectionalizing devices (e.g., switches, associated automation devices, etc.) will enable minimizing customer impacts during Public Safety Power Shut-Off (PSPS) events.	N/A	SDG&E-13-2R-E JTW-129 to JTW-130 CWP 192450
Capital	Balanced Program	HFTD Undergrounding	Strategic Undergrounding	No	N/A	Pursuant to SDG&E's Wildfire Mitigation Plan, this budget provides funding to perform distribution overhead to underground conversions in an effort to mitigate risk of wildfire ignitions caused by overhead infrastructure failures.	N/A	SDG&E-13-2R-E JTW-132 to JTW-135 CWP 192460
Capital	Balanced Program	Meteorology - Fire Science Enhancements	WRRM - OPS	No	N/A	Pursuant to SDG&E's Wildfire Mitigation Plan, this budget provides funding to enhance the fire science capabilities at SDG&E. New tools and technologies will be developed to greatly enhance current technologies such as the Fire Potential Index and create the next generation of fire weather tools.	N/A	SDG&E-13-2R-E JTW-94 to JTW-97 CWP 192480
Capital	Balanced Program	Backup Power for Resiliency	Microgrids	No	N/A			
Capital	Balanced Program	CNF - RAMP	System Hardening	No	N/A	The Cleveland National Forest (CNF) Fire Hardening program hardened transmission and distribution electric infrastructure within CNF boundaries through replacing wood poles with steel poles, replacing aged conductor with new high-strength conductor, and associated upgrades. The CNF hardening projects were all completed in 2021 but environmental restoration costs will continue.	SDG&E-14-R AFC-143 to AFC-144 CWP 08165	SDG&E-13-2R-E JTW-130 to JTW-132 CWP 08165
Capital	Balanced Program	TL649 Otay-San Ysidro-Border SW Pole Repl - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	N/A			
Capital	Balanced Program	TL691 Avo-Mon Wood to Steel - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	In the 2019 TY GRC, this wood to steel project on TL691 was anticipated to be placed in service by 2018; however was previously delayed due to permitting/easements with military base.	Replace (114) wood poles with a combination of direct-buried steel poles, wood equivalent SW poles and self-supporting tubular steel poles on drilled pier or micropile foundations and install approximately 8.7 miles of new 636 ACSR/AW conductor from Pendleton to Monserate to Avocado substation.	SDG&E-14-R AFC-146 to AFC-147 CWP 10144A	SDG&E-13-2R-E JTW-127 to JTW-128 CWP 141400
Capital	Balanced Program	TL6912 Wood to Steel Pole Replacement - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	N/A			
Capital	Balanced Program	TL6926 Rincon to Valley Center Fire Hardening	OH Trans Fire Hardening Dist Underbuild	No	N/A			
Capital	Balanced Program	TL690E - Camp Pendleton - Wood to Steel	Inspection, Repair, Maintenance & Replacement Programs	No	N/A			
Capital	Balanced Program	TL692 Horno Pulgas (Camp Pend)	Inspection, Repair, Maintenance & Replacement Programs	No	N/A			
Capital	Balanced Program	TL639 Wood to Steel Replacement	Inspection, Repair, Maintenance & Replacement Programs	No	N/A			
Capital	Balanced Program	TL636 Wood to Steel Replacement	Inspection, Repair, Maintenance & Replacement Programs	No	N/A			
Capital	Balanced Program	TL13831 Wood to Steel Replacement (Talega - Rancho Mission Viejo)	Inspection, Repair, Maintenance & Replacement Programs	No	N/A			
Capital	Balanced Program	TL23001 TL23004 Wood to Steel Replacement (Mission - San Luis Rey)	Inspection, Repair, Maintenance & Replacement Programs	No	N/A			
Capital	Balanced Program	Lightning Arrestor Replacement Program	Inspection, Repair, Maintenance & Replacement Programs	No	N/A	SDG&E analyzes equipment data, reliability data, and ignition data, together with equipment technology innovation in the industry, to propose programs that target high risk equipment with ignition history. SDG&E's lightning arrestor replacement program is an example of how SDG&E is exploring new technology to reduce the risk of equipment-related failures and ignitions. Through this process, a new lightning arrestor standard product was introduced that received CAL FIRE approval.	N/A	SDG&E-13-2R-E JTW-122 to JTW-123 CWP 202820



Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
Capital	Balanced Program	Aerial Mesh Network Expansion	Aviation Firefighting Program	No	N/A			
Capital	Balanced Program	Drone Investigation Assessment And Repair	Distribution System Inspection Drone Inspections	No	N/A	The capital portion of the DIAR program consists of replacement of electrical distribution poles in the HFTD that have been evaluated by qualified electrical workers who have concluded the pole has reached the end of its useful life.	N/A	SDG&E-13-2R-E JTW-141 to JTW-144 CWP 202480
Capital	Balanced Program	Aviation Firefighting Program	Grid Operations & Operating Protocols	No	N/A			
Capital	Balanced Program	Aviation Training Area	Aviation Training Area	No	N/A	The "On the Rocks" aviation training area will provide a space for training, maintaining currency, evaluating new pilots, and improving pilot proficiency. The training area will reduce risk associated with aviation incidents such as helicopter or UAS crashes and resulting fires by offering a controlled environment for aviation training.	N/A	SDG&E-13-2R-E JTW-145 to JTW-148 CWP 202770
Capital	Balanced Program	Aviation Crossing Markers	Aviation Crossing Markers	No	N/A	This project installs crossing signs where transmission lines intersect with distribution lines and is particularly important when helicopters are flying patrols in the High Fire Threat District (HFTD).	N/A	N/A

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
Capital	Balanced Program	Avian Protection WMP	Avian Protection WMP	No	N/A	Avian protection work will assess all distribution lines and poles in the overhead distribution system within the HFTD that either 1) lie within the Avian Protection Zone, or 2) have associated known bird contacts, and resolve potential avian risks through installing avian protection equipment or otherwise rearranging equipment.	SDG&E-14-R AFC-49 to AFC-50 CWP 102650	SDG&E-13-2R-E JTW-122 to JTW-124 CWP 202820
Capital	Balanced Program	Elect Transmission Line Reliability Projects	Transmission System Inspection	No	N/A			
Capital	Balanced Program	Trans Fiber Links HFTD	LTE Communication Network	No	N/A	The project when completed will provide a self-healing network to carry multi-gigabit data on demand. Our microwave network will also be upgraded to or be replaced with higher bandwidth (622 Mbps or higher) system, which is key to real-time applications. Create a solid backbone of Synchronous Optical NETWORK (SONET) consisting of fiber optic and high-speed digital microwave network. Modern protection relays require high-speed, dependable, and secure communication for protection and control. Presently, SDG&E's existing communication infrastructure is inadequate for protection of transmission lines, compromising protection dependability and security. SDG&E is lagging behind the industry in providing the quality of communication necessary to meet the demands of today's protection equipment. This project will install Fiber Optic communication on all 138kV and above transmission lines in the next 3 years and convert major 69 kV system to fiber in 5 years for safe grid operation. It will reduce single-use telecom infrastructures. It will position SDG&E for future automation application, Condition Based Maintenance (CBM), Smart Meter (AMI), and Smart Grid.	SDG&E-14-R AFC-142 to AFC-143 CWP 071440	SDG&E-13-2R-E JTW-114 to JTW-115 CWP 191340
Capital	Balanced Program	Ramp Base - Install SCADA On-Line Capacitors	Expand and Maintain Distribution Advanced SCADA infrastructure	No	N/A	Convert the existing 1404 existing line capacitors to SCADA control.	SDG&E-14-R AFC-87 to AFC-88 CWP 112490	SDG&E-13-2R-E JTW-106 to JTW-108 CWP 202580
Capital	Balanced Program	RAMP Base - Weather Station Adv Detection	Advanced Detection	No	N/A	The purpose of this project is to strategically enhance the Weather Network, promoting continuing operations of critical fire weather infrastructure. The SDG&E Weather Station Network was originally developed and deployed in 2009, and the weather stations are reaching their end of life. This project will continuously enhance the Weather Network to promote a reliable flow of operationally critical fire weather information. This information will be fed into fire weather tools such as the Fire Potential Index (FPI) and the Santa Anna Wildfire Threat Index (SAWTI). The Weather Network will be upgraded by installing new weather stations capable of more frequent weather reads. Additionally, multi-spectral cameras, fuel moisture sensors, and additional capabilities will be integrated to help predict and monitor weather during extreme weather events.	SDG&E-14-R AFC-94 to AFC-95 CWP 122490	SDG&E-13-2R-E JTW-98 to JTW-100 CWP 192470
Capital	Balanced Program	TL6916 Sycamore Canyon to Scripps Wood to Steel	OH Trans Fire Hardening Dist Underbuild	No	N/A			
Capital	Balanced Program	TL698 Monserate - Avocado Wood to Steel	OH Trans Fire Hardening Dist Underbuild	No	N/A			
Capital	Balanced Program	TL694 Wood To Steel	OH Trans Fire Hardening Dist Underbuild	No	N/A			
Capital	Balanced Program	TL13838 Wood to Steel Replacement (Magarita - Rancho Mission Viejo)	OH Trans Fire Hardening Dist Underbuild	No	N/A			
Capital	Balanced Program	TL690C Camp Pendleton Wood to Steel	OH Trans Fire Hardening Dist Underbuild	No	N/A			
Capital	Balanced Program	Helicopter HD/IR Cameras	Aviation Firefighting Program	No	N/A			
Capital	Balanced Program	TwinEngine Med Lift Helicopter	Aviation Firefighting Program	No	N/A	The Bell 412 helicopter is a twin-engineer medium lift helicopter that provides an increase in lifting capability for construction-related loads. The Bell 412 will be outfitted with equipment necessary for firefighting capabilities.	N/A	SDG&E-13-2R-E JTW-150 to JTW-152 CWP 212560
Capital	Balanced Program	Transmission DIAR UAS Purchase	Aviation Firefighting Program	No	N/A			
Capital	Balanced Program	IR Flir Monocular	Inspection, Repair, Maintenance & Replacement Programs	No	N/A			
Capital	Balanced Program	SDG&E ENS Enhancements	Non-RAMP	No	N/A			
Capital	Balanced Program	TL695 Talega Wood to Steel - RAMP Incremental	Inspection, Repair, Maintenance & Replacement Programs	No	N/A			
Capital	Balanced Program	WMP ENHANCED COMM 800MHZ RADIO SYSTEMS	Emergency Planning & Preparedness	No	N/A			

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
Capital	Balanced Program	Meteorology Super Computer Replacements	Meteorology Super Computer Replacements	No	N/A	SDG&E utilizes high performance supercomputing to run the Weather Research and Forecasting model specifically tailored to the unique weather and terrain characteristics of the service territory. Additionally, the computing cluster is critical to numerous big data analytics projects that generate terabytes of data required for operational Meteorology. The San Diego Supercomputing Center will ingest and store these SDG&E datasets for weather forecast, fire potential index, and fuels to enable metadata-based querying for various stakeholders through web APIs and visual maps.	N/A	SDG&E-13-2R-E JTW-104 to JTW-106 CWP 202400
Capital	Balanced Program	Mobile IR Sub Cameras WMP	Mobile IR Sub Cameras WMP	No	N/A			
Capital	Balanced Program	Wildfire Resiliency Platform (WiNGS)	Wildfire Resiliency Platform (WiNGS)	No	N/A			
Capital	Balanced Program	Early Fault Detection	Early Fault Detection	No	N/A	This project will deploy Power Quality Meters and advanced Radio Frequency (RF) Sensors in SDG&E electric substations and electric distribution circuits within the High Fire Threat District, to enable the collection of time-series analog data used to detect incipient failures of electrical equipment and locate that failing equipment before it can cause significant damage.	N/A	N/A
Capital	Balanced Program	TL686-W2S_Wind	TL686-W2S_Wind	No	N/A			
Capital	Balanced Program	Strategic Pole Replacement Program (SPRP) - WMP	Strategic Pole Replacement Program (SPRP) - WMP	No	N/A	Target high risk poles located throughout SDG&E service territory. This will continue SDG&E's efforts in hardening the system while continuing the Wildfire mitigation program. Examples of poles this program will focus on will include but not limited to, gas-treated poles (may be known as Cellon treatment), steel reinforced and poles that are set in concrete. These identified poles are also nearing the end of their useful life and are known to have a higher failure potential than average. These poles will be located in the HFTD 2 & 3 areas.	N/A	SDG&E-13-2R-E JTW-135 to JTW-137 CWP 222420
Capital	Balanced Program	Risk Drone Inspection	Risk Drone Inspection	No	N/A	Ensure electrical distribution reliability by replacing poles in the HFTD that have been evaluated by subject matter experts to have reached the end of their useful life.	N/A	N/A
Capital	Balanced Program	HFTD RFS Projects	HFTD RFS Projects	No	N/A	Removal from Service (RFS) jobs within the HFTD Tier 2 and Tier 3. Jobs include removing approximately 41 poles and conductor no longer in use.	N/A	N/A
Capital	Balanced Program	Advanced Protection	Inspection, Repair, Maintenance & Replacement Programs	No	N/A			
<b>Capital</b>	<b>Balanced Program</b>	<b>Sub-Total WMP Projects (Balanced Costs)</b>		<b>Yes</b>				
Capital	Balanced Program	Local Engineering Pool - Electric Distribution	Non-RAMP	No	N/A	Local Engineering activities are required to follow 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 through the use of the overhead pools. It is not feasible to charge directly for each electric distribution job due to the tremendous amount of work orders.	SDG&E-14-R AFC-69 to AFC-70 WP 009010	SDG&E-11-R OR-87 to OR-88 WP E09010
Capital	Balanced Program	Local Engineering Pool - ED RAMP	Works Standards and Methods	No	This activity included the development and implementation of the Enterprise Asset Management Platform (EAMP), which comprises a system of tools designed to enhance the company's ability to track and monitor electric distribution assets in order to make risk-based, data driven decisions around capital asset investments. The initial phase of this activity was completed in 2022.	Local Engineering activities are required to follow 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 through the use of the overhead pools. It is not feasible to charge directly for each electric distribution job due to the tremendous amount of work orders.	SDG&E-14-R AFC-69 to AFC-70 WP 009010	SDG&E-11-R OR-87 to OR-88 WP E09010
<b>Capital</b>	<b>Balanced Program</b>	<b>Sub-Total Local Engineering Pool – Electric Distribution</b>		<b>Yes</b>				

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
Capital	Balanced Program	Local Engineering Pool - Substation	Non-RAMP	No	N/A	The Local Engineering – Substation Pool consists of the pool 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 substation projects. These persons also address the interaction with internal and external customers in preparing a work order package for construction.	SDG&E-14-R AFC-70 to AFC-72 WP 009040	SDG&E-11-R OR-88 to OR-90 WP E09040
Capital	Balanced Program	Department Overhead Pool	Non-RAMP	No	N/A	Department Overheads are those costs for supervision and administration of crews in the SDG&E Construction and Operation (C&O) districts. Department Overhead is charged for expenses that are not attributable to one particular project, but benefit many projects, or the C&O districts as a whole. The non-labor piece consists of administrative expenses such as: office supplies, telephone expenses, mileage, employee uniforms and professional dues. This pool includes costs that will be allocated to electric capital activities.	SDG&E-14-R AFC-70 to AFC-72 WP 009050	SDG&E-11-R OR-90 to OR-91 WP E09050
Capital	Balanced Program	Contract Admin Pool - RAMP Base	Administration of Projects performed by Contractors	No	N/A	The Contract Administration (CA) pool consists of those expenses necessary for the administration of projects that are performed by contractors for SDG&E. The expenses to this pool consist of labor for Contract Administrators 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.	SDG&E-14-R AFC-70 to AFC-74 WP 00906A	SDG&E-11-R OR-91 to OR-92 WP E09060
<b>Capital</b>	<b>Balanced Program</b>	<b>Sub-Total ED Overhead Pools (Balanced Costs)</b>		<b>Yes</b>				

**C. SDG&E Balanced Program Regulatory Account 2023 Cumulative Balances**

**i. SDG&E Regulatory Account – DIMPBA**

<b>SDG&amp;E DIMPBA Details Revenue Requirements (\$000)</b>						
<b>Program Cycle 2019-2023</b>						
<b>Two-Way</b>						
	(a)	(b)	(c)	(d) = (b) - (c)	(e)	(f) = (a) + (d) + (e)
	<b>Beginning Balance</b>	<b>Actual</b>	<b>Authorized</b>	<b>Under/(Over) Collection</b>	<b>Interest</b>	<b>Ending Balance</b>
<b>Year 2023</b>						
Beginning Balance	(15,593)					
O&M		2,504				
Capital-Related Costs		27,341				
Adjustments						
Interest					(499)	
<b>Subtotal</b>	<b>(19,202)</b>	<b>29,845</b>	<b>18,177</b>	<b>11,169</b>	<b>(499)</b>	<b>(4,423)</b>

ii. **SDG&E Regulatory Account – TIMPBA**

<b>SDG&amp;E TIMPBA Details Revenue Requirements (\$000)</b>						
<b>Program Cycle 2019-2023</b>						
<b>Two-Way</b>						
	(a)	(b)	(c)	(d) = (b) - (c)	(e)	(f) = (a) + (d) + (e)
	<b>Beginning Balance</b>	<b>Actual</b>	<b>Authorized</b>	<b>Under/(Over) Collection</b>	<b>Interest</b>	<b>Ending Balance</b>
<b>Year 2023</b>						
Beginning Balance	8,431					
O&M		34,253				
Amortization						
Capital-Related Costs		2,020				
Interest					1,055	
<b>Subtotal</b>	<b>8,431</b>	<b>36,274</b>	<b>10,313</b>	<b>25,961</b>	<b>1,055</b>	<b>35,448</b>

iii. SDG&E Regulatory Account – Tree Trimming Balancing Account

SDG&E Tree Trimming Balancing Account Details Revenue Requirements (\$000)						
Program Cycle 2019-2023						
Two-Way						
	(a)	(b)	(c)	(d) = (b) - (c)	(e)	(f) = (a) + (d) + (e)
	Beginning Balance	Actual	Authorized	Under/(Over) Collection	Interest	Ending Balance
<b>Year 2023</b>						
Beginning Balance	116,303					
O&M		67,363				
Amortization						
Interest					6,522	
<b>Subtotal</b>	<b>116,303</b>	<b>67,636</b>	<b>36,865</b>	<b>30,771</b>	<b>6,522</b>	<b>153,596</b>

iv. **SDG&E Regulatory Account – Overhead Pools Balancing Account**

SDG&E Overhead Pools Balancing Account Details Revenue Requirements (\$000) Program Cycle 2019-2023 One-Way						
	(a)	(b)	(c)	(d) = (b) - (c)	(e)	(f) = (a) + (d) + (e)
	<b>Beginning Balance</b>	<b>Actual</b>	<b>Authorized</b>	<b>Under/(Over) Collection</b>	<b>Interest</b>	<b>Ending Balance</b>
<b>Year 2023</b>						
Beginning Balance	92,384					
Funding		215,095	127,927	87,168		
Interest						
<b>Subtotal</b>	<b>92,384</b>	<b>215,095</b>	<b>127,927</b>	<b>87,168</b>	<b>—</b>	<b>179,552</b>



v. **SDG&E Regulatory Account – Wildfire Mitigation Plan (WMP) Memorandum Account**

<b>SDG&amp;E Wildfire Mitigation Plan Memorandum Details Revenue Requirements (\$000)</b>						
<b>Program Cycle 2019-2023</b>						
<b>Two-Way</b>						
	(a)	(b)	(c)	(d) = (b) - (c)	(e)	(f) = (a) + (d) + (e)
	<b>Beginning Balance</b>	<b>Actual</b>	<b>Authorized</b>	<b>Under/(Over) Collection</b>	<b>Interest</b>	<b>Ending Balance</b>
<b>Year 2023</b>						
Beginning Balance	374,519					
O&M		168,589				
Capital-Related Costs		210,474				
Interest					26,196	
<b>Subtotal</b>	<b>374,519</b>	<b>379,063</b>	<b>94,379</b>	<b>284,684</b>	<b>26,196</b>	<b>685,400</b>

## **SDG&E Balanced Program Regulatory Account Disposition**

### **i. & ii TIMP & DIMP**

Per D.19-09-051, the TIMPBA and Post-2011 DIMPBA will continue for the 2019 GRC cycle. Any over- or under-collected balance at the end of each year within the GRC cycle will be carried over to the following year. For under-collections as a result of overspending up to 35% of the total authorized O&M and capital expenditures, SDG&E filed Tier 3 AL 3257-G on December 15, 2023 to recover the undercollected balance in the TIMPBA of \$23.3 million as of July 31, 2023. The remaining balance as of December 31, 2023 of \$12.1 million will be recovered through an application. It is expected to be filed in Q2 or Q3 of 2024.

For under-collections due to overspending greater than 35% of the total authorized O&M and capital expenditures, SDG&E will seek recovery through a separate application. If SDG&E has not overspent in excess of the total authorized O&M and capital expenditures for the current GRC cycle, but an under-collection exists due to compounding of actual capital revenue requirement recorded in the balancing account, SDG&E will incorporate the under-collected balance in its annual regulatory account balance update submittal for recovery in the subsequent year's rates. For any unspent funds at the end of the current GRC cycle, SDG&E will propose in its next GRC proceeding to return the unspent funds in rates to customers.

### **iii. Tree Trimming Balancing Account**

Pursuant to D.19-09-051, TY 2019 GRC, effective January 1, 2019, the TTBA will continue for the 2019 GRC cycle. TTBA is a two-way balancing account. SDG&E is required to file a Tier 3 advice letter for recovery of under-collections up to 35 percent of the revenue requirement and an application for under-collections above 35 percent. Any over-collected balance at the end of each year will be amortized in connection with its annual regulatory account balance update filing for rates effective January 1 of the following year. On December 9, 2022, SDG&E filed application A.22-12-008 requesting recovery of the 2020 under-collected balance of \$43.5 million which is approximately 175% of the revenue requirement and the 2021 under-collected balance of \$26.8 million which is approximately 105% of the revenue requirement to a total of \$70.3 million. The proceeding is on-going with the next step being a proposed decision. An application will need to be submitted for the 2022 costs of \$35.6 million and 2023 costs of \$37.3 million, for a total of \$72.9 million.

**iv. Overhead Pools Balancing Account**

Pursuant to D.19-09-051, the Overhead Pools Balancing account (OPBA) is established as a non-interest bearing, one-way balancing account, in effect during the TY 2019 GRC cycle. The OPBA shall apply to Electric Distribution customers, except for those specifically excluded by the Commission. The four overhead capital pools that are covered by this balancing account are the Local Engineering Electric Distribution pool; Local Engineering – Substation pool; the Department Overhead pool and the Contract Administration pool. This is a tracking account only and is not posted to the general ledger. The account will be evaluated for ratemaking purposes over the entire cycle covered by the TY 2019 GRC.

**v. Wildfire Mitigation Plan Memorandum Account**

Pursuant to D.19-05-039 and AL 3454-E / 2817-G, SDG&E established the Wildfire Mitigation Plan Memorandum Account (WMPMA) to record costs incurred to implement SDG&E's Commission-approved Wildfire Mitigation Plan, effective May 30, 2019. The WMPMA is a two-way memorandum account; it records the revenue requirement authorized in SDG&E's GRC (or other proceeding deemed appropriate by the Commission) for wildfire-related activities beginning on May 30, 2019, and O&M and capital-related costs associated with work performed based on activities in SDG&E's Wildfire Mitigation Plan, beginning on May 30, 2019. Accordingly, the WMPMA balance reflects those costs net of revenue requirement authorized in SDG&E's GRC. The WMPMA shall remain open until the Commission authorizes closure of the account. Consistent with the Scoping Memo in the Test Year 2024 GRC, SDG&E intends to address the 2019 to 2023 WMPMA balance in separate tracks of its current GRC.

SDG&E received approval of interim rate recovery authorizing \$193.8 million in interim cost recovery during the period from March 1, 2024 – December 31, 2024 and \$96.1 million during calendar year 2025. Interim cost recovery will still be subject to reasonableness review and potential disallowance.

**ATTACHMENT B - SOCALGAS'S 2023 RISK SPENDING ACCOUNTABILITY REPORT**

1. SoCalGas Gas  
A. SoCalGas Gas Distribution  
i. SoCalGas Gas Distribution Operations O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Gas Distribution	Gas Distribution		Yes			139,696	153,884	172,482	167,711	170,142	803,914	154,808	158,895	162,711	165,860	169,674	811,949
O&M	Gas Distribution	Field Services Leadership & Operations Assessment	Non-RAMP	No	On-going	Annual	460	512	409	532	534	2,446	296	304	311	318	325	1,554
O&M	Gas Distribution	Field Support	Non-RAMP	No	On-going	Annual	13,603	15,795	17,310	17,210	19,450	83,369	13,896	14,263	14,606	14,888	15,231	72,884
O&M	Gas Distribution	Field Support	Maintenance - Pipeline observation "Standby" (From Field Support)	No	On-going	Annual	—	—	—	—	—	—	3,580	3,675	3,763	3,836	3,924	18,777
O&M	Gas Distribution	Field Support	PPE and Safety Equipment	No	Completed	Annual	—	—	—	—	—	—	21	22	22	22	23	110
O&M	Gas Distribution	Field Support	Qualifications of Pipeline Personnel	No	On-going	Annual	2,707	2,988	4,994	6,036	3,885	20,610	2,547	2,614	2,677	2,729	2,792	13,359
O&M	Gas Distribution	Field Support	Contractor Management and Traffic Control	No	On-going	Annual	917	695	639	757	868	3,876	1,587	1,629	1,668	1,700	1,739	8,324
O&M	Gas Distribution	Field Support	QA Job Observations Field Rides and Job Monitoring	No	On-going	Annual	77	129	123	148	90	567	62	64	65	66	68	325
O&M	Gas Distribution	<b>Sub-Total Field Support</b>		Yes			<b>17,304</b>	<b>19,607</b>	<b>23,066</b>	<b>24,151</b>	<b>24,293</b>	<b>108,422</b>	<b>21,693</b>	<b>22,266</b>	<b>22,801</b>	<b>23,242</b>	<b>23,776</b>	<b>113,778</b>
O&M	Gas Distribution	Leak Survey	Non-RAMP	No	On-going	Annual	1,196	945	938	899	974	4,952	2,642	2,712	2,777	2,831	2,896	13,856
O&M	Gas Distribution	Leak Survey	Maintenance - Leak Survey	No	On-going	Annual	8,605	9,024	9,505	9,678	9,866	46,678	9,138	9,379	9,605	9,790	10,016	47,928
O&M	Gas Distribution	<b>Sub-Total Leak Survey</b>		Yes			<b>9,801</b>	<b>9,969</b>	<b>10,443</b>	<b>10,577</b>	<b>10,840</b>	<b>51,630</b>	<b>11,780</b>	<b>12,091</b>	<b>12,381</b>	<b>12,621</b>	<b>12,911</b>	<b>61,784</b>
O&M	Gas Distribution	Locate & Mark	Non-RAMP	No	On-going	Annual	1,611	1,790	1,789	1,766	1,955	8,911	41	42	43	44	45	217
O&M	Gas Distribution	Locate & Mark	Locate & Mark Activities	No	On-going	Annual	13,882	14,265	15,088	17,697	18,512	79,444	15,729	16,144	16,532	16,852	17,239	82,497
O&M	Gas Distribution	Locate & Mark	QA Job Observations Field Rides and Job Monitoring	No	On-going	Annual	2,326	2,810	3,481	3,734	4,047	16,398	1,696	1,741	1,783	1,817	1,859	8,895
O&M	Gas Distribution	<b>Sub-Total Locate &amp; Mark</b>		Yes			<b>17,819</b>	<b>18,865</b>	<b>20,358</b>	<b>23,197</b>	<b>24,514</b>	<b>104,753</b>	<b>17,466</b>	<b>17,927</b>	<b>18,358</b>	<b>18,713</b>	<b>19,144</b>	<b>91,609</b>

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Gas Distribution	Main Maintenance	Non-RAMP	No	On-going	Annual	20,628	22,499	27,379	20,829	18,850	110,186	16,717	17,159	17,571	17,911	18,323	87,680
O&M	Gas Distribution	Main Maintenance	Contracting for Traffic Control Delineation materials -- Distribution Only. Outside vendors	No	On-going	Annual	827	1,482	1,255	1,291	1,920	6,775	1,763	1,810	1,853	1,889	1,932	9,247
O&M	Gas Distribution	Main Maintenance	Maintenance - Valve Inspection and Maintenance (From Field Support)	No	On-going	Annual	945	1,014	1,013	979	1,063	5,014	888	911	933	951	973	4,657
O&M	Gas Distribution	Main Maintenance	High-Pressure Pipeline Failure, Project Maintenance - Valve Maintenance and Installation (Distribution High Pressure) (From Field Support)	No	On-going	Annual	65	69	69	67	73	343	61	63	64	65	67	320
O&M	Gas Distribution	Main Maintenance	Maintenance - Pipeline Patrol (From Field Support)	No	On-going	Annual	84	90	79	102	115	470	204	209	214	219	224	1,070
O&M	Gas Distribution	Main Maintenance	Maintenance - Bridge and Span (From Field Support)	No	On-going	Annual	101	96	83	109	150	539	125	128	131	134	137	656
O&M	Gas Distribution	Main Maintenance	Maintenance - Unstable Earth Inspection (From Field Support)	No	On-going	Annual	6	9	12	9	14	50	8	8	8	9	9	42
<b>O&amp;M</b>	<b>Gas Distribution</b>	<b>Sub-Total Main Maintenance</b>		<b>Yes</b>			<b>22,656</b>	<b>25,259</b>	<b>29,890</b>	<b>23,386</b>	<b>22,185</b>	<b>123,377</b>	<b>19,766</b>	<b>20,288</b>	<b>20,775</b>	<b>21,177</b>	<b>21,664</b>	<b>103,671</b>
O&M	Gas Distribution	Service Maintenance	Non-RAMP	No	On-going	Annual	11,384	13,835	15,919	15,713	13,817	70,669	17,147	17,600	18,023	18,371	18,794	89,935
O&M	Gas Distribution	Tools Fittings & Materials	Non-RAMP	No	On-going	Annual	11,166	11,338	12,029	12,826	19,989	67,348	8,526	8,751	8,962	9,135	9,345	44,720
O&M	Gas Distribution	Tools Fittings & Materials	PPE and Safety Equipment - Company wide purchases of personal protective equipment (PPE)	No	On-going	Annual	1,560	1,439	1,913	2,231	2,749	9,892	714	733	750	765	783	3,745
O&M	Gas Distribution	Tools Fittings & Materials	PPE and Safety Equipment - Uniform rentals for employees - both protective and for security	No	On-going	Annual	551	571	600	644	758	3,124	1,063	1,091	1,117	1,139	1,165	5,575
<b>O&amp;M</b>	<b>Gas Distribution</b>	<b>Sub-Total Tools Fittings &amp; Materials</b>		<b>Yes</b>			<b>13,277</b>	<b>13,348</b>	<b>14,542</b>	<b>15,701</b>	<b>23,496</b>	<b>80,364</b>	<b>10,303</b>	<b>10,575</b>	<b>10,829</b>	<b>11,039</b>	<b>11,293</b>	<b>54,040</b>
O&M	Gas Distribution	Asset Management	Non-RAMP	No	On-going	Annual	7,515	8,373	8,965	7,680	7,118	39,652	7,578	7,778	7,965	8,119	8,306	39,748

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Gas Distribution	Measurement & Regulation	Non-RAMP	No	On-going	Annual	7,335	8,573	8,502	7,230	7,870	39,511	9,231	9,474	9,702	9,890	10,117	48,413
O&M	Gas Distribution	Measurement & Regulation	Maintenance - Inspect meters, regulators, and gauges to evaluate and confirm overpressure protection is in place and maintained.	No	On-going	Annual	1,271	1,602	1,811	1,773	1,711	8,168	1,510	1,550	1,588	1,618	1,655	7,922
O&M	Gas Distribution	Measurement & Regulation	Maintenance - Maintenance and inspections of meter set assemblies (MSA) in the system	No	On-going	Annual	6,452	5,401	5,401	6,232	6,287	29,773	5,436	5,580	5,713	5,824	5,958	28,511
<b>O&amp;M</b>	<b>Gas Distribution</b>	<b>Sub-Total Measurement &amp; Regulation</b>		<b>Yes</b>			<b>15,058</b>	<b>15,576</b>	<b>15,714</b>	<b>15,235</b>	<b>15,868</b>	<b>77,452</b>	<b>16,177</b>	<b>16,604</b>	<b>17,003</b>	<b>17,332</b>	<b>17,730</b>	<b>84,846</b>
O&M	Gas Distribution	Cathodic Protection	Requirements for Corrosion Control	No	On-going	Annual	14,486	16,449	18,621	18,141	16,585	84,281	18,873	19,372	19,837	20,221	20,686	98,989
O&M	Gas Distribution	Cathodic Protection	Gas Facility and Pipeline Inspections	No	On-going	Annual	1,005	1,389	2,018	1,448	1,258	7,118	953	978	1,002	1,021	1,045	4,998
<b>O&amp;M</b>	<b>Gas Distribution</b>	<b>Sub-Total Cathodic Protection</b>		<b>Yes</b>			<b>15,491</b>	<b>17,838</b>	<b>20,639</b>	<b>19,589</b>	<b>17,843</b>	<b>91,399</b>	<b>19,826</b>	<b>20,350</b>	<b>20,839</b>	<b>21,242</b>	<b>21,730</b>	<b>103,987</b>
O&M	Gas Distribution	Operations And Management	Non-RAMP	No	On-going	Annual	5,150	6,978	8,630	7,907	5,674	34,338	6,976	7,161	7,333	7,475	7,646	36,591
O&M	Gas Distribution	Operations And Management	Policy, Procedures, Standards and ESCMP	No	On-going	Annual	—	—	—	—	—	—	996	1,022	1,047	1,067	1,092	5,224
<b>O&amp;M</b>	<b>Gas Distribution</b>	<b>Sub-Total Operations And Management</b>		<b>Yes</b>			<b>5,150</b>	<b>6,978</b>	<b>8,630</b>	<b>7,907</b>	<b>5,674</b>	<b>34,338</b>	<b>7,972</b>	<b>8,183</b>	<b>8,379</b>	<b>8,542</b>	<b>8,738</b>	<b>41,815</b>
O&M	Gas Distribution	Regional Public Affairs	Non-RAMP	No	On-going	Annual	3,781	3,722	3,906	4,042	3,961	19,413	4,801	4,928	5,046	5,144	5,262	25,181

1. SoCalGas Gas  
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i. SoCalGas Gas Distribution Operations O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Gas Distribution	Gas Distribution		Yes	(15,112)	(5,011)	9,770	1,851	467	(8,034)	-10%	-3%	6%	1%	0%	-1%
O&M	Gas Distribution	Field Services Leadership & Operations Assessment	Non-RAMP	No	164	208	98	214	209	892	55%	68%	31%	67%	64%	57%
O&M	Gas Distribution	Field Support	Non-RAMP	No	(293)	1,532	2,704	2,322	4,219	10,485	-2%	11%	19%	16%	28%	14%
O&M	Gas Distribution	Field Support	Maintenance - Pipeline observation "Standby" (From Field Support)	No	(3,580)	(3,675)	(3,763)	(3,836)	(3,924)	(18,777)	-100%	-100%	-100%	-100%	-100%	-100%
O&M	Gas Distribution	Field Support	PPE and Safety Equipment	No	(21)	(22)	(22)	(22)	(23)	(110)	-100%	-100%	-100%	-100%	-100%	-100%
O&M	Gas Distribution	Field Support	Qualifications of Pipeline Personnel	No	160	374	2,317	3,307	1,093	7,251	6%	14%	87%	121%	39%	54%
O&M	Gas Distribution	Field Support	Contractor Management and Traffic Control	No	(670)	(934)	(1,029)	(943)	(871)	(4,448)	-42%	-57%	-62%	-55%	-50%	-53%
O&M	Gas Distribution	Field Support	QA Job Observations Field Rides and Job Monitoring	No	15	65	58	82	22	242	24%	103%	89%	123%	32%	74%
O&M	Gas Distribution	<b>Sub-Total Field Support</b>		Yes	<b>(4,389)</b>	<b>(2,659)</b>	<b>265</b>	<b>909</b>	<b>516</b>	<b>(5,357)</b>	<b>-20%</b>	<b>-12%</b>	<b>1%</b>	<b>4%</b>	<b>2%</b>	<b>-5%</b>
O&M	Gas Distribution	Leak Survey	Non-RAMP	No	(1,445)	(1,767)	(1,838)	(1,931)	(1,922)	(8,904)	-55%	-65%	-66%	-68%	-66%	-64%
O&M	Gas Distribution	Leak Survey	Maintenance - Leak Survey	No	(533)	(355)	(100)	(112)	(150)	(1,250)	-6%	-4%	-1%	-1%	-1%	-3%
O&M	Gas Distribution	<b>Sub-Total Leak Survey</b>		Yes	<b>(1,978)</b>	<b>(2,122)</b>	<b>(1,938)</b>	<b>(2,044)</b>	<b>(2,072)</b>	<b>(10,154)</b>	<b>-17%</b>	<b>-18%</b>	<b>-16%</b>	<b>-16%</b>	<b>-16%</b>	<b>-16%</b>
O&M	Gas Distribution	Locate & Mark	Non-RAMP	No	1,570	1,748	1,746	1,722	1,909	8,695	3799%	4121%	4019%	3890%	4216%	4012%
O&M	Gas Distribution	Locate & Mark	Locate & Mark Activities	No	(1,847)	(1,879)	(1,444)	845	1,273	(3,053)	-12%	-12%	-9%	5%	7%	-4%
O&M	Gas Distribution	Locate & Mark	QA Job Observations Field Rides and Job Monitoring	No	630	1,069	1,698	1,917	2,188	7,503	37%	61%	95%	105%	118%	84%
O&M	Gas Distribution	<b>Sub-Total Locate &amp; Mark</b>		Yes	<b>353</b>	<b>938</b>	<b>2,000</b>	<b>4,484</b>	<b>5,370</b>	<b>13,145</b>	<b>2%</b>	<b>5%</b>	<b>11%</b>	<b>24%</b>	<b>28%</b>	<b>14%</b>



Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Gas Distribution	Main Maintenance	Non-RAMP	No	3,911	5,341	9,808	2,918	527	22,506	23%	31%	56%	16%	3%	26%
O&M	Gas Distribution	Main Maintenance	Contracting for Traffic Control Delineation materials -- Distribution Only. Outside vendors	No	(936)	(328)	(598)	(598)	(12)	(2,472)	-53%	-18%	-32%	-32%	-1%	-27%
O&M	Gas Distribution	Main Maintenance	Maintenance - Valve Inspection and Maintenance (From Field Support)	No	57	103	80	28	90	357	6%	11%	9%	3%	9%	8%
O&M	Gas Distribution	Main Maintenance	High-Pressure Pipeline Failure, Project Maintenance - Valve Maintenance and Installation (Distribution High Pressure) (From Field Support)	No	4	6	5	2	6	23	7%	10%	8%	3%	9%	7%
O&M	Gas Distribution	Main Maintenance	Maintenance - Pipeline Patrol (From Field Support)	No	(120)	(119)	(135)	(117)	(109)	(600)	-59%	-57%	-63%	-53%	-49%	-56%
O&M	Gas Distribution	Main Maintenance	Maintenance - Bridge and Span (From Field Support)	No	(24)	(32)	(48)	(25)	13	(117)	-19%	-25%	-37%	-19%	9%	-18%
O&M	Gas Distribution	Main Maintenance	Maintenance - Unstable Earth Inspection (From Field Support)	No	(2)	1	4	0	5	8	-25%	10%	43%	5%	60%	19%
O&M	Gas Distribution	<b>Sub-Total Main Maintenance</b>		Yes	<b>2,890</b>	<b>4,971</b>	<b>9,115</b>	<b>2,209</b>	<b>521</b>	<b>19,705</b>	<b>15%</b>	<b>25%</b>	<b>44%</b>	<b>10%</b>	<b>2%</b>	<b>19%</b>
O&M	Gas Distribution	Service Maintenance	Non-RAMP	No	(5,763)	(3,765)	(2,103)	(2,659)	(4,977)	(19,267)	-34%	-21%	-12%	-14%	-26%	-21%
O&M	Gas Distribution	Tools Fittings & Materials	Non-RAMP	No	2,640	2,587	3,067	3,691	10,644	22,629	31%	30%	34%	40%	114%	51%
O&M	Gas Distribution	Tools Fittings & Materials	PPE and Safety Equipment - Company wide purchases of personal protective equipment (PPE)	No	846	706	1,163	1,466	1,966	6,147	118%	96%	155%	192%	251%	164%
O&M	Gas Distribution	Tools Fittings & Materials	PPE and Safety Equipment - Uniform rentals for employees - both protective and for security	No	(512)	(520)	(517)	(495)	(407)	(2,451)	-48%	-48%	-46%	-43%	-35%	-44%
O&M	Gas Distribution	<b>Sub-Total Tools Fittings &amp; Materials</b>		Yes	<b>2,974</b>	<b>2,773</b>	<b>3,713</b>	<b>4,662</b>	<b>12,203</b>	<b>26,325</b>	<b>29%</b>	<b>26%</b>	<b>34%</b>	<b>42%</b>	<b>108%</b>	<b>49%</b>
O&M	Gas Distribution	Asset Management	Non-RAMP	No	(63)	595	1,000	(439)	(1,188)	(96)	-1%	8%	13%	-5%	-14%	-0%

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O&M	Gas Distribution	Measurement & Regulation	Non-RAMP	No	(1,896)	(902)	(1,199)	(2,659)	(2,247)	(8,903)	-21%	-10%	-12%	-27%	-22%	-18%
O&M	Gas Distribution	Measurement & Regulation	Maintenance - Inspect meters, regulators, and gauges to evaluate and confirm overpressure protection is in place and maintained.	No	(239)	52	223	155	56	246	-16%	3%	14%	10%	3%	3%
O&M	Gas Distribution	Measurement & Regulation	Maintenance - Maintenance and inspections of meter set assemblies (MSA) in the system	No	1,016	(179)	(312)	408	329	1,262	19%	-3%	-5%	7%	6%	4%
O&M	Gas Distribution	<b>Sub-Total Measurement &amp; Regulation</b>		Yes	<b>(1,119)</b>	<b>(1,028)</b>	<b>(1,289)</b>	<b>(2,096)</b>	<b>(1,862)</b>	<b>(7,395)</b>	<b>-7%</b>	<b>-6%</b>	<b>-8%</b>	<b>-12%</b>	<b>-11%</b>	<b>-9%</b>
O&M	Gas Distribution	Cathodic Protection	Requirements for Corrosion Control	No	(4,388)	(2,923)	(1,216)	(2,080)	(4,101)	(14,708)	-23%	-15%	-6%	-10%	-20%	-15%
O&M	Gas Distribution	Cathodic Protection	Gas Facility and Pipeline Inspections	No	52	411	1,016	427	213	2,120	5%	42%	101%	42%	20%	42%
O&M	Gas Distribution	<b>Sub-Total Cathodic Protection</b>		Yes	<b>(4,336)</b>	<b>(2,512)</b>	<b>(200)</b>	<b>(1,653)</b>	<b>(3,888)</b>	<b>(12,588)</b>	<b>-22%</b>	<b>-12%</b>	<b>-1%</b>	<b>-8%</b>	<b>-18%</b>	<b>-12%</b>
O&M	Gas Distribution	Operations And Management	Non-RAMP	No	(1,827)	(183)	1,297	432	(1,973)	(2,253)	-26%	-3%	18%	6%	-26%	-6%
O&M	Gas Distribution	Operations And Management	Policy, Procedures, Standards and ESCMP	No	(996)	(1,022)	(1,047)	(1,067)	(1,092)	(5,224)	-100%	-100%	-100%	-100%	-100%	-100%
O&M	Gas Distribution	<b>Sub-Total Operations And Management</b>		Yes	<b>(2,823)</b>	<b>(1,205)</b>	<b>250</b>	<b>(635)</b>	<b>(3,064)</b>	<b>(7,477)</b>	<b>-35%</b>	<b>-15%</b>	<b>3%</b>	<b>-7%</b>	<b>-35%</b>	<b>-18%</b>
O&M	Gas Distribution	Regional Public Affairs	Non-RAMP	No	(1,020)	(1,205)	(1,140)	(1,101)	(1,301)	(5,768)	-21%	-24%	-23%	-21%	-25%	-23%

1. SoCalGas Gas  
A. SoCalGas Gas Distribution  
i. SoCalGas Gas Distribution Operations O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance							
O&M	Gas Distribution	Gas Distribution		Yes																																
O&M	Gas Distribution	Field Services Leadership & Operations Assessment	Non-RAMP	No	This activity consists of the labor and non-labor expenses for the Vice President of Gas Distribution Organization and non-labor expenses that benefit the entire organization. The variety of activities makes it infeasible to identify a single unit of measurement.																															
O&M	Gas Distribution	Field Support	Non-RAMP	No	Recorded to Field Support Non-RAMP are a variety of support services to successfully complete daily Gas Distribution O&M activities. The primary components include: clerical support; dispatch operations; meeting and training time; and materials support. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																															
O&M	Gas Distribution	Field Support	Maintenance - Pipeline observation "Standby" (From Field Support)	No	This activity is captured by the RAMP activity in the Locate & Mark Workpaper called "QA Job Observations Field Rides and Job Monitoring".																															
O&M	Gas Distribution	Field Support	PPE and Safety Equipment	No	This RAMP activity is related to the purchase of Confined Space Air Monitoring System for Field Personnel. This RAMP activity was only anticipated to occur in 2018 and 2019. No costs were incurred in 2019 through 2022 (i.e., there were no units from 2019 through 2022).																															
O&M	Gas Distribution	Field Support	Qualifications of Pipeline Personnel	No	Student Training Hours	80,200	88,548	147,956	178,836	115,108	610,648	This activity is being tracked by student training hours at our central training facilities. Authorized units were not identified at the time of the TY 2019 GRC.																								
O&M	Gas Distribution	Field Support	Contractor Management and Traffic Control	No	This activity consists of the time of inspection, documentation of inspections, and invoicing related to contractors working on Gas Company facilities. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																															
O&M	Gas Distribution	Field Support	QA Job Observations Field Rides and Job Monitoring	No	Inspection Hours	N/A	2,682	2,566	2,857	1,686	9,791	This activity is being tracked by supervisor inspection hours, which consists of the time spent by supervisors observing Company crews while performing various field activities. Authorized units were not identified at the time of the TY 2019 GRC.																								
O&M	Gas Distribution	Sub-Total Field Support		Yes																																
O&M	Gas Distribution	Leak Survey	Non-RAMP	No	Bar Per Policy (BPP) Orders	N/A	12,444	10,366	10,078	11,206	44,094	These non-RAMP activities comply with 49 CFR part 192, Subpart M. These activities include Bar Per Policy (BPP) orders and Special Leakage Surveys. Both order types are driven by external factors that vary from year to year. Authorized units were not identified at the time of the TY 2019 GRC.																								
					Special Survey Miles	N/A	647	586	631	542	2,406	These non-RAMP activities comply with 49 CFR part 192, Subpart M. These activities include Bar Per Policy (BPP) orders and Special Leakage Surveys. Both order types are driven by external factors that vary from year to year. Authorized units were not identified at the time of the TY 2019 GRC.																								
O&M	Gas Distribution	Leak Survey	Maintenance - Leak Survey	No	Leak Survey Miles	31,784	35,093	35,416	35,173	35,160	172,626	This activity is being tracked by leakage survey orders. The objective of a leakage survey is to conduct a thorough search for gas leak indications in an assigned area and report all detectable leaks using an approved survey method. Authorized units were not identified at the time of the TY 2019 GRC.																								
O&M	Gas Distribution	Sub-Total Leak Survey		Yes																																
O&M	Gas Distribution	Locate & Mark	Non-RAMP	No	This activity consists of a combination of USA membership fees related to the number of USA tickets processed and Depth Check/Excavate to Locate Pipe orders. The USA membership fees are charged partially on a per ticket basis and partially on a flat rate based on the Regional Office charging. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																															
O&M	Gas Distribution	Locate & Mark	Locate & Mark Activities	No	USA Tickets	462,231	815,669	900,960	986,179	927,766	4,092,805	This activity consists of SoCalGas's Locating and Marking of their pipelines when requested by outside entities such as customers, contractors, or other utilities who will perform work which requires any subsurface digging. The activity is tracked by the number of USA tickets received. Authorized units were not identified at the time of the TY 2019 GRC.																								
O&M	Gas Distribution	Locate & Mark	QA Job Observations Field Rides and Job Monitoring	No	Standby Orders	2,935	3,117	3,440	3,646	3,491	16,629	This work supports compliance with California Code of Regulations (CCR) 1541(b)(1)(B). This activity is being tracked by Standby orders, which involves making third-party excavators aware of proper digging requirements when working near high priority subsurface installations. It also includes inspecting third-party excavators, observing the condition of the pipeline, and correcting any issues identified during the observation. Authorized units were not identified at the time of the TY 2019 GRC.																								
O&M	Gas Distribution	Sub-Total Locate & Mark		Yes																																

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance		
O&M	Gas Distribution	Main Maintenance	Non-RAMP	No	Main Maintenance Orders	N/A	34,348	34,220	30,544	31,456	130,568																			This activity complies with GO 112-F and 49 CFR part 192 Subpart M. This activity consists of a combination of leak repair, leak investigation, leak re-evaluate, misc. maintenance, paving repair orders, etc. Authorized units were not identified at the time of the TY 2019 GRC.	
O&M	Gas Distribution	Main Maintenance	Contracting for Traffic Control Delineation materials -- Distribution Only. Outside vendors	No																										This activity complies with GO 112-F and 49 CFR part 192 Subpart M. This RAMP activity consists of the costs associated with traffic control related purchases on O&M orders. This includes traffic control delineation materials and third-party contractors hired specifically to assist with traffic control. The variety of activities in this category makes it infeasible to identify a single unit of measurement.	
O&M	Gas Distribution	Main Maintenance	Maintenance - Valve Inspection and Maintenance (From Field Support)	No	Medium Pressure Valve Inspection Orders	6,644	6,470	6,417	6,435	6,445	32,411																			This activity complies with 49 CFR 192.747. This activity is being tracked by valve inspection orders. This RAMP activity represents the medium pressure valve inspections. Valves are checked and serviced at intervals not exceeding 15 months, but at least once each calendar year. Authorized units were not identified at the time of the TY 2019 GRC.	
O&M	Gas Distribution	Main Maintenance	High-Pressure Pipeline Failure, Project Maintenance - Valve Maintenance and Installation (Distribution High Pressure) (From Field Support)	No	High Pressure Valve Inspection Orders	454	442	439	440	441	2,216																			This activity complies with 49 CFR 192.747. This activity is being tracked by valve inspection orders. This RAMP activity represents the high pressure valve inspections. Valves are checked and serviced at intervals not exceeding 15 months, but at least once each calendar year. Authorized units were not identified at the time of the TY 2019 GRC.	
O&M	Gas Distribution	Main Maintenance	Maintenance - Pipeline Patrol (From Field Support)	No	Pipeline Patrol Orders	535	457	434	489	555	2,470																			This activity is being tracked by Pipeline Patrol orders. The objective of the patrol program is to observe surface conditions on and adjacent to the pipeline right-of-way for indications of leaks, construction activity, and other factors affecting safety and operation to comply with 49 CFR 192.705 and 192.721. Authorized units were not identified at the time of the TY 2019 GRC.	
O&M	Gas Distribution	Main Maintenance	Maintenance - Bridge and Span (From Field Support)	No	Bridge and Span Inspection Orders	735	783	732	807	884	3,941																				This activity is being tracked by Bridge and Span orders and involves inspecting for signs of atmospheric corrosion on pipelines that are exposed to the atmosphere. Authorized units were not identified at the time of the TY 2019 GRC.
O&M	Gas Distribution	Main Maintenance	Maintenance - Unstable Earth Inspection (From Field Support)	No	Unstable Earth Inspection Orders	141	159	140	139	159	738																				This activity is being tracked by Unstable Earth orders. The objective of unstable earth orders is to inspect locations where physical movement or external loading could occur that could cause failure or leakage. Authorized units were not identified at the time of the TY 2019 GRC.
O&M	Gas Distribution	<b>Sub-Total Main Maintenance</b>		<b>Yes</b>																											
O&M	Gas Distribution	Service Maintenance	Non-RAMP	No	Service Maintenance Orders	N/A	31,594	30,413	36,117	18,377	116,501																				This activity consists of leak repair, leak investigation, leak re-evaluate, riser leak repair & maintenance, meter set leak repair & maintenance, misc. maintenance orders, etc. Authorized units were not identified at the time of the TY 2019 GRC.
O&M	Gas Distribution	Tools Fittings & Materials	Non-RAMP	No																											Included in this category are materials used and expenses necessary for small tools, small pipe fittings, miscellaneous pipeline materials, and miscellaneous installation materials used during construction and maintenance activities and those held in inventory as vehicle truck stock. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.
O&M	Gas Distribution	Tools Fittings & Materials	PPE and Safety Equipment - Company wide purchases of personal protective equipment (PPE)	No																											This RAMP activity is comprised of a variety of purchases related to personal protective equipment (PPE). The variety of work activities in this category makes it infeasible to identify a single unit of measurement.
O&M	Gas Distribution	Tools Fittings & Materials	PPE and Safety Equipment - Uniform rentals for employees - both protective and for security	No																											This RAMP activity is comprised of uniform rentals for employees that provide both protection and security for our employees. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.
O&M	Gas Distribution	<b>Sub-Total Tools Fittings &amp; Materials</b>		<b>Yes</b>																											
O&M	Gas Distribution	Asset Management	Non-RAMP	No																											This activity consists of services provided by the Technical Office. Activities performed by this office include items such as identifying construction design requirements, evaluating pressure specifications, conducting pipeline planning, and obtaining permits. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance
O&M	Gas Distribution	Measurement & Regulation	Non-RAMP	No	This activity consists of maintaining and operating regulator stations and support services provided by management and administrative personnel. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																								
O&M	Gas Distribution	Measurement & Regulation	Maintenance - Inspect meters, regulators, and gauges to evaluate and confirm overpressure protection is in place and maintained.	No	Meter, Regulator, and Gauge Inspection Orders	3,233	3,328	3,644	3,803	3,854	17,862	This activity consists of inspecting meters, regulators and gauges. Authorized units were not identified at the time of the TY 2019 GRC.																	
O&M	Gas Distribution	Measurement & Regulation	Maintenance - Maintenance and inspections of meter set assemblies (MSA) in the system	No	M&R Meter Set Assembly (MSA) Orders	22,294	18,251	21,605	22,420	20,286	104,856	This activity consists of large MSA maintenance, unusual consumption, planned meter change, customer regulator orders, etc. Authorized units were not identified at the time of the TY 2019 GRC.																	
<b>O&amp;M</b>	<b>Gas Distribution</b>	<b>Sub-Total Measurement &amp; Regulation</b>		<b>Yes</b>																									
O&M	Gas Distribution	Cathodic Protection	Requirements for Corrosion Control	No	CP Maintenance Orders	44,957	43,806	44,441	42,764	44,099	220,067	This activity consists of impressed current reads, magnesium anode reads, down reads, anode installation, troubleshooting orders, etc. Authorized units were not identified at the time of the TY 2019 GRC.																	
O&M	Gas Distribution	Cathodic Protection	Gas Facility and Pipeline Inspections	No	CP 10% Reads	38,626	39,393	40,103	38,451	38,747	195,320	This activity is being tracked by CP 10% reads and involves the inspection of separately protected pipe sections. Authorized units were not identified at the time of the TY 2019 GRC.																	
<b>O&amp;M</b>	<b>Gas Distribution</b>	<b>Sub-Total Cathodic Protection</b>		<b>Yes</b>																									
O&M	Gas Distribution	Operations And Management	Non-RAMP	No	This activity includes support from operations leadership and field management. Operations leadership involves company leaders responsible for setting the tone and direction of their organization. Field management is responsible for overall management of the workforce. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																								
O&M	Gas Distribution	Operations And Management	Policy, Procedures, Standards and ESCMP	No	This RAMP activity consists of the time of Standard Owners to complete initial review, coordinate inputs, make changes and complete processing of formal gas standards, procedures, and processes for Gas Distribution. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																								
<b>O&amp;M</b>	<b>Gas Distribution</b>	<b>Sub-Total Operations And Management</b>		<b>Yes</b>																									
O&M	Gas Distribution	Regional Public Affairs	Non-RAMP	No	Regional Public Affairs primarily supports field operations through its work with regional and local governments on issues regarding proposed regulations, franchises, permitting, and emergency preparedness and response. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																								

1. SoCalGas Gas  
A. SoCalGas Gas Distribution  
i. SoCalGas Gas Distribution Operations O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Gas Distribution	Gas Distribution		Yes									
O&M	Gas Distribution	Field Services Leadership & Operations Assessment	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas Distribution	Field Support	Non-RAMP	No	Yes	No	The non-RAMP variance is due to higher than anticipated on-site training and meetings as well as work not directly attributable to work orders due to unanticipated weather events throughout the year. The overall workpaper did not exceed the threshold to require a variance explanation.	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas Distribution	Field Support	Maintenance - Pipeline observation "Standby" (From Field Support)	No	Yes	No	The variance in this workpaper is due to an inadvertent error in the way this line item was presented in the TY 2019 GRC. The "standby" dollars should not be recorded within the Field Support workpaper. The costs for these activities are (and should be) presented in the RAMP Locate & Mark Workpaper, "QA Job Observations Field Rides and Job Monitoring."	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	Yes
O&M	Gas Distribution	Field Support	PPE and Safety Equipment	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Completed	Yes
O&M	Gas Distribution	Field Support	Qualifications of Pipeline Personnel	No	Yes	No	The variance is due to increased number of students and training classes to support increased hiring for field personnel.	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Gas Distribution	Field Support	Contractor Management and Traffic Control	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Gas Distribution	Field Support	QA Job Observations Field Rides and Job Monitoring	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas Distribution	<b>Sub-Total Field Support</b>		Yes	No								No
O&M	Gas Distribution	Leak Survey	Non-RAMP	No	Yes	No	The variance is attributable to fewer orders than anticipated. Both order types (BPP and Special Leak Survey) are driven by external factors that are beyond SoCalGas's control. BPP orders are typically follow-up orders driven by customer generated orders through the Customer Services Department. Special Leak Survey orders are typically driven by Franchise (City) requests.	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Gas Distribution	Leak Survey	Maintenance - Leak Survey	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas Distribution	<b>Sub-Total Leak Survey</b>		Yes	No								No
O&M	Gas Distribution	Locate & Mark	Non-RAMP	No	Yes	No	The variance is driven by a combination of higher than anticipated costs in excavation to locate/depth check orders and USA Membership fees.	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Gas Distribution	Locate & Mark	Locate & Mark Activities	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas Distribution	Locate & Mark	QA Job Observations Field Rides and Job Monitoring	No	Yes	No	Standby orders, which are driven by factors outside the control of SoCalGas, were higher than anticipated in 2023. SoCalGas believes this increase is likely attributed to a greater awareness by the public of the 811 Call Before You Dig process, due to the efforts of SoCalGas's Damage Prevention Team and the Dig Safe Board.	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Gas Distribution	<b>Sub-Total Locate &amp; Mark</b>		Yes	Yes								No

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Gas Distribution	Main Maintenance	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Gas Distribution	Main Maintenance	Contracting for Traffic Control Delineation materials -- Distribution Only. Outside vendors	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Gas Distribution	Main Maintenance	Maintenance - Valve Inspection and Maintenance (From Field Support)	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas Distribution	Main Maintenance	High-Pressure Pipeline Failure, Project Maintenance - Valve Maintenance and Installation (Distribution High Pressure) (From Field Support)	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas Distribution	Main Maintenance	Maintenance - Pipeline Patrol (From Field Support)	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas Distribution	Main Maintenance	Maintenance - Bridge and Span (From Field Support)	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas Distribution	Main Maintenance	Maintenance - Unstable Earth Inspection (From Field Support)	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
<b>O&amp;M</b>	<b>Gas Distribution</b>	<b>Sub-Total Main Maintenance</b>		<b>Yes</b>	<b>No</b>								<b>No</b>
O&M	Gas Distribution	Service Maintenance	Non-RAMP	No	Yes	No	The variance in Service Maintenance Non-RAMP is primarily due to higher than anticipated damage credits. Damage Credits are costs returned to the company through a claims process resulting from third-party damages that occurred in the past. Damage Credits fluctuate year to year.	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Gas Distribution	Tools Fittings & Materials	Non-RAMP	No	Yes	No	The variance is due to higher than anticipated work volumes and incremental tool purchases for field personnel as well as increased costs of tools and materials.	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Gas Distribution	Tools Fittings & Materials	PPE and Safety Equipment - Company wide purchases of personal protective equipment (PPE)	No	Yes	No	The variance is due to increased purchases of PPE and safety equipment associated with increased hiring of field personnel.	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Gas Distribution	Tools Fittings & Materials	PPE and Safety Equipment - Uniform rentals for employees - both protective and for security	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
<b>O&amp;M</b>	<b>Gas Distribution</b>	<b>Sub-Total Tools Fittings &amp; Materials</b>		<b>Yes</b>	<b>Yes</b>								<b>No</b>
O&M	Gas Distribution	Asset Management	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Gas Distribution	Measurement & Regulation	Non-RAMP	No	Yes	No	The variance is due to the non-RAMP costs being re-allocated to the RAMP mitigation activities. The overall workpaper did not exceed the threshold to require a variance explanation.	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas Distribution	Measurement & Regulation	Maintenance - Inspect meters, regulators, and gauges to evaluate and confirm overpressure protection is in place and maintained.	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas Distribution	Measurement & Regulation	Maintenance - Maintenance and inspections of meter set assemblies (MSA) in the system	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas Distribution	<b>Sub-Total Measurement &amp; Regulation</b>		Yes	No								No
O&M	Gas Distribution	Cathodic Protection	Requirements for Corrosion Control	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas Distribution	Cathodic Protection	Gas Facility and Pipeline Inspections	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Gas Distribution	<b>Sub-Total Cathodic Protection</b>		Yes	No								No
O&M	Gas Distribution	Operations And Management	Non-RAMP	No	Yes	No	The Operations and Management Non-RAMP cost variance is primarily driven by lower than anticipated non-labor expenses. The expenses include small tools and material such as pipe and fittings that are charged against the Manager cost centers included in the workpaper.	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas Distribution	Operations And Management	Policy, Procedures, Standards and ESCMP	No	Yes	No	The variance is attributable to the costs for these activities, as reported within the Gas System Integrity section of this report.	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	Yes
O&M	Gas Distribution	<b>Sub-Total Operations And Management</b>		Yes	Yes								No
O&M	Gas Distribution	Regional Public Affairs	Non-RAMP	No	Yes	No	The variance is due to 2023 staffing levels being lower than the 5-year average staffing levels that were forecasted.	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No



1. SoCalGas Gas  
A. SoCalGas Gas Distribution  
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Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Gas Distribution	Gas Distribution		Yes				
O&M	Gas Distribution	Field Services Leadership & Operations Assessment	Non-RAMP	No	N/A			
O&M	Gas Distribution	Field Support	Non-RAMP	No	N/A	Recorded to the Field Services workgroup are a variety of support services to successfully complete daily Gas Distribution O&M activities. Activities primarily include: field supervision, clerical support, dispatch operations, off-production time, materials support and removal of abandoned mains. This category includes costs for activities, as described, designed to mitigate employee safety risks.	SCG-04-R GOM-62 to GOM-69 WP 2GD000.000	SCG-04-R-E MAA-53 to MAA-58 WP 2GD000
O&M	Gas Distribution	Field Support	Maintenance - Pipeline observation "Standby" (From Field Support)	No	The variance in this workpaper is due to an inadvertent error in the way this line item was presented in the TY 2019 GRC. The "standby" dollars should not be recorded within the Field Support workpaper. The costs for these activities are (and should be) presented in the RAMP Locate & Mark Workpaper, "QA Job Observations Field Rides and Job Monitoring."	Recorded to the Field Services workgroup are a variety of support services to successfully complete daily Gas Distribution O&M activities. Activities primarily include: field supervision, clerical support, dispatch operations, off-production time, materials support and removal of abandoned mains. This category includes costs for activities, as described, designed to mitigate employee safety risks.	SCG-04-R GOM-62 to GOM-69 WP 2GD000.000	SCG-04-R-E MAA-28 to MAA-33 WP 2GD002
O&M	Gas Distribution	Field Support	PPE and Safety Equipment	No	This RAMP activity is related to the purchase of Confined Space Air Monitoring System for Field Personnel. This RAMP activity was only anticipated to occur in 2018 and 2019. No costs were incurred in 2019 through 2022. The project is complete.			
O&M	Gas Distribution	Field Support	Qualifications of Pipeline Personnel	No	N/A	Recorded to the Field Services workgroup are a variety of support services to successfully complete daily Gas Distribution O&M activities. Activities primarily include: field supervision, clerical support, dispatch operations, off-production time, materials support and removal of abandoned mains. This category includes costs for activities, as described, designed to mitigate employee safety risks.	SCG-04-R GOM-62 to GOM-69 WP 2GD000.000	SCG-04-R-E MAA-53 to MAA-58 WP 2GD000
O&M	Gas Distribution	Field Support	Contractor Management and Traffic Control	No	N/A			
O&M	Gas Distribution	Field Support	QA Job Observations Field Rides and Job Monitoring	No	N/A			
O&M	Gas Distribution	<b>Sub-Total Field Support</b>		Yes				
O&M	Gas Distribution	Leak Survey	Non-RAMP	No	N/A	The activity in this workgroup is associated with federal and state pipeline safety regulations pertaining to surveying for gas leaks.	SCG-04-R GOM-36 to GOM-40 WP 2DG000.001	SCG-04-R-E MAA-24 to MAA-28 WP 2GD001
O&M	Gas Distribution	Leak Survey	Maintenance - Leak Survey	No	N/A			
O&M	Gas Distribution	<b>Sub-Total Leak Survey</b>		Yes				
O&M	Gas Distribution	Locate & Mark	Non-RAMP	No	N/A	The work in this workgroup is initiated by third-party excavators requesting SoCalGas to identify substructures at locations of planned excavations. The performed work is preventative in nature and required to avert damages caused by third-party excavators working near gas underground substructures. Activities primarily include: locating and marking SoCalGas's underground pipelines; conducting job observations; performing pothole operations; and performing depth checks.	SCG-04-R GOM-31 to GOM-36 WP 2GD000.002	SCG-04-R-E MAA-28 to MAA-33 WP 2GD002
O&M	Gas Distribution	Locate & Mark	Locate & Mark Activities	No	N/A			
O&M	Gas Distribution	Locate & Mark	QA Job Observations Field Rides and Job Monitoring	No	N/A	The work in this workgroup is initiated by third-party excavators requesting SoCalGas to identify substructures at locations of planned excavations. The performed work is preventative in nature and required to avert damages caused by third-party excavators working near gas underground substructures. Activities primarily include: locating and marking SoCalGas's underground pipelines; conducting job observations; performing pothole operations; and performing depth checks.	SCG-04-R GOM-31 to GOM-36 WP 2GD000.002	SCG-04-R-E MAA-28 to MAA-33 WP 2GD002
O&M	Gas Distribution	<b>Sub-Total Locate &amp; Mark</b>		Yes				

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Gas Distribution	Main Maintenance	Non-RAMP	No	N/A			
O&M	Gas Distribution	Main Maintenance	Contracting for Traffic Control Delineation materials -- Distribution Only. Outside vendors	No	N/A			
O&M	Gas Distribution	Main Maintenance	Maintenance - Valve Inspection and Maintenance (From Field Support)	No	N/A			
O&M	Gas Distribution	Main Maintenance	High-Pressure Pipeline Failure, Project Maintenance - Valve Maintenance and Installation (Distribution High Pressure) (From Field Support)	No	N/A			
O&M	Gas Distribution	Main Maintenance	Maintenance - Pipeline Patrol (From Field Support)	No	N/A			
O&M	Gas Distribution	Main Maintenance	Maintenance - Bridge and Span (From Field Support)	No	N/A			
O&M	Gas Distribution	Main Maintenance	Maintenance - Unstable Earth Inspection (From Field Support)	No	N/A			
<b>O&amp;M</b>	<b>Gas Distribution</b>	<b>Sub-Total Main Maintenance</b>		<b>Yes</b>				
O&M	Gas Distribution	Service Maintenance	Non-RAMP	No	N/A	Service maintenance work is generally corrective in nature and is required to keep the natural gas system operating safely and reliably. The work in this workgroup is designed to meet federal, i.e., 49 C.F.R. §192, and state, i.e., CPUC General Order 112-F, pipeline safety regulations and to extend the life of the distribution service pipeline system. Service maintenance work is primarily comprised of the following four activities: evaluation and repair of service leak, service alterations, meter set assembly (MSA) alterations and meter guard replacements, and miscellaneous service and MSA maintenance.	SCG-04-R GOM-56 to GOM-62 WP 2GD000.004	SCG-04-R-E MAA-42 to MAA-44 WP 2GD004
O&M	Gas Distribution	Tools Fittings & Materials	Non-RAMP	No	N/A	Recorded to this workgroup is the purchase of small tools, small pipe fittings, miscellaneous pipeline materials, and miscellaneous installation materials used during construction and maintenance activities and those held in inventory as vehicle truck stock. These materials are necessary to obtaining complete and safe work results. Included within each category of materials are items such as small tools – screw drivers, wrenches, etc., small pipe fittings – couplings, clls, nipples, etc., miscellaneous pipeline materials – bolts, stakes, pipe straps, traffic vests, etc., and miscellaneous installation materials – cold patch asphalt, pre-mixed concrete, etc. Also recorded to this workgroup are expenses for the rental and laundering of uniforms.	SCG-04-R GOM-69 to GOM-72 WP 2GD000.005	SCG-04-R-E MAA-58 to MAA-59 WP 2GD005
O&M	Gas Distribution	Tools Fittings & Materials	PPE and Safety Equipment - Company wide purchases of personal protective equipment (PPE)	No	N/A	Recorded to this workgroup is the purchase of small tools, small pipe fittings, miscellaneous pipeline materials, and miscellaneous installation materials used during construction and maintenance activities and those held in inventory as vehicle truck stock. These materials are necessary to obtaining complete and safe work results. Included within each category of materials are items such as small tools – screw drivers, wrenches, etc., small pipe fittings – couplings, clls, nipples, etc., miscellaneous pipeline materials – bolts, stakes, pipe straps, traffic vests, etc., and miscellaneous installation materials – cold patch asphalt, pre-mixed concrete, etc. Also recorded to this workgroup are expenses for the rental and laundering of uniforms.	SCG-04-R GOM-69 to GOM-72 WP 2GD000.005	SCG-04-R-E MAA-53 to MAA-58 WP 2GD000
O&M	Gas Distribution	Tools Fittings & Materials	PPE and Safety Equipment - Uniform rentals for employees - both protective and for security	No	N/A			
<b>O&amp;M</b>	<b>Gas Distribution</b>	<b>Sub-Total Tools Fittings &amp; Materials</b>		<b>Yes</b>				
O&M	Gas Distribution	Asset Management	Non-RAMP	No				

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Gas Distribution	Measurement & Regulation	Non-RAMP	No	N/A	M&R activities focus primarily on maintaining and operating approximately 1,975 regulator stations and approximately 102,000 medium and large customer MSAs in the SoCalGas service territory. Regulator stations reduce the pressure of gas entering the distribution system from high-pressure pipelines to provide the lower pressures used on the distribution pipeline network. Medium and large customer MSAs require routine maintenance of the meters, regulators, and other components to meet customers' capacity requirements and to measure gas volume accurately.	SCG-04-R GOM-40 to GOM-45 WP 2GD002.000	SCG-04-R-E MAA-33 to MAA-36 WP 2GD007
O&M	Gas Distribution	Measurement & Regulation	Maintenance - Inspect meters, regulators, and gauges to evaluate and confirm overpressure protection is in place and maintained.	No	N/A			
O&M	Gas Distribution	Measurement & Regulation	Maintenance - Maintenance and inspections of meter set assemblies (MSA) in the system	No	N/A			
<b>O&amp;M</b>	<b>Gas Distribution</b>	<b>Sub-Total Measurement &amp; Regulation</b>		<b>Yes</b>				
O&M	Gas Distribution	Cathodic Protection	Requirements for Corrosion Control	No	N/A			
O&M	Gas Distribution	Cathodic Protection	Gas Facility and Pipeline Inspections	No	N/A			
<b>O&amp;M</b>	<b>Gas Distribution</b>	<b>Sub-Total Cathodic Protection</b>		<b>Yes</b>				
O&M	Gas Distribution	Operations And Management	Non-RAMP	No	N/A	Operations Management and Training is a critical component of managing the integrity of the pipeline system to prevent and reduce risks. The activities completed within this workgroup are categorized as Operations Leadership, Field Management, Operations Support and Field Technical Skills Training. This category includes costs for activities, as described, designed to mitigate system reliability risks.	SCG-04-R GOM-77 to GOM-81 WP 2GD004.000	SCG-04-R-E MAA-63 to MAA-66 WP 2GD010.000
O&M	Gas Distribution	Operations And Management	Policy, Procedures, Standards and ESCMP	No	The variance is attributable to the costs for these activities, as reported within the Gas System Integrity section of this report.	Operations Management and Training is a critical component of managing the integrity of the pipeline system to prevent and reduce risks. The activities completed within this workgroup are categorized as Operations Leadership, Field Management, Operations Support and Field Technical Skills Training. This category includes costs for activities, as described, designed to mitigate system reliability risks.	SCG-04-R GOM-77 to GOM-81 & SCG-05-R OR-24 to OR-33 WP 2GD004.000 & 2S1001.000	SCG-05 WR-19 to WR-37 WP 2S1002.000
<b>O&amp;M</b>	<b>Gas Distribution</b>	<b>Sub-Total Operations And Management</b>		<b>Yes</b>				
O&M	Gas Distribution	Regional Public Affairs	Non-RAMP	No	N/A	Regional Public Affairs (RPA) primarily supports field operations through its work with regional and local governments on issues regarding proposed regulations, franchises, permitting, and emergency preparedness and response. RPA also educates officials at the county and city levels about SoCalGas issues that could impact customers. RPA further serves as the point of contact in the communities SoCalGas serves, educating stakeholders about SoCalGas activities, programs and services, responding to customer and media inquiries, and resolving customer complaints.	SCG-04-R GOM-81 to GOM-87 WP 2GD005.000	SCG-04-R-E MAA-66 to MAA-72 WP 2GD011

ii. SoCalGas Gas Distribution Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
Capital	Gas Distribution	Gas Distribution		Yes			301,934	378,495	374,031	400,937	410,658	1,866,054	391,406	326,581	331,747	335,659	342,815	1,728,208
Capital	Gas Distribution	New Business Construction	Non-RAMP	No	On-going	Annual	57,751	52,227	57,732	51,603	45,601	264,915	54,203	41,619	42,379	42,879	43,793	224,873
Capital	Gas Distribution	New Business - RAMP	MSA Inspections- Customer Service Initial Turn-Ons	No	On-going	Annual	3,409	2,296	3,318	3,812	3,373	16,208	2,858	2,276	2,210	2,236	2,283	11,863
<b>Capital</b>	<b>Gas Distribution</b>	<b>Sub-Total New Business</b>		<b>Yes</b>		<b>Annual</b>	<b>61,160</b>	<b>54,523</b>	<b>61,050</b>	<b>55,415</b>	<b>48,974</b>	<b>281,123</b>	<b>57,061</b>	<b>43,895</b>	<b>44,589</b>	<b>45,115</b>	<b>46,077</b>	<b>236,736</b>
Capital	Gas Distribution	Gas Meters	Non-RAMP	No	On-going	Annual	26,154	21,097	20,705	26,959	25,861	120,777	33,762	27,872	28,313	28,647	29,258	147,853
Capital	Gas Distribution	Gas Regulators	Non-RAMP	No	On-going	Annual	7,648	5,440	5,834	6,289	6,974	32,185	5,802	6,547	6,650	6,729	6,872	32,600
Capital	Gas Distribution	Cathodic Protection - RAMP	Systems are in place to monitor and manage compliance activity schedules	No	On-going	Annual	4,302	6,289	5,096	8,449	12,189	36,326	10,762	6,882	6,991	7,073	7,224	38,932
Capital	Gas Distribution	Electronic Pressure Monitors (EPM)	Non-RAMP	No	On-going	Annual	729	560	272	760	686	3,006	653	1,038	1,054	1,067	1,090	4,902
Capital	Gas Distribution	Remote Meter Reading	Non-RAMP	No		1 Complete	213	(51)	—	—	—	162	—	2,214	2,250	2,276	2,325	9,065
Capital	Gas Distribution	Pressure Betterment Projects	Non-RAMP	No	On-going	Annual	18,508	40,951	18,845	41,120	33,295	152,718	26,124	28,335	28,784	29,123	29,744	142,110
Capital	Gas Distribution	Main Replacements	Non-RAMP	No	On-going	Annual	11,887	21,155	24,093	18,948	22,481	98,565	35,716	35,804	36,370	36,799	37,584	182,274
Capital	Gas Distribution	Main Replacements - RAMP	Contracting for Traffic Control Delineation materials	No	On-going	Annual	2,015	2,457	4,169	2,316	1,707	12,664	2,428	2,434	2,473	2,502	2,555	12,392
<b>Capital</b>	<b>Gas Distribution</b>	<b>Sub-Total Main Replacements</b>		<b>Yes</b>			<b>13,902</b>	<b>23,612</b>	<b>28,262</b>	<b>21,264</b>	<b>24,188</b>	<b>111,229</b>	<b>38,144</b>	<b>38,238</b>	<b>38,843</b>	<b>39,301</b>	<b>40,139</b>	<b>194,666</b>

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
Capital	Gas Distribution	Main & Service Abandonments	Non-RAMP	No	On-going	Annual	13,218	12,176	11,898	13,595	12,469	63,355	13,337	9,134	9,279	9,388	9,589	50,727
Capital	Gas Distribution	Service Replacements	Non-RAMP	No	On-going	Annual	35,591	44,968	45,709	48,711	59,027	234,006	38,927	29,504	29,971	30,324	30,971	159,696
Capital	Gas Distribution	Pipeline Relocations - Freeway	Non-RAMP	No	On-going	Annual	796	1,995	3,376	939	615	7,722	8,868	8,859	8,999	9,105	9,300	45,131
Capital	Gas Distribution	Pipeline Relocations - Franchise	Non-RAMP	No	On-going	Annual	14,363	39,364	24,398	19,998	23,981	122,104	20,247	20,804	21,133	21,382	21,838	105,404
Capital	Gas Distribution	Meter Guards	Non-RAMP	No	On-going	Annual	1,648	4,549	7,046	9,555	10,208	33,005	9,390	3,022	3,069	3,106	3,172	21,759
Capital	Gas Distribution	Regulator Stations	Non-RAMP	No	On-going	Annual	5,444	4,573	4,047	2,619	5,752	22,435	21,735	11,730	11,916	12,056	12,313	69,751
Capital	Gas Distribution	Regulator Stations - RAMP	Systems are in place to monitor and manage compliance activity schedules related to high pressure	No	On-going	Annual	167	1,387	61	43	650	2,308	209	154	156	158	161	838
Capital	Gas Distribution	Regulator Stations - RAMP	Systems are in place to monitor and manage compliance activity schedules related to medium pressure	No	On-going	Annual	136	73	4,184	3,769	2,976	11,138	48	35	35	36	37	190
Capital	Gas Distribution	<b>Sub-Total Regulator Stations</b>		<b>Yes</b>			<b>5,747</b>	<b>6,033</b>	<b>8,292</b>	<b>6,431</b>	<b>9,378</b>	<b>35,881</b>	<b>21,992</b>	<b>11,919</b>	<b>12,107</b>	<b>12,250</b>	<b>12,511</b>	<b>70,779</b>

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
Capital	Gas Distribution	Supply Line Replacements	Non-RAMP	No	On-going	Annual	0	237	175	4,174	373	4,959	4,762	3,773	3,832	3,877	3,960	20,205
Capital	Gas Distribution	Other Distribution Capital Projects	Non-RAMP	No	On-going	Annual	10,314	9,456	7,218	7,873	9,341	44,201	3,700	3,802	3,862	3,908	3,991	19,264
Capital	Gas Distribution	Other Distribution Capital Projects - RAMP	Systems are in place to monitor and manage compliance activity schedules- Maintenance and Inspection of Medium Pressure Valves	No	On-going	Annual	15	238	682	222	306	1,463	6	9	9	9	9	42
Capital	Gas Distribution	Other Distribution Capital Projects - RAMP	Valve Maintenance and Installation (Distribution High Pressure)	No	On-going	Annual	73	763	352	374	531	2,093	25	26	26	26	27	130
<b>Capital</b>	<b>Gas Distribution</b>	<b>Sub-Total Other Distribution Capital Projects</b>		<b>Yes</b>			<b>10,402</b>	<b>10,457</b>	<b>8,252</b>	<b>8,469</b>	<b>10,178</b>	<b>47,757</b>	<b>3,731</b>	<b>3,837</b>	<b>3,897</b>	<b>3,943</b>	<b>4,027</b>	<b>19,435</b>
Capital	Gas Distribution	Gas Energy Measurement Systems (GEMS)	Non-RAMP	No	On-going	Annual	2,215	215	668	936	2,163	6,198	1,690	1,447	1,470	1,488	1,519	7,615
Capital	Gas Distribution	Capital Tools & Equipment	Non-RAMP	No	On-going	Annual	6,055	17,640	19,870	7,835	5,506	56,907	10,936	7,084	7,196	7,281	7,437	39,935
Capital	Gas Distribution	Capital Tools & Equipment - RAMP	Prevention and Improvements	No		3 Complete	328	637	844	—	—	1,809	—	896	910	921	941	3,669
Capital	Gas Distribution	Capital Tools & Equipment - RAMP	Upgrade Nomex Coveralls & Fresh Equipment	No		2 Complete	652	1,361	—	—	—	2,013	—	406	413	418	427	1,664
Capital	Gas Distribution	Capital Tools & Equipment - RAMP	Confined space air monitoring system for field personnel	No		3 Complete	892	81	2,130	—	—	3,103	—	268	272	276	282	1,098
<b>Capital</b>	<b>Gas Distribution</b>	<b>Sub-Total Capital Tools &amp; Equipment</b>		<b>Yes</b>			<b>7,927</b>	<b>19,719</b>	<b>22,844</b>	<b>7,835</b>	<b>5,506</b>	<b>63,832</b>	<b>10,936</b>	<b>8,655</b>	<b>8,792</b>	<b>8,896</b>	<b>9,086</b>	<b>46,365</b>

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
Capital	Gas Distribution	Field Capital Support	Non-RAMP	No	On-going	Annual	74,937	84,244	99,115	116,983	122,907	498,186	84,242	69,759	70,862	71,698	73,226	369,787
Capital	Gas Distribution	Field Capital Support - RAMP	Med Pressure Company Crew Inspections	No	On-going	Annual	76	124	119	185	103	607	66	59	60	60	62	307
Capital	Gas Distribution	Field Capital Support - RAMP	Systems are in place to monitor and manage compliance activity schedules	No	On-going	Annual	848	754	1,103	924	281	3,910	122	94	95	97	99	507
<b>Capital</b>	<b>Gas Distribution</b>	<b>Sub-Total Field Capital Support</b>		<b>Yes</b>			<b>75,861</b>	<b>85,122</b>	<b>100,337</b>	<b>118,092</b>	<b>123,291</b>	<b>502,703</b>	<b>84,430</b>	<b>69,911</b>	<b>71,017</b>	<b>71,855</b>	<b>73,387</b>	<b>370,601</b>
Capital	Gas Distribution	New Business Construction - Trench Reimbursements	Non-RAMP	No	On-going	Annual	1,550	1,238	970	1,945	1,303	7,006	789	694	705	713	728	3,628

ii. SoCalGas Gas Distribution Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
Capital	Gas Distribution	Gas Distribution		Yes	(89,472)	51,914	42,284	65,277	67,843	137,846	-23%	16%	13%	19%	20%	8%
Capital	Gas Distribution	New Business Construction	Non-RAMP	No	3,549	10,608	15,353	8,724	1,808	40,042	7%	25%	36%	20%	4%	18%
Capital	Gas Distribution	New Business - RAMP	MSA Inspections- Customer Service Initial Turn-Ons	No	551	20	1,108	1,576	1,090	4,345	19%	1%	50%	70%	48%	37%
<b>Capital</b>	<b>Gas Distribution</b>	<b>Sub-Total New Business</b>		<b>Yes</b>	<b>4,100</b>	<b>10,628</b>	<b>16,461</b>	<b>10,301</b>	<b>2,898</b>	<b>44,386</b>	<b>7%</b>	<b>24%</b>	<b>37%</b>	<b>23%</b>	<b>6%</b>	<b>19%</b>
Capital	Gas Distribution	Gas Meters	Non-RAMP	No	(7,608)	(6,775)	(7,608)	(1,688)	(3,397)	(27,076)	-23%	-24%	-27%	-6%	-12%	-18%
Capital	Gas Distribution	Gas Regulators	Non-RAMP	No	1,846	(1,107)	(816)	(440)	102	(415)	32%	-17%	-12%	-7%	1%	-1%
Capital	Gas Distribution	Cathodic Protection - RAMP	Systems are in place to monitor and manage compliance activity schedules	No	(6,460)	(592)	(1,894)	1,376	4,965	(2,606)	-60%	-9%	-27%	19%	69%	-7%
Capital	Gas Distribution	Electronic Pressure Monitors (EPM)	Non-RAMP	No	76	(478)	(783)	(307)	(404)	(1,896)	12%	-46%	-74%	-29%	-37%	-39%
Capital	Gas Distribution	Remote Meter Reading	Non-RAMP	No	213	(2,265)	(2,250)	(2,276)	(2,325)	(8,903)	100%	-102%	-100%	-100%	-100%	-98%
Capital	Gas Distribution	Pressure Betterment Projects	Non-RAMP	No	(7,616)	12,615	(9,938)	11,997	3,551	10,608	-29%	45%	-35%	41%	12%	7%
Capital	Gas Distribution	Main Replacements	Non-RAMP	No	(23,828)	(14,649)	(12,278)	(17,851)	(15,103)	(83,709)	-67%	-41%	-34%	-49%	-40%	-46%
Capital	Gas Distribution	Main Replacements - RAMP	Contracting for Traffic Control Delineation materials	No	(413)	23	1,696	(186)	(848)	272	-17%	1%	69%	-7%	-33%	2%
<b>Capital</b>	<b>Gas Distribution</b>	<b>Sub-Total Main Replacements</b>		<b>Yes</b>	<b>(24,242)</b>	<b>(14,626)</b>	<b>(10,582)</b>	<b>(18,037)</b>	<b>(15,951)</b>	<b>(83,437)</b>	<b>-64%</b>	<b>-38%</b>	<b>-27%</b>	<b>-46%</b>	<b>-40%</b>	<b>-43%</b>



Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
Capital	Gas Distribution	Main & Service Abandonments	Non-RAMP	No	(119)	3,041	2,619	4,206	2,880	12,628	-1%	33%	28%	45%	30%	25%
Capital	Gas Distribution	Service Replacements	Non-RAMP	No	(3,336)	15,464	15,738	18,387	28,057	74,309	-9%	52%	53%	61%	91%	47%
Capital	Gas Distribution	Pipeline Relocations - Freeway	Non-RAMP	No	(8,072)	(6,864)	(5,623)	(8,166)	(8,684)	(37,409)	-91%	-77%	-62%	-90%	-93%	-83%
Capital	Gas Distribution	Pipeline Relocations - Franchise	Non-RAMP	No	(5,884)	18,561	3,265	(1,384)	2,143	16,700	-29%	89%	15%	-6%	10%	16%
Capital	Gas Distribution	Meter Guards	Non-RAMP	No	(7,742)	1,527	3,976	6,449	7,036	11,246	-82%	51%	130%	208%	222%	52%
Capital	Gas Distribution	Regulator Stations	Non-RAMP	No	(16,291)	(7,157)	(7,869)	(9,438)	(6,562)	(47,316)	-75%	-61%	-66%	-78%	-53%	-68%
Capital	Gas Distribution	Regulator Stations - RAMP	Systems are in place to monitor and manage compliance activity schedules related to high pressure	No	(42)	1,233	(95)	(115)	489	1,470	-20%	804%	-61%	-73%	303%	176%
Capital	Gas Distribution	Regulator Stations - RAMP	Systems are in place to monitor and manage compliance activity schedules related to medium pressure	No	88	38	4,149	3,733	2,939	10,948	186%	109%	11719%	10423%	8035%	5757%
Capital	Gas Distribution	Sub-Total Regulator Stations		Yes	(16,245)	(5,885)	(3,815)	(5,819)	(3,133)	(34,898)	-74%	-49%	-32%	-48%	-25%	-49%

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
Capital	Gas Distribution	Supply Line Replacements	Non-RAMP	No	(4,762)	(3,335)	(3,657)	296	(3,588)	(15,246)	-100%	-94%	-95%	8%	-91%	-75%
Capital	Gas Distribution	Other Distribution Capital Projects	Non-RAMP	No	6,613	5,653	3,356	3,966	5,349	24,938	179%	149%	87%	101%	134%	129%
Capital	Gas Distribution	Other Distribution Capital Projects - RAMP	Systems are in place to monitor and manage compliance activity schedules- Maintenance and Inspection of Medium Pressure Valves	No	9	229	673	213	297	1,421	165%	2600%	7518%	2351%	3207%	3405%
Capital	Gas Distribution	Other Distribution Capital Projects - RAMP	Valve Maintenance and Installation (Distribution High Pressure)	No	48	737	326	348	504	1,963	193%	2880%	1254%	1321%	1876%	1514%
<b>Capital</b>	<b>Gas Distribution</b>	<b>Sub-Total Other Distribution Capital Projects</b>		<b>Yes</b>	<b>6,671</b>	<b>6,620</b>	<b>4,355</b>	<b>4,526</b>	<b>6,150</b>	<b>28,323</b>	<b>179%</b>	<b>173%</b>	<b>112%</b>	<b>115%</b>	<b>153%</b>	<b>146%</b>
Capital	Gas Distribution	Gas Energy Measurement Systems (GEMS)	Non-RAMP	No	525	(1,233)	(802)	(551)	644	(1,417)	31%	-85%	-55%	-37%	42%	-19%
Capital	Gas Distribution	Capital Tools & Equipment	Non-RAMP	No	(4,881)	10,556	12,673	554	(1,930)	16,972	-45%	149%	176%	8%	-26%	42%
Capital	Gas Distribution	Capital Tools & Equipment - RAMP	Prevention and Improvements	No	328	(259)	(66)	(921)	(941)	(1,860)	100%	-29%	-7%	-100%	-100%	-51%
Capital	Gas Distribution	Capital Tools & Equipment - RAMP	Upgrade Nomex Coveralls & Fresh Equipment	No	652	955	(413)	(418)	(427)	349	100%	235%	-100%	-100%	-100%	21%
Capital	Gas Distribution	Capital Tools & Equipment - RAMP	Confined space air monitoring system for field personnel	No	892	(187)	1,858	(276)	(282)	2,005	100%	-70%	682%	-100%	-100%	183%
<b>Capital</b>	<b>Gas Distribution</b>	<b>Sub-Total Capital Tools &amp; Equipment</b>		<b>Yes</b>	<b>(3,009)</b>	<b>11,064</b>	<b>14,052</b>	<b>(1,061)</b>	<b>(3,579)</b>	<b>17,467</b>	<b>-28%</b>	<b>128%</b>	<b>160%</b>	<b>-12%</b>	<b>-39%</b>	<b>38%</b>

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
Capital	Gas Distribution	Field Capital Support	Non-RAMP	No	(9,305)	14,485	28,253	45,285	49,680	128,398	-11%	21%	40%	63%	68%	35%
Capital	Gas Distribution	Field Capital Support - RAMP	Med Pressure Company Crew Inspections	No	10	65	59	125	41	300	16%	111%	99%	206%	67%	98%
Capital	Gas Distribution	Field Capital Support - RAMP	Systems are in place to monitor and manage compliance activity schedules	No	726	660	1,008	827	182	3,403	594%	702%	1055%	856%	185%	671%
<b>Capital</b>	<b>Gas Distribution</b>	<b>Sub-Total Field Capital Support</b>		<b>Yes</b>	<b>(8,569)</b>	<b>15,211</b>	<b>29,319</b>	<b>46,237</b>	<b>49,904</b>	<b>132,102</b>	<b>-10%</b>	<b>22%</b>	<b>41%</b>	<b>64%</b>	<b>68%</b>	<b>36%</b>
Capital	Gas Distribution	New Business Construction - Trench Reimbursements	Non-RAMP	No	762	544	266	1,232	575	3,378	97%	78%	38%	173%	79%	93%

ii. SoCalGas Gas Distribution Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance
Capital	Gas Distribution	Gas Distribution		Yes																									
Capital	Gas Distribution	New Business Construction	Non-RAMP	No	Number of new business meters installed	40,151	38,732	39,651	39,857	39,916	198,307																		
Capital	Gas Distribution	New Business - RAMP	MSA Inspections- Customer Service Initial Turn-Ons	No	Number of work orders issued	40,289	38,281	30,253	28,736	30,576	168,135																		
Capital	Gas Distribution	Sub-Total New Business		Yes																									
Capital	Gas Distribution	Gas Meters	Non-RAMP	No	Number of Meters Purchased	122,043	93,327	90,544	87,128	83,243	476,285																		
Capital	Gas Distribution	Gas Regulators	Non-RAMP	No	Number of Regulators Purchased	154,982	62,758	90,661	110,354	61,036	479,791																		
Capital	Gas Distribution	Cathodic Protection - RAMP	Systems are in place to monitor and manage compliance activity schedules	No	Number of Installations or Replacements - Anodes and Rectifiers	27	43	41	19	37	167																		
Capital	Gas Distribution	Electronic Pressure Monitors (EPM)	Non-RAMP	No	EPM Installations/Replacements	140	180	124	247	185	876	N/A	195	448	448	448	1,539	(15)	(324)	(201)	(263)	(663)		-8%	-72%	-45%	-59%	-43%	
Capital	Gas Distribution	Remote Meter Reading	Non-RAMP	No																									
Capital	Gas Distribution	Pressure Betterment Projects	Non-RAMP	No	Field Completed Projects - Pressure Betterments	35	53	56	55	35	234																		
Capital	Gas Distribution	Main Replacements	Non-RAMP	No	Field Completed Projects - Main Replacement	169	214	189	161	194	927																		
Capital	Gas Distribution	Main Replacements - RAMP	Contracting for Traffic Control Delineation materials	No	Orders involving contracting for traffic control delineation materials	829	2,413	1,758	868	525	6,393																		
Capital	Gas Distribution	Sub-Total Main Replacements		Yes																									

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
Capital	Gas Distribution	Main & Service Abandonments	Non-RAMP	No	Field Completed Projects - Main & Service Abandonment	4,604	3,636	3,425	3,343	2,851	17,859																			
Capital	Gas Distribution	Service Replacements	Non-RAMP	No	Field Completed Projects - Service Replacements	3,707	4,639	4,338	4,051	4,247	20,982																			
Capital	Gas Distribution	Pipeline Relocations - Freeway	Non-RAMP	No	Field Completed Projects - Freeway related work	7	5	7	2	2	23																			
Capital	Gas Distribution	Pipeline Relocations - Franchise	Non-RAMP	No	Field Completed Projects - Franchise related work	8	84	85	73	85	335																			
Capital	Gas Distribution	Meter Guards	Non-RAMP	No	Meter Guard Installations	1,803	7,911	12,005	16,301	17,159	55,179																			
Capital	Gas Distribution	Regulator Stations	Non-RAMP	No	Orders	20	15	23	26	15	99																			
Capital	Gas Distribution	Regulator Stations - RAMP	Systems are in place to monitor and manage compliance activity schedules related to high pressure	No	Orders	1	5	—	—	1	7																			
Capital	Gas Distribution	Regulator Stations - RAMP	Systems are in place to monitor and manage compliance activity schedules related to medium pressure	No	Orders	13	6	32	21	9	81																			
Capital	Gas Distribution	Sub-Total Regulator Stations		Yes																										

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
Capital	Gas Distribution	Supply Line Replacements	Non-RAMP	No	Field Completed Orders Supply Line Replacement work	—	2	2	2	1	7																			
Capital	Gas Distribution	Other Distribution Capital Projects	Non-RAMP	No	This non-RAMP activity is tracked by work orders that are initiated for capital relocations of SoCalGas facilities, not specifically included in franchise agreements or franchise work, and covers a wide variety of work and corresponding costs associated with collectible and non-collectible construction projects (e.g., related to relocation of service lines, MSAs, replacement or alterations of vaults, drips, traps, roads, fences and Excess Flow Valves (EFV)). The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Gas Distribution	Other Distribution Capital Projects - RAMP	Systems are in place to monitor and manage compliance activity schedules- Maintenance and Inspection of Medium Pressure Valves	No	Orders	9	9	9	6	7	40																			
Capital	Gas Distribution	Other Distribution Capital Projects - RAMP	Valve Maintenance and Installation (Distribution High Pressure)	No	Orders	9	11	11	5	5	41																			
<b>Capital</b>	<b>Gas Distribution</b>	<b>Sub-Total Other Distribution Capital Projects</b>		<b>Yes</b>																										
Capital	Gas Distribution	Gas Energy Measurement Systems (GEMS)	Non-RAMP	No	GEMS Units Installed	848	612	697	804	690	3,651	540	667	722	730	744	3,403	308	(55)	(25)	74	(54)	248	57%	-8%	-3%	10%	-7%	7%	
Capital	Gas Distribution	Capital Tools & Equipment	Non-RAMP	No	This activity consists of various capital expenditures associated with the purchase of tools and equipment used by field personnel for the inspection, maintenance, and repair of gas pipeline systems. The range of costs and types of equipment makes it infeasible to identify a single unit of measurement.																									
Capital	Gas Distribution	Capital Tools & Equipment - RAMP	Prevention and Improvements	No	Damage Prevention Kits	39	69	190	12	—	310																			
Capital	Gas Distribution	Capital Tools & Equipment - RAMP	Upgrade Nomex Coveralls & Fresh Equipment	No	Nomex Coverall/Equipment Purchased Units	—	554	—	—	—	554																			
Capital	Gas Distribution	Capital Tools & Equipment - RAMP	Confined space air monitoring system for field personnel	No	Confined Space Air Monitoring System Units	12	—	1,436	—	—	1,448																			
<b>Capital</b>	<b>Gas Distribution</b>	<b>Sub-Total Capital Tools &amp; Equipment</b>		<b>Yes</b>																										

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
Capital	Gas Distribution	Field Capital Support	Non-RAMP	No	FTE Related to Field Capital Support	674	735	707	818	826	3,760																			
Capital	Gas Distribution	Field Capital Support - RAMP	Med Pressure Company Crew Inspections	No	Company Crew Inspection Hours	3,075	2,576	2,471	3,571	1,929	13,622																			
Capital	Gas Distribution	Field Capital Support - RAMP	Systems are in place to monitor and manage compliance activity schedules	No	FTE Related to Field Capital Support	9	9	8	7	2	35																			
<b>Capital</b>	<b>Gas Distribution</b>	<b>Sub-Total Field Capital Support</b>		<b>Yes</b>																										
Capital	Gas Distribution	New Business Construction - Trench Reimbursements	Non-RAMP	No	This workpaper covers the reimbursable costs covered by SoCalGas if the customer provides the trench, which can vary significantly year over year, thus making it infeasible to identify a single unit of measurement.																									

ii. SoCalGas Gas Distribution Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
Capital	Gas Distribution	Gas Distribution		Yes									
Capital	Gas Distribution	New Business Construction	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Gas Distribution	New Business - RAMP	MSA Inspections- Customer Service Initial Turn-Ons	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Gas Distribution	<b>Sub-Total New Business</b>		Yes	No								No
Capital	Gas Distribution	Gas Meters	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
Capital	Gas Distribution	Gas Regulators	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Gas Distribution	Cathodic Protection - RAMP	Systems are in place to monitor and manage compliance activity schedules	No	Yes	No	The variance in Cathodic Protection - RAMP can primarily be attributed to the increased bundling of magnesium anode installations/replacements as capital projects to mitigate CP areas out of tolerance as well as the increased cost of materials.	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Gas Distribution	Electronic Pressure Monitors (EPM)	Non-RAMP	No	No	Yes	N/A	The unit variance is due to equipment and firmware compatibility, temporarily pausing installations of additional EPMs.	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
Capital	Gas Distribution	Remote Meter Reading	Non-RAMP	No	Yes	No	Planned work was completed prior to 2023 as a part of the planned meter changes associated with the Advanced Metering Infrastructure (AMI) implementation and therefore resulted in no spend in 2023. The CPUC approved a post-test year mechanism for the SoCalGas attrition years, which can result in imputed dollars when a project has been completed.	N/A	On Target (T)	On Target (T)	Under (U)	Completed	Yes
Capital	Gas Distribution	Pressure Betterment Projects	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Gas Distribution	Main Replacements	Non-RAMP	No	Yes	No	The variance is due in part to operational considerations where resources were reallocated to Service Replacements. Additionally, main replacement projects were still executed under DIMP as prioritized by DIMP DREAMS.	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
Capital	Gas Distribution	Main Replacements - RAMP	Contracting for Traffic Control Delineation materials	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Gas Distribution	<b>Sub-Total Main Replacements</b>		Yes	Yes								No



Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
Capital	Gas Distribution	Main & Service Abandonments	Non-RAMP	No	Yes	No	Variance is due to higher than anticipated expenditures from an increase in customer requested abandonments.	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Gas Distribution	Service Replacements	Non-RAMP	No	Yes	No	The variance is due to the higher than anticipated work volume of service replacements mitigating leakage, corrosion, encroachment, and other abnormal operating conditions to maintain system reliability.	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Gas Distribution	Pipeline Relocations - Freeway	Non-RAMP	No	Yes	No	The variance is due to the less than anticipated demand for relocations of pipeline and related facilities from external agencies as well as the timing of work schedule.	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
Capital	Gas Distribution	Pipeline Relocations - Franchise	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Gas Distribution	Meter Guards	Non-RAMP	No	Yes	No	The Residential Meter Protection Program (RMPP) has had to increase its existing workforce and contractor pool to align with robust goals to reduce inventory year over year. In addition, higher costs and supplier shortages associated with purchasing bollards have increased materials costs.	N/A	Over (O)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Gas Distribution	Regulator Stations	Non-RAMP	No	Yes	No	The variance for this non-RAMP portion of Regulator Stations is due to the reclassification of expenditures related to regulator station installations, replacements, and repairs due to the RAMP portion, discussed in "Regulator Stations - RAMP." The non-RAMP activity expenditures consist of regulator station installation due to system demand growth, relocation due to external agency requests, and abandonment. This activity is primarily driven by external factors that resulted in lower than anticipated spending.	N/A	Under (U)	Under (U)	Under (U)	Proceeding as Planned	No
Capital	Gas Distribution	Regulator Stations - RAMP	Systems are in place to monitor and manage compliance activity schedules related to high pressure	No	No	No	N/A	N/A	Over (O)	Under (U)	On Target (T)	Proceeding as Planned	No
Capital	Gas Distribution	Regulator Stations - RAMP	Systems are in place to monitor and manage compliance activity schedules related to medium pressure	No	Yes	No	The variance is due to the increase of projects and cost related to regulator station installation, replacement, and repair due to condition. This activity category addresses the regulator station work to further enhance the safety and reliability of the system. The authorized amount in this category is based on an inadvertent forecast error in the TY2019 GRC. The authorized amount was approved under the non-RAMP category, but the actual cost is being reported under this RAMP activity.	N/A	Over (O)	Under (U)	Over (O)	Proceeding as Planned	No
Capital	Gas Distribution	<b>Sub-Total Regulator Stations</b>		<b>Yes</b>	<b>Yes</b>								<b>No</b>

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
Capital	Gas Distribution	Supply Line Replacements	Non-RAMP	No	Yes	No	The variance is primarily attributable to a large portion of Supply Line replacement work being performed and recorded under other activity categories (e.g., Pressure Betterments and Pipe Relocations-Franchise).	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
Capital	Gas Distribution	Other Distribution Capital Projects	Non-RAMP	No	Yes	No	The variance is primarily due to paving related to Capital projects.	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Gas Distribution	Other Distribution Capital Projects - RAMP	Systems are in place to monitor and manage compliance activity schedules- Maintenance and Inspection of Medium Pressure Valves	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Gas Distribution	Other Distribution Capital Projects - RAMP	Valve Maintenance and Installation (Distribution High Pressure)	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
<b>Capital</b>	<b>Gas Distribution</b>	<b>Sub-Total Other Distribution Capital Projects</b>		<b>Yes</b>	<b>Yes</b>								<b>No</b>
Capital	Gas Distribution	Gas Energy Measurement Systems (GEMS)	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Gas Distribution	Capital Tools & Equipment	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Gas Distribution	Capital Tools & Equipment - RAMP	Prevention and Improvements	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Completed	Yes
Capital	Gas Distribution	Capital Tools & Equipment - RAMP	Upgrade Nomex Coveralls & Fresh Equipment	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Completed	Yes
Capital	Gas Distribution	Capital Tools & Equipment - RAMP	Confined space air monitoring system for field personnel	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Completed	Yes
<b>Capital</b>	<b>Gas Distribution</b>	<b>Sub-Total Capital Tools &amp; Equipment</b>		<b>Yes</b>	<b>Yes</b>								<b>No</b>

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
Capital	Gas Distribution	Field Capital Support	Non-RAMP	No	Yes	No	The variance is due to higher expenditures and additional FTEs to support the growing field capital investment activities, including project management, engineering, field dispatch, field management/supervision.	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Gas Distribution	Field Capital Support - RAMP	Med Pressure Company Crew Inspections	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Gas Distribution	Field Capital Support - RAMP	Systems are in place to monitor and manage compliance activity schedules	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
<b>Capital</b>	<b>Gas Distribution</b>	<b>Sub-Total Field Capital Support</b>		<b>Yes</b>	<b>Yes</b>								<b>No</b>
Capital	Gas Distribution	New Business Construction - Trench Reimbursements	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No

ii. SoCalGas Gas Distribution Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
Capital	Gas Distribution	Gas Distribution		Yes				
Capital	Gas Distribution	New Business Construction	Non-RAMP	No	N/A			
Capital	Gas Distribution	New Business - RAMP	MSA Inspections- Customer Service Initial Turn-Ons	No	N/A			
<b>Capital</b>	<b>Gas Distribution</b>	<b>Sub-Total New Business</b>		<b>Yes</b>				
Capital	Gas Distribution	Gas Meters	Non-RAMP	No	N/A			
Capital	Gas Distribution	Gas Regulators	Non-RAMP	No	N/A			
Capital	Gas Distribution	Cathodic Protection - RAMP	Systems are in place to monitor and manage compliance activity schedules	No	N/A	This work category includes the capital expenditures associated with the installation of cathodic protection equipment used to preserve the integrity of steel pipelines by protecting them from external corrosion. These projects are in compliance with federal and state pipeline safety regulations and provides for proper cathodic protection on company facilities.	SCG-04-R GOM-112 to GOM-116 WP 1730	SCG-04-R-E MAA-100 to MAA-103 WP 1730
Capital	Gas Distribution	Electronic Pressure Monitors (EPM)	Non-RAMP	No	N/A	Electronic Pressure Monitors (EPM) are devices used by SoCalGas to remotely monitor distribution pipeline pressures in support of gas system capacity analysis; and for alarming of over or under-pressure events. Costs discussed here are for the materials purchased, labor cost for warehouse handling, equipment configuration, and associated cost for the field installation and replacement work.	SCG-04-R GOM-133 to GOM-134 WP 1810	SCG-04-R-E MAA-119 to MAA-121 WP 1810
Capital	Gas Distribution	Remote Meter Reading	Non-RAMP	No	Planned work was completed prior to 2022 as a part of the planned meter changes associated with the Advanced Metering Infrastructure (AMI) implementation and therefore resulted in no spend in 2022. The CPUC approved a post-test year mechanism for the SoCalGas attrition years, which can result in imputed dollars when a project has been completed.	This cost category consists of Customer Services Field (CSF) labor and non-labor expenses for curb meter replacements as part of the planned meter changes associated with the Advanced Metering Infrastructure (AMI) implementation. Beginning in 2013, the AMI project assumed responsibility for above-ground Planned Meter Changes (PMC), including both planned and accelerated meter changes, and CSF shifted its focus to curb meter changes. This trade-off (i.e., the AMI project team focusing on above-ground meters and CSF focusing on curb meters) enabled a better match between the work and employee skill sets. Over the course of the deployment period, SoCalGas anticipates all GRC and AMI- funded planned meter changes will be completed.	SCG-04-R GOM-142 to GOM-144 WP 1820	N/A
Capital	Gas Distribution	Pressure Betterment Projects	Non-RAMP	No	N/A			
Capital	Gas Distribution	Main Replacements	Non-RAMP	No	N/A	This work category includes expenditures to replace mains operating at 60 psig and below, also referred to as medium-pressure main replacements. This category includes costs for activities designed to mitigate infrastructure integrity risks.	SCG-04-R GOM-101 to GOM-103 WP 2520	SCG-04-R-E MAA-84 to MAA-87 WP 2520
Capital	Gas Distribution	Main Replacements - RAMP	Contracting for Traffic Control Delineation materials	No	N/A			
<b>Capital</b>	<b>Gas Distribution</b>	<b>Sub-Total Main Replacements</b>		<b>Yes</b>				

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
Capital	Gas Distribution	Main & Service Abandonments	Non-RAMP	No	N/A	This work category includes expenditures associated with the abandonment of distribution pipeline mains and services without the installation of new pipeline to replace the old. Abandonment of mains and services are planned when the abandonment of the pipeline is anticipated not to cause a negative effect on the distribution system, otherwise, a replacement plan will be pursued. Mains are retired from service by stopping the flow of gas into the section of pipe to be abandoned. This is typically accomplished with pressure control fittings installed on both ends of the section of pipe to isolate from gas flow. Abandonment of service lines is accomplished by cutting and capping at the service-to-main connection.	SCG-04-R GOM-106 to GOM-108 WP 2540	SCG-04-R-E MAA-91 to MAA-93 WP 2540
Capital	Gas Distribution	Service Replacements	Non-RAMP	No	N/A	Service replacements represented in this category include expenditures specific to the replacement of isolated distribution service pipelines to maintain system reliability and to safely deliver gas to the customer, thus mitigating the risks associated with loss of service and public safety. Services are replaced by two construction methods, "insertion" and "direct bury." With the insertion method, a new plastic replacement service pipe is inserted into the to-be abandoned steel service pipe such that the steel service becomes casing for the plastic pipe. The direct bury technique specifies to the construction crews that the installation of new pipe does not need casing, and any appropriate installation method can be utilized, such as boring or open trench.	SCG-04-R GOM-103 to GOM-105 WP 2560	SCG-04-R-E MAA-87 to GOM-91 WP 2560
Capital	Gas Distribution	Pipeline Relocations - Freeway	Non-RAMP	No	N/A	The work in the Pipeline Relocations – Freeway category includes expenditures associated with relocating or altering SoCalGas facilities in response to external requests, as specified under the provisions of utility agreements with state and local agencies. This category includes costs for activities designed to mitigate public safety risks.	SCG-04-R GOM-116 to GOM-118 WP 2610	SCG-04-R-E MAA-103 to MAA-105 WP 2610
Capital	Gas Distribution	Pipeline Relocations - Franchise	Non-RAMP	No	N/A			
Capital	Gas Distribution	Meter Guards	Non-RAMP	No	N/A	Meter guards consist of pipeline compatible materials with sufficient structural integrity to guard against damage to meter set assemblies. Posts installed into the ground with welded cross braces, usually made of steel pipe, are fabricated and installed by SoCalGas field crews and contractors.	SCG-04-R GOM-123 to GOM-125 WP 2640	SCG-04-R-E MAA-108 to MAA-110 WP 2640
Capital	Gas Distribution	Regulator Stations	Non-RAMP	No	N/A	Represented in this work category are expenditures for the upgrade, repair, and abandonment of regulator stations. This category includes costs for activities designed to mitigate infrastructure integrity risks.	SCG-04-R GOM-109 to GOM-112 WP 2650	SCG-04-R-E MAA-93 to MAA-97 WP 2650
Capital	Gas Distribution	Regulator Stations - RAMP	Systems are in place to monitor and manage compliance activity schedules related to high pressure	No	N/A			
Capital	Gas Distribution	Regulator Stations - RAMP	Systems are in place to monitor and manage compliance activity schedules related to medium pressure	No	N/A	Represented in this work category are expenditures for the installation, the replacement, and the relocation of regulator stations. This category includes costs for activities designed to mitigate infrastructure integrity risks.	SCG-04-R GOM-109 to GOM-112 WP 2650	SCG-04-R-E MAA-93 to MAA-97 WP 2650
Capital	Gas Distribution	Sub-Total Regulator Stations		Yes				

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
Capital	Gas Distribution	Supply Line Replacements	Non-RAMP	No	N/A	This work category includes expenditures to replace high-pressure distribution pipelines, known as SoCalGas supply lines. Some of the major drivers for these supply line replacement projects include deteriorating pipe conditions, risk to the public, and increased maintenance costs.	SCG-04-R GOM-99 to GOM-100 WP 2670	SCG-04-R-E MAA-84 to MAA-87 WP 2520
Capital	Gas Distribution	Other Distribution Capital Projects	Non-RAMP	No	N/A	The Other Distribution Capital Projects work category covers construction projects not covered under franchise agreements, not related to freeway work, and not covered in other capital workpaper categories. This category includes costs for activities designed to mitigate public safety risks.	SCG-04-R GOM-121 to GOM-123 WP 2700	SCG-04-R-E MAA-110 to MAA-114 WP 2700
Capital	Gas Distribution	Other Distribution Capital Projects - RAMP	Systems are in place to monitor and manage compliance activity schedules- Maintenance and Inspection of Medium Pressure Valves	No	N/A			
Capital	Gas Distribution	Other Distribution Capital Projects - RAMP	Valve Maintenance and Installation (Distribution High Pressure)	No	N/A			
<b>Capital</b>	<b>Gas Distribution</b>	<b>Sub-Total Other Distribution Capital Projects</b>		<b>Yes</b>				
Capital	Gas Distribution	Gas Energy Measurement Systems (GEMS)	Non-RAMP	No	N/A			
Capital	Gas Distribution	Capital Tools & Equipment	Non-RAMP	No	N/A			
Capital	Gas Distribution	Capital Tools & Equipment - RAMP	Prevention and Improvements	No	The system-wide replacement of locating tools has been completed prior to 2019, and the recorded costs within the authorized years are additional purchases of locating equipment for routine replacement as needed. The CPUC approved a post-test year mechanism for the SoCalGas attrition years, which can result in imputed dollars when a project has been completed, so the authorized amount is relatively greater than the anticipated cost for the on-going routine replacement of the equipment, and thus, the forecast spending status is under the authorized amount.	This work category includes expenditures associated with the purchase of capital tools and equipment used by distribution field personnel for the maintenance and repair of gas pipeline systems. The main driver of this plant category is the need to replace existing tools that are broken, outdated, or have outlived their useful lives. In addition, SoCalGas invests in new tools that provide innovative ways of completing the construction, maintenance and repair of its facilities in order to lessen customer disruptions and improve construction safety. This workpaper covers routine capital tool and equipment purchases.	SCG-04-R GOM-134 to GOM-138 WP 7250	SCG-04-R-E MAA-123 to MAA-125 WP 7250
Capital	Gas Distribution	Capital Tools & Equipment - RAMP	Upgrade Nomex Coveralls & Fresh Equipment	No	The system-wide replacement of the Supplied Air Respirator (SAR) kits has been completed, and the recorded costs within the authorized years are additional purchases for routine replacement as needed. The CPUC approved a post-test year mechanism for the SoCalGas attrition years, which can result in imputed dollars when a project has been completed, and the authorized amount is relatively less than the historical cost of the system-wide replacement and the on-going routine replacement of the equipment, and thus, the forecast spending status is over the authorized amount.	This work category includes expenditures associated with the purchase of capital tools and equipment used by distribution field personnel for the maintenance and repair of gas pipeline systems. The main driver of this plant category is the need to replace existing tools that are broken, outdated, or have outlived their useful lives. In addition, SoCalGas invests in new tools that provide innovative ways of completing the construction, maintenance and repair of its facilities in order to lessen customer disruptions and improve construction safety. This workpaper covers routine capital tool and equipment purchases.	SCG-04-R GOM-134 to GOM-138 WP 7250	SCG-04-R-E MAA-123 to MAA-125 WP 7250
Capital	Gas Distribution	Capital Tools & Equipment - RAMP	Confined space air monitoring system for field personnel	No	The system-wide replacement of the equipment has been completed, and the recorded costs within the authorized years are additional purchases for routine replacement as needed. The CPUC approved a post-test year mechanism for the SoCalGas attrition years, which can result in imputed dollars when a project has been completed, and the authorized amount is relatively less than the historical cost of the system-wide replacement and the on-going routine replacement of the equipment, and thus, the forecast spending status is over the authorized amount.	This work category includes expenditures associated with the purchase of capital tools and equipment used by distribution field personnel for the maintenance and repair of gas pipeline systems. The main driver of this plant category is the need to replace existing tools that are broken, outdated, or have outlived their useful lives. In addition, SoCalGas invests in new tools that provide innovative ways of completing the construction, maintenance and repair of its facilities in order to lessen customer disruptions and improve construction safety. This workpaper covers routine capital tool and equipment purchases.	SCG-04-R GOM-134 to GOM-138 WP 7250	SCG-04-R-E MAA-123 to MAA-125 WP 7250
<b>Capital</b>	<b>Gas Distribution</b>	<b>Sub-Total Capital Tools &amp; Equipment</b>		<b>Yes</b>				

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
Capital	Gas Distribution	Field Capital Support	Non-RAMP	No	N/A	Traditional work elements recorded to this workpaper category include project planning, local engineering, clerical support, field dispatch, field management and supervision, and off-production time for support personnel and field crews who install the Gas Distribution capital assets.	SCG-04-R GOM-138 to GOM-142 WP 9030	SCG-04-R-E MAA-125 to MAA-131 WP 9030
Capital	Gas Distribution	Field Capital Support - RAMP	Med Pressure Company Crew Inspections	No	N/A			
Capital	Gas Distribution	Field Capital Support - RAMP	Systems are in place to monitor and manage compliance activity schedules	No	N/A			
<b>Capital</b>	<b>Gas Distribution</b>	<b>Sub-Total Field Capital Support</b>		<b>Yes</b>				
Capital	Gas Distribution	New Business Construction - Trench Reimbursements	Non-RAMP	No	N/A			

B. SoCalGas Gas Control & System Operations  
i. SoCalGas Gas Control & System Operations O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Gas Control & System Operations - Planning	Gas Control & System Operations - Planning		Yes			8,700	8,820	9,188	9,382	9,982	46,072	9,670	9,925	10,164	10,360	10,599	50,718
O&M	Gas Control & System Operations - Planning	Energy Markets & Capacity Products - Director	Non-RAMP	No	On-going	Annual	—	—	—	—	—	—	340	349	357	364	373	1,784
O&M	Gas Control & System Operations - Planning	Energy Markets & Capacity Products - Support	Non-RAMP	No	On-going	Annual	882	807	686	785	1,140	4,300	667	685	701	715	731	3,500
O&M	Gas Control & System Operations - Planning	Energy Markets & Capacity Products - Manager	Non-RAMP	No	On-going	Annual	876	866	906	1,007	1,022	4,677	663	680	697	710	726	3,476
O&M	Gas Control & System Operations - Planning	Gas Scheduling	Non-RAMP	No	On-going	Annual	821	594	796	767	737	3,716	780	801	820	836	855	4,093
O&M	Gas Control & System Operations - Planning	Gas Control & SCADA Operation Group - USS	Non-RAMP	No	On-Going	Annual	0	0	—	—	—	0	14	14	14	15	15	71
O&M	Gas Control & System Operations - Planning	Gas Control & SCADA Operation Group - USS	Fatigue Management	No	On-Going	Annual	385	852	873	738	802	3,650	463	475	487	496	507	2,428
O&M	Gas Control & System Operations - Planning	Gas Control & SCADA Operation Group - USS	Operations	No	On-Going	Annual	—	—	—	—	—	—	2	2	2	2	2	10
O&M	Gas Control & System Operations - Planning	Gas Control & SCADA Operation Group - USS	Gas Control Operation	No	On-Going	Annual	2,032	2,081	2,109	2,213	2,404	10,840	1,741	1,787	1,830	1,865	1,908	9,131
O&M	Gas Control & System Operations - Planning	Gas Control & SCADA Operation Group - USS	SCADA Operation	No	On-going	Annual	1,071	924	1,186	1,206	1,153	5,539	1,036	1,063	1,089	1,110	1,135	5,434
O&M	Gas Control & System Operations - Planning	<b>Sub-Total Gas Control &amp; SCADA Operation Group - USS</b>		Yes			<b>3,488</b>	<b>3,857</b>	<b>4,168</b>	<b>4,157</b>	<b>4,359</b>	<b>20,029</b>	<b>3,256</b>	<b>3,342</b>	<b>3,422</b>	<b>3,488</b>	<b>3,568</b>	<b>17,075</b>
O&M	Gas Control & System Operations - Planning	Gas Transmission Planning	Non-RAMP	No	On-going	Annual	710	864	861	903	919	4,257	745	765	783	798	817	3,909
O&M	Gas Control & System Operations - Planning	Storage Products Manager	Non-RAMP	No	On-going	Annual	170	206	250	180	234	1,040	170	175	179	182	187	893
O&M	Gas Control & System Operations - Planning	Emergency Services	Non-RAMP	No	On-going	Annual	—	—	225	176	175	577	127	130	134	136	139	667
O&M	Gas Control & System Operations - Planning	Emergency Services	Safety, Wellness and Emergency Services Support	No	On-going	Annual	1,751	1,626	1,296	1,407	1,396	7,477	2,921	2,998	3,070	3,130	3,202	15,320
O&M	Gas Control & System Operations - Planning	<b>Sub-Total Emergency Services</b>		Yes			<b>1,751</b>	<b>1,626</b>	<b>1,521</b>	<b>1,584</b>	<b>1,571</b>	<b>8,054</b>	<b>3,048</b>	<b>3,129</b>	<b>3,204</b>	<b>3,266</b>	<b>3,341</b>	<b>15,987</b>



B. SoCalGas Gas Control & System Operations  
i. SoCalGas Gas Control & System Operations O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Gas Control & System Operations - Planning	Gas Control & System Operations - Planning		Yes	(970)	(1,105)	(976)	(978)	(616)	(4,645)	-10%	-11%	-10%	-9%	-6%	-9%
O&M	Gas Control & System Operations - Planning	Energy Markets & Capacity Products - Director	Non-RAMP	No	(340)	(349)	(357)	(364)	(373)	(1,784)	-100%	-100%	-100%	-100%	-100%	-100%
O&M	Gas Control & System Operations - Planning	Energy Markets & Capacity Products - Support	Non-RAMP	No	215	122	(15)	70	408	800	32%	18%	-2%	10%	56%	23%
O&M	Gas Control & System Operations - Planning	Energy Markets & Capacity Products - Manager	Non-RAMP	No	213	186	209	297	296	1,201	32%	27%	30%	42%	41%	35%
O&M	Gas Control & System Operations - Planning	Gas Scheduling	Non-RAMP	No	41	(207)	(24)	(69)	(118)	(377)	5%	-26%	-3%	-8%	-14%	-9%
O&M	Gas Control & System Operations - Planning	Gas Control & SCADA Operation Group - USS	Non-RAMP	No	(13)	(14)	(14)	(15)	(15)	(71)	-96%	-100%	-100%	-100%	-100%	-99%
O&M	Gas Control & System Operations - Planning	Gas Control & SCADA Operation Group - USS	Fatigue Management	No	(78)	376	386	242	295	1,221	-17%	79%	79%	49%	58%	50%
O&M	Gas Control & System Operations - Planning	Gas Control & SCADA Operation Group - USS	Operations	No	(2)	(2)	(2)	(2)	(2)	(10)	-100%	-100%	-100%	-100%	-100%	-100%
O&M	Gas Control & System Operations - Planning	Gas Control & SCADA Operation Group - USS	Gas Control Operation	No	291	294	279	348	496	1,709	17%	16%	15%	19%	26%	19%
O&M	Gas Control & System Operations - Planning	Gas Control & SCADA Operation Group - USS	SCADA Operation	No	35	(140)	97	96	17	105	3%	-13%	9%	9%	2%	2%
O&M	Gas Control & System Operations - Planning	<b>Sub-Total Gas Control &amp; SCADA Operation Group - USS</b>		Yes	<b>233</b>	<b>515</b>	<b>746</b>	<b>669</b>	<b>791</b>	<b>2,954</b>	<b>7%</b>	<b>15%</b>	<b>22%</b>	<b>19%</b>	<b>22%</b>	<b>17%</b>
O&M	Gas Control & System Operations - Planning	Gas Transmission Planning	Non-RAMP	No	(35)	99	77	105	102	348	-5%	13%	10%	13%	13%	9%
O&M	Gas Control & System Operations - Planning	Storage Products Manager	Non-RAMP	No	0	31	71	(3)	47	146	0%	18%	40%	-2%	25%	16%
O&M	Gas Control & System Operations - Planning	Emergency Services	Non-RAMP	No	(127)	(130)	91	40	36	(90)	-100%	-100%	68%	30%	26%	-13%
O&M	Gas Control & System Operations - Planning	Emergency Services	Safety, Wellness and Emergency Services Support	No	(1,170)	(1,372)	(1,774)	(1,722)	(1,806)	(7,843)	-40%	-46%	-58%	-55%	-56%	-51%
O&M	Gas Control & System Operations - Planning	<b>Sub-Total Emergency Services</b>		Yes	<b>(1,297)</b>	<b>(1,502)</b>	<b>(1,683)</b>	<b>(1,682)</b>	<b>(1,770)</b>	<b>(7,933)</b>	<b>-43%</b>	<b>-48%</b>	<b>-53%</b>	<b>-51%</b>	<b>-53%</b>	<b>-50%</b>

B. SoCalGas Gas Control & System Operations  
i. SoCalGas Gas Control & System Operations O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
O&M	Gas Control & System Operations - Planning	Gas Control & System Operations - Planning		Yes																										
O&M	Gas Control & System Operations - Planning	Energy Markets & Capacity Products - Director	Non-RAMP	No	FTE	—	—	—	—	—	0	2	2	2	2	2	10	(2)	(2)	(2)	(2)	(2)	(10)	-100%	-100%	-100%	-100%	-100%	-100%	
O&M	Gas Control & System Operations - Planning	Energy Markets & Capacity Products - Support	Non-RAMP	No	FTE	7	7	5	6	6	31	6	6	6	6	6	30	1	1	(1)	—	—	1	17%	17%	-17%	—%	—%	3%	
O&M	Gas Control & System Operations - Planning	Energy Markets & Capacity Products - Manager	Non-RAMP	No	FTE	7	7	6	6	6	32	6	6	6	6	6	30	1	1	—	—	—	2	17%	17%	—%	—%	—%	7%	
O&M	Gas Control & System Operations - Planning	Gas Scheduling	Non-RAMP	No	FTE	5	5	7	7	6	30	7	7	7	7	7	35	(2)	(2)	—	—	(1)	(5)	-29%	-29%	—%	—%	-14%	-14%	
O&M	Gas Control & System Operations - Planning	Gas Control & SCADA Operation Group - USS	Non-RAMP	No	Gas Control and SCADA Operations is responsible for the remote monitoring, control, and real-time operation of SoCalGas and SDG&E's combined gas-transmission system including its associated pipelines, line compressor stations, and underground storage facilities. The variety of work scope and varying dollars associated with this activity make it infeasible to identify an appropriate unit of measure.																									
O&M	Gas Control & System Operations - Planning	Gas Control & SCADA Operation Group - USS	Fatigue Management	No	49 CFR § 192.631(d) - Control Room Management Fatigue Mitigation requires each operator to implement methods to reduce the risk associated with controller fatigue that could inhibit a controller's ability to carry out their roles and responsibilities safely. The variety of work scope and varying dollars associated with this activity make it infeasible to identify an appropriate unit of measure.																									
O&M	Gas Control & System Operations - Planning	Gas Control & SCADA Operation Group - USS	Operations	No	Gas Control and SCADA Operations is responsible for the remote monitoring, control, and real-time operations of SoCal Gas and SDG&E's combined gas-transmission system including its' associated pipelines, line compressor stations, and underground storage facilities. The variety of work scope and varying dollars associated with this activity make it infeasible to identify an appropriate unit of measure.																									
O&M	Gas Control & System Operations - Planning	Gas Control & SCADA Operation Group - USS	Gas Control Operation	No	Gas Control and SCADA Operations is responsible for the remote monitoring, control, and real-time operations of SoCal Gas and SDG&E's combined gas-transmission system including its' associated pipelines, line compressor stations, and underground storage facilities. The variety of work scope and varying dollars associated with this activity make it infeasible to identify an appropriate unit of measure.																									
O&M	Gas Control & System Operations - Planning	Gas Control & SCADA Operation Group - USS	SCADA Operation	No	49 CFR § 192.631 applies to each operator of a pipeline system monitoring and controlling the system via a SCADA system. The SCADA department manages the planning, operation and maintenance of the SCADA system. The SCADA system provides for remote monitoring and operation of valves, compressors, pressure regulation equipment, and gas flow across the system. The variety of work scope and varying dollars associated with this activity make it infeasible to identify an appropriate unit of measure.																									
O&M	Gas Control & System Operations - Planning	<b>Sub-Total Gas Control &amp; SCADA Operation Group - USS</b>		Yes																										
O&M	Gas Control & System Operations - Planning	Gas Transmission Planning	Non-RAMP	No	FTE	7	7	7	7	7	35	6	6	6	6	6	30	1	1	1	1	1	5	17%	17%	17%	17%	17%	17%	
O&M	Gas Control & System Operations - Planning	Storage Products Manager	Non-RAMP	No	FTE	2	2	1	1	1	7	1	1	1	1	1	5	1	1	—	—	—	2	100%	100%	—%	—%	—%	40%	
O&M	Gas Control & System Operations - Planning	Emergency Services	Non-RAMP	No	FTE	—	—	1	1	—	2	—	—	—	—	—	—	—	—	—	1	1	—	2	—%	—%	100%	100%	—%	100%
O&M	Gas Control & System Operations - Planning	Emergency Services	Safety, Wellness and Emergency Services Support	No	FTE	9	10	11	13	13	56	19	19	19	19	19	93	(9)	(8)	(8)	(5)	(6)	(36)	-51%	-44%	-41%	-30%	-30%	-39%	
O&M	Gas Control & System Operations - Planning	<b>Sub-Total Emergency Services</b>		Yes																										

B. SoCalGas Gas Control & System Operations  
i. SoCalGas Gas Control & System Operations O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Gas Control & System Operations - Planning	Gas Control & System Operations - Planning		Yes									
O&M	Gas Control & System Operations - Planning	Energy Markets & Capacity Products - Director	Non-RAMP	No	No	Yes	N/A	During TY 2019 GRC, Gas Scheduling and Energy Markets Departments reported to the same Director. When the Departments were separated, the Energy Markets Department reported directly to a Senior VP with no in-line Director. The Gas Scheduling Department was moved to the Director of Gas Control & System Planning in the workpaper Gas Control & SCADA Operation Group - USS	Under (U)	Under (U)	Under (U)	Proceeding as Planned	Yes
O&M	Gas Control & System Operations - Planning	Energy Markets & Capacity Products - Support	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Gas Control & System Operations - Planning	Energy Markets & Capacity Products - Manager	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Gas Control & System Operations - Planning	Gas Scheduling	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas Control & System Operations - Planning	Gas Control & SCADA Operation Group - USS	Non-RAMP	No	No	No	N/A	N/A	Under (U)	Under (U)	Under (U)	Canceled	No
O&M	Gas Control & System Operations - Planning	Gas Control & SCADA Operation Group - USS	Fatigue Management	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Gas Control & System Operations - Planning	Gas Control & SCADA Operation Group - USS	Operations	No	No	No	N/A	N/A	Under (U)	Under (U)	Under (U)	Canceled	No
O&M	Gas Control & System Operations - Planning	Gas Control & SCADA Operation Group - USS	Gas Control Operation	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas Control & System Operations - Planning	Gas Control & SCADA Operation Group - USS	SCADA Operation	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	<b>Gas Control &amp; System Operations - Planning</b>	<b>Sub-Total Gas Control &amp; SCADA Operation Group - USS</b>		<b>Yes</b>	<b>No</b>								<b>No</b>
O&M	Gas Control & System Operations - Planning	Gas Transmission Planning	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas Control & System Operations - Planning	Storage Products Manager	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas Control & System Operations - Planning	Emergency Services	Non-RAMP	No	No	No	N/A	N/A	Under (U)	Under (U)	Under (U)	Proceeding as Planned	No
O&M	Gas Control & System Operations - Planning	Emergency Services	Safety, Wellness and Emergency Services Support	No	Yes	Yes	Resources were shifted to support and manage the developments and enhancements of new and existing health and safety policies, procedures, and protocols company wide. Additionally, SoCalGas reorganized Emergency Services to align resources with strategic priorities such as the Safety Management Systems organization, which is partially recorded in the Gas Operations Training and Development work paper in Gas System Integrity. Although SoCalGas was able to conduct a scenario-based exercise during 2023, the activity was limited to tabletops due to the uptick in natural disaster-related incidents across our service territory, such as the Lake Arrowhead Snowstorm and Hurricane Hilary. This action significantly reduced the overall cost of this activity.	SoCalGas reallocated its Emergency Services personnel to better align with strategic priorities, including the Safety Management Systems organization, which is partially documented in the Gas Operations Training and Development work paper in Gas Systems integrity.	Under (U)	Under (U)	Under (U)	Proceeding as Planned	No
O&M	<b>Gas Control &amp; System Operations - Planning</b>	<b>Sub-Total Emergency Services</b>		<b>Yes</b>	<b>Yes</b>								<b>No</b>

B. SoCalGas Gas Control & System Operations  
i. SoCalGas Gas Control & System Operations O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Gas Control & System Operations - Planning	Gas Control & System Operations - Planning		Yes				
O&M	Gas Control & System Operations - Planning	Energy Markets & Capacity Products - Director	Non-RAMP	No	During TY 2019 GRC, Gas Scheduling and Energy Markets Departments reported to the same Director. When the Departments were separated, the Energy Markets Department reported directly to a Senior VP with no inline Director. The Gas Scheduling Department was moved to the Director of Gas Control & System Planning.	Energy Markets & Capacity Products' shared service elements include both direct customer service and staff support. Specific groups in this area include Capacity Products Support and Capacity Products - Manager. These shared services provide capacity services for gas marketers that serve both SoCalGas and SDG&E customers, large nonresidential customers who choose to act as their own gas supplier, and core aggregators. The group also manages business relationships with upstream pipelines that serve the SoCalGas and SDG&E systems; provides analytical and regulatory compliance support for Backbone Transportation Service, unbundled storage and Hub transactions; and represents SoCalGas in the development and modification of gas industry standards for gas scheduling.	SCG-13 DKZ-18 WP 2200-00246.000	SCG-16-2E BCP-34 to BCP-49 WP 2IN004.000
O&M	Gas Control & System Operations - Planning	Energy Markets & Capacity Products - Support	Non-RAMP	No	N/A			
O&M	Gas Control & System Operations - Planning	Energy Markets & Capacity Products - Manager	Non-RAMP	No	N/A			
O&M	Gas Control & System Operations - Planning	Gas Scheduling	Non-RAMP	No	N/A			
O&M	Gas Control & System Operations - Planning	Gas Control & SCADA Operation Group - USS	Non-RAMP	No	N/A			
O&M	Gas Control & System Operations - Planning	Gas Control & SCADA Operation Group - USS	Fatigue Management	No	N/A			
O&M	Gas Control & System Operations - Planning	Gas Control & SCADA Operation Group - USS	Operations	No	N/A			
O&M	Gas Control & System Operations - Planning	Gas Control & SCADA Operation Group - USS	Gas Control Operation	No	N/A			
O&M	Gas Control & System Operations - Planning	Gas Control & SCADA Operation Group - USS	SCADA Operation	No	N/A			
O&M	<b>Gas Control &amp; System Operations - Planning</b>	<b>Sub-Total Gas Control &amp; SCADA Operation Group - USS</b>		<b>Yes</b>				
O&M	Gas Control & System Operations - Planning	Gas Transmission Planning	Non-RAMP	No	N/A			
O&M	Gas Control & System Operations - Planning	Storage Products Manager	Non-RAMP	No	N/A			
O&M	Gas Control & System Operations - Planning	Emergency Services	Non-RAMP	No	N/A			
O&M	Gas Control & System Operations - Planning	Emergency Services	Safety, Wellness and Emergency Services Support	No	N/A	The SoCalGas Emergency Services department's main objective is to support SoCalGas's goals of maintaining comprehensive and coordinated emergency response and recovery programs to comply with applicable state and federal requirements. The department consists of four key groups (Core Emergency Operations Center Operations, Emergency Services Enhancement Program, Enterprise Planning/Tech Advancement/Training Program, and Regulatory Compliance/Stakeholder Outreach/Development Program).	SCG-13 DKZ-3 & DKZ-15 to DKZ-16 WP 2GS001.000	SCG-27-2R-E NNM-54 to NNM-59 WP 2SM001.000
O&M	<b>Gas Control &amp; System Operations - Planning</b>	<b>Sub-Total Emergency Services</b>		<b>Yes</b>				

C. SoCalGas Gas Engineering  
i. SoCalGas Gas Engineering Operations O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Gas Engineering	Gas Engineering		Yes			20,723	22,630	28,213	26,295	26,726	124,588	31,110	31,931	32,698	33,331	34,098	163,168
O&M	Gas Engineering	Dir Eng & Tech Services	Non-RAMP	No	On-going	Annual	505	634	691	1,109	986	3,925	546	561	574	585	599	2,865
O&M	Gas Engineering	Dir Eng & Tech Services	Information Management Systems	No	4	4	—	58	288	189	23	558	325	334	342	348	356	1,705
O&M	Gas Engineering	<b>Sub-Total Dir Eng &amp; Tech Service</b>		Yes			<b>505</b>	<b>692</b>	<b>979</b>	<b>1,298</b>	<b>1,009</b>	<b>4,483</b>	<b>871</b>	<b>894</b>	<b>916</b>	<b>933</b>	<b>955</b>	<b>4,569</b>
O&M	Gas Engineering	MRC Management & Special Projects	Non-RAMP	No	On-going	Annual	217	863	449	409	421	2,358	967	993	1,017	1,037	1,060	5,074
O&M	Gas Engineering	Measurement & Design	Non-RAMP	No	On-going	Annual	508	361	715	515	515	2,613	1,255	1,288	1,319	1,345	1,376	6,583
O&M	Gas Engineering	Measurement Technologies	Non-RAMP	No	On-going	Annual	955	1,258	1,498	1,476	1,016	6,204	1,380	1,416	1,450	1,478	1,512	7,236
O&M	Gas Engineering	Measurement Field Support	Non-RAMP	No	On-going	Annual	830	783	741	704	687	3,745	1,348	1,383	1,416	1,444	1,477	7,068
O&M	Gas Engineering	Engineering Design Management Process Engineering & Design	Non-RAMP	No	On-going	Annual	1,294	1,486	1,212	848	487	5,327	2,004	2,057	2,107	2,147	2,197	10,513
O&M	Gas Engineering	Engineering Design Management Process Engineering & Design	Information Management Systems	No	5	5	105	192	359	187	387	1,230	237	243	249	254	260	1,243
O&M	Gas Engineering	<b>Sub-Total Engineering Design Management Process Engineering &amp; Design</b>		Yes			<b>1,399</b>	<b>1,678</b>	<b>1,571</b>	<b>1,035</b>	<b>874</b>	<b>6,557</b>	<b>2,241</b>	<b>2,301</b>	<b>2,356</b>	<b>2,401</b>	<b>2,457</b>	<b>11,756</b>
O&M	Gas Engineering	Pipeline Materials	Non-RAMP	No	On-going	Annual	716	137	305	494	628	2,280	429	440	450	459	470	2,248
O&M	Gas Engineering	Mechanical Design	Non-RAMP	No	On-going	Annual	59	44	220	109	90	522	194	199	203	207	212	1,015
O&M	Gas Engineering	Pipeline Engineering	Non-RAMP	No	On-going	Annual	472	411	508	520	490	2,402	724	743	761	776	793	3,797
O&M	Gas Engineering	Research, Planning & Development	Non-RAMP	No	On-going	Annual	2	—	—	—	—	2	43	44	45	46	47	227
O&M	Gas Engineering	MRC - Instrumentation Repair and Field Support	Non-RAMP	No	On-going	Annual	736	850	957	541	744	3,828	1,428	1,466	1,501	1,530	1,565	7,491
O&M	Gas Engineering	Engineering Analysis Center - Chemical Lab	Non-RAMP	No	On-going	Annual	1,966	2,006	2,186	2,417	2,329	10,904	2,219	2,278	2,332	2,377	2,432	11,638
O&M	Gas Engineering	MRC Standards	Non-RAMP	No	On-going	Annual	135	169	139	148	103	693	787	807	827	843	862	4,126
O&M	Gas Engineering	High Pressure & Distribution Engineering	Non-RAMP	No	On-going	Annual	617	817	1,085	694	587	3,799	1,231	1,263	1,294	1,319	1,349	6,456
O&M	Gas Engineering	Electrical Design	Non-RAMP	No	On-going	Annual	111	100	186	230	347	974	166	171	175	178	182	872

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Gas Engineering	Gas Engineering Analysis Center, NGV and Electrical Field	Non-RAMP	No	On-going	Annual	6,148	7,386	10,459	10,425	11,597	46,015	6,597	6,771	6,934	7,068	7,231	34,602
O&M	Gas Engineering	Land Services & Right Of Way	Non-RAMP	No	On-going	Annual	2,900	3,363	3,014	2,992	3,306	15,574	3,900	4,003	4,099	4,179	4,275	20,456

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Gas Engineering	Civil Structural & Hazard Mitigation Engineering	Non-RAMP	No	5	5	333	142	878	962	436	2,750	1,071	1,099	1,125	1,147	1,173	5,615
O&M	Gas Engineering	Civil Structural & Hazard Mitigation Engineering	Monitoring of Land Movement & Flood zones	No	5	5	238	222	612	—	—	1,072	1,176	1,207	1,236	1,260	1,289	6,168
O&M	Gas Engineering	Civil Structural & Hazard Mitigation Engineering	Gas Infrastructure Resilience & Vulnerability Report	No	5	5	149	(96)	252	—	—	305	349	358	367	374	383	1,830
O&M	Gas Engineering	Civil Structural & Hazard Mitigation Engineering	Real time monitoring of land movement via stress acting on infrastructure	No	5	5	1	5	5	16	18	45	107	110	112	115	117	561
<b>O&amp;M</b>	<b>Gas Engineering</b>	<b>Sub-Total Civil Structural &amp; Hazard Mitigation Engineering</b>		<b>Yes</b>			<b>721</b>	<b>273</b>	<b>1,747</b>	<b>978</b>	<b>454</b>	<b>4,172</b>	<b>2,703</b>	<b>2,774</b>	<b>2,841</b>	<b>2,896</b>	<b>2,962</b>	<b>14,175</b>
O&M	Gas Engineering	Meter Shop & Records	Non-RAMP	No	On-going	Annual	1,725	1,438	1,456	1,312	1,530	7,461	2,627	2,697	2,761	2,815	2,879	13,779

C. SoCalGas Gas Engineering  
i. SoCalGas Gas Engineering Operations O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Gas Engineering	Gas Engineering		Yes	(10,387)	(9,301)	(4,485)	(7,036)	(7,371)	(38,580)	-33%	-29%	-14%	-21%	-22%	-24%
O&M	Gas Engineering	Dir Eng & Tech Services	Non-RAMP	No	(41)	74	117	523	387	1,060	-7%	13%	20%	89%	65%	37%
O&M	Gas Engineering	Dir Eng & Tech Services	Information Management Systems	No	(325)	(276)	(54)	(159)	(333)	(1,147)	-100%	-83%	-16%	-46%	-94%	-67%
O&M	Gas Engineering	<b>Sub-Total Dir Eng &amp; Tech Service</b>		Yes	<b>(366)</b>	<b>(202)</b>	<b>63</b>	<b>364</b>	<b>54</b>	<b>(87)</b>	<b>-42%</b>	<b>-23%</b>	<b>7%</b>	<b>39%</b>	<b>6%</b>	<b>-2%</b>
O&M	Gas Engineering	MRC Management & Special Projects	Non-RAMP	No	(750)	(130)	(568)	(628)	(640)	(2,716)	-78%	-13%	-56%	-61%	-60%	-54%
O&M	Gas Engineering	Measurement & Design	Non-RAMP	No	(747)	(928)	(604)	(830)	(860)	(3,970)	-60%	-72%	-46%	-62%	-63%	-60%
O&M	Gas Engineering	Measurement Technologies	Non-RAMP	No	(424)	(158)	48	(2)	(496)	(1,031)	-31%	-11%	3%	-0%	-33%	-14%
O&M	Gas Engineering	Measurement Field Support	Non-RAMP	No	(518)	(600)	(676)	(740)	(790)	(3,323)	-38%	-43%	-48%	-51%	-53%	-47%
O&M	Gas Engineering	Engineering Design Management Process Engineering & Design	Non-RAMP	No	(711)	(571)	(895)	(1,300)	(1,710)	(5,186)	-35%	-28%	-42%	-61%	-78%	-49%
O&M	Gas Engineering	Engineering Design Management Process Engineering & Design	Information Management Systems	No	(132)	(51)	110	(67)	127	(13)	-56%	-21%	44%	-26%	49%	-1%
O&M	Gas Engineering	<b>Sub-Total Engineering Design Management Process Engineering &amp; Design</b>		Yes	<b>(843)</b>	<b>(622)</b>	<b>(785)</b>	<b>(1,366)</b>	<b>(1,582)</b>	<b>(5,199)</b>	<b>-38%</b>	<b>-27%</b>	<b>-33%</b>	<b>-57%</b>	<b>-64%</b>	<b>-44%</b>
O&M	Gas Engineering	Pipeline Materials	Non-RAMP	No	287	(303)	(146)	35	158	32	67%	-69%	-32%	8%	34%	1%
O&M	Gas Engineering	Mechanical Design	Non-RAMP	No	(134)	(155)	17	(98)	(122)	(493)	-69%	-78%	8%	-47%	-58%	-49%
O&M	Gas Engineering	Pipeline Engineering	Non-RAMP	No	(251)	(332)	(253)	(255)	(304)	(1,395)	-35%	-45%	-33%	-33%	-38%	-37%
O&M	Gas Engineering	Research, Planning & Development	Non-RAMP	No	(41)	(44)	(45)	(46)	(47)	(225)	-96%	-100%	-100%	-100%	-100%	-99%
O&M	Gas Engineering	MRC - Instrumentation Repair and Field Support	Non-RAMP	No	(692)	(616)	(545)	(989)	(821)	(3,663)	-48%	-42%	-36%	-65%	-52%	-49%
O&M	Gas Engineering	Engineering Analysis Center - Chemical Lab	Non-RAMP	No	(253)	(271)	(146)	40	(104)	(734)	-11%	-12%	-6%	2%	-4%	-6%
O&M	Gas Engineering	MRC Standards	Non-RAMP	No	(651)	(639)	(688)	(695)	(760)	(3,433)	-83%	-79%	-83%	-82%	-88%	-83%
O&M	Gas Engineering	High Pressure & Distribution Engineering	Non-RAMP	No	(614)	(447)	(209)	(625)	(762)	(2,656)	-50%	-35%	-16%	-47%	-56%	-41%
O&M	Gas Engineering	Electrical Design	Non-RAMP	No	(55)	(70)	11	52	164	102	-33%	-41%	6%	29%	90%	12%



Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Gas Engineering	Gas Engineering Analysis Center, NGV and Electrical Field	Non-RAMP	No	(449)	614	3,525	3,356	4,366	11,413	-7%	9%	51%	47%	60%	33%
O&M	Gas Engineering	Land Services & Right Of Way	Non-RAMP	No	(1,000)	(640)	(1,085)	(1,187)	(968)	(4,881)	-26%	-16%	-26%	-28%	-23%	-24%

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Gas Engineering	Civil Structural & Hazard Mitigation Engineering	Non-RAMP	No	(738)	(957)	(248)	(185)	(738)	(2,865)	-69%	-87%	-22%	-16%	-63%	-51%
O&M	Gas Engineering	Civil Structural & Hazard Mitigation Engineering	Monitoring of Land Movement & Flood zones	No	(938)	(985)	(624)	(1,260)	(1,289)	(5,096)	-80%	-82%	-50%	-100%	-100%	-83%
O&M	Gas Engineering	Civil Structural & Hazard Mitigation Engineering	Gas Infrastructure Resilience & Vulnerability Report	No	(200)	(454)	(115)	(374)	(383)	(1,525)	-57%	-127%	-31%	-100%	-100%	-83%
O&M	Gas Engineering	Civil Structural & Hazard Mitigation Engineering	Real time monitoring of land movement via stress acting on infrastructure	No	(106)	(105)	(107)	(99)	(99)	(516)	-99%	-95%	-96%	-86%	-85%	-92%
<b>O&amp;M</b>	<b>Gas Engineering</b>	<b>Sub-Total Civil Structural &amp; Hazard Mitigation Engineering</b>		<b>Yes</b>	<b>(1,982)</b>	<b>(2,501)</b>	<b>(1,094)</b>	<b>(1,918)</b>	<b>(2,508)</b>	<b>(10,003)</b>	<b>-73%</b>	<b>-90%</b>	<b>-39%</b>	<b>-66%</b>	<b>-85%</b>	<b>-71%</b>
O&M	Gas Engineering	Meter Shop & Records	Non-RAMP	No	(903)	(1,258)	(1,305)	(1,502)	(1,350)	(6,318)	-34%	-47%	-47%	-53%	-47%	-46%

C. SoCalGas Gas Engineering  
i. SoCalGas Gas Engineering Operations O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance						
O&M	Gas Engineering	Gas Engineering		Yes																															
O&M	Gas Engineering	Dir Eng & Tech Services	Non-RAMP	No	Director of Gas Engineering includes expenditures incurred for activities such as engineering governance, oversight, policies, and strategies related to the safe design and operation of gas infrastructure and consists of a variety of activities including engineering service provider contracts and quality management and converting design applications to data-centric, three-dimensional models that involve modeling and scanning gas assets. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																														
O&M	Gas Engineering	Dir Eng & Tech Services	Information Management Systems	No	Consultant Services Contracts	—	1	2	2	2	7	2	2	2	2	2	10	(2)	(1)	—	—	—	(3)	-100%	-50%	—%	—%	—%	-30%						
O&M	Gas Engineering	<b>Sub-Total Dir Eng &amp; Tech Service</b>		Yes																															
O&M	Gas Engineering	MRC Management & Special Projects	Non-RAMP	No	Measurement, Regulation, and Control (MRC) Management & Special projects provides general management and administrative support and provides engineering policy, design, material selection, testing and field support related to measurement, gas regulation, automated control systems for pipelines and compressor stations and other instrumentation. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																														
O&M	Gas Engineering	Measurement & Design	Non-RAMP	No	Measurement & Design provides engineering, commissioning, and design solutions for M&R stations, district regulator stations, pipeline valve automation and system integration, fiber optic assets, pressure relief valves, and pressure regulation control and monitoring. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																														
O&M	Gas Engineering	Measurement Technologies	Non-RAMP	No	Measurement Technologies is responsible for: testing, evaluation, selection, and deployment of strategic planning and policies and practices associated with gas metering equipment; managing meter and regulator maintenance and inspection scheduling and reporting systems; and managing meter and regulator maintenance and inspection scheduling and reporting systems. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																														
O&M	Gas Engineering	Measurement Field Support	Non-RAMP	No	Measurement Field Support provides planning, field support, technical guidance policy, procedures and training in the areas of large automated control for gas compressor stations, pipelines, California Producers, metering and regulation station and auxiliary equipment. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																														
O&M	Gas Engineering	Engineering Design Management Process Engineering & Design	Non-RAMP	No	The non-RAMP portion of the Engineering Design workpaper includes several functional areas that cannot be described as a single unit of measure. These functional areas consist of core engineering activities and include: Pipeline Design, Process Engineering, Mechanical Design, and Design Drafting, including support of renewable gas design of interconnect facilities																														
O&M	Gas Engineering	Engineering Design Management Process Engineering & Design	Information Management Systems	No	Consultant Services Contracts	1	2	3	3	3	12	1	2	3	3	3	12	—	—	—	—	—	—	—%	—%	—%	—%	—%	—%						
O&M	Gas Engineering	<b>Sub-Total Engineering Design Management Process Engineering &amp; Design</b>		Yes																															
O&M	Gas Engineering	Pipeline Materials	Non-RAMP	No	Pipeline Materials activities include management of related business processes for the approval documentation, and quality management of gas pipeline and appurtenance materials including processes for approving manufacturers that supply specified pipeline materials. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																														
O&M	Gas Engineering	Mechanical Design	Non-RAMP	No	The activities provided by the Mechanical Design group include the technical expertise needed to develop and implement mechanical engineering strategies and designs related to transmission and storage facilities, including compressor stations, instrument air systems, exhaust systems, pressure vessels, field piping, fire protection systems, and gas processing facilities. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																														
O&M	Gas Engineering	Pipeline Engineering	Non-RAMP	No	Pipeline Engineering establishes engineering gas standards and procedures and material specifications and consists of a variety of activities involving assessments of pipelines for transmission, distribution, and storage fields including pressure testing, surface loadings, span evaluations, piping vibration and ground movement impacts. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																														
O&M	Gas Engineering	Research, Planning & Development	Non-RAMP	No	Research Planning includes activities related to the program management of Environmental Research, and Gas Operations Research, Development and Demonstrations (RD&D) and includes participation in research projects related to environmental research with organizations such as Pipeline Research Council International (PRCI) and in gas operations RD&D projects such as methane detection using an un-manned aerial vehicle drone. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																														
O&M	Gas Engineering	MRC - Instrumentation Repair and Field Support	Non-RAMP	No	MRC Instrumentation Repair and Field Support includes activities that provide calibration of instruments used for: field maintenance of gas facilities; field inspection; and the configuration, programming, testing and repair/assessment of electronic measurement devices used for customer billing. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																														
O&M	Gas Engineering	Engineering Analysis Center - Chemical Lab	Non-RAMP	No	The Engineering Analysis Center Chemical section provides environmental, gas operation, and BTU measurement related analytical services to the operation and customer services organizations, and activities include: PCB analysis and sample management, hazardous material, gas quality policy and operating procedures, gas composition, odorization management and test development, gas line odor seasoning management and training, gas quality testing, BTU measurement, fugitive and leakage gas identification and verification. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																														
O&M	Gas Engineering	MRC Standards	Non-RAMP	No	MRC Standards includes activities to develop material specification and technical standards for small and medium-sized meter and regulator stations and the management of policy, standards and planning for the measurement of gas heating value (BTU) or composition needed for special reporting and planning. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																														
O&M	Gas Engineering	High Pressure & Distribution Engineering	Non-RAMP	No	High Pressure and Distribution Engineering maintains and manages engineering drawings and consists of a variety of activities including creating computer hydraulic models of medium and high-pressure pipe Distribution networks, managing pressure monitoring programs, system analysis training of Region Engineering Employees, and providing engineering data analytics. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																														
O&M	Gas Engineering	Electrical Design	Non-RAMP	No	Electrical design is responsible for designing and producing documents and design drawings associated with electrical components such as meters, control valves, and monitoring equipment. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																														

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
O&M	Gas Engineering	Gas Engineering Analysis Center, NGV and Electrical Field	Non-RAMP	No	The Gas Engineering Analysis Center, Natural Gas Vehicle (NGV) and Electrical Field Maintenance workpaper includes several functional areas that cannot be described as a single unit of measure. These functional areas include: Compressor Services and Air Quality Testing, Materials Quality Management, Manufacturer Specifications (MSPs), Manufacturer Approvals and Audits, Chemical and Environmental Services, Non-Destructive Examination (NDE) Testing and Oversight Program, Materials Laboratory, Welding Procedure Evaluation, Natural Gas Vehicle Field Support and Maintenance, Electrical Maintenance and Applied Technologies. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Gas Engineering	Land Services & Right Of Way	Non-RAMP	No	Land Services and Right of Way manages and acquires the necessary property rights that allow for the access, construction, operation and maintenance of pipeline infrastructure. This workpaper also includes land lease administration. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
O&M	Gas Engineering	Civil Structural & Hazard Mitigation Engineering	Non-RAMP	No	The Civil Structural and Hazard Mitigation Engineering group is responsible for structural engineering design and Geological Hazard Engineering programs, which includes a seismic mitigation program, strain gauge programs, and satellite monitoring programs. This category includes activities, as described designed to mitigate geological hazards and climate change adaption related risks. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Gas Engineering	Civil Structural & Hazard Mitigation Engineering	Monitoring of Land Movement & Flood zones	No	Flood Analysis, Satellite Monitoring and Subsidence Monitoring Activity	3	3	2	0	0	8	3	3	3	3	3	15	—	—	(1)	(3)	(3)	(7)	—%	—%	-33%	-100%	-100%	-47%	
O&M	Gas Engineering	Civil Structural & Hazard Mitigation Engineering	Gas Infrastructure Resilience & Vulnerability Report	No	SoCalGas hires contractors to perform multiple resiliency and vulnerability reports of varying scope throughout the year. Invoices are submitted reflecting phases of these contracts. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Gas Engineering	Civil Structural & Hazard Mitigation Engineering	Real time monitoring of land movement via stress acting on infrastructure	No	Strain Gauge maintenance projects vary in size and scope. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Gas Engineering	Sub-Total Civil Structural & Hazard Mitigation Engineering		Yes																										
O&M	Gas Engineering	Meter Shop & Records	Non-RAMP	No	This activity involves refurbishing, repairing and maintaining a variety of meter types. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									

C. SoCalGas Gas Engineering  
i. SoCalGas Gas Engineering Operations O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Gas Engineering	Gas Engineering		Yes									
O&M	Gas Engineering	Dir Eng & Tech Services	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Gas Engineering	Dir Eng & Tech Services	Information Management Systems	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Gas Engineering	<b>Sub-Total Dir Eng &amp; Tech Service</b>		Yes	No								No
O&M	Gas Engineering	MRC Management & Special Projects	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Gas Engineering	Measurement & Design	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Gas Engineering	Measurement Technologies	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas Engineering	Measurement Field Support	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Gas Engineering	Engineering Design Management Process Engineering & Design	Non-RAMP	No	Yes	No	The variance is due to lower than forecasted staffing levels due to challenges finding qualified personnel to fill the open positions. In addition, current FTE resources spent a greater than anticipated percentage of their time on capital project activities.	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Gas Engineering	Engineering Design Management Process Engineering & Design	Information Management Systems	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas Engineering	<b>Sub-Total Engineering Design Management Process Engineering &amp; Design</b>		Yes	Yes								No
O&M	Gas Engineering	Pipeline Materials	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas Engineering	Mechanical Design	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Gas Engineering	Pipeline Engineering	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Gas Engineering	Research, Planning & Development	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Other	Yes
O&M	Gas Engineering	MRC - Instrumentation Repair and Field Support	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Gas Engineering	Engineering Analysis Center - Chemical Lab	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Gas Engineering	MRC Standards	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Gas Engineering	High Pressure & Distribution Engineering	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Gas Engineering	Electrical Design	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Gas Engineering	Gas Engineering Analysis Center, NGV and Electrical Field	Non-RAMP	No	Yes	No	The variance is attributed to higher than forecasted O&M activities related to the expansion of program areas in Material Quality Management and Non-Destructive Examination. The higher than forecasted expenditures are also attributable to the Hydrogen Blending and Aviation Services emergent activities.	N/A	Over (O)	On Target (T)	Over (O)	Expanded	No
O&M	Gas Engineering	Land Services & Right Of Way	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Gas Engineering	Civil Structural & Hazard Mitigation Engineering	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Gas Engineering	Civil Structural & Hazard Mitigation Engineering	Monitoring of Land Movement & Flood zones	No	Yes	Yes	Cost efficiency was achieved by leveraging existing threat and risk management activities already performed through TIMP.	The variance is due to Flood Analysis Report, Satellite Monitoring and Subsidence Monitoring being performed in the Pipeline Integrity TIMP program witness area starting in 2022.	On Target (T)	On Target (T)	Under (U)	Other	Yes
O&M	Gas Engineering	Civil Structural & Hazard Mitigation Engineering	Gas Infrastructure Resilience & Vulnerability Report	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Other	Yes
O&M	Gas Engineering	Civil Structural & Hazard Mitigation Engineering	Real time monitoring of land movement via stress acting on infrastructure	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
<b>O&amp;M</b>	<b>Gas Engineering</b>	<b>Sub-Total Civil Structural &amp; Hazard Mitigation Engineering</b>		<b>Yes</b>	<b>Yes</b>								<b>No</b>
O&M	Gas Engineering	Meter Shop & Records	Non-RAMP	No	Yes	No	The variance is attributed to a higher proportion of capital meter refurbishment work than forecasted which resulted in lower O&M spend.	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No



C. SoCalGas Gas Engineering  
i. SoCalGas Gas Engineering Operations O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Gas Engineering	Gas Engineering		Yes				
O&M	Gas Engineering	Dir Eng & Tech Services	Non-RAMP	No	N/A			
O&M	Gas Engineering	Dir Eng & Tech Services	Information Management Systems	No	N/A			
O&M	Gas Engineering	<b>Sub-Total Dir Eng &amp; Tech Service</b>		Yes				
O&M	Gas Engineering	MRC Management & Special Projects	Non-RAMP	No	N/A			
O&M	Gas Engineering	Measurement & Design	Non-RAMP	No	N/A			
O&M	Gas Engineering	Measurement Technologies	Non-RAMP	No	N/A			
O&M	Gas Engineering	Measurement Field Support	Non-RAMP	No	N/A			
O&M	Gas Engineering	Engineering Design Management Process Engineering & Design	Non-RAMP	No	N/A	The non-RAMP portion of the Engineering Design workpaper includes several functional areas that cannot be described as a single unit of measure. These functional areas consist of core engineering activities and include: Pipeline Design, Process Engineering, Mechanical Design, and Design Drafting, including support of renewable gas design of interconnect facilities	SCG-09-R DRH-30 to DRH-31 WP 2200-0318	SCG-07-R MTM-28 to MTM-32 WP 2200-0026, WP 2200-0318, and WP 2200-0322
O&M	Gas Engineering	Engineering Design Management Process Engineering & Design	Information Management Systems	No	N/A			
O&M	Gas Engineering	<b>Sub-Total Engineering Design Management Process Engineering &amp; Design</b>		Yes				
O&M	Gas Engineering	Pipeline Materials	Non-RAMP	No	N/A			
O&M	Gas Engineering	Mechanical Design	Non-RAMP	No	N/A			
O&M	Gas Engineering	Pipeline Engineering	Non-RAMP	No	N/A			
O&M	Gas Engineering	Research, Planning & Development	Non-RAMP	No	This work was not cancelled or deferred. Costs forecasted in this area were recorded in cost center 2200-0320.000	Research Planning includes activities related to the program management of Environmental Research, and Gas Operations Research, Development and Demonstrations (RD&D) and includes participation in research projects related to environmental research with organizations such as Pipeline Research Council International (PRCI) and in gas operations RD&D projects such as methane detection using an un-manned aerial vehicle drone. The variety of work activities in this category makes it infeasible to identify a single unit of measurement	SCG-09-R DRH-36 WP 2200-0323	SCG-07-R MTM-16 to MTM-20 WP 2EN003
O&M	Gas Engineering	MRC - Instrumentation Repair and Field Support	Non-RAMP	No	N/A	Measurement repair and field support includes activities related to calibration of temperature and pressure gauges and secondary standards used by field personnel to maintain gas facilities, field inspection of large metering facilities using bore scoping techniques, maintenance of all company gas standards used to test and calibrate gas meters and the laboratory configuration, programming, testing and laboratory repair of all electronic measurement devices used for customer billing. The variety of work activities in this category makes it infeasible to identify a single unit of measurement	SCG-09-R DRH-28 WP 2200-0799	SCG-07-R MTM-11 to MTM-13 WP 2EN002
O&M	Gas Engineering	Engineering Analysis Center - Chemical Lab	Non-RAMP	No	N/A			
O&M	Gas Engineering	MRC Standards	Non-RAMP	No	N/A			
O&M	Gas Engineering	High Pressure & Distribution Engineering	Non-RAMP	No	N/A			
O&M	Gas Engineering	Electrical Design	Non-RAMP	No	N/A			

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Gas Engineering	Gas Engineering Analysis Center, NGV and Electrical Field	Non-RAMP	No	N/A	The Gas Engineering Analysis Center, Natural Gas Vehicle (NGV) and Electrical Field Maintenance workpaper includes several functional areas that cannot be described as a single unit of measure. These functional areas include: Compressor Services and Air Quality Testing, Materials Quality Management, Manufacturer Specifications (MSPs), Manufacturer Approvals and Audits, Chemical and Environmental Services, Non-Destructive Examination (NDE) Testing and Oversight Program, Materials Laboratory, Welding Procedure Evaluation, Natural Gas Vehicle Field Support and Maintenance, Electrical Maintenance and Applied Technologies. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.	SCG-09-R DRH-12 to DRH-14 WP 2EN000.000	SCG-07-R MTM-v, MTM-8, MTM-9 to MTM-11; WP 2EN000.000 MTM-11 to MTM-13; WP2EN002.000 MTM-viii, MTM-2, MTM-33 to MTM-35; WP 2200-0300.000 MTM-16 to MTM-18; MTM-20; MTM-27; WP2EN003.000
O&M	Gas Engineering	Land Services & Right Of Way	Non-RAMP	No	N/A			

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Gas Engineering	Civil Structural & Hazard Mitigation Engineering	Non-RAMP	No	N/A			
O&M	Gas Engineering	Civil Structural & Hazard Mitigation Engineering	Monitoring of Land Movement & Flood zones	No	Efficiency was achieved by leveraging existing threat and risk management activities already performed through TIMP.	The Civil Structural and Hazard Mitigation Engineering group is responsible for structural engineering design and Geological Hazard Mitigation Engineering, civil engineering analysis and structural design which includes activities designed to mitigate geological hazards and climate change adaption related risks	SCG-9-R DRH-10, DRH-12 to DRH-14 WP 2EN002.000	SCG-09; AK-TS-27 to AK-TS-35 WP 2TD001.000
O&M	Gas Engineering	Civil Structural & Hazard Mitigation Engineering	Gas Infrastructure Resilience & Vulnerability Report	No	Efficiency was achieved by leveraging existing threat and risk management activities already performed through TIMP.	The Civil Structural and Hazard Mitigation Engineering group is responsible for structural engineering design and Geological Hazard Mitigation Engineering, civil engineering analysis and structural design which includes activities designed to mitigate geological hazards and climate change adaption related risks	SCG-9-R DRH-10, DRH-12 to DRH-14 WP 2EN002.000	SCG-09; AK-TS-27 to AK-TS-35 WP 2TD001.000
O&M	Gas Engineering	Civil Structural & Hazard Mitigation Engineering	Real time monitoring of land movement via stress acting on infrastructure	No	N/A			
O&M	Gas Engineering	<b>Sub-Total Civil Structural &amp; Hazard Mitigation Engineering</b>		Yes	N/A			
O&M	Gas Engineering	Meter Shop & Records	Non-RAMP	No	N/A	This activity involves refurbishing, repairing and maintaining a variety of meter types. The variety of work makes it infeasible to identify an imputed unit.	SCG-22-R DW-12 to DW-13 WP 2SS002.000	SCG-07-R MTM-11 to MTM-13 WP 2EN002

ii. SoCalGas Gas Engineering Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
Capital	Gas Engineering	Gas Engineering		Yes			14,709	113,355	24,872	28,175	29,424	210,535	14,963	11,185	11,362	11,496	11,741	60,746
Capital	Gas Engineering	Laboratory Equipment - RAMP	Odorization	No	On-going	Annual	2,588	2,009	2,723	1,177	1,254	9,751	2,540	2,827	2,872	2,906	2,968	14,114
Capital	Gas Engineering	Supervision & Engineering Overhead Pool	Non-RAMP	No	On-going	Annual	9,047	9,319	19,463	25,078	26,875	89,784	7,228	4,753	4,828	4,885	4,989	26,683
Capital	Gas Engineering	Land Rights & Buildings	Non-RAMP	No	On-going	Annual	3,073	102,026	2,686	1,920	1,294	111,000	5,195	3,605	3,662	3,705	3,784	19,949

ii. SoCalGas Gas Engineering Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
Capital	Gas Engineering	Gas Engineering		Yes	(254)	102,170	13,510	16,679	17,683	149,789	-2%	913%	119%	145%	151%	247%
Capital	Gas Engineering	Laboratory Equipment - RAMP	Odorization	No	48	(819)	(149)	(1,729)	(1,714)	(4,363)	2%	-29%	-5%	-59%	-58%	-31%
Capital	Gas Engineering	Supervision & Engineering Overhead Pool	Non-RAMP	No	1,819	4,567	14,635	20,193	21,886	63,100	25%	96%	303%	413%	439%	236%
Capital	Gas Engineering	Land Rights & Buildings	Non-RAMP	No	(2,121)	98,422	(975)	(1,785)	(2,489)	91,051	-41%	2731%	-27%	-48%	-66%	456%

ii. SoCalGas Gas Engineering Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
Capital	Gas Engineering	Gas Engineering		Yes																										
Capital	Gas Engineering	Laboratory Equipment - RAMP	Odorization	No	Laboratory Equipment	36	28	48	40	67	219	30	33	30	43	60	196	6	(5)	18	(3)	7	23	20.0%	-15%	60.0%	-7%	12%	12%	
Capital	Gas Engineering	Supervision & Engineering Overhead Pool	Non-RAMP	No	Supervision & Engineering Overhead Pool captures expenditures on a direct basis that will be reassigned to various capital workpaper categories and include labor costs for planning, and engineering of capital gas infrastructure projects including compressor station replacements, fiber optics, and methane detection systems. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Gas Engineering	Land Rights & Buildings	Non-RAMP	No	The Gas Transmission Building portion of this Workpaper consist of improvements activities for construction, replacement or upgrades to structures used by Gas Transmission to contain, shelter and/or protect Transmission equipment such as meter stations, pressure regulating equipment, critical valves or control equipment. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									

ii. SoCalGas Gas Engineering Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
Capital	Gas Engineering	Gas Engineering		Yes									
Capital	Gas Engineering	Laboratory Equipment - RAMP	Odorization	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
Capital	Gas Engineering	Supervision & Engineering Overhead Pool	Non-RAMP	No	Yes	No	The variance is attributed to an increase in the volume and complexity of projects requiring more oversight and preliminary engineering support.	N/A	Over (O)	On Target (T)	Over (O)	Expanded	No
Capital	Gas Engineering	Land Rights & Buildings	Non-RAMP	No	Yes	No	Due to the reprioritization of other Gas Transmission infrastructure projects and resources, fewer building structure projects were completed in 2023.	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No

ii. SoCalGas Gas Engineering Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
Capital	Gas Engineering	Gas Engineering		Yes				
Capital	Gas Engineering	Laboratory Equipment - RAMP	Odorization	No	N/A			
Capital	Gas Engineering	Supervision & Engineering Overhead Pool	Non-RAMP	No	N/A	Provides a pool for overhead charges from the Gas Engineering Supervisors or other employees. The charges get reassigned to the various workpaper categories on a direct basis. Charges reside in this Workpaper Category temporarily and are reassigned on a monthly basis. Overhead charges stemming from labor spend on capital projects and reassigned to Capital workpaper categories	SCG-09-R DRH-40 WP 009080	SCG-07-R MTM-39 to MTM-40 WP 009080
Capital	Gas Engineering	Land Rights & Buildings	Non-RAMP	No	N/A	Provides capital funding for purchases of land or land rights for new Transmission pipelines and for existing rights-of-way that have expired per contractual obligation and need to be re-negotiated. Typically these are for pipelines installed in private lands. It also provides funding for construction, replacement or upgrades to building structures used by Transmission operations to contain, shelter and/or protect Transmission equipment such as meter stations, pressure regulating equipment, critical valves, or controls equipment	SCG-09-R DRH-38 to DRH-39 WP 006170	SCG-07-R MTM-38 to MTM-39 WP 617



D. SoCalGas Major Projects  
i. SoCalGas Major Projects Operations O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Major Projects	Major Projects		Yes			1,983	4,112	3,967	7,289	6,497	23,849	4,301	4,415	4,521	4,608	4,714	22,560
O&M	Major Projects	Major Projects Management & Outreach	Non-RAMP	No	6	7	657	2,382	827	2,807	3,358	10,031	2,434	2,498	2,558	2,607	2,667	12,765
O&M	Major Projects	Major Projects Management & Outreach	Real-time pressure data and providing remote control to high priority distribution sites.	No	6	7	95	46	479	3,145	2,138	5,903	1,516	1,556	1,593	1,624	1,662	7,951
O&M	Major Projects	Sub-Total Major Projects Management & Outreach		Yes			752	2,428	1,306	5,952	5,496	15,934	3,950	4,054	4,151	4,232	4,329	20,716
O&M	Major Projects	Project & Construction Management	Non-RAMP	No	Ongoing	Annual	513	1,097	1,679	759	469	4,518	217	223	228	232	238	1,137
O&M	Major Projects	Project Controls And Estimating	Non-RAMP	No	Ongoing	Annual	718	587	982	414	532	3,234	135	138	142	144	148	706
O&M	Major Projects	GTSR MAOP Reconfirmation	MAOP Reconfirmation	No	14	3	—	—	—	164	—	164	—	—	—	—	—	—

D. SoCalGas Major Projects  
i. SoCalGas Major Projects Operations O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Major Projects	Major Projects		Yes	(2,318)	(303)	(554)	2,681	1,783	1,290	-54%	-7%	-12%	58%	38%	6%
O&M	Major Projects	Major Projects Management & Outreach	Non-RAMP	No	(1,777)	(116)	(1,731)	200	690	(2,734)	-73%	-5%	-68%	8%	26%	-21%
O&M	Major Projects	Major Projects Management & Outreach	Real-time pressure data and providing remote control to high priority distribution sites.	No	(1,421)	(1,510)	(1,114)	1,521	476	(2,048)	-94%	-97%	-70%	94%	29%	-26%
O&M	Major Projects	<b>Sub-Total Major Projects Management &amp; Outreach</b>		Yes	<b>(3,198)</b>	<b>(1,626)</b>	<b>(2,845)</b>	<b>1,720</b>	<b>1,167</b>	<b>(4,782)</b>	<b>-81%</b>	<b>-40%</b>	<b>-69%</b>	<b>41%</b>	<b>27%</b>	<b>-23%</b>
O&M	Major Projects	Project & Construction Management	Non-RAMP	No	296	874	1,451	527	232	3,380	137%	393%	637%	227%	97%	297%
O&M	Major Projects	Project Controls And Estimating	Non-RAMP	No	584	449	840	270	385	2,527	433%	325%	594%	187%	261%	358%
O&M	Major Projects	GTSR MAOP Reconfirmation	MAOP Reconfirmation	No	—	—	—	164	—	164	—%	—%	—%	100%	—%	100%

D. SoCalGas Major Projects  
i. SoCalGas Major Projects Operations O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance		
O&M	Major Projects	Major Projects		Yes																											
O&M	Major Projects	Major Projects Management & Outreach	Non-RAMP	No	FTE	—	3	3	8	10	24	15	15	15	15	15	75	(15)	(12)	(12)	(7)	(5)	(51)	-100%	-80%	-80%	-47%	-33%	-68%		
O&M	Major Projects	Major Projects Management & Outreach	Real-time pressure data and providing remote control to high priority distribution sites.	No	FTE	—	—	3	14	9	26	10	10	10	10	10	50	(10)	(10)	(7)	4	(1)	(24)	-100%	-100%	-70%	40%	-10%	-48%		
O&M	Major Projects	Sub-Total Major Projects Management & Outreach		Yes																											
O&M	Major Projects	Project & Construction Management	Non-RAMP	No	FTE	—	9	14	5.5	2.2	31	1	1	1	1	1	5	(1)	8	13	4.5	1.2	26	-100%	800%	1300%	450%	120%	514%		
O&M	Major Projects	Project Controls And Estimating	Non-RAMP	No	FTE	—	5	7	2	3.7	18	—	—	—	—	—	—	—	5	7	2	3.7	18	—%	100%	100%	100%	100%	100%		
O&M	Major Projects	GTSR MAOP Reconfirmation	MAOP Reconfirmation	No	The costs incurred are associated with scope validation activities. The variety of work in this workpaper makes it infeasible to identify a single unit of measurement.																										

D. SoCalGas Major Projects  
i. SoCalGas Major Projects Operations O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Major Projects	Major Projects		Yes									
O&M	Major Projects	Major Projects Management & Outreach	Non-RAMP	No	No	Yes	N/A	The unit variance is due to FTEs working on specific capital projects or applied to Company overhead pools.	Under (U)	Under (U)	Under (U)	Proceeding as Planned	No
O&M	Major Projects	Major Projects Management & Outreach	Real-time pressure data and providing remote control to high priority distribution sites.	No	No	No	N/A	N/A	Under (U)	Under (U)	Under (U)	Other	No
O&M	Major Projects	Sub-Total Major Projects Management & Outreach		Yes	Yes								No
O&M	Major Projects	Project & Construction Management	Non-RAMP	No	No	Yes	N/A	The variance is due to the inclusion of the capital delivery project management functions, incremental to the original scope, that were consolidated into this workpaper and caused the staffing level to be higher than authorized.	Over (O)	Over (O)	Over (O)	Expanded	No
O&M	Major Projects	Project Controls And Estimating	Non-RAMP	No	No	Yes	N/A	The variance is due to a re-organization of the project controls, estimating, regulatory, financial performance, and contractor safety functions related to this workpaper into a capital delivery organization responsible for a large portfolio of projects. The re-organization resulted in a large portfolio of projects that required a higher level of staffing.	Over (O)	Over (O)	Over (O)	Expanded	No
O&M	Major Projects	GTSR MAOP Reconfirmation	MAOP Reconfirmation	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No

D. SoCalGas Major Projects  
i. SoCalGas Major Projects Operations O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Major Projects	Major Projects		Yes				
O&M	Major Projects	Major Projects Management & Outreach	Non-RAMP	No	N/A	This workpaper captures the activities and expenses associated with the Vice President of Gas Engineering and Major Projects, Director of Project Management and Construction and Capital Projects Outreach. Activities include the O&M costs of leadership of engineering and project execution as well as the costs of public education regarding capital projects.	SCG-08-R MAB-11 to MAB-12 WP 2MP001.000	SCG-06-2R-E CHB-34 to CHB-41 WP 2MP001.000
O&M	Major Projects	Major Projects Management & Outreach	Real-time pressure data and providing remote control to high priority distribution sites.	No	The DOCC project, now known as the Control Center Modernization (CCM) project, was originally expected to begin in 2017 and end in 2022. Due to project modifications and ramp-up, the CCM project began in 2020 and is now forecasted to end in 2028. The updated scope, schedule and cost forecasts are reflected in the 2024 GRC Testimony for the CCM project.			
O&M	Major Projects	Sub-Total Major Projects Management & Outreach		Yes				
O&M	Major Projects	Project & Construction Management	Non-RAMP	No	N/A	This workpaper captures the activities and O&M expenses associated with the management and execution of projects both regarding pipeline work and facilities work including but not limited to regulator stations, meter stations, compressor stations etc. The cost centers included are Project and Construction Management – Pipeline and Project and Construction Management.	SCG-08-R MAB-16 to MAB-17 WP 2MP002.000	SCG-08 BGK-44 to BGK-46 WP 2PS000.001
O&M	Major Projects	Project Controls And Estimating	Non-RAMP	No	N/A	This workpaper captures the activities and O&M expenses associated with the improvement of project execution efficiency as well as the cost estimation of projects. Additionally, this workpaper covers O&M costs of quality assessment of projects including compliance with governing entities and public safety.	SCG-08-R MAB-17 to MAB-18 WP 2MP003.000	SCG-08 BGK-44 to BGK-46 WP 2PS000.001
O&M	Major Projects	GTSR MAOP Reconfirmation	MAOP Reconfirmation	No	N/A			

ii. SoCalGas Major Projects Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
Capital	Gas Major Projects	Gas Major Projects		Yes			323	5,805	15,734	28,610	47,348	97,819	42,673	7,715	7,837	7,929	8,098	74,253
Capital	Gas Major Projects	Distribution Operations Control Center (DOCC)	Non-RAMP	No	6	7	323	4,194	4,131	1,607	4,937	15,192	13,366	2,889	2,935	2,970	3,033	25,194
Capital	Gas Major Projects	Distribution Operations Control Center (DOCC)	Gas Control Operation	No	6	7	—	1,610	11,603	24,787	28,543	66,543	29,307	4,825	4,902	4,960	5,065	49,059
Capital	Gas Major Projects	Sub-Total (DOCC)		Yes			323	5,805	15,734	26,394	33,480	81,735	42,673	7,715	7,837	7,929	8,098	74,253
Capital	Gas Major Projects	GTSR MAOP Reconfirmation	MAOP Reconfirmation	No	14	3	—	—	—	2,216	13,868	16,084	—	—	—	—	—	—

ii. SoCalGas Major Projects Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
Capital	Gas Major Projects	Gas Major Projects		Yes	(42,351)	(1,910)	7,897	20,680	39,250	23,566	-99%	-25%	101%	261%	485%	32%
Capital	Gas Major Projects	Distribution Operations Control Center (DOCC)	Non-RAMP	No	(13,044)	1,305	1,196	(1,363)	1,904	(10,002)	-98%	45%	41%	-46%	63%	-40%
Capital	Gas Major Projects	Distribution Operations Control Center (DOCC)	Gas Control Operation	No	(29,307)	(3,215)	6,701	19,827	23,478	17,484	-100%	-67%	137%	400%	464%	36%
Capital	Gas Major Projects	Sub-Total (DOCC)		Yes	(42,351)	(1,910)	7,897	18,464	25,382	7,482	-99%	-25%	101%	233%	313%	10%
Capital	Gas Major Projects	GTSR MAOP Reconfirmation	MAOP Reconfirmation	No	—	—	—	2,216	13,868	16,084	—%	—%	—%	100%	100%	100%

ii. SoCalGas Major Projects Capital

Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance		
Capital	Gas Major Projects	Gas Major Projects	Yes																											
Capital	Gas Major Projects	Distribution Operations Control Center (DOCC)	Non-RAMP	No	The non-RAMP portion of the workpaper includes several activities including installation of High-Consequence Area (HCA) methane sensors, Optical Pipeline Monitoring (fiber) stations, and Operations Technology enhancements (formerly the Pipeline Information Management System "PIMS") which will deliver several critical technologies to support the Control Center Modernization (CCM, formerly DOCC) field asset deployments and the collection of data from the enhanced Distribution Regulator Stations (DRS), Electronic Pressure Monitors (EPMs), meters, Optical Pipeline Monitoring (OPM) stations, and HCA methane sensors. The technology will help manage and transform the collected field asset data into information that will provide a comprehensive view of the overall gas system for Gas Control. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Gas Major Projects	Distribution Operations Control Center (DOCC)	Gas Control Operation	No	The Control Center Modification (CCM) (formerly DOCC) project consists of upgrading and modifying new and existing field assets, such as distribution regulator stations, electronic pressure monitors, core and non-core meter data, and the current Supervisory Controls and Data Acquisition (SCADA) system to provide additional control and monitoring capabilities to Gas Control. SCADA servers, which are currently co-located with the existing Gas Control, will be looking to migrate to a new facility in 2024. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Gas Major Projects	Sub-Total (DOCC)		Yes																										
Capital	Gas Major Projects	GTSR MAOP Reconfirmation	MAOP Reconfirmation	No	The GTSR Part 1 rule was published in October of 2019 and took effect in July 2020 with the first of MAOP reconfirmation requirements taking effect in July 2021. SoCalGas is currently planning GTSR MAOP Reconfirmation projects so there are no miles completed at this time.																									



ii. SoCalGas Major Projects Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
Capital	Gas Major Projects	Gas Major Projects		Yes									
Capital	Gas Major Projects	Distribution Operations Control Center (DOCC)	Non-RAMP	No	No	No	N/A	N/A	Under (U)	Under (U)	Over (O)	Other	No
Capital	Gas Major Projects	Distribution Operations Control Center (DOCC)	Gas Control Operation	No	Yes	No	The variance is attributed to a continued ramp-up in Distribution Regulator Station (DRS) enhancement execution being performed as well as higher execution costs for installation of the DRS sites. This work will continue to increase over future years and the updated scope, schedule and cost forecasts are reflected in the TY 2024 GRC Testimony for the CCM project.	N/A	Under (U)	Under (U)	Over (O)	Other	No
Capital	Gas Major Projects	Sub-Total (DOCC)		Yes	Yes								No
Capital	Gas Major Projects	GTSR MAOP Reconfirmation	MAOP Reconfirmation	No	Yes	No	The variance is attributed to a new compliance program. Published as the first of three parts of the Gas Transmission and Gathering Rulemaking, the Gas Transmission Safety Rule (GTSR) Part 1 updates sections of 49 CFR Parts 191 and 192 and mandates gas operators to update or implement procedures accordingly. The GTSR Part 1 imposes significant new safety and integrity requirements to gas transmission pipelines under PHMSA's jurisdiction. This risk mitigation activity complies with the newly added requirements of 49 CFR 192.624 (MAOP Reconfirmation).  The costs incurred in 2023 are primarily attributed to the planning and execution of two hydrotest projects. Additional costs were incurred for the planning of additional MAOP Reconfirmation projects.	N/A	Over (O)	Over (O)	Over (O)	Emergent	No

ii. SoCalGas Major Projects Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
Capital	Gas Major Projects	Gas Major Projects		Yes				
Capital	Gas Major Projects	Distribution Operations Control Center (DOCC)	Non-RAMP	No	The DOCC project, now known as the Control Center Modernization (CCM) project, was originally expected to begin in 2017 and end in 2022. Due to required project modifications and project ramp-up, the CCM project began in 2020 and is now forecasted to end in 2028. The updated scope, schedule and cost forecasts are reflected in the TY 2024 GRC Testimony for the CCM project.			
Capital	Gas Major Projects	Distribution Operations Control Center (DOCC)	Gas Control Operation	No	The DOCC project, now known as the Control Center Modernization (CCM) project, was originally expected to begin in 2017 and end in 2022. Due to required project modifications and project ramp-up, the CCM project began in 2020 and is now forecasted to end in 2028. The updated scope, schedule and cost forecasts are reflected in the TY 2024 GRC Testimony for the CCM project.	SoCalGas and SDG&E plan to establish a distribution Control Center that is functionally similar and integrated into its existing transmission Gas Control Center operations. Control room functions include ensuring pipeline safety parameters as established by Federal and State agencies, analyzing, and responding to abnormal and/or emergency conditions on the pipeline system, coordinating necessary pipeline shutdowns for maintenance and/or emergency measures, and serving as a communication center between various departments conducting maintenance on both the Distribution and Transmission pipeline systems.	SCG-08-R MAB-19 to MAB-25 WP 00343.001	SCG-04-R-E MAA-97 to MAA-99 WP 00250.001 & 00250.002
Capital	Gas Major Projects	Sub-Total (DOCC)		Yes				
Capital	Gas Major Projects	GTSR MAOP Reconfirmation	MAOP Reconfirmation	No	N/A	Pursuant to 49 CFR § 192.624, SoCalGas is required to reconfirm by July 2035 the MAOP of transmission lines that either: 1) do not have traceable, verifiable, or complete pressure test records to establish MAOP in accordance with 49 C.F.R § 192.619(a) and are located in HCAs or Class 3 or 4 locations, or 2) have an MAOP established in accordance with 49 CFR § 192.619(c), have an MAOP greater than 30% SMYS, and are located in HCAs, Class 3 or 4 locations, or – where the segment can accommodate an in-line inspection (ILI) tool – MCAs.	N/A	SCG-09 AK-TS-58 to AK-TS-62 CWP X0367A, WP 2TD005, & WP 2200-7003

E. SoCalGas Gas System Integrity  
i. SoCalGas Gas System Integrity Operations O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Gas System Integrity	Gas System Integrity		Yes			15,002	16,879	31,252	28,341	29,723	121,198	35,583	36,522	37,399	38,123	39,000	186,628
O&M	Gas System Integrity	USS - VP Gas System Integrity	Non-RAMP	No	On-going	Annual	0	—	330	—	—	330	678	696	712	726	743	3,554
O&M	Gas System Integrity	Business Process Enterprise System Support (ESS) Implementation and ESS Mobile Solution	Non-RAMP	No	On-going	Annual	1,038	218	1,200	815	743	4,015	206	212	217	221	226	1,082
O&M	Gas System Integrity	Business Process Enterprise System Support (ESS) Implementation and ESS Mobile Solution	Information Management Systems	No	On-going	Annual	110	276	1,198	700	430	2,714	119	122	125	127	130	624
O&M	Gas System Integrity	<b>Sub-Total Business Process ESS Implementation and ESS Mobile Solution</b>		<b>Yes</b>			<b>1,148</b>	<b>494</b>	<b>2,398</b>	<b>1,515</b>	<b>1,173</b>	<b>6,729</b>	<b>325</b>	<b>334</b>	<b>342</b>	<b>349</b>	<b>357</b>	<b>1,706</b>
O&M	Gas System Integrity	Applications	Non-RAMP	No	On-going	Annual	0	289	84	264	225	863	515	529	542	552	565	2,703
O&M	Gas System Integrity	ESS Production Support	Non-RAMP	No	On-going	Annual	69	311	806	1,111	3,044	5,342	610	626	641	654	669	3,200
O&M	Gas System Integrity	ESS Production Support	Information Management Systems	No	On-going	Annual	—	80	808	1,000	537	2,425	108	111	114	116	118	566
O&M	Gas System Integrity	<b>Sub-Total ESS Production Support</b>		<b>Yes</b>			<b>69</b>	<b>391</b>	<b>1,614</b>	<b>2,111</b>	<b>3,581</b>	<b>7,767</b>	<b>718</b>	<b>737</b>	<b>755</b>	<b>769</b>	<b>787</b>	<b>3,767</b>

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Gas System Integrity	Wrk Mgmt & Databases	Non-RAMP	No	On-going	Annual	795	674	1,030	(313)	495	2,681	1,786	1,833	1,877	1,914	1,958	9,368
O&M	Gas System Integrity	Wrk Mgmt & Databases	Operational Compliance and Oversight	No	On-going	Annual	293	200	200	234	60	987	216	222	227	231	237	1,133
<b>O&amp;M</b>	<b>Gas System Integrity</b>	<b>Sub-Total Wrk Mgmt &amp; Databases</b>		<b>Yes</b>			<b>1,088</b>	<b>874</b>	<b>1,230</b>	<b>(79)</b>	<b>555</b>	<b>3,668</b>	<b>2,002</b>	<b>2,055</b>	<b>2,104</b>	<b>2,145</b>	<b>2,194</b>	<b>10,501</b>
O&M	Gas System Integrity	Contract & Maintenance	Non-RAMP	No	On-going	Annual	617	469	528	714	664	2,992	603	618	633	646	660	3,160
O&M	Gas System Integrity	Field Technologies	Non-RAMP	No	On-going	Annual	222	215	703	673	822	2,636	448	459	471	480	491	2,348
O&M	Gas System Integrity	Gas System Integrity Staff & Programs	Non-RAMP	No	On-going	Annual	109	140	108	338	325	1,020	345	354	362	369	378	1,808
O&M	Gas System Integrity	Operator Qualification	Non-RAMP	No	On-going	Annual	1,677	1,651	1,012	1,364	1,478	7,181	1,248	1,281	1,311	1,337	1,368	6,544
O&M	Gas System Integrity	Operator Qualification	Operations	No	On-going	Annual	—	—	900	915	1,000	2,815	856	879	900	917	938	4,490
<b>O&amp;M</b>	<b>Gas System Integrity</b>	<b>Sub-Total Operator Qualification</b>		<b>Yes</b>			<b>1,677</b>	<b>1,651</b>	<b>1,912</b>	<b>2,279</b>	<b>2,478</b>	<b>9,996</b>	<b>2,104</b>	<b>2,159</b>	<b>2,211</b>	<b>2,254</b>	<b>2,306</b>	<b>11,034</b>
O&M	Gas System Integrity	Pipeline System Construction Policy	Locate & Mark Activities	No	On-going	Annual	—	—	654	965	828	2,447	1,322	1,357	1,389	1,416	1,449	6,934
O&M	Gas System Integrity	Pipeline System Construction Policy	Policy, Procedures, Standards and ESCMP	No	On-going	Annual	771	696	—	—	—	1,467	668	686	702	716	732	3,504
<b>O&amp;M</b>	<b>Gas System Integrity</b>	<b>Sub-Total Pipeline System Construction Policy</b>		<b>Yes</b>			<b>771</b>	<b>696</b>	<b>654</b>	<b>965</b>	<b>828</b>	<b>3,914</b>	<b>1,990</b>	<b>2,043</b>	<b>2,092</b>	<b>2,132</b>	<b>2,181</b>	<b>10,437</b>
O&M	Gas System Integrity	Quality & Risk	Operational Compliance and Oversight	No	On-going	Annual	419	430	535	511	512	2,408	1,309	1,344	1,376	1,403	1,435	6,867
O&M	Gas System Integrity	Enterprise Geographic Information System (eGIS)	Non-RAMP	No	On-going	Annual	756	1,244	1,228	959	1,357	5,544	2,126	2,182	2,235	2,278	2,330	11,151
O&M	Gas System Integrity	Enterprise Geographic Information System (eGIS)	Operational Compliance and Oversight	No	On-going	Annual	—	—	—	—	—	—	625	642	657	670	685	3,278
<b>O&amp;M</b>	<b>Gas System Integrity</b>	<b>Sub-Total Enterprise Geographic Information System (eGIS)</b>		<b>Yes</b>			<b>756</b>	<b>1,244</b>	<b>1,228</b>	<b>959</b>	<b>1,357</b>	<b>5,544</b>	<b>2,751</b>	<b>2,824</b>	<b>2,891</b>	<b>2,947</b>	<b>3,015</b>	<b>14,429</b>

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O&M	Gas System Integrity	Shared Public Awareness Activities	Analysis	No	On-going	Annual	146	165	102	99	114	627	579	594	608	620	635	3,036
O&M	Gas System Integrity	Pipeline Safety & Compliance Manager	Non-RAMP	No	On-going	Annual	678	725	883	924	999	4,209	920	944	967	985.252	1,008	4,823
O&M	Gas System Integrity	Pipeline Safety Oversight	Non-RAMP	No	On-going	Annual	599	602	627	529	472	2,829	617	634	649	661.376	677	3,238
O&M	Gas System Integrity	Records Management - From 2200-2361	Operational Compliance and Oversight	No	On-going	Annual	—	—	—	—	—	—	1,778	1,825	1,869	1,905	1,949	9,325
O&M	Gas System Integrity	Records Management - From 2200-2361	Policy, Procedures, Standards and ESCMP	No	On-going	Annual	—	—	168	112	131	411	970	996	1,020	1,039	1,063	5,088
<b>O&amp;M</b>	<b>Gas System Integrity</b>	<b>Sub-Total Records Management - From 2200-2361</b>		<b>Yes</b>			<b>—</b>	<b>—</b>	<b>168</b>	<b>112</b>	<b>131</b>	<b>411</b>	<b>2,748</b>	<b>2,821</b>	<b>2,888</b>	<b>2,944</b>	<b>3,012</b>	<b>14,413</b>
O&M	Gas System Integrity	Gas Operations Training & Development	Non-RAMP	No	On-going	Annual	123	893	2,192	2,122	1,787	7,116	1,376	1,413	1,447	1,475	1,509	7,219
O&M	Gas System Integrity	Gas Operations Training & Development	Qualifications of Pipeline Personnel - MP	No	On-going	Annual	923	1,600	2,500	2,550	2,500	10,073	1,458	1,497	1,533	1,563	1,599	7,650
O&M	Gas System Integrity	Gas Operations Training & Development	Qualifications of Pipeline Personnel - HP	No	On-going	Annual	175	140	1,130	1,130	1,100	3,675	128	132	135	137	141	673
O&M	Gas System Integrity	Gas Operations Training & Development	Expand "Situation City" training props at Pico Rivera campus	No	On-going	Annual	—	—	280	550	1,200	2,030	269	277	283	289	295	1,413

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O&M	Gas System Integrity	Gas Operations Training & Development	Employee Skills Training	No	On-going	Annual	208	2,000	2,800	2,850	1,500	9,358	1,729	1,775	1,817	1,852	1,895	9,068
O&M	Gas System Integrity	Gas Operations Training & Development	Locate & Mark Activities	No	On-going	Annual	73	200	1,150	1,160	1,100	3,683	152	156	160	163	167	797
<b>O&amp;M</b>	<b>Gas System Integrity</b>	<b>Sub-Total Gas Operations Training &amp; Development</b>		<b>Yes</b>			<b>1,502</b>	<b>4,833</b>	<b>10,052</b>	<b>10,362</b>	<b>9,187</b>	<b>35,935</b>	<b>5,114</b>	<b>5,249</b>	<b>5,375</b>	<b>5,479</b>	<b>5,605</b>	<b>26,820</b>
O&M	Gas System Integrity	Pipeline Safety & Compliance	Non-RAMP	No	On-going	Annual	139	693	—	—	—	832	657	674	690	704	720	3,444
O&M	Gas System Integrity	Pipeline Safety & Compliance	Operational Compliance and Oversight	No	On-going	Annual	2,364	—	1,195	1,243	972	5,774	2,490	2,556	2,617	2,668	2,729	13,060
<b>O&amp;M</b>	<b>Gas System Integrity</b>	<b>Sub-Total Pipeline Safety &amp; Compliance</b>		<b>Yes</b>			<b>2,503</b>	<b>693</b>	<b>1,195</b>	<b>1,243</b>	<b>972</b>	<b>6,606</b>	<b>3,147</b>	<b>3,230</b>	<b>3,307</b>	<b>3,371</b>	<b>3,449</b>	<b>16,504</b>
O&M	Gas System Integrity	Public Awareness	Non-RAMP	No	On-going	Annual	—	—	—	—	—	—	304	312	319	325	333	1,592
O&M	Gas System Integrity	Public Awareness	Public Awareness	No	On-going	Annual	493	666	1,612	389	846	4,007	1,498	1,538	1,574	1,605	1,642	7,857
<b>O&amp;M</b>	<b>Gas System Integrity</b>	<b>Sub-Total Public Awareness</b>		<b>Yes</b>			<b>493</b>	<b>666</b>	<b>1,612</b>	<b>389</b>	<b>846</b>	<b>4,007</b>	<b>1,802</b>	<b>1,849</b>	<b>1,894</b>	<b>1,930</b>	<b>1,975</b>	<b>9,449</b>

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O&M	Gas System Integrity	Asset Management	Non-RAMP	No	On-going	Annual	2,001	1,839	3,007	2,790	2,816	12,452	2,386	2,449	2,508	2,557	2,616	12,516
O&M	Gas System Integrity	Asset Management	Operational Compliance and Oversight	No	On-going	Annual	—	—	1,200	500	500	2,200	336	345	353	360	368	1,762
<b>O&amp;M</b>	<b>Gas System Integrity</b>	<b>Sub-Total Asset Management</b>		<b>Yes</b>			<b>2,001</b>	<b>1,839</b>	<b>4,207</b>	<b>3,290</b>	<b>3,316</b>	<b>14,652</b>	<b>2,722</b>	<b>2,794</b>	<b>2,861</b>	<b>2,917</b>	<b>2,984</b>	<b>14,279</b>
O&M	Gas System Integrity	Gas Contractor Controls	Contractor Management and Traffic Control	No	On-going	Annual	—	—	—	78	307	385	4,147	4,256	4,359	4,443	4,545	21,751
O&M	Gas System Integrity	Safety Excellence Management System	Non-RAMP	No	On-going	Annual	133	344	279	314	227	1,297	—	—	—	—	—	—
O&M	Gas System Integrity	Damage Prevention Strategies	Non-RAMP	No	On-going	Annual	69	118	183	168	132	671	—	—	—	—	—	—
O&M	Gas System Integrity	Policy Quality Assurance Cntl Effective	Non-RAMP	No	On-going	Annual	—	—	592	563	497	1,653	—	—	—	—	—	—
O&M	Gas System Integrity	Damage Prevention Program Management	Non-RAMP	No	On-going	Annual	—	—	29	19	0	49	—	—	—	—	—	—

E. SoCalGas Gas System Integrity  
i. SoCalGas Gas System Integrity Operations O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Gas System Integrity	Gas System Integrity		Yes	(20,581)	(19,643)	(6,147)	(9,782)	(9,277)	(65,430)	-58%	-54%	-16%	-26%	-24%	-35%
O&M	Gas System Integrity	USS - VP Gas System Integrity	Non-RAMP	No	(678)	(696)	(383)	(726)	(743)	(3,225)	-100%	-100%	-54%	-100%	-100%	-91%
O&M	Gas System Integrity	Business Process Enterprise System Support (ESS) Implementation and ESS Mobile Solution	Non-RAMP	No	832	6	983	594	517	2,933	403%	3%	453%	269%	229%	271%
O&M	Gas System Integrity	Business Process Enterprise System Support (ESS) Implementation and ESS Mobile Solution	Information Management Systems	No	(9)	154	1,073	573	300	2,090	-8%	126%	858%	449%	230%	335%
O&M	Gas System Integrity	<b>Sub-Total Business Process ESS Implementation and ESS Mobile Solution</b>		<b>Yes</b>	<b>823</b>	<b>160</b>	<b>2,056</b>	<b>1,166</b>	<b>817</b>	<b>5,022</b>	<b>253%</b>	<b>48%</b>	<b>601%</b>	<b>335%</b>	<b>229%</b>	<b>294%</b>
O&M	Gas System Integrity	Applications	Non-RAMP	No	(515)	(240)	(457)	(288)	(339)	(1,840)	-100%	-45%	-84%	-52%	-60%	-68%
O&M	Gas System Integrity	ESS Production Support	Non-RAMP	No	(541)	(316)	165	458	2,376	2,142	-89%	-50%	26%	70%	355%	67%
O&M	Gas System Integrity	ESS Production Support	Information Management Systems	No	(108)	(31)	694	884	419	1,859	-100%	-28%	612%	764%	354%	328%
O&M	Gas System Integrity	<b>Sub-Total ESS Production Support</b>		<b>Yes</b>	<b>(649)</b>	<b>(346)</b>	<b>859</b>	<b>1,342</b>	<b>2,794</b>	<b>4,000</b>	<b>-90%</b>	<b>-47%</b>	<b>114%</b>	<b>174%</b>	<b>355%</b>	<b>106%</b>



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O&M	Gas System Integrity	Wrk Mgmt & Databases	Non-RAMP	No	(991)	(1,159)	(847)	(2,227)	(1,462)	(6,687)	-56%	-63%	-45%	-116%	-75%	-71%
O&M	Gas System Integrity	Wrk Mgmt & Databases	Operational Compliance and Oversight	No	77	(22)	(27)	3	(177)	(146)	36%	-10%	-12%	1%	-75%	-13%
<b>O&amp;M</b>	<b>Gas System Integrity</b>	<b>Sub-Total Wrk Mgmt &amp; Databases</b>		<b>Yes</b>	<b>(914)</b>	<b>(1,181)</b>	<b>(874)</b>	<b>(2,225)</b>	<b>(1,639)</b>	<b>(6,833)</b>	<b>-46%</b>	<b>-57%</b>	<b>-42%</b>	<b>-104%</b>	<b>-75%</b>	<b>-65%</b>
O&M	Gas System Integrity	Contract & Maintenance	Non-RAMP	No	15	(150)	(105)	68	3	(168)	2%	-24%	-17%	11%	1%	-5%
O&M	Gas System Integrity	Field Technologies	Non-RAMP	No	(226)	(244)	232	194	332	288	-50%	-53%	-49%	40%	68%	12%
O&M	Gas System Integrity	Gas System Integrity Staff & Programs	Non-RAMP	No	(235)	(214)	(255)	(32)	(53)	(788)	-68%	-60%	-70%	-9%	-14%	-44%
O&M	Gas System Integrity	Operator Qualification	Non-RAMP	No	429	370	(300)	27	110	637	34%	29%	-23%	2%	8%	10%
O&M	Gas System Integrity	Operator Qualification	Operations	No	(856)	(879)	0	(2)	62	(1,675)	-100%	-100%	0%	-0%	7%	-37%
<b>O&amp;M</b>	<b>Gas System Integrity</b>	<b>Sub-Total Operator Qualification</b>		<b>Yes</b>	<b>(427)</b>	<b>(508)</b>	<b>(300)</b>	<b>25</b>	<b>172</b>	<b>(1,038)</b>	<b>-20%</b>	<b>-24%</b>	<b>-14%</b>	<b>1%</b>	<b>7%</b>	<b>-9%</b>
O&M	Gas System Integrity	Pipeline System Construction Policy	Locate & Mark Activities	No	(1,322)	(1,357)	(735)	(452)	(621)	(4,487)	-100%	-100%	-53%	-32%	-43%	-65%
O&M	Gas System Integrity	Pipeline System Construction Policy	Policy, Procedures, Standards and ESCMP	No	103	10	(702)	(716)	(732)	(2,037)	15%	1%	-100%	-100%	-100%	-58%
<b>O&amp;M</b>	<b>Gas System Integrity</b>	<b>Sub-Total Pipeline System Construction Policy</b>		<b>Yes</b>	<b>(1,219)</b>	<b>(1,347)</b>	<b>(1,437)</b>	<b>(1,167)</b>	<b>(1,353)</b>	<b>(6,523)</b>	<b>-61%</b>	<b>-66%</b>	<b>-69%</b>	<b>-55%</b>	<b>-62%</b>	<b>-63%</b>
O&M	Gas System Integrity	Quality & Risk	Operational Compliance and Oversight	No	(891)	(914)	(841)	(891)	(923)	(4,460)	-68%	-68%	-61%	-64%	-64%	-65%
O&M	Gas System Integrity	Enterprise Geographic Information System (eGIS)	Non-RAMP	No	(1,370)	(939)	(1,007)	(1,318)	(973)	(5,607)	-64%	-43%	-45%	-58%	-42%	-50%
O&M	Gas System Integrity	Enterprise Geographic Information System (eGIS)	Operational Compliance and Oversight	No	(625)	(642)	(657)	(670)	(685)	(3,278)	-100%	-100%	-100%	-100%	-100%	-100%
<b>O&amp;M</b>	<b>Gas System Integrity</b>	<b>Sub-Total Enterprise Geographic Information System (eGIS)</b>		<b>Yes</b>	<b>(1,995)</b>	<b>(1,580)</b>	<b>(1,664)</b>	<b>(1,988)</b>	<b>(1,658)</b>	<b>(8,885)</b>	<b>-73%</b>	<b>-56%</b>	<b>-58%</b>	<b>-67%</b>	<b>-55%</b>	<b>-62%</b>

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O&M	Gas System Integrity	Shared Public Awareness Activities	Analysis	No	(433)	(429)	(506)	(522)	(520)	(2,409)	-75%	-72%	-83%	-84%	-82%	-79%
O&M	Gas System Integrity	Pipeline Safety & Compliance Manager	Non-RAMP	No	(241)	(219)	(84)	(61)	(9)	(614)	-26%	-23%	-9%	-6%	-1%	-13%
O&M	Gas System Integrity	Pipeline Safety Oversight	Non-RAMP	No	(18)	(31)	(22)	(133)	(204)	(408)	-3%	-5%	-3%	-20%	-30%	-13%
O&M	Gas System Integrity	Records Management - From 2200-2361	Operational Compliance and Oversight	No	(1,778)	(1,825)	(1,869)	(1,905)	(1,949)	(9,325)	-100%	-100%	-100%	-100%	-100%	-100%
O&M	Gas System Integrity	Records Management - From 2200-2361	Policy, Procedures, Standards and ESCMP	No	(970)	(996)	(851)	(927)	(932)	(4,676)	-100%	-100%	-83%	-89%	-88%	-92%
<b>O&amp;M</b>	<b>Gas System Integrity</b>	<b>Sub-Total Records Management - From 2200-2361</b>		<b>Yes</b>	<b>(2,748)</b>	<b>(2,821)</b>	<b>(2,720)</b>	<b>(2,832)</b>	<b>(2,881)</b>	<b>(14,001)</b>	<b>-100%</b>	<b>-100%</b>	<b>-94%</b>	<b>-96%</b>	<b>-96%</b>	<b>-97%</b>
O&M	Gas System Integrity	Gas Operations Training & Development	Non-RAMP	No	(1,254)	(520)	745	647	278	(104)	-91%	-37%	52%	44%	18%	-1%
O&M	Gas System Integrity	Gas Operations Training & Development	Qualifications of Pipeline Personnel - MP	No	(535)	103	967	987	901	2,423	-37%	7%	63%	63%	56%	32%
O&M	Gas System Integrity	Gas Operations Training & Development	Qualifications of Pipeline Personnel - HP	No	47	8	995	993	959	3,002	36%	6%	738%	722%	682%	446%
O&M	Gas System Integrity	Gas Operations Training & Development	Expand "Situation City" training props at Pico Rivera campus	No	(269)	(277)	(3)	261	905	617	-100%	-100%	-1%	90%	306%	44%

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O&M	Gas System Integrity	Gas Operations Training & Development	Employee Skills Training	No	(1,521)	225	983	998	(395)	290	-88%	13%	54%	54%	-21%	3%
O&M	Gas System Integrity	Gas Operations Training & Development	Locate & Mark Activities	No	(79)	44	990	997	933	2,886	-52%	28%	620%	612%	560%	362%
<b>O&amp;M</b>	<b>Gas System Integrity</b>	<b>Sub-Total Gas Operations Training &amp; Development</b>		<b>Yes</b>	<b>(3,612)</b>	<b>(416)</b>	<b>4,677</b>	<b>4,884</b>	<b>3,582</b>	<b>9,115</b>	<b>-71%</b>	<b>-8%</b>	<b>87%</b>	<b>89%</b>	<b>64%</b>	<b>34%</b>
O&M	Gas System Integrity	Pipeline Safety & Compliance	Non-RAMP	No	(517)	19	(690)	(704)	(720)	(2,612)	-79%	3%	-100%	-100%	-100%	-76%
O&M	Gas System Integrity	Pipeline Safety & Compliance	Operational Compliance and Oversight	No	(126)	(2,556)	(1,422)	(1,425)	(1,757)	(7,285)	-5%	-100%	-54%	-53%	-64%	-56%
<b>O&amp;M</b>	<b>Gas System Integrity</b>	<b>Sub-Total Pipeline Safety &amp; Compliance</b>		<b>Yes</b>	<b>(643)</b>	<b>(2,537)</b>	<b>(2,112)</b>	<b>(2,128)</b>	<b>(2,477)</b>	<b>(9,898)</b>	<b>-20%</b>	<b>-79%</b>	<b>-64%</b>	<b>-63%</b>	<b>-72%</b>	<b>-60%</b>
O&M	Gas System Integrity	Public Awareness	Non-RAMP	No	(304)	(312)	(319)	(325)	(333)	(1,592)	-100%	-100%	-100%	-100%	-100%	-100%
O&M	Gas System Integrity	Public Awareness	Public Awareness	No	(1,005)	(871)	37	(1,216)	(796)	(3,850)	-67%	-57%	2%	-76%	-48%	-49%
<b>O&amp;M</b>	<b>Gas System Integrity</b>	<b>Sub-Total Public Awareness</b>		<b>Yes</b>	<b>(1,308)</b>	<b>(1,183)</b>	<b>(282)</b>	<b>(1,541)</b>	<b>(1,128)</b>	<b>(5,442)</b>	<b>-73%</b>	<b>-64%</b>	<b>-15%</b>	<b>-80%</b>	<b>-57%</b>	<b>-58%</b>

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Gas System Integrity	Asset Management	Non-RAMP	No	(385)	(610)	498	233	200	(64)	-16%	-25%	20%	9%	8%	-1%
O&M	Gas System Integrity	Asset Management	Operational Compliance and Oversight	No	(336)	(345)	847	140	132	438	-100%	-100%	240%	39%	36%	25%
<b>O&amp;M</b>	<b>Gas System Integrity</b>	<b>Sub-Total Asset Management</b>		<b>Yes</b>	<b>(721)</b>	<b>(955)</b>	<b>1,345</b>	<b>373</b>	<b>332</b>	<b>373</b>	<b>-27%</b>	<b>-34%</b>	<b>47%</b>	<b>13%</b>	<b>11%</b>	<b>3%</b>
O&M	Gas System Integrity	Gas Contractor Controls	Contractor Management and Traffic Control	No	(4,147)	(4,256)	(4,359)	(4,365)	(4,238)	(21,365)	-100%	-100%	-100%	-98%	-93%	-98%
O&M	Gas System Integrity	Safety Excellence Management System	Non-RAMP	No	133	344	279	314	227	1,297	100%	100%	100%	100%	100%	100%
O&M	Gas System Integrity	Damage Prevention Strategies	Non-RAMP	No	69	118	183	168	132	671	100%	100%	100%	100%	100%	100%
O&M	Gas System Integrity	Policy Quality Assurance Cntl Effective	Non-RAMP	No	—	—	592	563	497	1,653	—%	—%	100%	100%	100%	100%
O&M	Gas System Integrity	Damage Prevention Program Management	Non-RAMP	No	—	—	29	19	0	49	—%	—%	100%	100%	100%	100%

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Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
O&M	Gas System Integrity	Gas System Integrity		Yes																										
O&M	Gas System Integrity	USS - VP Gas System Integrity	Non-RAMP	No	FTE	—	—	2	—	—	2	4	4	4	4	4	20	(4)	(4)	(2)	(4)	(4)	(18)	-100%	-100%	-50%	-100%	-100%	-90%	
O&M	Gas System Integrity	Business Process Enterprise System Support (ESS) Implementation and ESS Mobile Solution	Non-RAMP	No	FTE	2	2	2	2	2	10	2	2	2	2	2	10	—	—	—	—	—	—	—%	—%	—%	—%	—%	—%	
O&M	Gas System Integrity	Business Process Enterprise System Support (ESS) Implementation and ESS Mobile Solution	Information Management Systems	No	FTE	1	1	1	1	1	5	1	1	1	1	1	5	—	—	—	—	—	—	—%	—%	—%	—%	—%	—%	
O&M	Gas System Integrity	<b>Sub-Total Business Process ESS Implementation and ESS Mobile Solution</b>		Yes																										
O&M	Gas System Integrity	Applications	Non-RAMP	No	FTE	—	3	2	2	2	9	4	4	4	4	4	20	(4)	(1)	(2)	(2)	(2)	(11)	-100%	-25%	-50%	-50%	-50%	-55%	
O&M	Gas System Integrity	ESS Production Support	Non-RAMP	No	FTE	1	—	—	—	—	1	4	4	2	2	2	14	(3)	(4)	(2)	(2)	(2)	(13)	-75%	-100%	-100%	-100%	-100%	-93%	
O&M	Gas System Integrity	ESS Production Support	Information Management Systems	No	FTE	—	1	1	1	1	4	1	1	3	3	3	11	(1)	—	(2)	(2)	(2)	(7)	-100%	—%	-67%	-67%	-67%	-64%	
O&M	Gas System Integrity	<b>Sub-Total ESS Production Support</b>		Yes																										

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance
O&M	Gas System Integrity	Wrk Mgmt & Databases	Non-RAMP	No	FTE	7	7	3	3	2	22	12	12	12	12	12	60	-5	-5	-9	-9	-10	(38)	-42%	-42%	-75%	-75%	-83%	-63%
O&M	Gas System Integrity	Wrk Mgmt & Databases	Operational Compliance and Oversight	No	FTE	2	2	2	2	2	10	2	2	2	2	2	10	0	0	0	0	0	—	—%	—%	—%	—%	—%	—%
<b>O&amp;M</b>	<b>Gas System Integrity</b>	<b>Sub-Total Wrk Mgmt &amp; Databases</b>		<b>Yes</b>																									
O&M	Gas System Integrity	Contract & Maintenance	Non-RAMP	No	FTE	—	—	—	—	—	—	1	1	1	1	1	5	-1	-1	-1	-1	-1	(5)	-100%	-100%	-100%	-100%	-100%	-100%
O&M	Gas System Integrity	Field Technologies	Non-RAMP	No	FTE	2	2	6	6	5	21	3	3	3	3	3	15	-1	-1	3	3	2	6	-33%	-33%	100%	100%	67%	40%
O&M	Gas System Integrity	Gas System Integrity Staff & Programs	Non-RAMP	No	FTE	1	1	1	1	1	5	2	2	2	2	2	10	-1	-1	-1	-1	-1	(5)	-50%	-50%	-50%	-50%	-50%	-50%
O&M	Gas System Integrity	Operator Qualification	Non-RAMP	No	FTE	13	13	11	10	9	56	11	11	11	11	11	55	2	2	0	-1	-2	1	18%	18%	—%	-9%	-18%	2%
O&M	Gas System Integrity	Operator Qualification	Operations	No	FTE	—	—	7	7	6	20	7	7	7	7	7	35	-7	-7	0	0	-1	(15)	-100%	-100%	—%	—%	-14%	-43%
<b>O&amp;M</b>	<b>Gas System Integrity</b>	<b>Sub-Total Operator Qualification</b>		<b>Yes</b>																									
O&M	Gas System Integrity	Pipeline System Construction Policy	Locate & Mark Activities	No	FTE	—	—	7	6	6	19	9	9	7	7	7	39	-9	-9	0	-1	-1	(20)	-100%	-100%	—%	-14%	-14%	-51%
O&M	Gas System Integrity	Pipeline System Construction Policy	Policy, Procedures, Standards and ESCMP	No	FTE	6	6	—	—	—	12	7	7	7	7	7	35	-1	-1	-7	-7	-7	(23)	-14%	-14%	-100%	-100%	-100%	-66%
<b>O&amp;M</b>	<b>Gas System Integrity</b>	<b>Sub-Total Pipeline System Construction Policy</b>		<b>Yes</b>																									
O&M	Gas System Integrity	Quality & Risk	Operational Compliance and Oversight	No	FTE	4	5	5	5	4	23	12	12	12	12	12	60	-8	-7	-7	-7	-8	(37)	-67%	-58%	-58%	-58%	-67%	-62%
O&M	Gas System Integrity	Enterprise Geographic Information System (eGIS)	Non-RAMP	No	FTE	5	12	12	10	11	50	21	21	12	12	12	78	-16	-9	0	-2	-1	(28)	-76%	-43%	—%	-17%	-8%	-36%
O&M	Gas System Integrity	Enterprise Geographic Information System (eGIS)	Operational Compliance and Oversight	No	FTE	—	—	—	—	—	—	1	1	1	1	1	5	-1	-1	-1	-1	-1	(5)	-100%	-100%	-100%	-100%	-100%	-100%
<b>O&amp;M</b>	<b>Gas System Integrity</b>	<b>Sub-Total Enterprise Geographic Information System (eGIS)</b>		<b>Yes</b>																									

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance
O&M	Gas System Integrity	Shared Public Awareness Activities	Analysis	No	FTE	1	1	1	1	1	5	2	2	2	2	2	10	-1	-1	-1	-1	-1	(5)	-50%	-50%	-50%	-50%	-50%	-50%
O&M	Gas System Integrity	Pipeline Safety & Compliance Manager	Non-RAMP	No	FTE	5	7	8	8	7	35	7	7	7	7	7	35	-2	0	1	1	0	—	-29%	—%	14%	14%	—%	—%
O&M	Gas System Integrity	Pipeline Safety Oversight	Non-RAMP	No	FTE	5	6	6	5	4	26	4	4	4	4	4	20	1	2	2	1	0	6	25%	50%	50%	25%	—%	30%
O&M	Gas System Integrity	Records Management - From 2200-2361	Operational Compliance and Oversight	No	FTE	—	—	—	—	—	—	4	4	15	15	15	53	-4	-4	-15	-15	-15	(53)	-100%	-100%	-100%	-100%	-100%	-100%
O&M	Gas System Integrity	Records Management - From 2200-2361	Policy, Procedures, Standards and ESCMP	No	FTE	—	—	2	1	1	4	15	15	4	4	4	42	-15	-15	-2	-3	-3	(38)	-100%	-100%	-50%	-75%	-75%	-90%
O&M	Gas System Integrity	<b>Sub-Total Records Management - From 2200-2361</b>		<b>Yes</b>																									
O&M	Gas System Integrity	Gas Operations Training & Development	Non-RAMP	No	FTE	1	5	11	10	10	37	4	4	4	4	4	20	-3	1	7	6	6	17	-75%	25%	175%	150%	150%	85%
O&M	Gas System Integrity	Gas Operations Training & Development	Qualifications of Pipeline Personnel - MP	No	FTE	2	14	13	12	13	54	13	13	7	7	7	47	-11	1	6	5	6	7	-85%	8%	86%	71%	86%	15%
O&M	Gas System Integrity	Gas Operations Training & Development	Qualifications of Pipeline Personnel - HP	No	FTE	1	1	11	10	10	33	1	1	1	1	1	5	0	0	10	9	9	28	—%	—%	1000%	900%	900%	560%
O&M	Gas System Integrity	Gas Operations Training & Development	Expand "Situation City" training props at Pico Rivera campus	No	FTE	—	—	3	3	3	9	—	—	3	3	3	9	0	0	0	0	0	—	—%	—%	—%	—%	—%	—%

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
O&M	Gas System Integrity	Gas Operations Training & Development	Employee Skills Training	No	FTE	—	—	14	12	1	27	3	3	7	7	7	27	-3	-3	7	5	-6	—	-100%	-100%	100%	71%	-86%	—%	
O&M	Gas System Integrity	Gas Operations Training & Development	Locate & Mark Activities	No	FTE	—	2	11	10	10	33	2	2	1	1	1	7	-2	0	10	9	9	26	-100%	—%	1000%	900%	900%	371%	
O&M	Gas System Integrity	<b>Sub-Total Gas Operations Training &amp; Development</b>		Yes																										
O&M	Gas System Integrity	Pipeline Safety & Compliance	Non-RAMP	No	FTE	1	1	—	—	—	2	3	3	7	7	7	27	-2	-2	-7	-7	-7	(25)	-67%	-67%	-100%	-100%	-100%	-93%	
O&M	Gas System Integrity	Pipeline Safety & Compliance	Operational Compliance and Oversight	No	FTE	15	—	4	6	5	30	27	27	23	23	23	123	-12	-27	-19	-17	-18	(93)	-44%	-100%	-83%	-74%	-78%	-76%	
O&M	Gas System Integrity	<b>Sub-Total Pipeline Safety &amp; Compliance</b>		Yes																										
O&M	Gas System Integrity	Public Awareness	Non-RAMP	No	No single unit is available for this workpaper due to multiple activities including mailers sent and the number of customers.																									
O&M	Gas System Integrity	Public Awareness	Public Awareness	No	No single unit is available for this workpaper due to multiple activities including mailers sent and the number of customers.																									
O&M	Gas System Integrity	<b>Sub-Total Public Awareness</b>		Yes																										



Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance
O&M	Gas System Integrity	Asset Management	Non-RAMP	No	FTE	12	12	12	16	12	64	21	21	20	20	20	102	-9	-9	-8	-4	-8	(38)	-43%	-43%	-40%	-20%	-40%	-37%
O&M	Gas System Integrity	Asset Management	Operational Compliance and Oversight	No	FTE	—	—	4	4	4	12	3	3	4	4	4	18	-3	-3	0	0	0	(6)	-100%	-100%	—%	—%	—%	-33%
O&M	Gas System Integrity	Sub-Total Asset Management		Yes																									
O&M	Gas System Integrity	Gas Contractor Controls	Contractor Management and Traffic Control	No	FTE	—	—	—	1	1	2	20	20	20	20	20	100	-20	-20	-20	-19	-19	(98)	-100%	-100%	-100%	-95%	-95%	-98%
O&M	Gas System Integrity	Safety Excellence Management System	Non-RAMP	No	FTE	2	—	3	2	1	8	—	—	—	—	—	—	2	0	3	2	1	8	100%	—%	100%	100%	100%	100%
O&M	Gas System Integrity	Damage Prevention Strategies	Non-RAMP	No	FTE	1	—	2	2	1	6	—	—	—	—	—	—	1	0	2	2	1	6	100%	—%	100%	100%	100%	100%
O&M	Gas System Integrity	Policy Quality Assurance Cntl Effective	Non-RAMP	No	FTE	—	—	2	4	3	9	—	—	—	—	—	—	0	0	2	4	3	9	—%	—%	100%	100%	100%	100%
O&M	Gas System Integrity	Damage Prevention Program Management	Non-RAMP	No	FTE	—	—	—	—	—	—	—	—	—	—	—	—	0	0	0	0	0	—	—%	—%	—%	—%	—%	—%

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Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Gas System Integrity	Gas System Integrity		Yes									
O&M	Gas System Integrity	USS - VP Gas System Integrity	Non-RAMP	No	No	Yes	N/A	The dollars and units associated with the vice president position previously titled VP of Gas Systems Integrity are now included in the costs for Gas Major Projects – Major Projects Management & Outreach (Wkp 2MP001.000 cost center (Cctr) 2200-2391).	Under (U)	Under (U)	Under (U)	Other	Yes
O&M	Gas System Integrity	Business Process Enterprise System Support (ESS) Implementation and ESS Mobile Solution	Non-RAMP	No	No	No	N/A	N/A	Over (O)	On Target (T)	Over (O)	Expanded	No
O&M	Gas System Integrity	Business Process Enterprise System Support (ESS) Implementation and ESS Mobile Solution	Information Management Systems	No	No	No	N/A	N/A	Over (O)	On Target (T)	Over (O)	Expanded	No
O&M	Gas System Integrity	<b>Sub-Total Business Process ESS Implementation and ESS Mobile Solution</b>		<b>Yes</b>	<b>No</b>								<b>No</b>
O&M	Gas System Integrity	Applications	Non-RAMP	No	No	Yes	N/A	Contractors and consultants were used for this initiative instead of internal FTEs due to temporary scope of work.	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas System Integrity	ESS Production Support	Non-RAMP	No	Yes	Yes	Contractors and consultants were used for this initiative instead of internal FTEs due to temporary scope of work. A portion of the costs associated with this workpaper were reallocated from the Work Management and Databases workpaper (2200-0306) for additional annual license fees.	Contractors and consultants were used for this initiative instead of internal FTEs due to temporary scope of work.	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas System Integrity	ESS Production Support	Information Management Systems	No	No	Yes	N/A	Contractors and consultants were used for this initiative instead of internal FTEs due to temporary scope of work.	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas System Integrity	<b>Sub-Total ESS Production Support</b>		<b>Yes</b>	<b>Yes</b>								<b>No</b>

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Gas System Integrity	Wrk Mgmt & Databases	Non-RAMP	No	Yes	Yes	A portion of the costs associated with this workpaper were reallocated into the Enterprise Systems Solutions (ESS) Production Support workpaper (2200-0305) for additional annual license fees.	Contractors and consultants were used for this initiative instead of internal FTEs due to temporary scope of work.	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas System Integrity	Wrk Mgmt & Databases	Operational Compliance and Oversight	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
<b>O&amp;M</b>	<b>Gas System Integrity</b>	<b>Sub-Total Wrk Mgmt &amp; Databases</b>		<b>Yes</b>	<b>Yes</b>								<b>No</b>
O&M	Gas System Integrity	Contract & Maintenance	Non-RAMP	No	No	Yes	N/A	Contractors and consultants were used for this initiative instead of internal FTEs due to temporary scope of work.	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas System Integrity	Field Technologies	Non-RAMP	No	No	Yes	N/A	This group expanded beyond its originally proposed work scope to include the procurement of tools and equipment for initiatives to equip field operations employees. The additional FTEs coordinated tools and equipment procured to support incremental Distribution work and updates to the "Hazardous Atmosphere in Excavations" Gas Standard that impacted Customer Service - Field, Gas Distribution, and Gas Transmission. Both initiatives required ordering additional tools and equipment for field employees.	Over (O)	Over (O)	Over (O)	Expanded	No
O&M	Gas System Integrity	Gas System Integrity Staff & Programs	Non-RAMP	No	No	Yes	N/A	Administrative Associate support was provided by a shared Administrative Associate.	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas System Integrity	Operator Qualification	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas System Integrity	Operator Qualification	Operations	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
<b>O&amp;M</b>	<b>Gas System Integrity</b>	<b>Sub-Total Operator Qualification</b>		<b>Yes</b>	<b>No</b>								<b>No</b>
O&M	Gas System Integrity	Pipeline System Construction Policy	Locate & Mark Activities	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas System Integrity	Pipeline System Construction Policy	Policy, Procedures, Standards and ESCMP	No	No	Yes	N/A	The costs and units associated with this workpaper have reorganized into the Damage Prevention Strategies workpaper (2200-2623).	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	Yes
<b>O&amp;M</b>	<b>Gas System Integrity</b>	<b>Sub-Total Pipeline System Construction Policy</b>		<b>Yes</b>	<b>Yes</b>		<b>A portion of the costs and units associated with this workpaper have reorganized into the Damage Prevention Strategies workpaper (2200-2623).</b>						<b>No</b>
O&M	Gas System Integrity	Quality & Risk	Operational Compliance and Oversight	No	No	Yes	N/A	The variance is caused by the delay in plan development and difficulties in recruiting and onboarding qualified personnel. Additionally, some resources were re-prioritized to support PSEP (Wkp 2PS000.000 Cctr 2200-0064).	Under (U)	Under (U)	Under (U)	Proceeding as Planned	No
O&M	Gas System Integrity	Enterprise Geographic Information System (eGIS)	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas System Integrity	Enterprise Geographic Information System (eGIS)	Operational Compliance and Oversight	No	No	Yes	N/A	The variance is caused by the delay in plan development and difficulties in recruiting and onboarding qualified personnel.	Under (U)	Under (U)	Under (U)	Deferred	No
<b>O&amp;M</b>	<b>Gas System Integrity</b>	<b>Sub-Total Enterprise Geographic Information System (eGIS)</b>		<b>Yes</b>	<b>Yes</b>		<b>The variance is caused by the delay in plan development and difficulties in recruiting and onboarding qualified personnel.</b>						<b>No</b>

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Gas System Integrity	Shared Public Awareness Activities	Analysis	No	No	Yes	N/A	This program was able to achieve cost efficiencies by leveraging existing outreach activities already performed through other programs/groups (e.g., Operations, Marketing and Communications, and Emergency Management).	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Gas System Integrity	Pipeline Safety & Compliance Manager	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas System Integrity	Pipeline Safety Oversight	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas System Integrity	Records Management - From 2200-2361	Operational Compliance and Oversight	No	Yes	Yes	This area was forecasted to expand to perform enhanced activities, however, this variance is caused by the delay in plan development and difficulties in recruiting and onboarding qualified personnel.	This area was forecasted to expand to perform enhanced activities, however, this variance is caused by the delay in plan development and difficulties in recruiting and onboarding qualified personnel.	Under (U)	Under (U)	Under (U)	Deferred	No
O&M	Gas System Integrity	Records Management - From 2200-2361	Policy, Procedures, Standards and ESCMP	No	No	Yes	N/A	This area was forecasted to expand to perform enhanced activities, however, this variance is caused by the delay in plan development and difficulties in recruiting and onboarding qualified personnel.	Under (U)	Under (U)	Under (U)	Deferred	No
O&M	Gas System Integrity	<b>Sub-Total Records Management - From 2200-2361</b>		<b>Yes</b>	<b>Yes</b>								<b>Yes</b>
O&M	Gas System Integrity	Gas Operations Training & Development	Non-RAMP	No	No	Yes	N/A	Gas Operations Training facilitated initial training to additional 600 incremental Gas Operations Field hires to support the Self-Perform Initiative (SPI) with a 60/40 balanced workforce of field company employees and contractors. The increase in demand for training increased the need for additional instructors.	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas System Integrity	Gas Operations Training & Development	Qualifications of Pipeline Personnel - MP	No	No	Yes	N/A	Gas Operations Training facilitated initial training to additional 600 incremental Gas Operations Field hires to support the Self-Perform Initiative (SPI) with a 60/40 balanced workforce of field company employees and contractors. The increase in demand for training increased the need for additional instructors.	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas System Integrity	Gas Operations Training & Development	Qualifications of Pipeline Personnel - HP	No	No	Yes	N/A	Gas Operations Training facilitated initial training to additional 600 incremental Gas Operations Field hires to support the Self-Perform Initiative (SPI) with a 60/40 balanced workforce of field company employees and contractors. The increase in demand for training increased the need for additional instructors.	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas System Integrity	Gas Operations Training & Development	Expand "Situation City" training props at Pico Rivera campus	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Gas System Integrity	Gas Operations Training & Development	Employee Skills Training	No	No	Yes	N/A	The variance is caused by delay in plan development and difficulties in recruiting and onboarding qualified personnel.	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas System Integrity	Gas Operations Training & Development	Locate & Mark Activities	No	No	Yes	N/A	Gas Operations Training facilitated initial training to additional 600 incremental Gas Operations Field hires to support the Self-Perform Initiative (SPI) with a 60/40 balanced workforce of field company employees and contractors. The increase in demand for training increased the need for additional instructors.	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas System Integrity	<b>Sub-Total Gas Operations Training &amp; Development</b>		Yes	Yes		<b>A significant increase in demand for training of field personnel, resulted in the need for additional instructors which were reallocated from the Emergency Services activity under the Gas Control witness area.</b>						No
O&M	Gas System Integrity	Pipeline Safety & Compliance	Non-RAMP	No	No	Yes	N/A	The variance is caused by delays in plan development and difficulties in recruiting and onboarding qualified personnel.	Under (U)	Under (U)	Under (U)	Deferred	No
O&M	Gas System Integrity	Pipeline Safety & Compliance	Operational Compliance and Oversight	No	Yes	Yes	A portion of the costs have been reallocated to capital workpapers within Gas Transmission, Gas Distribution, and Gas Engineering. A portion of the labor expense was allocated to another activity (TIMP), based on a need for subject matter expertise, to support company-level cost efficiencies.	A portion of the costs have been reallocated to capital workpapers within Gas Transmission, Gas Distribution, and Gas Engineering. A portion of the costs are being captured in the Pipeline Integrity for Transmission & Distribution category (Wkp 2TD000.000).	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas System Integrity	<b>Sub-Total Pipeline Safety &amp; Compliance</b>		Yes	Yes								No
O&M	Gas System Integrity	Public Awareness	Non-RAMP	No	No	No	N/A	N/A	Under (U)	Under (U)	Under (U)	Deferred	No
O&M	Gas System Integrity	Public Awareness	Public Awareness	No	No	No	N/A	N/A	Under (U)	Under (U)	Under (U)	Proceeding as Planned	No
O&M	Gas System Integrity	<b>Sub-Total Public Awareness</b>		Yes	Yes		<b>This program was able to achieve cost efficiencies by leveraging existing outreach activities already performed through other programs/groups (e.g., Operations, Marketing and Communications, and Emergency Management).</b>						No

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Gas System Integrity	Asset Management	Non-RAMP	No	No	Yes	N/A	Contractors and consultants were used to develop and expand the program instead of internal FTEs due to the temporary scope of work.	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas System Integrity	Asset Management	Operational Compliance and Oversight	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
<b>O&amp;M</b>	<b>Gas System Integrity</b>	<b>Sub-Total Asset Management</b>		<b>Yes</b>	<b>No</b>								<b>No</b>
O&M	Gas System Integrity	Gas Contractor Controls	Contractor Management and Traffic Control	No	Yes	Yes	The work forecasted in this workpaper was re-distributed and is managed in Gas Major Projects (Wkp 2MP003.000 Cctr 2200-2553).	The work forecasted in this workpaper was re-distributed and is managed in Gas Major Projects (Wkp 2MP003.000 Cctr 2200-2553).	Under (U)	Under (U)	Under (U)	Other	No
O&M	Gas System Integrity	Safety Excellence Management System	Non-RAMP	No	No	Yes	N/A	This is an emergent activity that was developed after the GRC filing to provide a greater focus on safety. This includes establishing safety policy, developing, and implementing safety programs and procedures, and guiding short-term and long-term safety performance management. (Wkp 2SM004.000; SCG-27 NNM-25 to NNM-31)	Over (O)	Over (O)	Over (O)	Emergent	No
O&M	Gas System Integrity	Damage Prevention Strategies	Non-RAMP	No	No	Yes	N/A	This is a new cost center that was created after the GRC filing. This activity was originally included in the Pipeline Systems Construction Policy workpaper (2200-2345).	Over (O)	Over (O)	Over (O)	Emergent	No
O&M	Gas System Integrity	Policy Quality Assurance Cntl Effective	Non-RAMP	No	No	Yes	N/A	This is an emergent activity that was developed after the GRC filing to develop the Gas Standard Effectiveness Program, which is responsible for verifying observations that are conducted on Company operations standards to determine and document the adequacy and effectiveness of procedures. As new regulations continue to be introduced, relevant gas standards, and Company policies need to be updated to remain in compliance with the changes.	Over (O)	Over (O)	Over (O)	Emergent	No
O&M	Gas System Integrity	Damage Prevention Program Management	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No

E. SoCalGas Gas System Integrity  
i. SoCalGas Gas System Integrity Operations O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Gas System Integrity	Gas System Integrity		Yes				
O&M	Gas System Integrity	USS - VP Gas System Integrity	Non-RAMP	No	The dollars and units associated with the VP of Gas Systems Integrity workpaper are now included in the costs for Gas Major Projects – Major Projects Management & Outreach (Wkp 2MP001.000 Cctr 2200-2391).	The costs for the Vice President of Gas Engineering and System Integrity include technical and financial support, as well as policy issuance to successfully sustain the operation and provide the vision to maintain the safety and reliability of the gas system. The Vice President's activities also include the governance, technical, and policy support for Gas Transmission and Gas Distribution support functions at both utilities, in addition to Storage for SoCalGas.	SCG-05-R OR-48 WP 2200-0225.000	SCG-07-R MTM-33 to MTM-35 WP 2200-0300.000
O&M	Gas System Integrity	Business Process Enterprise System Support (ESS) Implementation and ESS Mobile Solution	Non-RAMP	No	N/A			
O&M	Gas System Integrity	Business Process Enterprise System Support (ESS) Implementation and ESS Mobile Solution	Information Management Systems	No	N/A			
O&M	Gas System Integrity	<b>Sub-Total Business Process ESS Implementation and ESS Mobile Solution</b>		Yes				
O&M	Gas System Integrity	Applications	Non-RAMP	No	N/A	The Applications cost center includes expenditures for labor and non-labor expenses to support a broad range of computer programs and systems that are not provided by the Company's Information Technology group. The work included within this cost center is to: manage, develop, and support specialized computer-aided drafting and design for Engineering Applications; manage and support the Gas computer-aided drafting and design and policies; manage and support hardware, file management, and back-end processes; manage help desk tickets and client support calls; manage, develop and maintain the Formal Communications Document Library & Publish Gas Standards; and develop and maintain Gas Operations Internal Websites. Expenditures covered in this cost center accounts for labor and expenses to support computer programs and systems not provided by the Company's Information Technology group. The work included within this cost center is to: manage, develop, and support specialized computer-aided drafting and design for Engineering Applications; manage and support the Gas computer-aided drafting and design policies; manage and support hardware, file management, and back-end processes; manage help desk tickets and client support calls; manage, develop and maintain the Formal Communications Document Library and publish Gas Standards; and develop and maintain Gas Operations internal websites.	SCG-05-R OR-61 to OR-62 WP 2200-0303.000	SCG-21-R-E TLB/WJE-16 to TLB/WJE-18 WP 2200-2272.000
O&M	Gas System Integrity	ESS Production Support	Non-RAMP	No	N/A	Enterprise Systems Solutions (ESS) organization maintains and provides support for business applications used by Gas Transmission, Distribution, and Storage organizations for both utilities. These applications are utilized by the organizations in support of meeting regulatory requirements. ESS develops and maintains more than two dozen applications that are used by Gas Transmission and Gas Storage organizations. The group also provides first-level support to users of several enterprise business application users that are developed and maintained by the central Information Technology (IT) organization. Users of business applications are supported through phone calls, emails, Help Desk ticketing system, and walkups from 6:00 am to 6:00 pm during weekdays. The team monitors interfaces between applications, resolve program interface issues, publishes client communications (release notes, information bulletins, outage notifications, technical bulletins, interim process bulletins, applications instructions, webcasts, etc.), supports hardware used in the field (mobile devices and peripheral equipment), maintains training environments, and manages systems modifications/change requests including software quality assurance (QA) activities.	SCG-05-R OR-62 to OR-63 WP 2200-0305.000	SCG-21-R-E TLB/WJE-20 to TLB/WJE-21 WP 2200-1220.000
O&M	Gas System Integrity	ESS Production Support	Information Management Systems	No	N/A	Enterprise Systems Solutions (ESS) organization maintains and provides support for business applications used by Gas Transmission, Distribution, and Storage organizations for both utilities. These applications are utilized by the organizations in support of meeting regulatory requirements. ESS develops and maintains more than two dozen applications that are used by Gas Transmission and Gas Storage organizations. The group also provides first-level support to users of several enterprise business application users that are developed and maintained by the central Information Technology (IT) organization. Users of business applications are supported through phone calls, emails, Help Desk ticketing system, and walkups from 6:00 am to 6:00 pm during weekdays. The team monitors interfaces between applications, resolve program interface issues, publishes client communications (release notes, information bulletins, outage notifications, technical bulletins, interim process bulletins, applications instructions, webcasts, etc.), supports hardware used in the field (mobile devices and peripheral equipment), maintains training environments, and manages systems modifications/change requests including software quality assurance (QA) activities.	SCG-05-R OR-62 to OR-63 WP 2200-0305.000	SCG-21-R-E TLB/WJE-20 to TLB/WJE-21 WP 2200-1220.000
O&M	Gas System Integrity	<b>Sub-Total ESS Production Support</b>		Yes				

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Gas System Integrity	Wrk Mgmt & Databases	Non-RAMP	No	N/A	Activities associated with this cost center include the support of Work Management Systems for Measurement and Regulation (M&R), System Protection Specialists (SPS) and Work Order Tracking (WOT) applications, AutoSol Enterprise System (AES), and the MyProjects enterprise system. This cost center also supports the SDG&E Gas Technical Services Group in Miramar; specifically, the Electronic Data Management System (EDMS) and the Cathodic Protection Data Management (CPDM) applications. These systems are key operational systems to support field functions to verify pipeline and ancillary facilities continue to be fit for service.	SCG-05-R OR-63 to OR-64 WP 2200-0306.000	SCG-21-R-E TLB/WJE-19 to TLB/WJE-20 WP 2200-0619.000
O&M	Gas System Integrity	Wrk Mgmt & Databases	Operational Compliance and Oversight	No	N/A			
<b>O&amp;M</b>	<b>Gas System Integrity</b>	<b>Sub-Total Wrk Mgmt &amp; Databases</b>		<b>Yes</b>				
O&M	Gas System Integrity	Contract & Maintenance	Non-RAMP	No	N/A	This cost center accounts for the labor and non-labor expenses associated with software licenses and maintenance contracts for System & Technology Energy Infrastructure. System & Technology Energy Infrastructure manages, administers, and maintains hardware, software, and back-end processes that support the systems and applications of various organizations at SoCalGas and SDG&E, including Gas Distribution, Gas Major Projects, Gas Transmission, Storage and Gas Engineering.	SCG-05-R OR-64 WP 2200-0308.000	SCG-21-R-E TLB/WJE-19 to TLB/WJE-20 WP 2200-2453.000
O&M	Gas System Integrity	Field Technologies	Non-RAMP	No	N/A	Recorded to this cost center are the labor, employee expense, and non-labor materials and services required to research and evaluate new tools and technology that enhance or replace existing processes or tools and provide benefits in the form of improved safety. This team helps mitigate risks associated with potential failure of field technologies or the use of obsolete equipment. Field Technologies supports Field Operations by conducting tool and equipment instruction and training to help clients become proficient in the use of new and existing tools and equipment.	SCG-05-R OR-48 to OR-49 WP 2200-2023.000	SCG-05 WR-56 to WR-57 WP 2200-2023.000
O&M	Gas System Integrity	Gas System Integrity Staff & Programs	Non-RAMP	No	N/A	This cost center includes the salaries for the Gas System Integrity Staff & Programs Director and the Administrative Associate who support this organization. This cost center also includes the associated employee expenses, as well as miscellaneous supplies and materials.	SCG-05-R OR-49 to OR-50 WP 2200-2144.000	SCG-05 WR-49 to WR-50 WP 2200-2144.000
O&M	Gas System Integrity	Operator Qualification	Non-RAMP	No	N/A			
O&M	Gas System Integrity	Operator Qualification	Operations	No	N/A			
<b>O&amp;M</b>	<b>Gas System Integrity</b>	<b>Sub-Total Operator Qualification</b>		<b>Yes</b>				
O&M	Gas System Integrity	Pipeline System Construction Policy	Locate & Mark Activities	No	N/A			
O&M	Gas System Integrity	Pipeline System Construction Policy	Policy, Procedures, Standards and ESCMP	No	A portion of the costs and units associated with this workpaper have reorganized into the Damage Prevention Strategies workpaper (2200-2623).	Pipeline Systems Construction Policy focuses on the safe construction of high and medium pressure pipelines and associated systems. This category includes development and maintenance of medium and high pressures construction policies and practices in accordance with applicable specifications, requirements and regulations.	SCG-05-R OR-56 to OR-59 WP 2200-2345.0000	SCG-05 WR-57 to WR-58 WP 2200-2345.000
<b>O&amp;M</b>	<b>Gas System Integrity</b>	<b>Sub-Total Pipeline System Construction Policy</b>		<b>Yes</b>				
O&M	Gas System Integrity	Quality & Risk	Operational Compliance and Oversight	No	N/A	The Quality and Risk group performs quality assurance and quality control activities for various pipeline safety and compliance activities on gas utility assets. The group provides objective assessments and thorough analyses resulting in recommendations and process improvements. Additionally, the group provides process improvement oversight to enhance discipline in process improvement activities with an emphasis on the implementation tracking, effectiveness evaluation, and review of business control tracking related to the enhancement. The Quality and Risk group seeks to not only support the organization to meet regulatory requirements, but also proactively use tools and processes to enhance system safety and reliability through the implementation of continuous improvement across the business units.	SCG-05-R OR-54 to OR-55 WP 2200-2360.000	SCG-27-2R-E NNM-36 to NNM-42 WP 2SM002.000
O&M	Gas System Integrity	Enterprise Geographic Information System (eGIS)	Non-RAMP	No	N/A			
O&M	Gas System Integrity	Enterprise Geographic Information System (eGIS)	Operational Compliance and Oversight	No	N/A	The need to gather and harmonize the disparate data sets is being addressed by the synchronization of the GIS system. The high-pressure pipe (maximum operating pressure greater than 60 psi), medium pressure pipe (maximum operating pressure less than or equal to 60 psi), storage field pipe and other above-ground facility pipes exist across multiple GIS and computer aided drafting and design databases and software platforms. This category includes costs for activities, as described, designed to mitigate system reliability risks.	SCG-05-R OR-65 to OR-66 WP 2200-2376.000	SCG-21-R-E TLB/WJE-12 to TLB/WJE-13 WP 2IT002.000
<b>O&amp;M</b>	<b>Gas System Integrity</b>	<b>Sub-Total Enterprise Geographic Information System (eGIS)</b>		<b>Yes</b>				



Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Gas System Integrity	Shared Public Awareness Activities	Analysis	No	N/A	The activities associated with the shared service component of Public Awareness include the central management of both SoCalGas and SDG&E's Public Awareness plans. This co-operator approach offers some resource efficiencies by leveraging the knowledge to the benefit of both companies. As noted in the non-shared service discussion, the Public Awareness work group is focused on the mandates from 49 CFR 192.616, which requires the development and implementation of a public awareness program.	SCG-05-R OR-55 to OR-56 WP 2200-2417.000	SCG-05 WR-58 to WR-61 WP 2200-2417.000
O&M	Gas System Integrity	Pipeline Safety & Compliance Manager	Non-RAMP	No	N/A			
O&M	Gas System Integrity	Pipeline Safety Oversight	Non-RAMP	No	N/A			
O&M	Gas System Integrity	Records Management - From 2200-2361	Operational Compliance and Oversight	No	N/A	Records Management provides centralized operational oversight for records management processes in specific operational areas.	SCG-05-R OR-67 to OR-68 WP 2200-7242.000	SCG-05 WR-19 to WR-37 WP 2S1002.000
O&M	Gas System Integrity	Records Management - From 2200-2361	Policy, Procedures, Standards and ESCMP	No	N/A	Records Management provides centralized operational oversight for records management processes in specific operational areas.	SCG-05-R OR-67 to OR-68 WP 2200-7242.000	SCG-05 WR-19 to WR-37 WP 2S1002.000
O&M	Gas System Integrity	<b>Sub-Total Records Management - From 2200-2361</b>		Yes	<b>This area was forecasted to expand to perform enhanced activities, however, this variance is caused by the delay in plan development and difficulties in recruiting and onboarding qualified personnel.</b>			
O&M	Gas System Integrity	Gas Operations Training & Development	Non-RAMP	No	N/A	Gas Operations Training and Development communicates and reinforces the SoCalGas safety culture and strives to instill a passion for success through participation in employee seminars, ongoing refresher training, and one-on-one employee meetings. Gas Operations Training and Development also consists of Field Technical Skills Training for employees in Gas Transmission, Gas Distribution, and Storage. These trainings and services are necessary for the Company to follow applicable laws, regulations and standards and to help maintain the safety of the workforce and the public. Also, included under Gas Operations Training and Development are activities and associated O&M expenses within the workgroup of Pipeline Maintenance Policy, which conducts a variety of operational services necessary for employees to complete their daily activities. These activities include identifying, developing, implementing, monitoring, and enhancing Company policies, procedures, tariffs, technologies, and/or reports used by Gas Transmission, Gas Distribution, and Storage.	SCG-05-R OR-24 to OR-33 WP 2S1001.000	SCG-05 WR-12 to WR-19 WP 2S1001.000
O&M	Gas System Integrity	Gas Operations Training & Development	Qualifications of Pipeline Personnel - MP	No	N/A	Gas Operations Training and Development communicates and reinforces the SoCalGas safety culture and strives to instill a passion for success through participation in employee seminars, ongoing refresher training, and one-on-one employee meetings. Gas Operations Training and Development also consists of Field Technical Skills Training for employees in Gas Transmission, Gas Distribution, and Storage. These trainings and services are necessary for the Company to follow applicable laws, regulations and standards and to help maintain the safety of the workforce and the public. Also, included under Gas Operations Training and Development are activities and associated O&M expenses within the workgroup of Pipeline Maintenance Policy, which conducts a variety of operational services necessary for employees to complete their daily activities. These activities include identifying, developing, implementing, monitoring, and enhancing Company policies, procedures, tariffs, technologies, and/or reports used by Gas Transmission, Gas Distribution, and Storage.	SCG-05-R OR-24 to OR-33 WP 2S1001.000	SCG-05 WR-12 to WR-19 WP 2S1001.000
O&M	Gas System Integrity	Gas Operations Training & Development	Qualifications of Pipeline Personnel - HP	No	N/A	Gas Operations Training and Development communicates and reinforces the SoCalGas safety culture and strives to instill a passion for success through participation in employee seminars, ongoing refresher training, and one-on-one employee meetings. Gas Operations Training and Development also consists of Field Technical Skills Training for employees in Gas Transmission, Gas Distribution, and Storage. These trainings and services are necessary for the Company to follow applicable laws, regulations and standards and to help maintain the safety of the workforce and the public. Also, included under Gas Operations Training and Development are activities and associated O&M expenses within the workgroup of Pipeline Maintenance Policy, which conducts a variety of operational services necessary for employees to complete their daily activities. These activities include identifying, developing, implementing, monitoring, and enhancing Company policies, procedures, tariffs, technologies, and/or reports used by Gas Transmission, Gas Distribution, and Storage.	SCG-05-R OR-24 to OR-33 WP 2S1001.000	SCG-05 WR-12 to WR-19 WP 2S1001.000
O&M	Gas System Integrity	Gas Operations Training & Development	Expand "Situation City" training props at Pico Rivera campus	No	N/A			

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Gas System Integrity	Gas Operations Training & Development	Employee Skills Training	No	N/A	Gas Operations Training and Development communicates and reinforces the SoCalGas safety culture and strives to instill a passion for success through participation in employee seminars, ongoing refresher training, and one-on-one employee meetings. Gas Operations Training and Development also consists of Field Technical Skills Training for employees in Gas Transmission, Gas Distribution, and Storage. These trainings and services are necessary for the Company to follow applicable laws, regulations and standards and to help maintain the safety of the workforce and the public. Also, included under Gas Operations Training and Development are activities and associated O&M expenses within the workgroup of Pipeline Maintenance Policy, which conducts a variety of operational services necessary for employees to complete their daily activities. These activities include identifying, developing, implementing, monitoring, and enhancing Company policies, procedures, tariffs, technologies, and/or reports used by Gas Transmission, Gas Distribution, and Storage.	SCG-05-R OR-24 to OR-33 WP 2SI001.000	SCG-05 WR-12 to WR-19 WP 2SI001.000
O&M	Gas System Integrity	Gas Operations Training & Development	Locate & Mark Activities	No	N/A	Gas Operations Training and Development communicates and reinforces the SoCalGas safety culture and strives to instill a passion for success through participation in employee seminars, ongoing refresher training, and one-on-one employee meetings. Gas Operations Training and Development also consists of Field Technical Skills Training for employees in Gas Transmission, Gas Distribution, and Storage. These trainings and services are necessary for the Company to follow applicable laws, regulations and standards and to help maintain the safety of the workforce and the public. Also, included under Gas Operations Training and Development are activities and associated O&M expenses within the workgroup of Pipeline Maintenance Policy, which conducts a variety of operational services necessary for employees to complete their daily activities. These activities include identifying, developing, implementing, monitoring, and enhancing Company policies, procedures, tariffs, technologies, and/or reports used by Gas Transmission, Gas Distribution, and Storage.	SCG-05-R OR-24 to OR-33 WP 2SI001.000	SCG-05 WR-12 to WR-19 WP 2SI001.000
O&M	Gas System Integrity	<b>Sub-Total Gas Operations Training &amp; Development</b>		Yes				
O&M	Gas System Integrity	Pipeline Safety & Compliance	Non-RAMP	No	N/A	Pipeline Safety and Compliance (PS&C) is responsible for supporting the Company to meet and exceed compliance in regulatory and safety regulations. PS&C oversees a robust compliance system that demonstrates SoCalGas' commitment to pipeline safety and shapes essential enhancements for our employees, processes, and technologies. PS&C consists of multiple interconnected departments and cost centers including: Pipeline Safety & Compliance Director; Pipeline Safety and Compliance Group; Major Projects Regulatory Compliance and Controls; Pipeline Safety and Oversight; Operator Qualification; and Quality and Risk.	SCG-05-R OR-34 to OR-37 WP 2SI002.000	SCG-27-2R-E NNM-21 to NNM-24 WP 2SM000.000
O&M	Gas System Integrity	Pipeline Safety & Compliance	Operational Compliance and Oversight	No	N/A	Pipeline Safety and Compliance (PS&C) is responsible for supporting the Company to meet and exceed compliance in regulatory and safety regulations. PS&C oversees a robust compliance system that demonstrates SoCalGas' commitment to pipeline safety and shapes essential enhancements for our employees, processes, and technologies. PS&C consists of multiple interconnected departments and cost centers including: Pipeline Safety & Compliance Director; Pipeline Safety and Compliance Group; Major Projects Regulatory Compliance and Controls; Pipeline Safety and Oversight; Operator Qualification; and Quality and Risk.	SCG-05-R OR-34 to OR-37 WP 2SI002.000	SCG-27-2R-E NNM-21 to NNM-24 WP 2SM000.000
O&M	Gas System Integrity	<b>Sub-Total Pipeline Safety &amp; Compliance</b>		Yes				
O&M	Gas System Integrity	Public Awareness	Non-RAMP	No	N/A			
O&M	Gas System Integrity	Public Awareness	Public Awareness	No	N/A	SoCalGas has developed and implemented a federally-mandated Public Awareness program, as prescribed in 49 CFR 192.616. The Public Awareness program contributes to enhanced public safety by providing certain risk mitigation measures. In adopting these Public Awareness program requirements, the Pipeline and Hazardous Materials Safety Administration (PHMSA) determined that "effective public awareness programs are vital to continued safe pipeline Operations" and that "such programs are an important factor in establishing communications with affected stakeholders, providing information necessary to enhance public awareness of pipelines, and communicating stakeholder roles relative to pipeline safety." The federal regulations directing the implementation of this program specifically require that the program include activities to educate the public, appropriate government organizations, and persons engaged in excavation-related activities regarding: (1) Use of the one-call notification system prior to excavation and other damage prevention activities; (2) possible hazards associated with unintended releases from a gas pipeline facility; (3) Physical indications that such a release may have occurred; (4) steps that should be taken for public safety in the event of a gas pipeline release; and (5) procedures for reporting such an event.	SCG-05-R OR-37 to OR-41 WP 2SI003.000	SCG-05 WR-38 to WR-43 WP 2SI003.000
O&M	Gas System Integrity	<b>Sub-Total Public Awareness</b>		Yes				

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Gas System Integrity	Asset Management	Non-RAMP	No	N/A	Asset and data management requires computer-based work management systems, document management systems with integration to geographic information systems (GIS), and technical computing management and support. Part of the activity performed in this workgroup is to maintain and upgrade software applications. These application systems and the management of field hardware and mobile applications, as well as supporting activities are necessary for the safe and efficient operation and maintenance of the gas infrastructure from receipt point through the Transmission, Distribution, and Storage pipeline networks, as well as to support Customer Services. This category includes work performed to support computer programs and systems, as well as field hardware and mobile applications not provided by the Company's Information Technology group.	SCG-05-R OR-41 to OR-43 WP 2SI004.000	SCG-21-R-E TLB/WJE-12 to TLB/WJE-13 WP 2IT017.000
O&M	Gas System Integrity	Asset Management	Operational Compliance and Oversight	No	N/A			
O&M	Gas System Integrity	Sub-Total Asset Management		Yes				
O&M	Gas System Integrity	Gas Contractor Controls	Contractor Management and Traffic Control	No	N/A	Gas Contractor Controls collaborates with Company and industry leaders and subject matter experts to formulate and promote policy related to construction contractor safety and pipeline safety/quality oversight. Activities include: establish, maintain, and expand construction contractor oversight program, including safety (occupational and process), to systematically review, assess, and enhance the management practices related to contractors; provide written guidance on inspection of workmanship on the pipeline; facilitate invoice approval process via online training and invoice submittal system user support; and construction fraud vigilance and training. As prescribed in the Agreement between SoCalGas and Utility Workers Union of America (AFL-CIO) and International Chemical Workers Union Council, SoCalGas must provide semi-annual reports to the union identifying contract employees doing represented work (excluding Distribution) and a report of Gas Distribution contract employment showing the ration of Company/contractor employees. Additional activities include: deliver pipeline construction fraud awareness training; author and maintain Company Gas Standards, forms, and workflows related to construction contractor oversight and associated information/records collection, including those related to California Public Utilities Code Section 141 Construction and Safety Standards; and develop Safety Congress presentation/content and facilitate quarterly meetings. Pipeline Safety Management System (PSMS) – Develop and implement a Company-wide PSMS API RP 1173, consistent with PHMSA's recommendation.	SCG-05-R OR-43 to OR-46 WP 2SI005.000	SCG-27-2R-E NNM-42 to NNM-54 WP 2SM003.000
O&M	Gas System Integrity	Safety Excellence Management System	Non-RAMP	No	N/A	Gas Contractor Controls collaborates with Company and industry leaders and subject matter experts to formulate and promote policy related to construction contractor safety and pipeline safety/quality oversight. Activities include: establish, maintain, and expand construction contractor oversight program, including safety (occupational and process), to systematically review, assess, and enhance the management practices related to contractors; provide written guidance on inspection of workmanship on the pipeline; facilitate invoice approval process via online training and invoice submittal system user support; and construction fraud vigilance and training. As prescribed in the Agreement between SoCalGas and Utility Workers Union of America (AFL-CIO) and International Chemical Workers Union Council, SoCalGas must provide semi-annual reports to the union identifying contract employees doing represented work (excluding Distribution) and a report of Gas Distribution contract employment showing the ration of Company/contractor employees. Additional activities include: deliver pipeline construction fraud awareness training; author and maintain Company Gas Standards, forms, and workflows related to construction contractor oversight and associated information/records collection, including those related to California Public Utilities Code Section 141 Construction and Safety Standards; and develop Safety Congress presentation/content and facilitate quarterly meetings. Pipeline Safety Management System (PSMS) – Develop and implement a Company-wide PSMS API RP 1173, consistent with PHMSA's recommendation.	N/A	SCG-27-2R-E NNM-25 to NNM-31 WP 2SM004.000
O&M	Gas System Integrity	Damage Prevention Strategies	Non-RAMP	No	N/A	Damage Prevention Strategies manages the damage prevention program focusing on preventing excavation damages to SoCalGas's buried pipelines. Damages resulting from excavation activity are the greatest threat to SoCalGas's pipeline infrastructure with potential for catastrophic consequences to public safety. SoCalGas is dedicated to mitigating the risk and associated hazards of excavation damages through the expansion of its Damage Prevention program by employing additional resources to proactively identify specific threats to its pipelines. The damage prevention program is mandated by the Code of Federal Regulations 192.614, California Government Code 4216, and California Code of Regulations Title 19 Division 4. The Damage Prevention Analyst Program works to reduce the number of third-party damages to gas facilities by identifying at risk excavating contractors and educating them on proper one-call and safe digging techniques.	SCG-05-R OR-56 to OR-59 WP 2200-2345.0000	SCG-05 WR-62 to WR-68 WP 2200-2623.000
O&M	Gas System Integrity	Policy Quality Assurance Cntl Effective	Non-RAMP	No	N/A	The Gas Standard Effectiveness Program is responsible for verifying observations that are conducted on Company operation standards to determine and document the adequacy and effectiveness of procedures. The staff group focuses on the quality assurance and controls required to effectively conduct observations on work being performed by employees, and documenting the observation and edits required for an adequate and effective procedure. The procedures include operating, maintenance, and emergency response procedures used by field operations in the Gas Distribution, Gas Transmission and Storage, Pipeline Integrity, and Gas Engineering organizations.	N/A	SCG-05 WR-53 to WR-54 WP 2200-0970.000
O&M	Gas System Integrity	Damage Prevention Program Management	Non-RAMP	No	N/A			

H. SoCalGas Pipeline Safety Enhancement Program (PSEP)  
i. SoCalGas PSEP O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Pipeline Safety Enhancement Plan	Pipeline Safety Enhancement Plan		Yes			8,898	21,827	50,473	44,086	41,342	166,626	60,582	62,182	63,675	64,908	66,400	317,748
O&M	Pipeline Safety Enhancement Plan	Pipeline Safety Enhancement Program	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	No	Program to be completed as soon as practicable	11	2,872	20,438	50,232	44,086	41,342	158,970	56,325	57,813	59,201	60,347	61,735	295,420
O&M	Pipeline Safety Enhancement Plan	Pipeline Safety Enhancement Program- PMO Costs	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	No	Program to be completed as soon as practicable	11	6,026	1,389	241	—	—	7,656	4,257	4,369	4,474	4,561	4,666	22,327

H. SoCalGas Pipeline Safety Enhancement Program (PSEP)  
i. SoCalGas PSEP O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Pipeline Safety Enhancement Plan	Pipeline Safety Enhancement Plan		Yes	(51,684)	(40,355)	(13,203)	(20,821)	(25,058)	(151,122)	-85%	-65%	-21%	-32%	-38%	-48%
O&M	Pipeline Safety Enhancement Plan	Pipeline Safety Enhancement Program	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	No	(53,453)	(37,375)	(8,969)	(16,260)	(20,393)	(136,450)	-95%	-65%	-15%	-27%	-33%	-46%
O&M	Pipeline Safety Enhancement Plan	Pipeline Safety Enhancement Program- PMO Costs	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	No	1,769	(2,981)	(4,233)	(4,561)	(4,666)	(14,672)	42%	-68%	-95%	-100%	-100%	-66%

H. SoCalGas Pipeline Safety Enhancement Program (PSEP)  
i. SoCalGas PSEP O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
O&M	Pipeline Safety Enhancement Plan	Pipeline Safety Enhancement Plan		Yes																										
O&M	Pipeline Safety Enhancement Plan	Pipeline Safety Enhancement Program	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	No	Miles	—	20	80	76	15	191	—	104	52	67	—	224	—	(85)	28	9	15	(33)	—%	(81)%	53%	14%	100%	(15)%	
O&M	Pipeline Safety Enhancement Plan	Pipeline Safety Enhancement Program-PMO Costs	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	No	The activities in the Project Management Office (PMO) include labor and non-labor activities that cannot be described as a single unit of measure. These activities support the successful implementation of PSEP and other large capital projects by ensuring compliance with regulatory requirements, facilitating and implementing continuous work improvement, and establishing controls across all PSEP and non-PSEP functional teams.																									

H. SoCalGas Pipeline Safety Enhancement Program (PSEP)  
i. SoCalGas PSEP O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Pipeline Safety Enhancement Plan	Pipeline Safety Enhancement Plan		Yes									
O&M	Pipeline Safety Enhancement Plan	Pipeline Safety Enhancement Program	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	No	Yes	Yes	The actual spending in 2023 is attributed to the completion of one previously deferred project (L2001W-D) and the planning of future projects. Additional projects including L1030 were planned to be completed in 2023 but were deferred because: 1) isolation of the line would impact SoCalGas's ability to maintain system reliability (one project); 2) extreme weather event [Hurricane Hilary] impacting operations (one project); and 3) project redesign was required due to community input (one project).	At the time of the 2019 GRC filing (which preceded the Commission's order for SoCalGas to modify the rate case cycle to include 2022 and 2023), no hydrotest projects were planned to go into construction in 2023. However, one previously deferred approximately 15-mile hydrotest project (L2001W-D) was completed in 2023.	Under (U)	Under (U)	Under (U)	Deferred	No
O&M	Pipeline Safety Enhancement Plan	Pipeline Safety Enhancement Program- PMO Costs	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	No	Yes	No	The spending variance is primarily due to a re-organization of PMO functions related to this workpaper into a large capital delivery organization that expands beyond PSEP projects. The re-organization necessitated the support of PMO employees to be spread to both PSEP and non-PSEP projects across the portfolio to reflect the expanded strategic support of the PMO; therefore, O&M costs are now either included in the projects themselves or applied to Company overhead pools.	N/A	Under (U)	Under (U)	Under (U)	Expanded	Yes

H. SoCalGas Pipeline Safety Enhancement Program (PSEP)  
i. SoCalGas PSEP O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Pipeline Safety Enhancement Plan	Pipeline Safety Enhancement Plan		Yes				
O&M	Pipeline Safety Enhancement Plan	Pipeline Safety Enhancement Program	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	No	N/A	This is the total cost of PSEP Hydrotest projects in the GRC. Costs have been normalized based on the hydrotest expenditures from 2019-2021. Detailed information at a project level is contained in the supplemental workpapers included as Exhibit No. SCG-15-WP-S.	SCG-15-R RDP- A-28 to RDP-A- 34 WP 2PS000.000	SCG-08 BGK-37 to BGK-44 WP 2PS000.000
O&M	Pipeline Safety Enhancement Plan	Pipeline Safety Enhancement Program- PMO Costs	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	No	The work is proceeding as planned. However, PMO O&M costs are now either included in the projects themselves or applied to Company overhead pools, resulting in lower than forecasted totals in this workpaper.	The PSEP Project Management Office (PMO) provides governance and management that enable the PSEP program to effectively achieve their objectives. The PMO ensures compliance with regulatory requirements, facilitates and implements continuous work improvement, and establishes controls across all PSEP functional teams. The PSEP PMO costs included in this forecast represents those PSEP organizational costs that are not charged to individual projects.	SCG-15-R RDP- A-36 to RDP-A- 38 WP 2PS000.001	SCG-08 BGK-37 to BGK-44 WP 2PS000.001



ii. SoCalGas PSEP Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
Capital	Pipeline Safety Enhancement Program	Pipeline Safety Enhancement Program		Yes			66,003	88,397	129,491	117,379	113,723	514,993	131,641	177,580	239,396	44,875	—	593,492
Capital	Pipeline Safety Enhancement Program	PSEP Pipeline Replacement - RAMP	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	No	Program to be completed as soon as practicable	11	27,389	37,764	65,044	36,301	38,167	204,665	32,416	66,428	126,551	9,341	—	234,737
Capital	Pipeline Safety Enhancement Program	PSEP Hydrotest Capital		No	Program to be completed as soon as practicable	11	771	7,919	21,544	20,943	22,288	73,465	4,088	20,412	27,747	24,185	—	76,431
Capital	Pipeline Safety Enhancement Program	PSEP Valve Projects - RAMP		No	Program to be completed as soon as practicable	11	37,843	42,346	42,903	60,135	53,268	236,495	83,971	80,128	74,317	—	—	238,416
Capital	Pipeline Safety Enhancement Program	PSEP PMO - RAMP		No	Program to be completed as soon as practicable	11	—	368	—	—	—	368	11,166	10,613	10,781	11,349	—	43,908

ii. SoCalGas PSEP Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
Capital	Pipeline Safety Enhancement Program	Pipeline Safety Enhancement Program		Yes	(65,638)	(89,183)	(109,905)	72,504	113,723	(78,499)	-50%	-50%	-46%	162%	100%	-13%
Capital	Pipeline Safety Enhancement Program	PSEP Pipeline Replacement - RAMP	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	No	(5,027)	(28,664)	(61,507)	26,960	38,167	(30,072)	-16%	-43%	-49%	289%	100%	-13%
Capital	Pipeline Safety Enhancement Program	PSEP Hydrotest Capital		No	(3,317)	(12,492)	(6,203)	(3,242)	22,288	(2,966)	-81%	-61%	-22%	-13%	100%	-4%
Capital	Pipeline Safety Enhancement Program	PSEP Valve Projects - RAMP		No	(46,128)	(37,782)	(31,414)	60,135	53,268	(1,921)	-55%	-47%	-42%	100%	100%	-1%
Capital	Pipeline Safety Enhancement Program	PSEP PMO - RAMP		No	(11,166)	(10,245)	(10,781)	(11,349)	—	(43,540)	-100%	-97%	-100%	-100%	—%	-99%

ii. SoCalGas PSEP Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
Capital	Pipeline Safety Enhancement Program	Pipeline Safety Enhancement Program		Yes																										
Capital	Pipeline Safety Enhancement Program	PSEP Pipeline Replacement - RAMP	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	No	Miles	1	4	10	2	0	18	1	6	23	—	—	30	0	(2)	(13)	2	0	(12)	7%	-31%	-57%	100%	100%	-41%	
Capital	Pipeline Safety Enhancement Program	PSEP Hydrotest Capital		No	The activities in Hydrotest Capital include labor and non-labor activities that can't be described as a single unit of measure. These activities are associated with the execution of hydrotest projects.																									
Capital	Pipeline Safety Enhancement Program	PSEP Valve Projects - RAMP		No	Installations	45	27	23	19	21	135	94	97	93	—	—	284	(49)	(70)	(70)	19	21	(149)	-52%	-72%	-75%	100%	100%	-52%	
Capital	Pipeline Safety Enhancement Program	PSEP PMO - RAMP		No	The activities in the Project Management Office (PMO) include labor and non-labor activities that can't be described as a single unit of measure. These activities support the successful implementation of PSEP and other large capital projects by ensuring compliance with regulatory requirements, facilitating and implementing continuous work improvement, and establishing controls across all PSEP and non-PSEP functional teams.																									

ii. SoCalGas PSEP Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
Capital	Pipeline Safety Enhancement Program	Pipeline Safety Enhancement Program		Yes									
Capital	Pipeline Safety Enhancement Program	PSEP Pipeline Replacement - RAMP	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	No	Yes	Yes	At the time of the 2019 GRC filing (which preceded the Commission's order for SoCalGas to modify the rate case cycle to include 2022 and 2023), no replacement projects were planned to go into construction in 2023. The costs incurred in 2023 were primarily attributed to 1 previously deferred project (SL36-9-09N Section 15 Replacement) and 4 accelerated projects included in the 2024 GRC (SL38-100, L133, SL 38-2101, SL 41-6000). A portion of the capital spend reported for replacement projects includes derate/abandonment projects. Other additional costs were incurred in 2023 for the planning of future replacement projects.	The unit variance is attributed to the 5 projects completed in 2023: 0.461 miles of SL36-9-09N Section 15 replaced, 0.008 miles of SL 38-100 replaced, 0.027 miles of L133 derated, 1.102 miles of SL38-2101 derated, and 7.964 miles of SL41-6000 abandoned.	Under (U)	Under (U)	Under (U)	Deferred	No
Capital	Pipeline Safety Enhancement Program	PSEP Hydrotest Capital		No	Yes	No	At the time of the 2019 GRC filing (which preceded the Commission's order for SoCalGas to modify the rate case cycle to include 2022 and 2023), no hydrotest projects were planned to go into construction in 2023. One project (L2001W-D) was completed in 2023. One previously deferred project (L1030) and four accelerated 2024 GRC projects (L1005, L404, SL 31-09, SL 31-09-C) were planned to be completed in 2023. However, the projects were deferred because: 1) isolation of the line would impact SoCalGas's ability to maintain system reliability (3 projects); 2) weather [Hurricane Hilary] impacting operations (1 project); and 3) project redesign was required due to community input (1 project). Other additional costs were incurred in 2023 for the planning of future projects.	N/A	Under (U)	Under (U)	Under (U)	Deferred	No
Capital	Pipeline Safety Enhancement Program	PSEP Valve Projects - RAMP		No	Yes	Yes	At the time of the 2019 GRC filing (which preceded the Commission's order for SoCalGas to modify the rate case cycle to include 2022 and 2023), no valve projects were planned in the 2019 GRC to go into construction in 2023. The overspend is attributed to the construction of 21 valve installation projects. 9 of the projects were previously deferred: 2 from 2019 and 7 from 2020. The remaining 12 projects that went into construction in 2023 were scoped subsequent to the SoCalGas 2019 GRC application, consistent with the valve enhancement plan as discussed therein. Additional costs were incurred in 2023 for the planning of future valve installation projects.	At the time of the 2019 GRC filing (which preceded the Commission's order for SoCalGas to modify the rate case cycle to include 2022 and 2023), no valve projects were planned in the 2019 GRC to go into construction in 2023. The unit variance is attributed to the construction of 21 valve projects that went into construction in 2023.	Under (U)	Under (U)	Under (U)	Deferred	No
Capital	Pipeline Safety Enhancement Program	PSEP PMO - RAMP		No	No	No	N/A	N/A	Under (U)	Under (U)	Under (U)	Proceeding as Planned	No

ii. SoCalGas PSEP Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
Capital	Pipeline Safety Enhancement Program	Pipeline Safety Enhancement Program		Yes				
Capital	Pipeline Safety Enhancement Program	PSEP Pipeline Replacement - RAMP	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	No	N/A	This is the total cost of PSEP Replacement projects in the GRC. Detailed information at a project level is contained in the supplemental workpapers included as Exhibit No. SCG-15-WP-S-R	SCG-15-R RDP-A-40 to RDP-A-47 WP 00569A	SCG-08 BGK-25 to BGK-36 WP 00512B, 00512C
Capital	Pipeline Safety Enhancement Program	PSEP Hydrotest Capital		No	N/A	This is the total cost of the capital component of PSEP Hydrotest projects in the GRC. Detailed information at a project level is contained in the supplemental workpapers included as Exhibit No. SCG-15-WP-S.	SCG-15-R RDP-A-28 to RDP-A-33 WP 2PS000.000	SCG-08 BGK-37 to BGK-44 WP 2PS000.000
Capital	Pipeline Safety Enhancement Program	PSEP Valve Projects - RAMP		No	N/A	Continued implementation of the Valve Enhancement Plan included in the overall PSEP approved by the Commission in D.14-06-007. We expect to complete PSEP Valve projects in each of the GRC years at an annual cost of \$82 million. Detailed information at a project level is contained in the supplemental workpapers included as Appendix A of SCG-15.	SCG-15-R RDP-A-48 WP 00569B	SCG-08 BGK-25 to BGK-36 WP 00571A
Capital	Pipeline Safety Enhancement Program	PSEP PMO - RAMP		No	N/A			

F. SoCalGas Gas Transmission  
i. SoCalGas Gas Transmission Operations O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Gas Transmission	Gas Transmission		Yes	On-going		32,233	35,103	39,242	37,862	37,642	182,081	33,217	34,094	34,912	35,588	36,406	174,217
O&M	Gas Transmission	Director Gas Transmission - USS	Non-RAMP	No	On-going	Annual	246	300	183	239	255	1,223	258	265	271	277	283	1,354
O&M	Gas Transmission	Field Operations Managers - USS	Non-RAMP	No	On-going	Annual	307	297	376	193	122	1,295	452	464	475	484	495	2,369
O&M	Gas Transmission	Technical Services Manager - USS	Non-RAMP	No	On-going	Annual	299	395	269	37	—	1,001	384	395	404	412	421	2,016
O&M	Gas Transmission	Pipeline Operations	Non-RAMP	No	On-going	Annual	1,354	3,905	10,505	11,008	12,085	38,857	10,771	11,055	11,320	11,539	11,805	56,490
O&M	Gas Transmission	Pipeline Operations	Maintenance - Valve, Meters, Pipe, PLS, Regulators, etc.	No	On-going	Annual	13,132	10,842	7,710	7,204	6,872	45,760	4,354	4,469	4,576	4,665	4,772	22,836
O&M	Gas Transmission	Pipeline Operations	Corrosion Control Operation - Cathodic Protection	No	On-going	Annual	1,387	1,602	850	1,144	1,212	6,195	271	278	285	290	297	1,421
O&M	Gas Transmission	Pipeline Operations	Odorization of Natural Gas	No	On-going	Annual	570	1,044	553	221	564	2,952	108	111	114	116	118	566
O&M	Gas Transmission	Pipeline Operations	Training and Qualification Of Personnel	No	1	Canceled	44	—	—	—	—	44	188	193	198	201	206	986
O&M	Gas Transmission	Sub-Total Pipeline Operations		Yes			16,487	17,393	19,617	19,577	20,733	93,808	15,692	16,106	16,493	16,812	17,198	82,300
O&M	Gas Transmission	Compressor Station Operations	Non-RAMP	No	On-going	Annual	9,960	10,736	11,244	12,153	12,836	56,929	10,799	11,084	11,351	11,570	11,836	56,641
O&M	Gas Transmission	Technical Services	Non-RAMP	No	On-going	Annual	319	259	1,484	1,834	1,123	5,019	314	322	330	336	344	1,645
O&M	Gas Transmission	Technical Services	Class Location (Hydrotest)	No	On-going	Annual	—	—	—	321	375	696	1,545	1,586	1,624	1,655	1,693	8,103
O&M	Gas Transmission	Technical Services	Engineering, Supervision, Oversight, and Compliance	No	On-going	Annual	587	820	1,055	748	1,103	4,313	1,319	1,354	1,386	1,413	1,446	6,918
O&M	Gas Transmission	Technical Services	ROW - Maintenance & Routine	No	On-going	Annual	2,501	4,903	5,015	2,759	1,094	16,271	1,611	1,654	1,693	1,726	1,766	8,449
O&M	Gas Transmission	Technical Services	Right of Way - Maintenance of access roads	No	1	2	1,527	—	—	—	—	1,527	—	—	—	—	—	—
O&M	Gas Transmission	Technical Services	Class Location Mitigation	No	On-going	Annual	—	—	—	—	—	—	843	865	886	903	924	4,421
O&M	Gas Transmission	Sub-Total Technical Services		Yes			4,934	5,982	7,554	5,662	3,695	27,826	5,632	5,780	5,919	6,034	6,172	29,537

F. SoCalGas Gas Transmission  
i. SoCalGas Gas Transmission Operations O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Gas Transmission	Gas Transmission		Yes	(983)	1,009	4,330	2,274	1,235	7,864	-3%	3%	12%	6%	3%	5%
O&M	Gas Transmission	Director Gas Transmission - USS	Non-RAMP	No	(12)	35	(89)	(37)	(28)	(131)	-5%	13%	-33%	-13%	-10%	-10%
O&M	Gas Transmission	Field Operations Managers - USS	Non-RAMP	No	(145)	(167)	(99)	(291)	(373)	(1,074)	-32%	-36%	-21%	-60%	-75%	-45%
O&M	Gas Transmission	Technical Services Manager - USS	Non-RAMP	No	(85)	1	(135)	(375)	(421)	(1,016)	-22%	0%	-33%	-91%	-100%	-50%
O&M	Gas Transmission	Pipeline Operations	Non-RAMP	No	(9,417)	(7,150)	(815)	(531)	280	(17,633)	-87%	-65%	-7%	-5%	2%	-31%
O&M	Gas Transmission	Pipeline Operations	Maintenance - Valve, Meters, Pipe, PLS, Regulators, etc.	No	8,778	6,373	3,133	2,539	2,100	22,924	202%	143%	68%	54%	44%	100%
O&M	Gas Transmission	Pipeline Operations	Corrosion Control Operation - Cathodic Protection	No	1,116	1,324	565	854	915	4,773	412%	476%	198%	294%	308%	336%
O&M	Gas Transmission	Pipeline Operations	Odorization of Natural Gas	No	462	933	439	105	446	2,385	428%	842%	387%	91%	376%	421%
O&M	Gas Transmission	Pipeline Operations	Training and Qualification Of Personnel	No	(144)	(193)	(198)	(201)	(206)	(942)	-77%	-100%	-100%	-100%	-100%	-96%
O&M	Gas Transmission	<b>Sub-Total Pipeline Operations</b>		Yes	795	1,288	3,125	2,766	3,534	11,507	5%	8%	19%	16%	21%	14%
O&M	Gas Transmission	Compressor Station Operations	Non-RAMP	No	(839)	(349)	(107)	583	1,000	288	-8%	-3%	-1%	5%	8%	1%
O&M	Gas Transmission	Technical Services	Non-RAMP	No	5	(63)	1,154	1,498	780	3,374	2%	-20%	350%	446%	227%	205%
O&M	Gas Transmission	Technical Services	Class Location (Hydrotest)	No	(1,545)	(1,586)	(1,624)	(1,334)	(1,318)	(7,407)	-100%	-100%	-100%	-81%	-78%	-91%
O&M	Gas Transmission	Technical Services	Engineering, Supervision, Oversight, and Compliance	No	(732)	(534)	(331)	(665)	(343)	(2,605)	-55%	-39%	-24%	-47%	-24%	-38%
O&M	Gas Transmission	Technical Services	ROW - Maintenance & Routine	No	890	3,249	3,322	1,033	(672)	7,822	55%	196%	196%	60%	-38%	93%
O&M	Gas Transmission	Technical Services	Right of Way - Maintenance of access roads	No	1,527	—	—	—	—	1,527	100%	—%	—%	—%	—%	100%
O&M	Gas Transmission	Technical Services	Class Location Mitigation	No	(843)	(865)	(886)	(903)	(924)	(4,421)	-100%	-100%	-100%	-100%	-100%	-100%
O&M	Gas Transmission	<b>Sub-Total Technical Services</b>		Yes	(698)	201	1,634	(372)	(2,477)	(1,711)	-12%	3%	28%	-6%	-40%	-6%

F. SoCalGas Gas Transmission  
i. SoCalGas Gas Transmission Operations O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance		
O&M	Gas Transmission	Gas Transmission		Yes																											
O&M	Gas Transmission	Director Gas Transmission - USS	Non-RAMP	No	FTE	2	2	2	2	2	10	2	2	2	2	2	10	—	—	—	—	—	—	—%	—%	—%	—%	—%	—%	—%	
O&M	Gas Transmission	Field Operations Managers - USS	Non-RAMP	No	FTE	2	2	4	4	4	16	4	4	4	4	4	20	(2)	(2)	—	—	—	(4)	-50%	-50%	—%	—%	—%	—%	-20%	
O&M	Gas Transmission	Technical Services Manager - USS	Non-RAMP	No	FTE	3	3	3	3	3	15	3	3	3	3	3	15	—	—	—	—	—	—	—%	—%	—%	—%	—%	—%	—%	
O&M	Gas Transmission	Pipeline Operations	Non-RAMP	No	This workpaper is unable to identify a single unit of measure due to the variety of Pipeline Maintenance activities. The activities contained within this workpaper include operating and maintaining equipment at pipeline receipt points, valve control stations, major customer delivery custody-transfer points, and all associated monitoring, metering, and control facilities, odorization equipment, and real-time operating data telemetry communications. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																										
O&M	Gas Transmission	Pipeline Operations	Maintenance - Valve, Meters, Pipe, PLS, Regulators, etc.	No	This workpaper is unable to identify a single unit of measure because there are many Pipeline Maintenance activities which consist of leak surveys, pipeline patrol, valve inspections, meter inspections, vault inspections and bridge & span inspections on transmission pipelines. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																										
O&M	Gas Transmission	Pipeline Operations	Corrosion Control Operation - Cathodic Protection	No	This workpaper is unable to identify a single unit of measure because there are many Pipeline Maintenance activities which consist of annual electrolysis test station (ETS) reads, bi-monthly current source inspections and annual rectifier maintenance on transmission pipelines. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																										
O&M	Gas Transmission	Pipeline Operations	Odorization of Natural Gas	No	The odorization of the natural gas is required by 49CFR § 192.625. Odorant is added to natural gas as a safety precaution reducing risk that leaks will go undetected and gas will accumulate to hazardous levels. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																										
O&M	Gas Transmission	Pipeline Operations	Training and Qualification Of Personnel	No	Training and Qualification of personnel is a regulatory requirement before an employee can perform any work in that job function. Training and Qualification occur in a different Department (Gas Operations & Development) outside of Gas Transmission. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																										
O&M	Gas Transmission	Sub-Total Pipeline Operations		Yes																											
O&M	Gas Transmission	Compressor Station Operations	Non-RAMP	No	This workpaper is unable to identify a single unit of measure due to the variety of work that takes place in Compressor Station Operation activities. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																										
O&M	Gas Transmission	Technical Services	Non-RAMP	No	FTE	2	2	2	3	3	12	3	3	3	3	3	15	(1)	(1)	(1)	—	—	(3)	-33%	-33%	-33%	—%	—%	—%	-20%	
O&M	Gas Transmission	Technical Services	Class Location (Hydrotest)	No	Class location changes are driven by commercial, residential and/or industrial development that occur along transmission pipeline right-of-way. The variety of work in this category makes it infeasible to identify a single unit of measurement.																										
O&M	Gas Transmission	Technical Services	Engineering, Supervision, Oversight, and Compliance	No	FTE	7	7	11	6	7	38	11	11	11	11	11	55	(4)	(4)	—	(5)	(4)	(17)	-36%	-36%	—%	-45%	-36%	-31%		
O&M	Gas Transmission	Technical Services	ROW - Maintenance & Routine	No	Right of Way (ROW) work is driven by commercial, residential, and/or industrial development that occur along transmission pipeline rights-of-way. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																										
O&M	Gas Transmission	Technical Services	Right of Way - Maintenance of access roads	No	Right of Way (ROW) maintenance of access roads work is driven by commercial, residential, and/or industrial development that occur along transmission pipeline rights-of-way. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																										
O&M	Gas Transmission	Technical Services	Class Location Mitigation	No	Class location changes are driven by commercial, residential, and/or industrial development that occur along transmission pipeline rights-of-way. Pipeline segments operating in an area where the class location changes may require remediation. Pipeline segments operating in an area where the class location has changed may require remediation under existing regulations. For example, one form of remediation under the regulations is hydrotesting the existing pipeline to a higher test pressure than it was originally tested to when it was installed. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																										
O&M	Gas Transmission	Sub-Total Technical Services		Yes																											



F. SoCalGas Gas Transmission  
i. SoCalGas Gas Transmission Operations O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Gas Transmission	Gas Transmission		Yes									
O&M	Gas Transmission	Director Gas Transmission - USS	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Gas Transmission	Field Operations Managers - USS	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Gas Transmission	Technical Services Manager - USS	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Other	Yes
O&M	Gas Transmission	Pipeline Operations	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Gas Transmission	Pipeline Operations	Maintenance - Valve, Meters, Pipe, PLS, Regulators, etc.	No	Yes	No	The variance in this category is due to higher than forecasted RAMP activities that included automated valve maintenance, increased need for corrosion control for spans, and maintenance of increasingly complex pressure limiting station equipment.	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Gas Transmission	Pipeline Operations	Corrosion Control Operation - Cathodic Protection	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Gas Transmission	Pipeline Operations	Odorization of Natural Gas	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Gas Transmission	Pipeline Operations	Training and Qualification Of Personnel	No	No	No	N/A	N/A	Under (U)	Under (U)	Under (U)	Canceled	No
O&M	Gas Transmission	Sub-Total Pipeline Operations		Yes	Yes								No
O&M	Gas Transmission	Compressor Station Operations	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Gas Transmission	Technical Services	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Gas Transmission	Technical Services	Class Location (Hydrotest)	No	Yes	No	The class location (hydrotest) variance is due to the deferral of the L1005 hydrotest to increase operational efficiency by aligning with work in other departments. This was partially offset by the completion of the L4000 hydrotest instead.	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Gas Transmission	Technical Services	Engineering, Supervision, Oversight, and Compliance	No	No	Yes	N/A	The original RAMP activity under this workpaper (i.e., 2GT002.000 - Technical Services) included Operator Qualification which has not been an activity performed by Technical Services since 2017, thus one FTE was eliminated from the actuals. The reduction of three more FTEs can be attributed to a shift in support to Tech Services, ROW Maintenance and Routine.	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Gas Transmission	Technical Services	ROW - Maintenance & Routine	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Gas Transmission	Technical Services	Right of Way - Maintenance of access roads	No	No	No	N/A	N/A	Under (U)	Under (U)	Over (O)	Completed	No
O&M	Gas Transmission	Technical Services	Class Location Mitigation	No	No	No	N/A	N/A	Under (U)	Under (U)	Under (U)	Canceled	No
O&M	Gas Transmission	Sub-Total Technical Services		Yes	Yes								No

F. SoCalGas Gas Transmission  
i. SoCalGas Gas Transmission Operations O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Gas Transmission	Gas Transmission		Yes				
O&M	Gas Transmission	Director Gas Transmission - USS	Non-RAMP	No	N/A			
O&M	Gas Transmission	Field Operations Managers - USS	Non-RAMP	No	N/A			
O&M	Gas Transmission	Technical Services Manager - USS	Non-RAMP	No	This cost center has been closed out and costs have shifted to Pipeline Operations.			
O&M	Gas Transmission	Pipeline Operations	Non-RAMP	No	N/A			
O&M	Gas Transmission	Pipeline Operations	Maintenance - Valve, Meters, Pipe, PLS, Regulators, etc.	No	N/A	Gas Transmission Pipelines Operations is responsible for the safe day-to-day operation and maintenance of gas transmission pipeline facilities and related infrastructure. This includes, but is not limited to, leak surveys, valve inspections, cathodic protection systems, locate & mark, stand-by, and maintaining equipment at pipeline receipt points that includes odorization equipment and real-time operating data telemetry communication equipment.	SCG-06 EAM-9 to EAM-10 WP 2GT000.000	SCG-06-2R-E CHB-17 to CHB-23 WP 2GT000.000
O&M	Gas Transmission	Pipeline Operations	Corrosion Control Operation - Cathodic Protection	No	N/A			
O&M	Gas Transmission	Pipeline Operations	Odorization of Natural Gas	No	N/A			
O&M	Gas Transmission	Pipeline Operations	Training and Qualification Of Personnel	No	N/A			
O&M	Gas Transmission	Sub-Total Pipeline Operations		Yes				
O&M	Gas Transmission	Compressor Station Operations	Non-RAMP	No	N/A			
O&M	Gas Transmission	Technical Services	Non-RAMP	No	N/A			
O&M	Gas Transmission	Technical Services	Class Location (Hydrotest)	No	N/A	The Technical Services function includes the activities of engineering, instrumentation, control, project support, and plan file review in support of the day-to-day operations and maintenance of the gas transmission system. Responsibilities include right-of-way maintenance, providing on-site technical expertise to Pipeline and Compression Operations field personnel, and troubleshooting technical issues for both capital and O&M projects.	SCG-06 EAM-16 to EAM-17 WP 2GT002.000	SCG-06-2R-E CHB-29 to CHB-32 WP 2GT003.000
O&M	Gas Transmission	Technical Services	Engineering, Supervision, Oversight, and Compliance	No	N/A	The Technical Services function includes the activities of engineering, instrumentation, control, project support, and plan file review in support of the day-to-day operations and maintenance of the gas transmission system. Responsibilities include right-of-way maintenance, providing on-site technical expertise to Pipeline and Compression Operations field personnel, and troubleshooting technical issues for both capital and O&M projects.	SCG-06 EAM-16 to EAM-17 WP 2GT002.000	SCG-06-2R-E CHB-29 to CHB-32 WP 2GT003.000
O&M	Gas Transmission	Technical Services	ROW - Maintenance & Routine	No	N/A			
O&M	Gas Transmission	Technical Services	Right of Way - Maintenance of access roads	No	N/A			
O&M	Gas Transmission	Technical Services	Class Location Mitigation	No	N/A			
O&M	Gas Transmission	Sub-Total Technical Services		Yes				

i. SoCalGas Gas Transmission Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
Capital	Gas Transmission	Gas Transmission		Yes			227,307	234,487	257,785	231,481	198,473	1,149,532	202,285	116,212	118,050	119,443	121,989	677,979
Capital	Gas Transmission	Gas Transmission New Pipeline	Non-RAMP	No	On-going	Annual	11,490	3,827	658	162	936	17,072	8,354	5,691	5,781	5,849	5,974	31,649
Capital	Gas Transmission	Gas Transmission Relocations	Non-RAMP	No	On-going	Annual	16,667	24,944	10,741	7,555	7,006	66,912	6,601	8,561	8,696	8,799	8,986	41,643
Capital	Gas Transmission	GT M&R Stations	Non-RAMP	No	On-going	Annual	37,756	27,197	72,696	58,540	44,646	240,836	21,428	17,893	18,176	18,390	18,782	94,669
Capital	Gas Transmission	GT Auxiliary Equipment	Non-RAMP	No	On-going	Annual	2,741	6,002	7,446	4,922	3,566	24,677	4,922	3,612	3,670	3,713	3,792	19,709
Capital	Gas Transmission	GT Auxiliary Equipment - RAMP	Operational Resiliency	No	On-going	Annual	—	—	—	—	—	—	6,880	3,167	3,217	3,255	3,324	19,842
Capital	Gas Transmission	GT Auxiliary Equipment - RAMP	Physical security measures put in place for the security/safety of employees and infrastructure	No	On-going	Annual	361	1,011	2,960	470	1,137	5,939	2,172	1,000	1,016	1,028	1,050	6,266
Capital	Gas Transmission	GT Auxiliary Equipment - RAMP	Strain Gauge Installation Projects	No	On-going	Annual	99	35	16	5	—	155	453	299	304	308	314	1,678
Capital	Gas Transmission	<b>Sub-Total GT Auxiliary Equipment</b>		Yes			<b>3,201</b>	<b>7,048</b>	<b>10,422</b>	<b>5,397</b>	<b>4,703</b>	<b>30,771</b>	<b>14,427</b>	<b>8,079</b>	<b>8,206</b>	<b>8,303</b>	<b>8,480</b>	<b>47,495</b>
Capital	Gas Transmission	Gas Transmission Freeway Relocations	Non-RAMP	No	On-going	Annual	1,950	815	25	1,489	5,348	9,627	100	22	22	22	23	188
Capital	Gas Transmission	Gas Transmission Cathodic Protection - RAMP	Requirements for corrosion control	No	On-going	Annual	7,296	12,327	12,495	8,121	9,079	49,317	7,534	4,302	4,370	4,422	4,516	25,144

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
Capital	Gas Transmission	GT Compressor Stations (BC 305)	Non-RAMP	No	On-going	Annual	0	—	279	—	359	639	218	210	214	216	221	1,080
Capital	Gas Transmission	GT Compressor Stations (BC 315)	Non-RAMP	No	On-going	Annual	9,518	12,239	25,429	17,999	20,086	85,271	12,616	11,262	11,440	11,575	11,822	58,716
Capital	Gas Transmission	GT Compressor Stations (BC 325)	Non-RAMP	No	On-going	Annual	—	—	—	—	—	—	1,452	1,667	1,694	1,714	1,750	8,277
Capital	Gas Transmission	GT Compressor Stations (BC 335)	Non-RAMP	No	On-going	Annual	102,705	113,345	57,818	27,699	38,074	339,641	117,676	39,978	40,611	41,089	41,965	281,319
<b>Capital</b>	<b>Gas Transmission</b>	<b>Sub-Total Compressor Stations</b>		<b>Yes</b>			<b>112,223</b>	<b>125,583</b>	<b>83,527</b>	<b>45,697</b>	<b>58,519</b>	<b>425,550</b>	<b>131,962</b>	<b>53,118</b>	<b>53,958</b>	<b>54,595</b>	<b>55,759</b>	<b>349,392</b>
Capital	Gas Transmission	GT Replacement Pipelines - RAMP	Gas Transmission	No	On-going	Annual	32,265	29,296	55,042	91,107	73,048	280,758	11,880	18,547	18,840	19,063	19,469	87,798
Capital	Gas Transmission	MP PL Rpls / Quality/Economic Driven	Non-RAMP	No	On-going	Annual	432	134	(200)	4,079	1,375	5,820	—	—	—	—	—	—
Capital	Gas Transmission	Ventura Compressor Station Modernization	Non-RAMP	No	12	9	3,688	3,316	12,339	7,992	(6,942)	20,393	—	—	—	—	—	—
Capital	Gas Transmission	Gas Transmission - Software	Non-RAMP	No	On-going	Annual	—	—	40	1,342	755	2,137	—	—	—	—	—	—
Capital	Gas Transmission	GT & Stor Cap Tools / Quality/Economic Driven	Non-RAMP	No	1	1	340	—	—	—	—	340	—	—	—	—	—	—

i. SoCalGas Gas Transmission Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
Capital	Gas Transmission	Gas Transmission		Yes	25,022	118,275	139,734	112,038	76,484	471,553	12%	102%	118%	94%	63%	70%
Capital	Gas Transmission	Gas Transmission New Pipeline	Non-RAMP	No	3,136	(1,864)	(5,123)	(5,688)	(5,038)	(14,578)	38%	-33%	-89%	-97%	-84%	-46%
Capital	Gas Transmission	Gas Transmission Relocations	Non-RAMP	No	10,065	16,384	2,044	(1,244)	(1,980)	25,269	152%	191%	24%	-14%	-22%	61%
Capital	Gas Transmission	GT M&R Stations	Non-RAMP	No	16,328	9,304	54,520	40,150	25,864	146,166	76%	52%	300%	218%	138%	154%
Capital	Gas Transmission	GT Auxiliary Equipment	Non-RAMP	No	(2,181)	2,390	3,776	1,209	(226)	4,968	-44%	66%	103%	33%	-6%	25%
Capital	Gas Transmission	GT Auxiliary Equipment - RAMP	Operational Resiliency	No	(6,880)	(3,167)	(3,217)	(3,255)	(3,324)	(19,842)	-100%	-100%	-100%	-100%	-100%	-100%
Capital	Gas Transmission	GT Auxiliary Equipment - RAMP	Physical security measures put in place for the security/safety of employees and infrastructure	No	(1,811)	11	1,944	(558)	87	(327)	-83%	1%	191%	-54%	8%	-5%
Capital	Gas Transmission	GT Auxiliary Equipment - RAMP	Strain Gauge Installation Projects	No	(354)	(264)	(288)	(303)	(314)	(1,523)	-78%	-88%	-95%	-98%	-100%	-91%
Capital	Gas Transmission	Sub-Total GT Auxiliary Equipment		Yes	(11,226)	(1,031)	2,216	(2,906)	(3,777)	(16,724)	-78%	-13%	27%	-35%	-45%	-35%
Capital	Gas Transmission	Gas Transmission Freeway Relocations	Non-RAMP	No	1,850	793	3	1,467	5,325	9,439	1858%	3659%	15%	6584%	23405%	5013%
Capital	Gas Transmission	Gas Transmission Cathodic Protection - RAMP	Requirements for corrosion control	No	(238)	8,025	8,125	3,699	4,563	24,173	-3%	187%	186%	84%	101%	96%

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
Capital	Gas Transmission	GT Compressor Stations (BC 305)	Non-RAMP	No	(218)	(210)	66	(216)	138	(441)	-100%	-100%	31%	-100%	63%	-41%
Capital	Gas Transmission	GT Compressor Stations (BC 315)	Non-RAMP	No	(3,099)	976	13,989	6,424	8,264	26,554	-25%	9%	122%	55%	70%	45%
Capital	Gas Transmission	GT Compressor Stations (BC 325)	Non-RAMP	No	(1,452)	(1,667)	(1,694)	(1,714)	(1,750)	(8,277)	-100%	-100%	-100%	-100%	-100%	-100%
Capital	Gas Transmission	GT Compressor Stations (BC 335)	Non-RAMP	No	(14,971)	73,366	17,208	(13,391)	(3,891)	58,322	-13%	184%	42%	-33%	-9%	21%
<b>Capital</b>	<b>Gas Transmission</b>	<b>Sub-Total Compressor Stations</b>		<b>Yes</b>	<b>(19,739)</b>	<b>72,465</b>	<b>29,569</b>	<b>(8,897)</b>	<b>2,761</b>	<b>76,158</b>	<b>-15%</b>	<b>136%</b>	<b>55%</b>	<b>-16%</b>	<b>5%</b>	<b>22%</b>
Capital	Gas Transmission	GT Replacement Pipelines - RAMP	Gas Transmission	No	20,386	10,749	36,202	72,044	53,579	192,960	172%	58%	192%	378%	275%	220%
Capital	Gas Transmission	MP PL Rpls / Quality/Economic Driven	Non-RAMP	No	432	134	(200)	4,079	1,375	5,820	100%	100%	100%	100%	100%	100%
Capital	Gas Transmission	Ventura Compressor Station Modernization	Non-RAMP	No	3,688	3,316	12,339	7,992	(6,942)	20,393	100%	100%	100%	100%	100%	100%
Capital	Gas Transmission	Gas Transmission - Software	Non-RAMP	No	—	—	40	1,342	755	2,137	—%	—%	100%	100%	100%	100%
Capital	Gas Transmission	GT & Stor Cap Tools / Quality/Economic Driven	Non-RAMP	No	340	—	—	—	—	340	100%	—%	—%	—%	—%	100%

i. SoCalGas Gas Transmission Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
Capital	Gas Transmission	Gas Transmission		Yes																										
Capital	Gas Transmission	Gas Transmission New Pipeline	Non-RAMP	No	The activities tracked within this category are for projects associated with the installation of new pipeline to provide increased resiliency, capacity, and reliability. The scope of work is project-specific and varies significantly from project to project (e.g., pipe size, location, valves, fittings). Accordingly, project costs vary significantly from project to project as well. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Gas Transmission	Gas Transmission Relocations	Non-RAMP	No	The activities tracked within this category are for projects related to the modification and relocation of transmission pipelines to accommodate planned private property development, municipal public works and street improvement projects, and other work required due to right-of-way agreements, contract, and franchise requirements. The scope of work is project-specific and varies significantly from project to project (e.g., pipe size, location, installation method). Accordingly, project costs vary significantly from project to project as well. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Gas Transmission	GT M&R Stations	Non-RAMP	No	The activities tracked within this category are for projects associated with installing and rebuilding meter set assemblies and pressure limiting stations. The scope of work is project-specific and varies significantly from project to project (e.g., station piping, valves, regulators, control and communications equipment, shelters, enclosure, etc.). Accordingly, project costs vary significantly from project to project as well. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Gas Transmission	GT Auxiliary Equipment	Non-RAMP	No	The activities tracked within this category are for projects associated with the installation of equipment to support transmission system operations that are not assigned to any other Budget Code. The scope of work is project-specific and varies significantly from project to project (i.e., installation of telemetric and recording equipment, auxiliary water, electrical, paving, moisture analyzer, pipe supports, methane sensing, etc.) Accordingly, project costs vary significantly from project to project as well. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Gas Transmission	GT Auxiliary Equipment - RAMP	Operational Resiliency	No	The activities tracked within this category are for projects to enhance operational flexibility through the installation of supportive pipeline system capabilities, backup equipment and resources, resumption planning and exercises. The variety of work activities in this category makes it infeasible to identify a single unit of measurement. There were no projects completed in 2023 due to limited studies to identify where additional pipelines would provide needed flexibility to the pipeline system.																									
Capital	Gas Transmission	GT Auxiliary Equipment - RAMP	Physical security measures put in place for the security/safety of employees and infrastructure	No	The activities tracked within this category are for projects associated with installations of physical security upgrades put in place for the security/safety of people and infrastructure. The scope of work is project-specific and varies significantly from project to project (i.e., security cameras, lighting, gates, locks, and equipment upgrades). Accordingly, project costs vary significantly from project to project as well. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Gas Transmission	GT Auxiliary Equipment - RAMP	Strain Gauge Installation Projects	No	Strain Gauge Projects	2	1	1	1	1	6	1	1	1	1	1	5	1	—	—	—	—	1	100%	—%	—%	—%	—%	20%	
Capital	Gas Transmission	Sub-Total GT Auxiliary Equipment		Yes													—						—							
Capital	Gas Transmission	Gas Transmission Freeway Relocations	Non-RAMP	No	The activities tracked within this category are for projects associated with relocation of transmission pipelines to accommodate freeway construction. The scope of work is externally driven, project-specific and varies significantly from project to project (i.e., pipe size, location, installation method, etc.). Accordingly, project costs vary significantly from project to project as well. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Gas Transmission	Gas Transmission Cathodic Protection - RAMP	Requirements for corrosion control	No	The activities tracked within this category are for projects associated with the installation of cathodic protection equipment used to preserve transmission pipelines, such as surface anodes, rectifiers, and cathodic protection stations. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
Capital	Gas Transmission	GT Compressor Stations (BC 305)	Non-RAMP	No	The activities tracked within this category are for projects associated with the replacement of compression station equipment. The scope of work is project-specific and varies significantly from project to project (i.e., automated data gathering systems, replacing outdated technology, emissions monitoring, catalyst, and combustion technologies, etc.) Accordingly, project costs vary significantly from project to project as well. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Gas Transmission	GT Compressor Stations (BC 315)	Non-RAMP	No	The activities tracked within this category are for projects associated with the replacement of compression station equipment to comply with environmental regulations. The scope of work is project-specific and varies significantly from project to project (i.e., replace engine components and controls, emissions monitoring, reporting equipment, etc.) Accordingly, project costs vary significantly from project to project as well. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Gas Transmission	GT Compressor Stations (BC 325)	Non-RAMP	No	The activities tracked within this category are for projects associated with the installation and replacement of compressor station equipment used in operating the transmission system. The scope of work is project-specific and varies significantly from project to project (i.e., engine components and controls). Accordingly, project costs vary significantly from project to project as well. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Gas Transmission	GT Compressor Stations (BC 335)	Non-RAMP	No	The Blythe Compressor Station Modernization project consists of a variety of activities including installation of two new compressors and a compressor building (Plant 4), rebuilding five existing compressors and installing clean burn emission reduction technology (Plant 2), installation of a new operations building, new electric generators, cooling tower apparatus, underground and aboveground pipelines, and other infrastructure. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Gas Transmission	<b>Sub-Total Compressor Stations</b>		Yes																										
Capital	Gas Transmission	GT Replacement Pipelines - RAMP	Gas Transmission	No	The activities tracked within this category are for projects associated with the replacement of pipelines to address conditions that could affect the integrity of the pipeline, such as leaks, poor coating, erosion, etc., as well as changes to the class location of the pipeline. The scope of work is project-specific and varies significantly from project to project (i.e., pipe size, location, installation method, etc.). Accordingly, project costs vary significantly from project to project as well. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Gas Transmission	MP PL Rpls / Quality/Economic Driven	Non-RAMP	No	The activities tracked within this category are for projects associated with the replacement of pipelines to meet pipeline quality or efficiency objectives. The scope of work is project-specific and varies significantly from project to project (i.e., pipe size, location, installation method, etc.). Accordingly, project costs vary significantly from project to project as well. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Gas Transmission	Ventura Compressor Station Modernization	Non-RAMP	No	The Ventura Compressor Station Modernization project consists of a variety of activities including installation of four new reciprocating gas engine-driven compressors, a compressor building, an office and warehouse building, utilities, and associated controls, electrical, instrumentation and emission control equipment. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Gas Transmission	Gas Transmission - Software	Non-RAMP	No	The Gas Transmission – Software project consists of a variety of activities related to the Maximo program that is used to manage all Gas Transmission projects. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Gas Transmission	GT & Stor Cap Tools / Quality/Economic Driven	Non-RAMP	No	The activities tracked within this category are for projects associated with the replacement and purchase of required capital tools. Costs associated with this category vary significantly from item to item and from year to year. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									



i. SoCalGas Gas Transmission Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
Capital	Gas Transmission	Gas Transmission		Yes									
Capital	Gas Transmission	Gas Transmission New Pipeline	Non-RAMP	No	Yes	No	SoCalGas identified fewer than forecasted projects on the Gas Transmission system necessitated by new or increased loads and/or to provide natural gas supply reinforcement to an existing area.	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
Capital	Gas Transmission	Gas Transmission Relocations	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Gas Transmission	GT M&R Stations	Non-RAMP	No	Yes	No	The variance is largely attributed to ongoing costs related to work at Quigley Station. There were unforeseen system constraints that have extended construction work and required the remobilization of resources, which increased costs. Necessary facility upgrades have also contributed to increased costs.	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Gas Transmission	GT Auxiliary Equipment	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Gas Transmission	GT Auxiliary Equipment - RAMP	Operational Resiliency	No	Yes	No	The cost variance in this category is due to no activity related to this measure. Due to changing needs, there were no activities completed related to operational resiliency projects to identify where additional pipelines would provide necessary flexibility to the pipeline system.	N/A	On Target (T)	On Target (T)	Under (U)	Deferred	No
Capital	Gas Transmission	GT Auxiliary Equipment - RAMP	Physical security measures put in place for the security/safety of employees and infrastructure	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
Capital	Gas Transmission	GT Auxiliary Equipment - RAMP	Strain Gauge Installation Projects	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	Yes
Capital	Gas Transmission	Sub-Total GT Auxiliary Equipment		Yes	Yes								No
Capital	Gas Transmission	Gas Transmission Freeway Relocations	Non-RAMP	No	Yes	No	A customer requested project was the main driver of spending in this category. The project had delays due to permitting issues and the storms that hit California late 2023.	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Gas Transmission	Gas Transmission Cathodic Protection - RAMP	Requirements for corrosion control	No	Yes	No	The cost variance is due to an increase in projects that were executed in a focused effort to address out of tolerance areas and proactive projects.	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
Capital	Gas Transmission	GT Compressor Stations (BC 305)	Non-RAMP	No	No	No	N/A	N/A	Under (U)	Under (U)	Under (U)	Canceled	No
Capital	Gas Transmission	GT Compressor Stations (BC 315)	Non-RAMP	No	Yes	No	Delays associated with Compressor Modernization projects resulted in required upgrades of aging infrastructure at various Compressor Stations to support system capacity.	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Gas Transmission	GT Compressor Stations (BC 325)	Non-RAMP	No	No	No	N/A	N/A	Under (U)	Under (U)	Under (U)	Other	Yes
Capital	Gas Transmission	GT Compressor Stations (BC 335)	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
<b>Capital</b>	<b>Gas Transmission</b>	<b>Sub-Total Compressor Stations</b>		<b>Yes</b>	<b>No</b>								<b>No</b>
Capital	Gas Transmission	GT Replacement Pipelines - RAMP	Gas Transmission	No	Yes	No	The cost variance in this category is mainly due to an increased number of exposure projects due to weather related events, a large, unanticipated relocation project, and an increased number of class location change and encroachment projects.	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Gas Transmission	MP PL Rpls / Quality/Economic Driven	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Gas Transmission	Ventura Compressor Station Modernization	Non-RAMP	No	Yes	No	In compliance with General Order 177 (GO-177) Sections I and IX, wherein no construction should begin without first complying with the provisions of this General Order and CEQA Compliance respectively, previously incurred construction-related costs before the effective date of the General Order were reallocated. These costs included the necessary preparatory work for office relocation, installation of temporary office and warehouse, security perimeter cameras and installation of a fence line methane monitoring system. These costs were partially offset by other costs incurred in 2023 for the preparation and filing of the project's Proponent's Environmental Assessment (PEA) and Certificate of Public Convenience and Necessity (CPCN) Application.	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Gas Transmission	Gas Transmission - Software	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Gas Transmission	GT & Stor Cap Tools / Quality/Economic Driven	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No

i. SoCalGas Gas Transmission Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
Capital	Gas Transmission	Gas Transmission		Yes				
Capital	Gas Transmission	Gas Transmission New Pipeline	Non-RAMP	No	N/A	The activities in this category are required to provide the backbone and local natural gas transmission system with additional resiliency, capacity, and reliability in order to serve new or increased loads and/or to provide natural gas supply reinforcement to an existing area.	SCG-07 MAB-9 to MAB-10 WP 00301	SCG-06-2R-E CHB-65 to CHB-66 WP 00301
Capital	Gas Transmission	Gas Transmission Relocations	Non-RAMP	No	N/A			
Capital	Gas Transmission	GT M&R Stations	Non-RAMP	No	N/A	Activities in this category include installing and rebuilding large meter set assemblies (MSAs) for transmission-served customers and pressure limiting stations on the gas transmission system. These assets require replacement principally for three reasons: aging, change in use patterns and/or population encroachment, and enhancement of the transmission system to address gas quality and capacity issues. The capital work sustains reliable operation of critical transmission assets. This includes periodic replacement of local field measurement and control equipment directly linking with Gas Operations SCADA system via remote communications.	SCG-07 MAB-26 to MAB-28 WP 00308 & 00308A	SCG-06-2R-E CHB-65 to CHB-66 WP 00301
Capital	Gas Transmission	GT Auxiliary Equipment	Non-RAMP	No	N/A			
Capital	Gas Transmission	GT Auxiliary Equipment - RAMP	Operational Resiliency	No	N/A	Activities in this category include new installations or upgrades of aging Measurement and Regulation station and pipeline system control and telemetry systems which link with and provide information to, but are not a direct part of, SoCalGas' centralized Gas Control's SCADA computer system. Also included are telemetry- related upgrades to remote site security systems and remote-control systems for critical in-line valves.	SCG-07 MAB-28 to MAB-29 WP 003090 & 00309A	SCG-06-2R-E CHB-78 to CHB-80 WP 003090
Capital	Gas Transmission	GT Auxiliary Equipment - RAMP	Physical security measures put in place for the security/safety of employees and infrastructure	No	N/A			
Capital	Gas Transmission	GT Auxiliary Equipment - RAMP	Strain Gauge Installation Projects	No	Less was spent in the strain gauge category than was originally forecasted because these projects have been offset by the Control Center Modernization (CCM) initiative of Optical Pipeline Monitoring (OPM). These fiber optic cables monitor land movement, just as strain gauges do. Strain gauge projects may still occur moving forward on an as needed basis.			
Capital	Gas Transmission	Sub-Total GT Auxiliary Equipment		Yes				
Capital	Gas Transmission	Gas Transmission Freeway Relocations	Non-RAMP	No	N/A	This workpaper includes costs necessitated by Caltrans construction projects.	SCG-07 MAB-13 to MAB-16 WP003130	SCG-06-2R-E CHB-70 to CHB-71 WP 003030
Capital	Gas Transmission	Gas Transmission Cathodic Protection - RAMP	Requirements for corrosion control	No	N/A	This workpaper includes activities associated with the installation of cathodic protection equipment used to preserve the integrity of transmission pipelines by protecting them from external corrosion. These projects are mandated by Federal and State pipelines safety regulations and enable the maintenance of adequate protection on Company facilities. Typical expenditures include the replacement of surface anode beds, deep well anodes and/or rectifier systems, installation of new cathodic protection stations, and applying cathodic protection to existing steel mains and service lines.	SCG-07 MAB-25 to MAB-26 WP 003160	SCG-06-2R-E CHB-74 to CHB-75 WP 003160

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
Capital	Gas Transmission	GT Compressor Stations (BC 305)	Non-RAMP	No	N/A			
Capital	Gas Transmission	GT Compressor Stations (BC 315)	Non-RAMP	No	N/A	Activities in this category include costs associated with the installation and replacement of compressor station equipment used in operating the transmission system. The environmental and regulations associated with the operation of compressor stations requires consistent maintenance and replacement of key engine components and controls equipment to maintain acceptable emissions levels. New air quality regulations require emissions monitoring and reporting equipment along with new catalyst and combustion technology to meet lower emission levels.	SCG-07 MAB-16 to MAB-21 WP M03150	SCG-06-2R-E CHB-72 to CHB-74 WP 00305.002
Capital	Gas Transmission	GT Compressor Stations (BC 325)	Non-RAMP	No	No work was completed in this category in 2023.			
Capital	Gas Transmission	GT Compressor Stations (BC 335)	Non-RAMP	No	N/A			
<b>Capital</b>	<b>Gas Transmission</b>	<b>Sub-Total Compressor Stations</b>		<b>Yes</b>				
Capital	Gas Transmission	GT Replacement Pipelines - RAMP	Gas Transmission	No	N/A	Activities in this category include the cost to plan, design, permit, acquire materials, construct, commission, and mitigate impacts for the replacement of pipelines, fittings, valves, and associated pressure regulating stations and service lines. Multiple projects are completed each year ranging in size and magnitude from a few feet to several miles of replacement. Projects can involve difficult and hazardous access with many logistical challenges caused by weather or physical terrain. Also included are projects to replace pipelines due to class location changes.	SCG-07 MAB-10 to MAB-13 WP M03120	SCG-06-2R-E CHB-66 to CHB-68 WP 00302
Capital	Gas Transmission	MP PL Rpls / Quality/Economic Driven	Non-RAMP	No	N/A			
Capital	Gas Transmission	Ventura Compressor Station Modernization	Non-RAMP	No	N/A	The Ventura Compressor Replacement Project (VCR) will ultimately consist of six compressor trains. Three of these compressor trains will be purchased new, engineered, and installed in a new building on the west side of the station grounds. Each new unit will be engine-driven with non-Selective Catalytic Reduction emissions reduction systems with 1680 horsepower each.	SCG-07 MAB-16 to MAB-24 WP M0335	N/A
Capital	Gas Transmission	Gas Transmission - Software	Non-RAMP	No	N/A			
Capital	Gas Transmission	GT & Stor Cap Tools / Quality/Economic Driven	Non-RAMP	No	N/A			

G. SoCalGas Underground Storage  
i. SoCalGas Underground Storage Operations O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Underground Storage	Underground Storage		Yes			39,288	45,486	41,467	38,000	37,808	202,049	44,041	45,204	46,289	47,185	48,270	230,990
O&M	Underground Storage	Underground Storage	Non-RAMP	No	On-going	Annual	32,237	35,748	30,998	29,582	29,538	158,103	32,408	33,264	34,063	34,722	35,521	169,978
O&M	Underground Storage	Underground Storage	Maintenance work performed on gas storage wells	No	On-going	Annual	1,195	3,352	3,961	3,168	2,914	14,589	4,442	4,559	4,669	4,759	4,869	23,298
O&M	Underground Storage	Underground Storage	Contract Security	No	On-going	Annual	203	918	928	480	598	3,126	1,407	1,444	1,479	1,507	1,542	7,380
O&M	Underground Storage	Underground Storage	Maintenance of high-pressure storage lines	No	On-going	Annual	3,692	4,045	3,942	3,222	2,886	17,787	2,973	3,051	3,125	3,185	3,259	15,593
O&M	Underground Storage	Underground Storage	Internal Corrosion Plan	No	On-going	Annual	255	239	484	373	404	1,755	599	615	630	642	657	3,142
O&M	Underground Storage	<b>Sub-Total Underground Storage</b>		<b>Yes</b>			<b>37,582</b>	<b>44,302</b>	<b>40,313</b>	<b>36,824</b>	<b>36,339</b>	<b>195,360</b>	<b>41,829</b>	<b>42,934</b>	<b>43,965</b>	<b>44,816</b>	<b>45,846</b>	<b>219,390</b>
O&M	Underground Storage	Storage Risk Management	Non-RAMP	No	On-going	Annual	1,705	1,184	1,154	1,176	1,470	6,689	2,212	2,270	2,325	2,370	2,424	11,600

G. SoCalGas Underground Storage  
i. SoCalGas Underground Storage Operations O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Underground Storage	Underground Storage		Yes	(4,753)	283	(4,822)	(9,185)	(10,462)	(28,941)	-11%	1%	-10%	-19%	-22%	-13%
O&M	Underground Storage	Underground Storage	Non-RAMP	No	(171)	2,484	(3,065)	(5,140)	(5,983)	(11,875)	-1%	7%	-9%	-15%	-17%	-7%
O&M	Underground Storage	Underground Storage	Maintenance work performed on gas storage wells	No	(3,247)	(1,207)	(707)	(1,592)	(1,955)	(8,708)	-73%	-26%	-15%	-33%	-40%	-37%
O&M	Underground Storage	Underground Storage	Contract Security	No	(1,204)	(526)	(551)	(1,028)	(944)	(4,253)	-86%	-36%	-37%	-68%	-61%	-58%
O&M	Underground Storage	Underground Storage	Maintenance of high-pressure storage lines	No	719	993	817	37	(373)	2,194	24%	33%	26%	1%	-11%	14%
O&M	Underground Storage	Underground Storage	Internal Corrosion Plan	No	(344)	(376)	(146)	(269)	(252)	(1,387)	-57%	-61%	-23%	-42%	-38%	-44%
O&M	Underground Storage	<b>Sub-Total Underground Storage</b>		Yes	<b>(4,247)</b>	<b>1,368</b>	<b>(3,652)</b>	<b>(7,992)</b>	<b>(9,508)</b>	<b>(24,030)</b>	<b>-10%</b>	<b>3%</b>	<b>-8%</b>	<b>-18%</b>	<b>-21%</b>	<b>-11%</b>
O&M	Underground Storage	Storage Risk Management	Non-RAMP	No	(506)	(1,086)	(1,171)	(1,193)	(955)	(4,910)	-23%	-48%	-50%	-50%	-39%	-42%

G. SoCalGas Underground Storage  
i. SoCalGas Underground Storage Operations O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
O&M	Underground Storage	Underground Storage		Yes																										
O&M	Underground Storage	Underground Storage	Non-RAMP	No	This workpaper is composed of a variety of activities including the preparation of engineering studies, pipeline & equipment testing and maintenance, pipeline patrolling, compliance with regulations, and labor to support these activities. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Underground Storage	Underground Storage	Maintenance work performed on gas storage wells	No	This workpaper is composed of a variety of activities to address failure components such as tubing, casing, valves, pumps, and other equipment on existing wells. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Underground Storage	Underground Storage	Contract Security	No	This workpaper is comprised of security guard staffing costs to address physical security at the four storage fields. The variety of coverage and intermittent additional needs required at each field makes it infeasible to identify a single unit of measurement applicable to all four fields.																									
O&M	Underground Storage	Underground Storage	Maintenance of high-pressure storage lines	No	Storage Fields	4	4	4	4	4	20	4	4	4	4	4	20	—	—	—	—	—	—	—%	—%	—%	—%	—%	—%	
O&M	Underground Storage	Underground Storage	Internal Corrosion Plan	No	This workpaper is composed of activities to address internal corrosion, including corrosion monitoring, chemical program, internal corrosion program enhancement. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Underground Storage	<b>Sub-Total Underground Storage</b>		Yes																										
O&M	Underground Storage	Storage Risk Management	Non-RAMP	No	The variety of work (e.g., implementation requirements of California Air Resources Board (CARB), California Geologic Energy Management Division (CalGEM), and Pipeline and Hazardous Materials Safety Administration (PHMSA) regulations and varying dollars make it infeasible to identify a single unit of measurement.																									

G. SoCalGas Underground Storage  
i. SoCalGas Underground Storage Operations O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Underground Storage	Underground Storage		Yes									
O&M	Underground Storage	Underground Storage	Non-RAMP	No	Yes	No	The variance is due to increased company labor charged to capital projects (see Underground Storage Capital workpapers GS Auxiliary Equipment and GS Pipeline) resulting in lower expenditures for O&M work.	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Underground Storage	Underground Storage	Maintenance work performed on gas storage wells	No	Yes	No	The variance is due to numerous wells being plugged and abandoned resulting in reduced maintenance work thus increasing costs in the capital workpaper for Plug and Abandonment.	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Underground Storage	Underground Storage	Contract Security	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Underground Storage	Underground Storage	Maintenance of high-pressure storage lines	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Underground Storage	Underground Storage	Internal Corrosion Plan	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Underground Storage	<b>Sub-Total Underground Storage</b>		Yes	Yes								No
O&M	Underground Storage	Storage Risk Management	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No



G. SoCalGas Underground Storage  
i. SoCalGas Underground Storage Operations O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Underground Storage	Underground Storage		Yes				
O&M	Underground Storage	Underground Storage	Non-RAMP	No	N/A	Storage Operations is responsible for the safe, efficient, and economical operation of the underground natural gas storage facilities for SoCalGas. This work paper covers the supervision, engineering, and operational costs associated with the operation of the underground storage fields.	SCG-10-R NPN-18 to NPN-24 WP 2US000.000	SCG-10-R LTB SH-13 to LTB SH-17 WP 2US000.000
O&M	Underground Storage	Underground Storage	Maintenance work performed on gas storage wells	No	N/A	Storage Operations is responsible for the safe, efficient, and economical operation of the underground natural gas storage facilities for SoCalGas. This work paper covers the supervision, engineering, and operational costs associated with the operation of the underground storage fields.	SCG-10-R NPN-18 to NPN-24 WP 2US000.000	SCG-10-R LTB SH-13 to LTB SH-17 WP 2US000.000
O&M	Underground Storage	Underground Storage	Contract Security	No	N/A			
O&M	Underground Storage	Underground Storage	Maintenance of high-pressure storage lines	No	N/A			
O&M	Underground Storage	Underground Storage	Internal Corrosion Plan	No	N/A			
O&M	Underground Storage	<b>Sub-Total Underground Storage</b>		Yes				
O&M	Underground Storage	Storage Risk Management	Non-RAMP	No	N/A			

ii. SoCalGas Underground Storage Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
Capital	Underground Storage	Underground Storage		Yes			71,854	116,139	187,238	230,861	194,404	800,496	133,599	104,705	106,361	107,615	109,910	562,189
Capital	Underground Storage	GS Compressor Stations	Non-RAMP	No	On-going	Annual	7,524	10,160	19,741	26,160	27,750	91,336	29,080	19,949	20,265	20,504	20,941	110,737
Capital	Underground Storage	GS Wells - Cushion Gas Purchase	Non-RAMP	No	1	Completed	—	(0)	0	0	0	(0)	2,340	568	577	583	596	4,663
Capital	Underground Storage	GS Wells - RAMP Base - C1	Well replacements	No	On-going	Annual	—	6,144	46,923	49,568	31,801	134,436	55,444	19,225	19,530	19,760	20,181	134,139
Capital	Underground Storage	GS Wells - RAMP Base - C2	Well plug & abandon	No	On-going	Annual	28,632	18,468	25,327	26,746	19,435	118,607	8,203	18,046	18,331	18,547	18,943	82,071
Capital	Underground Storage	GS Wells - RAMP Base - C3	Tubing upsizing	No	2	Complete	—	16	27	5	—	48	—	962	977	989	1,010	3,939
Capital	Underground Storage	GS Wells - RAMP Base - C4	Well workovers	No	On-going	Annual	535	4,939	7,382	16,657	5,943	35,456	1,096	4,743	4,818	4,875	4,979	20,510
Capital	Underground Storage	GS Wells - RAMP Base - C5	Wellhead repairs & replacements	No	2	Complete	—	—	—	—	—	—	—	412	418	423	432	1,685
Capital	Underground Storage	GS Wells - RAMP Base - C7	Wells blanket projects	No	On-going	Annual	1,521	653	1,063	685	36	3,958	1,132	794	807	816	834	4,382
Capital	Underground Storage	GS Wells Sub-Total		Yes			30,688	30,220	80,721	93,661	57,216	292,505	68,215	44,749	45,457	45,993	46,974	251,389

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
Capital	Underground Storage	GS Pipelines	Non-RAMP	No	On-going	Annual	16,334	29,396	33,902	41,161	30,610	151,404	7,694	6,222	6,320	6,395	6,531	33,162
Capital	Underground Storage	GS Pipelines - RAMP Base	Combat land movement through ground stabilization projects in both Gas Transmission and Gas Storage	No	6	6	—	1,726	8,079	2,746	695	13,246	—	4,420	4,490	4,542	4,639	18,091
<b>Capital</b>	<b>Underground Storage</b>	<b>GS Pipelines Sub-Total</b>		<b>Yes</b>			<b>16,334</b>	<b>31,122</b>	<b>41,981</b>	<b>43,907</b>	<b>31,305</b>	<b>164,650</b>	<b>7,694</b>	<b>10,641</b>	<b>10,810</b>	<b>10,937</b>	<b>11,170</b>	<b>51,253</b>
Capital	Underground Storage	GS Purification	Non-RAMP	No	On-going	Annual	1,503	6,491	6,756	6,173	9,941	30,865	6,348	8,612	8,748	8,851	9,040	41,598
Capital	Underground Storage	GS Auxiliary Equipment	Non-RAMP	No	On-going	Annual	15,398	36,543	37,358	59,473	68,011	216,782	19,999	18,305	18,594	18,814	19,215	94,927
Capital	Underground Storage	GS - Aliso Canyon	Erosion mitigation	No	On-going	Annual	374	1,401	135	1,345	120	3,375	1,132	1,062	1,079	1,091	1,115	5,478
Capital	Underground Storage	GS - Playa Del Rey	Erosion mitigation	No	On-going	Annual	33	202	545	142	61	983	1,132	1,387	1,409	1,425	1,456	6,807
<b>Capital</b>	<b>Underground Storage</b>	<b>GS Auxiliary Equipment Sub-Total</b>		<b>Yes</b>			<b>15,805</b>	<b>38,146</b>	<b>38,038</b>	<b>60,960</b>	<b>68,192</b>	<b>221,140</b>	<b>22,262</b>	<b>20,753</b>	<b>21,081</b>	<b>21,330</b>	<b>21,785</b>	<b>107,212</b>

ii. SoCalGas Underground Storage Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
Capital	Underground Storage	Underground Storage		Yes	(61,744)	11,434	80,877	123,246	84,494	238,307	-46%	11%	76%	115%	77%	42%
Capital	Underground Storage	GS Compressor Stations	Non-RAMP	No	(21,555)	(9,789)	(523)	5,657	6,810	(19,401)	-74%	-49%	-3%	28%	33%	-18%
Capital	Underground Storage	GS Wells - Cushion Gas Purchase	Non-RAMP	No	(2,340)	(568)	(577)	(583)	(596)	(4,664)	-100%	-100%	-100%	-100%	-100%	-100%
Capital	Underground Storage	GS Wells - RAMP Base - C1	Well replacements	No	(55,444)	(13,081)	27,393	29,808	11,620	297	-100%	-68%	140%	151%	58%	0%
Capital	Underground Storage	GS Wells - RAMP Base - C2	Well plug & abandon	No	20,429	422	6,996	8,198	492	36,537	249%	2%	38%	44%	3%	45%
Capital	Underground Storage	GS Wells - RAMP Base - C3	Tubing upsizing	No	—	(946)	(951)	(984)	(1,010)	(3,891)	—%	-98%	-97%	-99%	-100%	-99%
Capital	Underground Storage	GS Wells - RAMP Base - C4	Well workovers	No	(561)	196	2,564	11,782	965	14,946	-51%	4%	53%	242%	19%	73%
Capital	Underground Storage	GS Wells - RAMP Base - C5	Wellhead repairs & replacements	No	—	(412)	(418)	(423)	(432)	(1,685)	—%	-100%	-100%	-100%	-100%	-100%
Capital	Underground Storage	GS Wells - RAMP Base - C7	Wells blanket projects	No	390	(141)	256	(132)	(797)	(424)	34%	-18%	32%	-16%	-96%	-10%
Capital	Underground Storage	GS Wells Sub-Total		Yes	(37,527)	(14,530)	35,264	47,667	10,241	41,116	-55%	-32%	78%	104%	22%	16%

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
Capital	Underground Storage	GS Pipelines	Non-RAMP	No	8,640	23,175	27,582	34,767	24,079	118,242	112%	372%	436%	544%	369%	357%
Capital	Underground Storage	GS Pipelines - RAMP Base	Combat land movement through ground stabilization projects in both Gas Transmission and Gas Storage	No	—	(2,694)	3,590	(1,797)	(3,944)	(4,845)	—%	-61%	80%	-40%	-85%	-27%
<b>Capital</b>	<b>Underground Storage</b>	<b>GS Pipelines Sub-Total</b>		<b>Yes</b>	<b>8,640</b>	<b>20,481</b>	<b>31,172</b>	<b>32,970</b>	<b>20,135</b>	<b>113,397</b>	<b>112%</b>	<b>192%</b>	<b>288%</b>	<b>301%</b>	<b>180%</b>	<b>221%</b>
Capital	Underground Storage	GS Purification	Non-RAMP	No	(4,844)	(2,120)	(1,992)	(2,678)	902	(10,733)	-76%	-25%	-23%	-30%	10%	-26%
Capital	Underground Storage	GS Auxiliary Equipment	Non-RAMP	No	(4,601)	18,238	18,763	40,659	48,796	121,856	-23%	100%	101%	216%	254%	128%
Capital	Underground Storage	GS - Aliso Canyon	Erosion mitigation	No	(758)	339	(943)	253	(995)	(2,103)	-67%	32%	-87%	23%	-89%	-38%
Capital	Underground Storage	GS - Playa Del Rey	Erosion mitigation	No	(1,099)	(1,185)	(864)	(1,283)	(1,395)	(5,824)	-97%	-85%	-61%	-90%	-96%	-86%
<b>Capital</b>	<b>Underground Storage</b>	<b>GS Auxiliary Equipment Sub-Total</b>		<b>Yes</b>	<b>(6,457)</b>	<b>17,393</b>	<b>16,956</b>	<b>39,630</b>	<b>46,407</b>	<b>113,928</b>	<b>-29%</b>	<b>84%</b>	<b>80%</b>	<b>186%</b>	<b>213%</b>	<b>106%</b>

ii. SoCalGas Underground Storage Capital

Capital Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
Capital	Underground Storage	Underground Storage		Yes																										
Capital	Underground Storage	GS Compressor Stations	Non-RAMP	No	This workpaper is comprised of activities associated with compressor station and auxiliary equipment upgrades. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Underground Storage	GS Wells - Cushion Gas Purchase	Non-RAMP	No	Storage Field	1	—	—	—	—	1	1	1	1	1	1	5	—	(1)	(1)	(1)	(1)	(4)	—%	-100%	-100%	-100%	-100%	-80%	
Capital	Underground Storage	GS Wells - RAMP Base - C1	Well replacements	No	Wells	—	—	4	3	2	9	7	7	7	7	7	35	(7)	(7)	(3)	(4)	(5)	(26)	-100%	-100%	-43%	-57%	-71%	-74%	
Capital	Underground Storage	GS Wells - RAMP Base - C2	Well plug & abandon	No	Wells	13	9	11	12	3	48	5	5	5	5	5	25	8	4	6	7	(2)	23	160%	80%	120%	140%	-40%	92%	
Capital	Underground Storage	GS Wells - RAMP Base - C3	Tubing upsizing	No	Wells	—	—	—	—	—	—	1	1	1	1	1	5	(1)	(1)	(1)	(1)	(1)	(5)	-100%	-100%	-100%	-100%	-100%	-100%	
Capital	Underground Storage	GS Wells - RAMP Base - C4	Well workovers	No	Wells	5	9	7	7	8	36	1	1	1	1	1	5	4	8	6	6	7	31	400%	800%	600%	600%	700%	620%	
Capital	Underground Storage	GS Wells - RAMP Base - C5	Wellhead repairs & replacements	No	This workpaper is comprised of wellhead leak detection and repair which entails performing audio-visual inspection as well as optical gas imaging and repairs as needed. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Underground Storage	GS Wells - RAMP Base - C7	Wells blanket projects	No	This workpaper is comprised of well blanket project activities, which include upgrades to gas lift line and kill systems, compressed air system updates, and work string capital tools. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Underground Storage	GS Wells Sub-Total		Yes																										

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
Capital	Underground Storage	GS Pipelines	Non-RAMP	No	This workpaper is comprised of non-RAMP work such as upgrading or replacing lateral piping and related components including valve replacements, pipe bridge replacement, expansions, upsizing, supports, corrosion protection, and other elements related to piping systems. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Underground Storage	GS Pipelines - RAMP Base	Combat land movement through ground stabilization projects in both Gas Transmission and Gas Storage	No	Storage Field	1	1	1	1	1	5	1	1	1	1	1	5	—	—	—	—	—	—	—%	—%	—%	—%	—%	—%	
<b>Capital</b>	<b>Underground Storage</b>	<b>GS Pipelines Sub-Total</b>		<b>Yes</b>																										
Capital	Underground Storage	GS Purification	Non-RAMP	No	This workpaper is comprised of dehydration and tank farm equipment upgrade work activities, including, but not limited to the installation, replacements and relocations of gas and glycol filters for improved gas conditioning as well as instrumentation upgrades to allow remote monitoring. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Underground Storage	GS Auxiliary Equipment	Non-RAMP	No	This workpaper is comprised of non-RAMP auxiliary equipment work activities including overhead power and electrical system upgrades, relief system redesign, and equipment modernization. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Underground Storage	GS - Aliso Canyon	Erosion mitigation	No	Storage Field	1	1	1	1	1	5	1	1	1	1	1	5	—	—	—	—	—	—	—%	—%	—%	—%	—%	—%	
Capital	Underground Storage	GS - Playa Del Rey	Erosion mitigation	No	Storage Field	1	1	1	1	1	5	1	1	1	1	1	5	—	—	—	—	—	—	—%	—%	—%	—%	—%	—%	
<b>Capital</b>	<b>Underground Storage</b>	<b>GS Auxiliary Equipment Sub-Total</b>		<b>Yes</b>																										

ii. SoCalGas Underground Storage Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
Capital	Underground Storage	Underground Storage		Yes									
Capital	Underground Storage	GS Compressor Stations	Non-RAMP	No	Yes	No	The variance in compressor station work is primarily due to the Honor Rancho compressor modernization, first and secondary power sources, and the purchase of the EDC (Electric Driven Compressor) Vorecon due to K1110 corrosion.	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
Capital	Underground Storage	GS Wells - Cushion Gas Purchase	Non-RAMP	No	No	Yes	N/A	This storage activity is completed. Honor Rancho storage reservoir did not require purchased cushion gas to maintain adequate pressure and deliverability rates.	Under (U)	Under (U)	Under (U)	Completed	Yes
Capital	Underground Storage	GS Wells - RAMP Base - C1	Well replacements	No	Yes	Yes	Spending variance is due to drilling activity that was previously deferred. Drilling activity is now active. Along with increased activity, the costs for drilling have increased more than the approved 2019 GRC escalation rates. The major areas of cost increases are in rigs, contractors, and materials.	Lower than authorized due to accelerated California Energy Management Division (CalGEM) reassessment timeline leading to less availability to do new well replacement.	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Underground Storage	GS Wells - RAMP Base - C2	Well plug & abandon	No	No	Yes	N/A	Lower than authorized due to CalGEM's new requirement of more frequent assessments. Abandonments were more complex and took longer to complete.	Over (O)	Over (O)	Over (O)	Proceeding as Planned	No
Capital	Underground Storage	GS Wells - RAMP Base - C3	Tubing upsizing	No	No	Yes	N/A	This storage activity is completed. Tubing upsizing was primarily completed prior to 2020 as part of well upgrades/workovers.	Under (U)	Under (U)	Under (U)	Completed	Yes
Capital	Underground Storage	GS Wells - RAMP Base - C4	Well workovers	No	No	Yes	N/A	This activity was higher than authorized due to performing work on non-gas storage wells (abandonments, pump and Electric Submersible Pump (ESP) changes, well conversions, cleanouts, casing repair, etc.).	Over (O)	Over (O)	Over (O)	Expanded	No
Capital	Underground Storage	GS Wells - RAMP Base - C5	Wellhead repairs & replacements	No	No	No	N/A	N/A	Under (U)	Under (U)	Under (U)	Completed	Yes
Capital	Underground Storage	GS Wells - RAMP Base - C7	Wells blanket projects	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Completed	Yes
Capital	Underground Storage	GS Wells Sub-Total		Yes	Yes								No



Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
Capital	Underground Storage	GS Pipelines	Non-RAMP	No	Yes	No	Higher than forecasted due to the compliance driven bi-annual well reassessments requiring lateral modifications, installation of deferred new well surface facilities, removal of abandoned well surface facilities, upgrades to pipeline coating systems and removal of out of service pipelines.	N/A	Over (O)	Over (O)	Over (O)	Proceeding as Planned	No
Capital	Underground Storage	GS Pipelines - RAMP Base	Combat land movement through ground stabilization projects in both Gas Transmission and Gas Storage	No	Yes	No	Delay in City of LA permitting to create retaining wall on the east side FF-38 (city require 5ft). A total of 16 actuated valves are being installed between FF38 & P30.	N/A	On Target (T)	Over (O)	Under (U)	Proceeding as Planned	No
<b>Capital</b>	<b>Underground Storage</b>	<b>GS Pipelines Sub-Total</b>		<b>Yes</b>	<b>Yes</b>								<b>No</b>
Capital	Underground Storage	GS Purification	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
Capital	Underground Storage	GS Auxiliary Equipment	Non-RAMP	No	Yes	No	Higher than forecasted costs attributable to prioritization of work activities related to safety, compliance and reliability requirements (i.e., SCAQMD RECLAIM (South Coast Air Quality Management District Regional Clean Air Incentives Market) Program equipment upgrades, Gas Storage Network, General Order (GO) 95 wood-to-steel replacements, and electrical upgrades).	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
Capital	Underground Storage	GS - Aliso Canyon	Erosion mitigation	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Underground Storage	GS - Playa Del Rey	Erosion mitigation	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	Yes
<b>Capital</b>	<b>Underground Storage</b>	<b>GS Auxiliary Equipment Sub-Total</b>		<b>Yes</b>	<b>Yes</b>								<b>No</b>

ii. SoCalGas Underground Storage Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
Capital	Underground Storage	Underground Storage		Yes				
Capital	Underground Storage	GS Compressor Stations	Non-RAMP	No	N/A	These storage compressor units increase the pressure of natural gas so it can be injected into the underground reservoirs. Examples of equipment within this area include turbines, engines, high pressure gas compressors, compressed air system equipment, fire suppression systems, gas scrubbers, and related control instruments. This budget category includes the necessary capital for maintenance, replacements, and upgrades of the various storage field compressors to uphold safety, maintain or improve reliability, extend equipment life, achieve environmental compliance, and to meet the required injection capacities.	SCG-10-R NPN-31 to NPN-35 WP 00411	SCG-10-R LTB SH-19 to LTB SH-20 WP 00411
Capital	Underground Storage	GS Wells - Cushion Gas Purchase	Non-RAMP	No	Project completed in 2019.	This workpaper category includes costs associated with replacing failed components on existing wells, and the design, drilling and completion of replacement wells for the injection and withdrawal of natural gas and reservoir observation purposes. This includes well workover contractors (major well work), drilling contractors, and component materials such as tubing, casing, valves, pumps, and other down-hole equipment, and well plugging and abandonment. The intent behind the capital expenditure plan is to provide safe, reliable delivery of natural gas to customers and enhance the integrity, efficiency, and responsiveness of operations while maintaining compliance with applicable regulatory and environmental regulations.	SCG-10-R NPN-35 to NPN-42 WP 00412	N/A
Capital	Underground Storage	GS Wells - RAMP Base - C1	Well replacements	No	N/A	This workpaper category includes costs associated with replacing failed components on existing wells, and the design, drilling and completion of replacement wells for the injection and withdrawal of natural gas and reservoir observation purposes. This includes well workover contractors (major well work), drilling contractors, and component materials such as tubing, casing, valves, pumps, and other down-hole equipment, and well plugging and abandonment. The intent behind the capital expenditure plan is to provide safe, reliable delivery of natural gas to customers and enhance the integrity, efficiency, and responsiveness of operations while maintaining compliance with applicable regulatory and environmental regulations.	SCG-10-R NPN-35 to NPN-42 WP 00412	SCG-10-R LTB SH-24 to LTB SH-27 WP 00412
Capital	Underground Storage	GS Wells - RAMP Base - C2	Well plug & abandon	No	N/A	This workpaper category includes costs associated with replacing failed components on existing wells, and the design, drilling and completion of replacement wells for the injection and withdrawal of natural gas and reservoir observation purposes. This includes well workover contractors (major well work), drilling contractors, and component materials such as tubing, casing, valves, pumps, and other down-hole equipment, and well plugging and abandonment. The intent behind the capital expenditure plan is to provide safe, reliable delivery of natural gas to customers and enhance the integrity, efficiency, and responsiveness of operations while maintaining compliance with applicable regulatory and environmental regulations.	SCG-10-R NPN-35 to NPN-42 WP 00412	SCG-10-R LTB SH-24 to LTB SH-27 WP 00412
Capital	Underground Storage	GS Wells - RAMP Base - C3	Tubing upsizing	No	Project completed in 2018.	This workpaper category includes costs associated with replacing failed components on existing wells, and the design, drilling and completion of replacement wells for the injection and withdrawal of natural gas and reservoir observation purposes. This includes well workover contractors (major well work), drilling contractors, and component materials such as tubing, casing, valves, pumps, and other down-hole equipment, and well plugging and abandonment. The intent behind the capital expenditure plan is to provide safe, reliable delivery of natural gas to customers and enhance the integrity, efficiency, and responsiveness of operations while maintaining compliance with applicable regulatory and environmental regulations.	SCG-10-R NPN-35 to NPN-42 WP 00412	SCG-10-R LTB SH-24 to LTB SH-27 WP 00412
Capital	Underground Storage	GS Wells - RAMP Base - C4	Well workovers	No	N/A	This workpaper category includes costs associated with replacing failed components on existing wells, and the design, drilling and completion of replacement wells for the injection and withdrawal of natural gas and reservoir observation purposes. This includes well workover contractors (major well work), drilling contractors, and component materials such as tubing, casing, valves, pumps, and other down-hole equipment, and well plugging and abandonment. The intent behind the capital expenditure plan is to provide safe, reliable delivery of natural gas to customers and enhance the integrity, efficiency, and responsiveness of operations while maintaining compliance with applicable regulatory and environmental regulations.	SCG-10-R NPN-35 to NPN-42 WP 00412	SCG-10-R LTB SH-24 to LTB SH-27 WP 00412
Capital	Underground Storage	GS Wells - RAMP Base - C5	Wellhead repairs & replacements	No	Project completed in 2018.			
Capital	Underground Storage	GS Wells - RAMP Base - C7	Wells blanket projects	No	Project completed in 2022.			
Capital	Underground Storage	GS Wells Sub-Total		Yes				

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
Capital	Underground Storage	GS Pipelines	Non-RAMP	No	N/A	This workpaper category includes costs associated with upgrading or replacing failed field piping and related components. The intent behind the capital expenditure plan is to provide safe, reliable delivery of natural gas to customers and also enhance the integrity, efficiency, and responsiveness of operations while maintaining compliance with applicable regulatory and environmental regulations.	SCG-10-R NPN-42 to NPN-44 WP 00413	SCG-10-R LTB SH-27 to LTB SH-28 WP 00413
Capital	Underground Storage	GS Pipelines - RAMP Base	Combat land movement through ground stabilization projects in both Gas Transmission and Gas Storage	No	N/A	This workpaper category includes costs associated with upgrading or replacing failed field piping and related components. The intent behind the capital expenditure plan is to provide safe, reliable delivery of natural gas to customers and also enhance the integrity, efficiency, and responsiveness of operations while maintaining compliance with applicable regulatory and environmental regulations.	SCG-10-R NPN-42 to NPN-44 WP 00413	SCG-10-R LTB SH-27 to LTB SH-28 WP 00413
<b>Capital</b>	<b>Underground Storage</b>	<b>GS Pipelines Sub-Total</b>		<b>Yes</b>				
Capital	Underground Storage	GS Purification	Non-RAMP	No	N/A			
Capital	Underground Storage	GS Auxiliary Equipment	Non-RAMP	No	N/A	This budget category includes work on various types of field equipment not included in other budget codes such as instrumentation, measurement, controls, electrical, drainage, infrastructure, safety, security, and communications systems	SCG-10-R NPN-46 to NPN-51 WP 00419	SCG-10-R LTB SH-30 to LTB SH-31 WP 00419
Capital	Underground Storage	GS - Aliso Canyon	Erosion mitigation	No	N/A			
Capital	Underground Storage	GS - Playa Del Rey	Erosion mitigation	No	Due to delay in City of LA and Coastal Commission permit approvals for slope stability projects. Pending resolution on jurisdictional obligations for the erosion between the city of LA and SoCalGas.			
<b>Capital</b>	<b>Underground Storage</b>	<b>GS Auxiliary Equipment Sub-Total</b>		<b>Yes</b>				

I. SoCalGas Gas Acquisition  
i. SoCalGas Gas Acquisition O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Gas Procurement	Gas Procurement		Yes			4,687	4,909	5,083	5,160	4,760	24,600	4,604	4,725	4,839	4,932	5,046	24,146
O&M	Gas Procurement	Gas Acquisition	Non-RAMP	No	Ongoing	Annual	4,687	4,909	5,083	5,160	4,760	24,600	4,604	4,725	4,839	4,932	5,046	24,146

I. SoCalGas Gas Acquisition  
i. SoCalGas Gas Acquisition O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Gas Procurement	Gas Procurement		Yes	84	184	244	228	(286)	454	2%	4%	5%	5%	-6%	2%
O&M	Gas Procurement	Gas Acquisition	Non-RAMP	No	84	184	244	228	(286)	454	2%	4%	5%	5%	-6%	2%

I. SoCalGas Gas Acquisition  
i. SoCalGas Gas Acquisition O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
O&M	Gas Procurement	Gas Procurement		Yes																										
O&M	Gas Procurement	Gas Acquisition	Non-RAMP	No	FTE	33	35	36	36	33	173	34	34	34	34	34	170	(1)	1	2	2	(1)	3	-3%	3%	6%	6%	-3%	2%	

I. SoCalGas Gas Acquisition  
i. SoCalGas Gas Acquisition O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Gas Procurement	Gas Procurement		Yes													
O&M	Gas Procurement	Gas Acquisition	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No	N/A			

2. SoCalGas Other  
A. SoCalGas Customer Services  
i. SoCalGas Customer Services O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Customer Services	Customer Services		Yes			248,311	245,672	251,606	264,810	272,338	1,282,737	270,720	277,868	284,541	290,047	296,718	1,419,895
O&M	Customer Services	Advance Metering Infrastructure Policy		Yes			8,975	9,428	9,855	10,647	11,443	50,349	11,245	11,541	11,819	12,047	12,324	58,977
O&M	Customer Services	Advanced Meter Operations	Non-RAMP	No	On-going	Annual	8,421	9,074	9,558	10,150	11,011	48,213	10,748	11,031	11,296	11,515	11,780	56,370
O&M	Customer Services	Advanced Meter Operations	Annual DCU/ Pole Inspections	No	On-going	Annual	397	257	240	438	372	1,703	298	306	313	319	327	1,563
O&M	Customer Services	Advanced Meter Operations	Analyze consumption patterns to identify atypical/unusual consumption	No	On-going	Annual	157	98	58	60	60	432	199	204	209	213	218	1,044
O&M	Customer Services	Sub-Total Advanced Meter Operations		Yes			8,975	9,428	9,855	10,647	11,443	50,349	11,245	11,541	11,819	12,047	12,324	58,977
O&M	Customer Services	Customer Services - Field & Meter Reading		Yes			180,410	174,982	175,301	183,583	188,106	902,382	187,371	192,318	196,937	200,748	205,365	982,740
O&M	Customer Services	CS Field Staff Manager	Non-RAMP	No	On-going	Annual	477	465	613	619	714	2,887	523	537	550	561	574	2,745
O&M	Customer Services	CS Field Staff Manager	Policy, Procedures, Standards and ESCMP	No	On-going	Annual	803	811	780	787	946	4,128	938	963	986	1,005	1,028	4,920
O&M	Customer Services	Sub-Total CS Field Staff Manager		Yes			1,280	1,276	1,392	1,406	1,660	7,014	1,461	1,500	1,536	1,566	1,602	7,665
O&M	Customer Services	Customer Services Field - Operations	Non-RAMP	No	On-going	Annual	74,551	69,085	64,483	71,745	79,995	359,859	79,156	81,246	83,197	84,807	86,757	415,163
O&M	Customer Services	Customer Services Field - Operations	Safety-related field Orders, Field Employee meetings and Training	No	On-going	Annual	40,462	37,018	39,307	38,435	33,678	188,901	39,888	40,941	41,924	42,736	43,719	209,208
O&M	Customer Services	Customer Services Field - Operations	PPE and Tools	No	On-going	Annual	3,237	2,403	2,573	2,699	2,948	13,861	3,364	3,453	3,536	3,604	3,687	17,644
O&M	Customer Services	Sub-Total CS Field - Operations		Yes			118,250	108,506	106,363	112,880	116,621	562,620	122,408	125,640	128,657	131,147	134,163	642,015
O&M	Customer Services	Customer Services Field - Supervision	Non-RAMP	No	On-going	Annual	12,087	12,763	10,889	10,814	11,835	58,388	11,102	11,395	11,669	11,895	12,168	58,229



Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Customer Services	Customer Services Field - Supervision	Job Observations Field Rides and Job Monitoring	No	On-going	Annual	780	830	775	867	893	4,145	951	976	1,000	1,019	1,042	4,988
<b>O&amp;M</b>	<b>Customer Services</b>	<b>Sub-Total CS Field- Supervision</b>		<b>Yes</b>			<b>12,867</b>	<b>13,593</b>	<b>11,664</b>	<b>11,681</b>	<b>12,728</b>	<b>62,534</b>	<b>12,053</b>	<b>12,371</b>	<b>12,668</b>	<b>12,914</b>	<b>13,211</b>	<b>63,217</b>
O&M	Customer Services	Customer Services Field - Dispatch	Non-RAMP	No	On-going	Annual	12,699	12,979	14,066	14,046	14,569	68,359	9,465	9,715	9,948	10,141	10,374	49,642
O&M	Customer Services	Customer Services Field - Support	Non-RAMP	No	On-going	Annual	11,203	12,920	10,892	13,425	12,370	60,810	15,160	15,561	15,934	16,243	16,616	79,515
O&M	Customer Services	Customer Services Field - Support	Employee Skills Training and QA inspections	No	On-going	Annual	3,661	3,918	4,838	5,706	5,692	23,815	3,787	3,887	3,980	4,057	4,151	19,862
<b>O&amp;M</b>	<b>Customer Services</b>	<b>Sub-Total CS Field- Support</b>		<b>Yes</b>			<b>14,864</b>	<b>16,838</b>	<b>15,730</b>	<b>19,131</b>	<b>18,062</b>	<b>84,625</b>	<b>18,947</b>	<b>19,448</b>	<b>19,915</b>	<b>20,300</b>	<b>20,767</b>	<b>99,377</b>
O&M	Customer Services	MSA Inspection Program	Non-RAMP	No	On-going	Annual	4,004	5,504	10,173	6,192	5,620	31,493	7,052	7,238	7,412	7,556	7,729	36,987
O&M	Customer Services	MSA Inspection Program	Gas Facility and Pipeline Inspections	No	On-going	Annual	14,578	15,312	15,146	17,571	18,299	80,905	12,687	13,022	13,335	13,593	13,905	66,542
<b>O&amp;M</b>	<b>Customer Services</b>	<b>Sub-Total MSA Inspection Program</b>		<b>Yes</b>			<b>18,582</b>	<b>20,816</b>	<b>25,319</b>	<b>23,762</b>	<b>23,919</b>	<b>112,398</b>	<b>19,739</b>	<b>20,260</b>	<b>20,747</b>	<b>21,148</b>	<b>21,635</b>	<b>103,529</b>
O&M	Customer Services	Meter Reading - Operations	Non-RAMP	No	On-going	Annual	703	487	768	676	547	3,181	1,192	1,223	1,252	1,277	1,306	6,250
O&M	Customer Services	Meter Reading - Operations	Manual Meter Reads for Atmospheric Corrosion Inspections	No	On-going	This activity was absorbed by MSA Inspection Program.	702	487	—	—	—	1,189	1,226	1,258	1,289	1,314	1,344	6,430
<b>O&amp;M</b>	<b>Customer Services</b>	<b>Sub-Total Meter Reading - Operations</b>		<b>Yes</b>			<b>1,405</b>	<b>973</b>	<b>768</b>	<b>676</b>	<b>547</b>	<b>4,370</b>	<b>2,418</b>	<b>2,481</b>	<b>2,541</b>	<b>2,590</b>	<b>2,650</b>	<b>12,680</b>

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Customer Services	Meter Reading - Clerical	Non-RAMP	No	On-going	Annual	180	—	—	—	—	180	161	166	170	173	177	846
O&M	Customer Services	Meter Reading - Supervision & Training	Non-RAMP	No	On-going	Annual	4	—	—	—	—	4	387	397	406	414	424	2,027
O&M	Customer Services	Meter Reading - Support	Non-RAMP	No	On-going	Annual	279	0	—	—	—	279	332	341	349	356	364	1,742
<b>O&amp;M</b>	<b>Customer Services</b>	<b>Customer Services - Office Operations</b>		<b>Yes</b>			<b>36,590</b>	<b>32,573</b>	<b>33,400</b>	<b>35,455</b>	<b>38,557</b>	<b>176,575</b>	<b>42,145</b>	<b>43,257</b>	<b>44,296</b>	<b>45,153</b>	<b>46,192</b>	<b>221,044</b>
O&M	Customer Services	CCC - Operations	Non-RAMP	No	On-going	Annual	26,956	22,282	23,304	24,458	26,744	123,744	29,793	30,580	31,314	31,920	32,654	156,262
O&M	Customer Services	CCC - Operations	Update customer information for notification/access purposes	No	On-going	Annual	702	1,130	405	445	548	3,230	1,579	1,621	1,660	1,692	1,731	8,282
O&M	Customer Services	CCC - Operations	CSR Training, Quality Observations, CCC Safety Committee Liaison	No	On-going	Annual	264	482	587	587	577	2,497	247	254	260	265	271	1,295
O&M	Customer Services	CCC - Operations	Emergency Call Handling	No	On-going	Annual	756	536	430	513	580	2,816	932	957	980	999	1,022	4,888
<b>O&amp;M</b>	<b>Customer Services</b>	<b>Sub-Total CCC - Operations</b>		<b>Yes</b>			<b>28,678</b>	<b>24,430</b>	<b>24,726</b>	<b>26,003</b>	<b>28,450</b>	<b>132,286</b>	<b>32,551</b>	<b>33,411</b>	<b>34,213</b>	<b>34,875</b>	<b>35,677</b>	<b>170,727</b>
O&M	Customer Services	CCC - Support	Non-RAMP	No	On-going	Annual	7,912	8,143	8,674	9,452	10,107	44,289	9,594	9,847	10,083	10,278	10,515	50,317
<b>O&amp;M</b>	<b>Customer Services</b>	<b>Customer Services - Information</b>		<b>Yes</b>			<b>19,570</b>	<b>24,559</b>	<b>26,580</b>	<b>23,028</b>	<b>23,426</b>	<b>117,163</b>	<b>24,666</b>	<b>25,317</b>	<b>25,925</b>	<b>26,426</b>	<b>27,034</b>	<b>129,368</b>
O&M	Customer Services	Renewable Gas - Customer Outreach	Non-RAMP	No	On-going	Annual	423	490	599	696	621	2,829	1,028	1,055	1,081	1,102	1,127	5,393
O&M	Customer Services	Clean Transportation - Customer Outreach	Non-RAMP	No	On-going	Annual	1,184	1,484	1,998	917	1,171	6,753	1,463	1,502	1,538	1,568	1,604	7,675
O&M	Customer Services	CI-Customer Strategy and Engagement -	Non-RAMP	No	On-going	Annual	5,790	6,019	8,720	7,717	8,665	36,912	7,652	7,854	8,043	8,198	8,387	40,134

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Customer Services	CI-Customer Assistance Programs	Non-RAMP	No	On-going	Annual	671	321	369	195	226	1,782	761	781	800	816	835	3,993
O&M	Customer Services	CI-Customer Assistance Programs	Natural Gas Appliance Testing (NGAT)	No	On-going	Annual	2,106	1,064	1,672	1,647	1,104	7,593	2,923	3,000	3,072	3,132	3,204	15,331
O&M	Customer Services	Sub-Total CI-Customer Assistance Programs		Yes			2,777	1,385	2,041	1,842	1,330	9,375	3,684	3,782	3,872	3,947	4,038	19,324
O&M	Customer Services	CI-Customer Segment Services	Non-RAMP	No	On-going	Annual	9,396	15,181	13,222	11,857	11,638	61,294	10,837	11,124	11,391	11,611	11,878	56,841
O&M	Customer Services	Customer Services - Technologies, Policies & Solutions		Yes			2,766	4,129	6,470	12,096	10,807	36,268	5,294	5,434	5,564	5,672	5,803	27,767
O&M	Customer Services	Business Strategy and Development	Non-RAMP	No	On-going	Annual	899	2,044	3,650	7,201	6,114	19,907	1,616	1,659	1,699	1,731	1,771	8,476
O&M	Customer Services	Environmental Affairs	Non-RAMP	No	On-going	Annual	489	384	602	494	291	2,260	697	716	733	747	764	3,658
O&M	Customer Services	Energy & Environmental Policy	Non-RAMP	No	On-going	Annual	523	504	755	302	354	2,438	1,768	1,815	1,858	1,894	1,938	9,274
O&M	Customer Services	Planning & Legislative Analysis	Non-RAMP	No	On-going	Annual	221	258	464	688	692	2,324	238	244	250	254	260	1,246
O&M	Customer Services	Policy & Environmental Solutions NSS	Non-RAMP	No	On-going	Annual	634	940	998	3,411	3,356	9,339	975	1,001	1,025	1,045	1,069	5,113

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Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Customer Services	Customer Services		Yes	(22,409)	(32,196)	(32,935)	(25,237)	(24,380)	(137,158)	-8%	-12%	-12%	-9%	-8%	-10%
O&M	Customer Services	Advance Metering Infrastructure Policy		Yes	(2,270)	(2,113)	(1,964)	(1,400)	(881)	(8,628)	-20%	-18%	-17%	-12%	-7%	-15%
O&M	Customer Services	Advanced Meter Operations	Non-RAMP	No	(2,327)	(1,957)	(1,739)	(1,365)	(769)	(8,157)	-22%	-18%	-15%	-12%	-7%	-14%
O&M	Customer Services	Advanced Meter Operations	Annual DCU/ Pole Inspections	No	99	(49)	(73)	118	46	140	33%	-16%	-23%	37%	14%	9%
O&M	Customer Services	Advanced Meter Operations	Analyze consumption patterns to identify atypical/unusual consumption	No	(42)	(107)	(151)	(153)	(158)	(611)	-21%	-52%	-72%	-72%	-72%	-59%
O&M	Customer Services	Sub-Total Advanced Meter Operations		Yes	(2,270)	(2,113)	(1,964)	(1,400)	(881)	(8,628)	-20%	-18%	-17%	-12%	-7%	-15%
O&M	Customer Services	Customer Services - Field & Meter Reading		Yes	(6,961)	(17,336)	(21,636)	(17,165)	(17,259)	(80,357)	-4%	-9%	-11%	-9%	-8%	-8%
O&M	Customer Services	CS Field Staff Manager	Non-RAMP	No	(46)	(72)	63	58	140	142	-9%	-13%	11%	10%	24%	5%
O&M	Customer Services	CS Field Staff Manager	Policy, Procedures, Standards and ESCMP	No	(135)	(151)	(206)	(217)	(82)	(792)	-14%	-16%	-21%	-22%	-8%	-16%
O&M	Customer Services	Sub-Total CS Field Staff Manager		Yes	(181)	(224)	(144)	(159)	58	(650)	-12%	-15%	-9%	-10%	4%	-8%
O&M	Customer Services	Customer Services Field - Operations	Non-RAMP	No	(4,605)	(12,161)	(18,714)	(13,062)	(6,762)	(55,304)	-6%	-15%	-22%	-15%	-8%	-13%
O&M	Customer Services	Customer Services Field - Operations	Safety-related field Orders, Field Employee meetings and Training	No	574	(3,923)	(2,617)	(4,300)	(10,040)	(20,307)	1%	-10%	-6%	-10%	-23%	-10%
O&M	Customer Services	Customer Services Field - Operations	PPE and Tools	No	(127)	(1,049)	(963)	(905)	(739)	(3,783)	-4%	-30%	-27%	-25%	-20%	-21%
O&M	Customer Services	Sub-Total CS Field - Operations		Yes	(4,158)	(17,134)	(22,294)	(18,267)	(17,542)	(79,395)	-3%	-14%	-17%	-14%	-13%	-12%
O&M	Customer Services	Customer Services Field - Supervision	Non-RAMP	No	985	1,368	(780)	(1,080)	(333)	159	9%	12%	-7%	-9%	-3%	0%

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Customer Services	Customer Services Field - Supervision	Job Observations Field Rides and Job Monitoring	No	(171)	(146)	(225)	(152)	(149)	(843)	-18%	-15%	-22%	-15%	-14%	-17%
<b>O&amp;M</b>	<b>Customer Services</b>	<b>Sub-Total CS Field- Supervision</b>		<b>Yes</b>	<b>814</b>	<b>1,222</b>	<b>(1,004)</b>	<b>(1,232)</b>	<b>(482)</b>	<b>(683)</b>	<b>7%</b>	<b>10%</b>	<b>-8%</b>	<b>-10%</b>	<b>-4%</b>	<b>-1%</b>
O&M	Customer Services	Customer Services Field - Dispatch	Non-RAMP	No	3,234	3,265	4,117	3,905	4,195	18,717	34%	34%	41%	39%	40%	38%
O&M	Customer Services	Customer Services Field - Support	Non-RAMP	No	(3,957)	(2,641)	(5,042)	(2,818)	(4,247)	(18,705)	-26%	-17%	-32%	-17%	-26%	-24%
O&M	Customer Services	Customer Services Field - Support	Employee Skills Training and QA inspections	No	(126)	31	858	1,648	1,541	3,953	-3%	1%	22%	41%	37%	20%
<b>O&amp;M</b>	<b>Customer Services</b>	<b>Sub-Total CS Field- Support</b>		<b>Yes</b>	<b>(4,083)</b>	<b>(2,610)</b>	<b>(4,185)</b>	<b>(1,169)</b>	<b>(2,705)</b>	<b>(14,752)</b>	<b>-22%</b>	<b>-13%</b>	<b>-21%</b>	<b>-6%</b>	<b>-13%</b>	<b>-15%</b>
O&M	Customer Services	MSA Inspection Program	Non-RAMP	No	(3,048)	(1,734)	2,761	(1,364)	(2,110)	(5,495)	-43%	-24%	37%	-18%	-27%	-15%
O&M	Customer Services	MSA Inspection Program	Gas Facility and Pipeline Inspections	No	1,891	2,290	1,811	3,978	4,394	14,364	15%	18%	14%	29%	32%	22%
<b>O&amp;M</b>	<b>Customer Services</b>	<b>Sub-Total MSA Inspection Program</b>		<b>Yes</b>	<b>(1,157)</b>	<b>556</b>	<b>4,572</b>	<b>2,614</b>	<b>2,284</b>	<b>8,869</b>	<b>-6%</b>	<b>3%</b>	<b>22%</b>	<b>12%</b>	<b>11%</b>	<b>9%</b>
O&M	Customer Services	Meter Reading - Operations	Non-RAMP	No	(489)	(736)	(485)	(600)	(759)	(3,069)	-41%	-60%	-39%	-47%	-58%	-49%
O&M	Customer Services	Meter Reading - Operations	Manual Meter Reads for Atmospheric Corrosion Inspections	No	(524)	(772)	(1,289)	(1,314)	(1,344)	(5,241)	-43%	-61%	-100%	-100%	-100%	-82%
<b>O&amp;M</b>	<b>Customer Services</b>	<b>Sub-Total Meter Reading - Operations</b>		<b>Yes</b>	<b>(1,013)</b>	<b>(1,508)</b>	<b>(1,773)</b>	<b>(1,914)</b>	<b>(2,103)</b>	<b>(8,310)</b>	<b>-42%</b>	<b>-61%</b>	<b>-70%</b>	<b>-74%</b>	<b>-79%</b>	<b>-66%</b>

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Customer Services	Meter Reading - Clerical	Non-RAMP	No	19	(166)	(170)	(173)	(177)	(666)	12%	-100%	-100%	-100%	-100%	-79%
O&M	Customer Services	Meter Reading - Supervision & Training	Non-RAMP	No	(383)	(397)	(406)	(414)	(424)	(2,024)	-99%	-100%	-100%	-100%	-100%	-100%
O&M	Customer Services	Meter Reading - Support	Non-RAMP	No	(54)	(341)	(349)	(356)	(364)	(1,463)	-16%	-100%	-100%	-100%	-100%	-84%
O&M	Customer Services	Customer Services - Office Operations		Yes	(5,555)	(10,684)	(10,896)	(9,698)	(7,635)	(44,469)	-13%	-25%	-25%	-21%	-17%	-20%
O&M	Customer Services	CCC - Operations	Non-RAMP	No	(2,837)	(8,298)	(8,010)	(7,462)	(5,910)	(32,517)	-10%	-27%	-26%	-23%	-18%	-21%
O&M	Customer Services	CCC - Operations	Update customer information for notification/access purposes	No	(877)	(491)	(1,255)	(1,247)	(1,183)	(5,052)	-56%	-30%	-76%	-74%	-68%	-61%
O&M	Customer Services	CCC - Operations	CSR Training, Quality Observations, CCC Safety Committee Liaison	No	17	229	327	322	307	1,201	7%	90%	126%	122%	113%	93%
O&M	Customer Services	CCC - Operations	Emergency Call Handling	No	(176)	(420)	(550)	(485)	(441)	(2,072)	-19%	-44%	-56%	-49%	-43%	-42%
O&M	Customer Services	Sub-Total CCC - Operations		Yes	(3,873)	(8,980)	(9,487)	(8,872)	(7,228)	(38,440)	-12%	-27%	-28%	-25%	-20%	-23%
O&M	Customer Services	CCC - Support	Non-RAMP	No	(1,681)	(1,704)	(1,409)	(826)	(408)	(6,028)	-18%	-17%	-14%	-8%	-4%	-12%
O&M	Customer Services	Customer Services - Information		Yes	(5,096)	(758)	655	(3,398)	(3,609)	(12,204)	-21%	-3%	3%	-13%	-13%	-9%
O&M	Customer Services	Renewable Gas - Customer Outreach	Non-RAMP	No	(605)	(566)	(481)	(406)	(506)	(2,564)	-59%	-54%	-45%	-37%	-45%	-48%
O&M	Customer Services	Clean Transportation - Customer Outreach	Non-RAMP	No	(280)	(18)	460	(651)	(433)	(923)	-19%	-1%	30%	-42%	-27%	-12%
O&M	Customer Services	CI-Customer Strategy and Engagement -	Non-RAMP	No	(1,862)	(1,835)	677	(481)	279	(3,222)	-24%	-23%	8%	-6%	3%	-8%

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Customer Services	CI-Customer Assistance Programs	Non-RAMP	No	(90)	(460)	(431)	(621)	(608)	(2,211)	-12%	-59%	-54%	-76%	-73%	-55%
O&M	Customer Services	CI-Customer Assistance Programs	Natural Gas Appliance Testing (NGAT)	No	(817)	(1,936)	(1,400)	(1,485)	(2,100)	(7,738)	-28%	-65%	-46%	-47%	-66%	-50%
<b>O&amp;M</b>	<b>Customer Services</b>	<b>Sub-Total CI-Customer Assistance Programs</b>		<b>Yes</b>	<b>(907)</b>	<b>(2,396)</b>	<b>(1,832)</b>	<b>(2,106)</b>	<b>(2,708)</b>	<b>(9,949)</b>	<b>-25%</b>	<b>-63%</b>	<b>-47%</b>	<b>-53%</b>	<b>-67%</b>	<b>-51%</b>
O&M	Customer Services	CI-Customer Segment Services	Non-RAMP	No	(1,442)	4,058	1,831	246	(240)	4,453	-13%	36%	16%	2%	-2%	8%
<b>O&amp;M</b>	<b>Customer Services</b>	<b>Customer Services - Technologies, Policies &amp; Solutions</b>		<b>Yes</b>	<b>(2,528)</b>	<b>(1,305)</b>	<b>905</b>	<b>6,424</b>	<b>5,004</b>	<b>8,501</b>	<b>-48%</b>	<b>-24%</b>	<b>16%</b>	<b>113%</b>	<b>86%</b>	<b>31%</b>
O&M	Customer Services	Business Strategy and Development	Non-RAMP	No	(717)	385	1,951	5,469	4,342	11,430	-44%	23%	115%	316%	245%	135%
O&M	Customer Services	Environmental Affairs	Non-RAMP	No	(208)	(332)	(131)	(253)	(473)	(1,397)	-30%	-46%	-18%	-34%	-62%	-38%
O&M	Customer Services	Energy & Environmental Policy	Non-RAMP	No	(1,245)	(1,311)	(1,103)	(1,592)	(1,584)	(6,836)	-70%	-72%	-59%	-84%	-82%	-74%
O&M	Customer Services	Planning & Legislative Analysis	Non-RAMP	No	(17)	14	215	434	432	1,078	-7%	6%	86%	170%	166%	87%
O&M	Customer Services	Policy & Environmental Solutions NSS	Non-RAMP	No	(341)	(60)	(27)	2,366	2,288	4,226	-35%	-6%	-3%	227%	214%	83%

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Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
O&M	Customer Services	Customer Services		Yes																										
O&M	Customer Services	Advance Metering Infrastructure Policy		Yes																										
O&M	Customer Services	Advanced Meter Operations	Non-RAMP	No	FTE	Units were not tracked at this granular level for 2019	45	41	46	46	178	48	48	48	48	48	242		(3)	(7)	(2)	(3)	(64)		-7%	-15%	-5%	-6%	-27%	
O&M	Customer Services	Advanced Meter Operations	Annual DCU/ Pole Inspections	No	Inspections		4,404	4,416	4,437	4,539	4,580	22,376	4,600	4,600	4,600	4,600	4,600	23,000	(196)	(184)	(163)	(61)	(20)	(624)	-4%	-4%	-4%	-1%	-0%	-3%
O&M	Customer Services	Advanced Meter Operations	Analyze consumption patterns to identify atypical/unusual consumption	No	Accounts		32,900	30,190	31,812	30,191	27,216	152,309	21,312	21,312	21,312	21,312	21,312	106,560	11,588	8,878	10,500	8,879	5,904	45,749	54%	42%	49%	42%	28%	43%
O&M	Customer Services	Sub-Total Advanced Meter Operations		Yes																										
O&M	Customer Services	Customer Services - Field & Meter Reading		Yes																										
O&M	Customer Services	CS Field Staff Manager	Non-RAMP	No	FTE	Units were not tracked at this granular level for 2019	4	5	5	6	19	6	6	6	6	6	31		(2)	(1)	(1)	(1)	(11)		-36%	-16%	-20%	-10%	-36%	
O&M	Customer Services	CS Field Staff Manager	Policy, Procedures, Standards and ESCMP	No	FTE	Units were not tracked at this granular level for 2019	7	6	6	7	27	8	8	8	8	8	40		(1)	(2)	(2)	(1)	(13)		-14%	-19%	-20%	-8%	-32%	
O&M	Customer Services	Sub-Total CS Field Staff Manager		Yes																										
O&M	Customer Services	Customer Services Field - Operations	Non-RAMP	No	Non-RAMP Orders	Units were not tracked at this granular level for 2019	1,077,366	1,049,861	1,051,708	1,157,686	4,336,621	1,829,324	1,829,324	1,829,324	1,829,324	1,829,324	9,146,620		(751,958)	(779,463)	(777,616)	(671,638)	(4,809,999)		-41%	-43%	-43%	-37%	-53%	
O&M	Customer Services	Customer Services Field - Operations	Safety-related field Orders, Field Employee meetings and Training	No	Safety-related field orders		805,237	655,143	663,789	694,261	657,811	3,476,241	843,077	843,077	843,077	843,077	843,077	4,215,385	(37,840)	(187,934)	(179,288)	(148,816)	(185,266)	(739,144)	-4%	-22%	-21%	-18%	-22%	-18%
O&M	Customer Services	Customer Services Field - Operations	PPE and Tools	No	FTE	Units were not tracked at this granular level for 2019	1,080	1,035	1,071	1,066	4,253	1,330	1,330	1,330	1,330	1,330	6,648		(249)	(294)	(259)	(263)	(2,395)							
O&M	Customer Services	Sub-Total CS Field - Operations		Yes																										
O&M	Customer Services	Customer Services Field - Supervision	Non-RAMP	No	FTE	Units were not tracked at this granular level for 2019	116	93	99	105	413	109	109	109	109	109	547		7	(17)	(11)	(4)	(135)		6%	-15%	-10%	-4%	-25%	



Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance
O&M	Customer Services	Customer Services Field - Supervision	Job Observations Field Rides and Job Monitoring	No	FTE	Units were not tracked at this granular level for 2019	1,080	1,035	1,071	1,066	4,253	1,330	1,330	1,330	1,330	1,330	6,648	(249)	(294)	(259)	(263)	(2,395)		-19%	-22%	-19%	-20%	-36%	
O&M	Customer Services	Sub-Total CS Field- Supervision		Yes																									
O&M	Customer Services	Customer Services Field - Dispatch	Non-RAMP	No	FTE	Units were not tracked at this granular level for 2019	124	128	129	130	510	93	93	93	93	93	465	31	35	36	37	45		33%	38%	38%	40%	10%	
O&M	Customer Services	Customer Services Field - Support	Non-RAMP	No	FTE	Units were not tracked at this granular level for 2019	103	84	88	84	358	113	113	113	113	113	566	(11)	(30)	(25)	(29)	(208)		-9%	-26%	-22%	-26%	-37%	
O&M	Customer Services	Customer Services Field - Support	Employee Skills Training and QA inspections	No	FTE	Units were not tracked at this granular level for 2019	35	46	52	49	181	37	37	37	37	37	184	(2)	9	15	12	(2)		-5%	24%	41%	34%	-1%	
O&M	Customer Services	Sub-Total CS Field- Support		Yes																									
O&M	Customer Services	MSA Inspection Program	Non-RAMP	No	Remediation Orders	72,206	124,981	157,599	72,372	49,189	476,347	166,509	166,509	166,509	166,509	166,509	832,545	(94,303)	(41,528)	(8,910)	(94,137)	(117,320)	(356,198)	-57%	-25%	-5%	-57%	-70%	-43%
O&M	Customer Services	MSA Inspection Program	Gas Facility and Pipeline Inspections	No	MSA Inspections	2,365,887	2,850,126	2,705,546	2,596,353	2,704,927	13,222,839	2,292,132	2,292,132	2,292,132	2,292,132	2,292,132	11,460,660	73,755	557,994	413,414	304,221	412,795	1,762,179	3%	24%	18%	13%	18%	15%
O&M	Customer Services	Sub-Total MSA Inspection Program		Yes																									
O&M	Customer Services	Meter Reading - Operations	Non-RAMP	No	FTE	Units were not tracked at this granular level for 2019	45	15	14	11	84	26	26	26	26	26	128	19	(10)	(12)	(15)	(43)		75%	-40%	-47%	-59%	-34%	
O&M	Customer Services	Meter Reading - Operations	Manual Meter Reads for Atmospheric Corrosion Inspections	No	Manual Meter Reads	242,278	165,602	—	—	—	407,880	335,744	335,744	335,744	335,744	335,744	1,678,720	(93,466)	(170,142)	(335,744)	(335,744)	(335,744)	(1,270,840)	-28%	-51%	-100%	-100%	-100%	-76%
O&M	Customer Services	Sub-Total Meter Reading - Operations		Yes																									

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
O&M	Customer Services	Meter Reading - Clerical	Non-RAMP	No	FTE	Units were not tracked at this granular level for 2019	—	—	—	—	—	2	2	2	2	2	10	(2)	(2)	(2)	(2)	(2)	(10)	-100%	-100%	-100%	-100%	-100%	-100%	
O&M	Customer Services	Meter Reading - Supervision & Training	Non-RAMP	No	FTE	Units were not tracked at this granular level for 2019	—	—	—	—	—	4	4	4	4	4	20	(4)	(4)	(4)	(4)	(4)	(20)	-100%	-100%	-100%	-100%	-100%	-100%	
O&M	Customer Services	Meter Reading - Support	Non-RAMP	No	FTE	Units were not tracked at this granular level for 2019	—	—	—	—	—	3	3	3	3	3	15	(3)	(3)	(3)	(3)	(3)	(15)	-100%	-100%	-100%	-100%	-100%	-100%	
O&M	Customer Services	Customer Services - Office Operations		Yes																										
O&M	Customer Services	CCC - Operations	Non-RAMP	No	Non-Emergency Call Volume	Units were not tracked at this granular level for 2019	3,674,684	3,164,923	2,858,843	2,905,898	12,604,348	4,877,877	4,877,877	4,877,877	4,877,877	4,877,877	24,389,385	(1,203,193)	(1,712,954)	(2,019,034)	(1,971,979)	(11,785,037)		-25%	-35%	-41%	-40%	-48%	-48%	
O&M	Customer Services	CCC - Operations	Update customer information for notification/access purposes	No	Call Volume	4,365,076	2,492,849	881,060	989,000	1,264,217	9,992,202	4,908,129	4,908,129	4,908,129	4,908,129	4,908,129	24,540,645	(543,053)	(2,415,280)	(4,027,069)	(3,919,129)	(3,643,912)	(14,548,443)	-11%	-49%	-82%	-80%	-74%	-59%	
O&M	Customer Services	CCC - Operations	CSR Training, Quality Observations, CCC Safety Committee Liaison	No	FTE	4,065 Hours	3	4	5	5	18	2	2	2	2	2	11	1	2	3	3	7		50%	77%	127%	145%	60%	60%	
O&M	Customer Services	CCC - Operations	Emergency Call Handling	No	Emergency Calls	278,190	268,172	408,992	409,239	444,618	1,809,211	346,767	346,767	346,767	346,767	346,767	1,733,835	(68,577)	(78,595)	62,225	62,472	97,851	75,376	-20%	-23%	18%	18%	28%	4%	
O&M	Customer Services	Sub-Total CCC - Operations		Yes																										
O&M	Customer Services	CCC - Support	Non-RAMP	No	FTE	Units were not tracked at this granular level for 2019	55	55	59	58	227	66	66	66	66	66	330	(11)	(11)	(7)	(8)	(103)		-17%	-16%	-10%	-13%	-31%	-31%	
O&M	Customer Services	Customer Services - Information		Yes																										
O&M	Customer Services	Renewable Gas - Customer Outreach	Non-RAMP	No	The Renewable Gas Customer Outreach group supports customer implementation of renewable gas projects through activities such as educating customers on technology options and project economics, providing information on state/local incentive programs, monitoring renewable gas credit prices, as well as developing presentations and informational materials for use by others in the Company. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Customer Services	Clean Transportation - Customer Outreach	Non-RAMP	No	The Clean Transportation Customer Outreach conducts direct customer contact activities such as providing customer information for natural gas vehicles (NGV) and refueling stations, education and training related to clean transportation regulations, utility service, infrastructure, safety, and products, and the evaluation of clean transportation solutions. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Customer Services	CI-Customer Strategy and Engagement -	Non-RAMP	No	Customer Strategy and Engagement (CSE) manages internal and external communications and marketing activities such as design, research, compliance, campaigns, and communication events. Activities in this area include: (1) Customer Marketing and Communications: Marketing and communication plans, management of communication campaigns; (2) Creative Services: Graphic design, scheduling and production for various printed and electronic materials such as bill enclosures, brochures, flyers, posters, and newsletters, conducting external outreach events; (3) Customer Insights & Analytics: Primary and secondary customer research such as SoCalGas's Customer Experience Study, customer insight panels, disadvantaged communities and low-income customer research; and (4) Digital Engagement: Management of socialgas.com, MyAccount residential & business, mobile, email, SMS text, and non-marketing social media. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
O&M	Customer Services	CI-Customer Assistance Programs	Non-RAMP	No	Activities administering the Medical Baseline and Gas Assistance Fund programs include outreach, enrollment, processing, customer support, and participant recertification. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Customer Services	CI-Customer Assistance Programs	Natural Gas Appliance Testing (NGAT)	No	NGATs	72,067	39,732	57,158	52,662	35,854	257,473	103,084	103,084	103,084	103,084	103,084	515,420	(31,017)	(63,352)	(45,926)	(50,422)	(67,230)	(257,947)	-30%	-61%	-45%	-49%	-65%	-50%	
O&M	Customer Services	Sub-Total CI-Customer Assistance Programs		Yes																										
O&M	Customer Services	CI-Customer Segment Services	Non-RAMP	No	Customer Segment Services area consists of a variety of activities which include: account management and support for large commercial & industrial customers and the energy market segment; outreach and market analysis for small/medium businesses and residential customer segments; negotiated contract assessments and contract management; customer rate analysis; segment demand forecasting; developing program offerings and services in compliance with legislative and regulatory mandates. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Customer Services	Customer Services - Technologies, Policies & Solutions		Yes																										
O&M	Customer Services	Business Strategy and Development	Non-RAMP	No	The group provides analytical and execution support for initiatives in major strategic priority areas such as development and deployment of clean energy solutions that support ratepayer interests and advance Commission and State policy. The group also performs research and analysis on various clean energy innovation topics. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Customer Services	Environmental Affairs	Non-RAMP	No	The group activities are to monitor and analyze issues to identify air quality regulatory and compliance impacts on SoCalGas customers and on utility operations. The group works directly with air quality agency staff and with customers on rulemakings. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Customer Services	Energy & Environmental Policy	Non-RAMP	No	This group provides policy analysis, agency engagement and outreach related to policies, laws and regulations related to natural gas delivery and utilization. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Customer Services	Planning & Legislative Analysis	Non-RAMP	No	The group activities consist of managing legislative analysis for SoCalGas and provide legislative support. Provides analysis of legislative policies and emerging issues that could impact SoCalGas customers. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Customer Services	Policy & Environmental Solutions NSS	Non-RAMP	No	The group leads the development and implementation of SoCalGas' public policy and planning efforts related to the role of gas infrastructure & system for meeting federal, state, regional and local energy and environmental policy goals. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									

2. SoCalGas Other  
A. SoCalGas Customer Services  
i. SoCalGas Customer Services O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Customer Services	Customer Services		Yes									
O&M	Customer Services	Advance Metering Infrastructure Policy		Yes									
O&M	Customer Services	Advanced Meter Operations	Non-RAMP	No	No	No	N/A	N/A	Under (U)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Customer Services	Advanced Meter Operations	Annual DCU/ Pole Inspections	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Customer Services	Advanced Meter Operations	Analyze consumption patterns to identify atypical/unusual consumption	No	No	Yes	N/A	Higher than authorized units due to Advanced Meter Analytics process improvements which continue to enhance the ability to identify, evaluate, and analyze unusual consumption anomalies.	Over (O)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Customer Services	Sub-Total Advanced Meter Operations		Yes	No								No
O&M	Customer Services	Customer Services - Field & Meter Reading		Yes									
O&M	Customer Services	CS Field Staff Manager	Non-RAMP	No	No	No	N/A	N/A	Under (U)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Customer Services	CS Field Staff Manager	Policy, Procedures, Standards and ESCMP	No	No	No	N/A	N/A	Under (U)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Customer Services	Sub-Total CS Field Staff Manager		Yes	No								No
O&M	Customer Services	Customer Services Field - Operations	Non-RAMP	No	Yes	Yes	Variance attributed to a significant decline in certain order types. Some orders were impacted by regulatory policy decisions, such as a moratorium on collection activity and disconnections. In 2023, Credit and Collection orders were severely limited and account for 65% of the total decline in non-RAMP orders. Soft Close orders were replaced with Hang Tag Orders after Advanced Meter was in place. The decline in these orders accounted for 14%. Turn-On/Shut-Off work was down 8% over this period.	Variance attributed to a significant decline in certain order types. Some orders were impacted by regulatory policy decisions, such as a moratorium on collection activity and disconnections. In 2023, Credit and Collection orders were severely limited and account for 65% of the total decline in non-RAMP orders. Soft Close orders were replaced with Hang Tag Orders after Advanced Meter was in place. The decline in these orders accounted for 14%. Turn-On/Shut-Off work was down 8% over this period.	Under (U)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Customer Services	Customer Services Field - Operations	Safety-related field Orders, Field Employee meetings and Training	No	Yes	Yes	A process improvement in Read/Verify orders allowed us to reduce the number of these orders which accounts for 28% of the reduction. Fumigation accounts for 19% of the decline. This activity is largely tied to home sales. Increasing interest rates affected home sales in 2023, driving the activity level down. Customer Service Order (CSO) activity dropped during COVID-19 and has not yet returned to historical levels. These orders account for 21% of the decline. Gas Leak orders account for 23% of the decline.	A process improvement in Read/Verify orders allowed us to reduce the number of these orders which accounts for 28% of the reduction. Fumigation accounts for 19% of the decline. This activity is largely tied to home sales. Increasing interest rates affected home sales in 2023, driving the activity level down. CSO activity dropped during COVID-19 and has not yet returned to historical levels. These orders account for 21% of the decline. Gas Leak orders account for 23% of the decline.	Under (U)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Customer Services	Customer Services Field - Operations	PPE and Tools	No	No	No	N/A	N/A	Under (U)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Customer Services	Sub-Total CS Field - Operations		Yes	Yes								No
O&M	Customer Services	Customer Services Field - Supervision	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Customer Services	Customer Services Field - Supervision	Job Observations Field Rides and Job Monitoring	No	No	No	N/A	N/A	Under (U)	On Target (T)	Under (U)	Proceeding as Planned	No
<b>O&amp;M</b>	<b>Customer Services</b>	<b>Sub-Total CS Field- Supervision</b>		<b>Yes</b>	<b>No</b>								<b>No</b>
O&M	Customer Services	Customer Services Field - Dispatch	Non-RAMP	No	Yes	Yes	Higher than forecasted due to an increase in training and broader responsibility in scheduling, routing, and dispatching of field operations work.	Higher than forecasted due to an increase in training and broader responsibility in scheduling, routing, and dispatching of field operations work.	Over (O)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Customer Services	Customer Services Field - Support	Non-RAMP	No	Yes	Yes	Variance attributed primarily to resources that were temporarily reallocated to supporting PACER Mobile and Vista One capital projects.	Variance attributed primarily to resources that were temporarily reallocated to supporting PACER Mobile and Vista One capital projects.	Under (U)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Customer Services	Customer Services Field - Support	Employee Skills Training and QA inspections	No	Yes	Yes	Although class schedules stabilized in 2023, training staffing levels remained at a higher level as a result of the increased shifts that were added throughout 2020-2022 to maintain essential staffing levels. Training Staff is being moved and repurposed to other positions as capacity exists.	Although class schedules stabilized in 2023, training staffing levels remained at a higher level as a result of the increased shifts that were added throughout 2020-2022 to maintain essential staffing levels. Training Staff is being moved and repurposed to other positions as capacity exists.	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
<b>O&amp;M</b>	<b>Customer Services</b>	<b>Sub-Total CS Field- Support</b>		<b>Yes</b>	<b>No</b>								<b>No</b>
O&M	Customer Services	MSA Inspection Program	Non-RAMP	No	Yes	Yes	Fewer orders primarily due to a reduction in remediation conditions found during inspections.	Fewer orders primarily due to a reduction in remediation conditions found during inspections.	Under (U)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Customer Services	MSA Inspection Program	Gas Facility and Pipeline Inspections	No	Yes	No	Increased inspections due to a higher rate of meter access issues and to increase the inspection program's overall routing and scheduling efficiency. In addition, higher wage classifications were utilized to meet staffing levels.	N/A	Over (O)	On Target (T)	Over (O)	Proceeding as Planned	No
<b>O&amp;M</b>	<b>Customer Services</b>	<b>Sub-Total MSA Inspection Program</b>		<b>Yes</b>	<b>No</b>								<b>No</b>
O&M	Customer Services	Meter Reading - Operations	Non-RAMP	No	No	Yes	N/A	Fewer manual meter reads were needed for opt-out customers due to effective increased outreach efforts. Fewer escalated city reads were needed due to installation of Data Collection Units (DCUs) providing communication coverage.	Under (U)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Customer Services	Meter Reading - Operations	Manual Meter Reads for Atmospheric Corrosion Inspections	No	Yes	Yes	This activity was absorbed by MSA Inspection Program.	This activity was absorbed by MSA Inspection Program.	Under (U)	On Target (T)	Under (U)	Other	Yes
<b>O&amp;M</b>	<b>Customer Services</b>	<b>Sub-Total Meter Reading - Operations</b>		<b>Yes</b>	<b>Yes</b>								<b>No</b>

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Customer Services	Meter Reading - Clerical	Non-RAMP	No	No	Yes	N/A	This activity was absorbed by CS Field Support due to fewer manual meter reads.	Under (U)	On Target (T)	Under (U)	Other	Yes
O&M	Customer Services	Meter Reading - Supervision & Training	Non-RAMP	No	No	Yes	N/A	This activity was absorbed by CS Field Supervision due to fewer manual meter reads.	Under (U)	On Target (T)	Under (U)	Other	Yes
O&M	Customer Services	Meter Reading - Support	Non-RAMP	No	No	Yes	N/A	This activity was absorbed by CS Field Support due to fewer manual meter reads.	Under (U)	On Target (T)	Under (U)	Other	Yes
<b>O&amp;M</b>	<b>Customer Services</b>	<b>Customer Services - Office Operations</b>		<b>Yes</b>									
O&M	Customer Services	CCC - Operations	Non-RAMP	No	Yes	Yes	Overall decrease in call volume is attributed to reduction in billing, collections, service, and miscellaneous calls. Collections activity did not fully resume, impacting turn-on/close call volume.	Overall decrease in call volume is attributed to reduction in billing, collections, service, and miscellaneous calls. Collections activity did not fully resume, impacting turn-on/close call volume.	Under (U)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Customer Services	CCC - Operations	Update customer information for notification/access purposes	No	Yes	Yes	Variance attributed to the efficiency gained by the automation technology which reduced the frequency of CSRs soliciting and/or verifying customer cell phone information. Additionally lower call volume reduced the opportunity to collect customer information.	Variance attributed to the efficiency gained by the automation technology which reduced the frequency of CSRs soliciting and/or verifying customer cell phone information. Additionally lower call volume reduced the opportunity to collect customer information.	Under (U)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Customer Services	CCC - Operations	CSR Training, Quality Observations, CCC Safety Committee Liaison	No	No	Yes	N/A	Increase in evaluating calls for safety and compliance through quality observations and training due to increased call volume.	Over (O)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Customer Services	CCC - Operations	Emergency Call Handling	No	No	Yes	N/A	Overall increase in call volume, most significant in first quarter due to unprecedented winter weather.	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
<b>O&amp;M</b>	<b>Customer Services</b>	<b>Sub-Total CCC - Operations</b>		<b>Yes</b>	<b>Yes</b>								<b>No</b>
O&M	Customer Services	CCC - Support	Non-RAMP	No	No	No	N/A	N/A	Under (U)	On Target (T)	Under (U)	Proceeding as Planned	No
<b>O&amp;M</b>	<b>Customer Services</b>	<b>Customer Services - Information</b>		<b>Yes</b>									
O&M	Customer Services	Renewable Gas - Customer Outreach	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Customer Services	Clean Transportation - Customer Outreach	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Customer Services	CI-Customer Strategy and Engagement -	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Customer Services	CI-Customer Assistance Programs	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Customer Services	CI-Customer Assistance Programs	Natural Gas Appliance Testing (NGAT)	No	Yes	Yes	The lower than forecasted spend of Natural Gas Appliance Testing (NGAT) in 2023 was the result of the recent low-income Decision (D.21-06-015) directing a shift in Energy Savings Assistance (ESA) Program priorities from treating numbers of homes to achieving deeper energy savings per home. Specifically, starting in 2022 as directed by D.21-06-015, the ESA Program transitioned to them savings goal instead of number of homes treated. As a result, the Program is focused on installation of measures which contribute to cost effective energy savings. NGAT is usually performed in conjunction with air infiltration reduction measures. Given the shift in focus of ESA Program, air infiltration measures are being installed at a lower frequency resulting in less opportunity to perform NGAT. Thus, with less NGAT work performed, fewer dollars were spent.	The lower than forecasted treated homes receiving Natural Gas Appliance Testing (NGAT) in 2023 was the result of the recent low-income Decision (D.21-06-015) directing a shift in Energy Savings Assistance (ESA) Program priorities from treating numbers of homes to achieving deeper energy savings per home. Specifically, starting in 2022 as directed by D.21-06-015, the ESA Program transitioned to them savings goal instead of number of homes treated. As a result, the Program is focused on installation of measures which contribute to cost effective energy savings. NGAT is usually performed in conjunction with air infiltration reduction measures. Given the shift in focus of ESA Program, air infiltration measures are being installed at a lower frequency resulting in less opportunity to perform NGAT. Thus, with less NGAT work performed, fewer NGAT units were completed.	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Customer Services	Sub-Total CI-Customer Assistance Programs		Yes	Yes								No
O&M	Customer Services	CI-Customer Segment Services	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Customer Services	Customer Services - Technologies, Policies & Solutions		Yes									
O&M	Customer Services	Business Strategy and Development	Non-RAMP	No	Yes	No	The variance is primarily due to emergent activities associated with Business Development. The Business Development function supports development and deployment of environmentally sustainable clean energy solutions, including clean fuels and carbon management, to serve SoCalGas's customers. In 2023, the activities include identifying, analyzing, selecting, and prioritizing clean energy and decarbonization initiatives and projects to advance the Company's sustainability goals. Please refer to Clean Energy Innovations GRC Exhibit SCG-12-R (Witness: Armando Infanzon) for additional details.	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
O&M	Customer Services	Environmental Affairs	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Customer Services	Energy & Environmental Policy	Non-RAMP	No	Yes	No	Energy & Environmental Policy activities from 2019 evolved into two cost centers 2200-2396 Energy & Env'tl Aff Mgr and 2200-1212 Energy Policy which resides in workpaper 2RD002. The variance is due to changes in resource allocation (e.g., labor) to newly created cost centers, diminished travel, conferences and external support in these particular cost centers.	N/A	Under (U)	Under (U)	Under (U)	Other	No
O&M	Customer Services	Planning & Legislative Analysis	Non-RAMP	No	No	No	N/A	N/A	Over (O)	On Target (T)	Over (O)	Expanded	No
O&M	Customer Services	Policy & Environmental Solutions NSS	Non-RAMP	No	Yes	No	The variance is due to three new emergent activities in this workpaper. The creation of 2200-0261 VP of Strategy Sustainability and Environmental Services created to oversee all functions of the department, 2200-0833 Director of Sustainability, created to focus on the company's Sustainability plan and ASPIRE 2045, and Strategic Planning which focuses on Gas Planning OIR.	N/A	Over (O)	Over (O)	Over (O)	Expanded	No

2. SoCalGas Other  
A. SoCalGas Customer Services  
i. SoCalGas Customer Services O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Customer Services	Customer Services		Yes				
O&M	Customer Services	Advance Metering Infrastructure Policy		Yes				
O&M	Customer Services	Advanced Meter Operations	Non-RAMP	No	N/A			
O&M	Customer Services	Advanced Meter Operations	Annual DCU/ Pole Inspections	No	N/A			
O&M	Customer Services	Advanced Meter Operations	Analyze consumption patterns to identify atypical/unusual consumption	No	N/A	This workpaper includes costs associated with the Advanced Meter Operations (AMO) organization. AMO will be responsible for AM systems maintenance and DCUs network management, post-project deployment. This workpaper includes activities, as described, designed to mitigate safety risks.	SCG-17-R RFG-14 to RFG-23 WP 2AM002.000	SCG-14-R DJR-31 to DJR-42 WP 2FC006.000
O&M	Customer Services	Sub-Total Advanced Meter Operations		Yes				
O&M	Customer Services	Customer Services - Field & Meter Reading		Yes				
O&M	Customer Services	CS Field Staff Manager	Non-RAMP	No	N/A			
O&M	Customer Services	CS Field Staff Manager	Policy, Procedures, Standards and ESCMP	No	N/A			
O&M	Customer Services	Sub-Total CS Field Staff Manager		Yes				
O&M	Customer Services	Customer Services Field - Operations	Non-RAMP	No	N/A	CS – Field Operations consists of labor and non-labor expenses for field technicians to provide service at customer premises, including both customer and company-generated work orders. Examples of customer-generated work orders include requests to establish/remove gas service, light gas pilots, check gas appliances, shut off and restore gas service for fumigation, investigate the potential causes of high gas bills, respond to emergency incidents, investigate potential gas leaks, and other field services to customers. Examples of company-generated work include meter and regulator changes and other meter work necessary to maintain Company assets and collecting customer payments for delinquent bills.	SCG-18-R GRM-14 to GRM-28 WP 2FC001.000	SCG-14-R DJR-15 to DJR-22 WP 2FC001.000
O&M	Customer Services	Customer Services Field - Operations	Safety-related field Orders, Field Employee meetings and Training	No	N/A	CS – Field Operations consists of labor and non-labor expenses for field technicians to provide service at customer premises, including both customer and company-generated work orders. Examples of customer-generated work orders include requests to establish/remove gas service, light gas pilots, check gas appliances, shut off and restore gas service for fumigation, investigate the potential causes of high gas bills, respond to emergency incidents, investigate potential gas leaks, and other field services to customers. Examples of company-generated work include meter and regulator changes and other meter work necessary to maintain Company assets and collecting customer payments for delinquent bills.	SCG-18-R GRM-14 to GRM-28 WP 2FC001.000	SCG-14-R DJR-15 to DJR-22 WP 2FC001.000
O&M	Customer Services	Customer Services Field - Operations	PPE and Tools	No	N/A			
O&M	Customer Services	Sub-Total CS Field - Operations		Yes				
O&M	Customer Services	Customer Services Field - Supervision	Non-RAMP	No	N/A			



Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Customer Services	Customer Services Field - Supervision	Job Observations Field Rides and Job Monitoring	No	N/A			
<b>O&amp;M</b>	<b>Customer Services</b>	<b>Sub-Total CS Field- Supervision</b>		<b>Yes</b>				
O&M	Customer Services	Customer Services Field - Dispatch	Non-RAMP	No	N/A	CS – Field Support Includes labor and non-labor costs for CS – Field Dispatch personnel who route and dispatch work orders to CS – Field Operations employees 24 hours a day, 365 days a year. Dispatchers are located at four central locations and handle all matters that come up during the day, including: 1) dispatching emergency orders real time as they are received; 2) redistributing work when CS – Field Operations employees call in sick or otherwise become unavailable; and 3) redistributing work orders when CS – Field Operations employees are not able to complete all work that has been assigned for the day.	SCG-18-R GRM-32 to GRM-34 WP 2FC003.000	SCG-14-R DJR-27 to DJR-28 WP 2FC004.000
O&M	Customer Services	Customer Services Field - Support	Non-RAMP	No	N/A	The CS – Field Support cost category includes: (1) centralized training (classroom instructors, supervisors and a training manager located at SoCalGas' Pico Rivera skills training centers); (2) field instructors who accompany new residential field technicians immediately following their formal training; quality assurance (QA) inspectors and a QA supervisor who inspect the work of field technicians to ensure policy adherence and quality of the work performed; (3) field technology support personnel who maintain the field mobile data terminals, work management, routing and reporting systems used for CS – Field Operations; (4) operations clerks who are located at the field operating bases; (5) region and district management; and (6) administrative associates. Non-labor costs include cell phones, office supplies and other miscellaneous expenses.	SCG-18-R GRM-34 to GRM-38 WP 2FC004.000	SCG-14-R DJR-24 to DJR-27 WP 2FC003.000
O&M	Customer Services	Customer Services Field - Support	Employee Skills Training and QA inspections	No	N/A	The CS – Field Support cost category includes: (1) centralized training (classroom instructors, supervisors and a training manager located at SoCalGas' Pico Rivera skills training centers); (2) field instructors who accompany new residential field technicians immediately following their formal training; quality assurance (QA) inspectors and a QA supervisor who inspect the work of field technicians to ensure policy adherence and quality of the work performed; (3) field technology support personnel who maintain the field mobile data terminals, work management, routing and reporting systems used for CS – Field Operations; (4) operations clerks who are located at the field operating bases; (5) region and district management; and (6) administrative associates. Non-labor costs include cell phones, office supplies and other miscellaneous expenses.	SCG-18-R GRM-34 to GRM-38 WP 2FC004.000	SCG-14-R DJR-24 to DJR-27 WP 2FC003.000
<b>O&amp;M</b>	<b>Customer Services</b>	<b>Sub-Total CS Field- Support</b>		<b>Yes</b>				
O&M	Customer Services	MSA Inspection Program	Non-RAMP	No	N/A	The Department of Transportation (DOT) Code of Federal Regulations (i.e., CFR 192.481) generally requires that each MSA be inspected every three years for atmospheric corrosion. Meter readers have historically performed this function, but with the implementation of AMI and the elimination of traditional Meter Reading function, a new group, the CS – Field MSA Inspection Organization, was formed in 2016. This includes costs to perform physical, onsite inspection of each meter set assembly (MSA) to comply with DOT required MSA inspections for atmospheric corrosion, to identify conditions which require remediation by CS – Field Operations and Distribution field employees, and to contact customers to resolve meter access issues. This workpaper includes activities, as described, designed to mitigate safety risks.	SCG-18-R GRM-38 to GRM-44 WP 2FC005.000	SCG-14-R DJR-28 to DJR-31 WP 2FC005.000
O&M	Customer Services	MSA Inspection Program	Gas Facility and Pipeline Inspections	No	N/A	The Department of Transportation (DOT) Code of Federal Regulations (i.e., CFR 192.481) generally requires that each MSA be inspected every three years for atmospheric corrosion. Meter readers have historically performed this function, but with the implementation of AMI and the elimination of traditional Meter Reading function, a new group, the CS – Field MSA Inspection Organization, was formed in 2016. This includes costs to perform physical, onsite inspection of each meter set assembly (MSA) to comply with DOT required MSA inspections for atmospheric corrosion, to identify conditions which require remediation by CS – Field Operations and Distribution field employees, and to contact customers to resolve meter access issues. This workpaper includes activities, as described, designed to mitigate safety risks.	SCG-18-R GRM-38 to GRM-44 WP 2FC005.000	SCG-14-R DJR-28 to DJR-31 WP 2FC005.000
<b>O&amp;M</b>	<b>Customer Services</b>	<b>Sub-Total MSA Inspection Program</b>		<b>Yes</b>				
O&M	Customer Services	Meter Reading - Operations	Non-RAMP	No	N/A	Costs include part-time meter readers who are dispersed across SoCalGas' operating bases. Meter readers are equipped with MDTs (handheld devices) which are used to record customers' gas consumption. Meter readers capture monthly meter reads at customer premises and read over 68 million meters per year. Data from the meter readers' MDTs are uploaded each night and transferred to the Company's mainframe computer for processing and billing. Meter readers are also supported by meter reading technicians. This workpaper includes activities, as described, designed to mitigate safety risks.	SCG-18-R GRM-44 to GRM-47 WP 2FC006.000	SCG-14-R DJR-15 to DJR-22 WP 2FC001.000
O&M	Customer Services	Meter Reading - Operations	Manual Meter Reads for Atmospheric Corrosion Inspections	No	This activity was absorbed by MSA Inspection Program.	Costs include part-time meter readers who are dispersed across SoCalGas' operating bases. Meter readers are equipped with MDTs (handheld devices) which are used to record customers' gas consumption. Meter readers capture monthly meter reads at customer premises and read over 68 million meters per year. Data from the meter readers' MDTs are uploaded each night and transferred to the Company's mainframe computer for processing and billing. Meter readers are also supported by meter reading technicians. This workpaper includes activities, as described, designed to mitigate safety risks.	SCG-18-R GRM-44 to GRM-47 WP 2FC006.000	SCG-14-R DJR-15 to DJR-22 WP 2FC001.000
<b>O&amp;M</b>	<b>Customer Services</b>	<b>Sub-Total Meter Reading - Operations</b>		<b>Yes</b>				

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Customer Services	Meter Reading - Clerical	Non-RAMP	No	This activity was absorbed by CS Field Support due to fewer manual meter reads.	CS – Meter Reading clerks handle the timekeeping, payroll, scheduling of part-time meter readers, and various customer facility record and geographical coding updates necessary for meter reading operations. The clerical group also handles meter access issues and provides general administrative support to the CS – Meter Reading organization.	SCG-18-R GRM-47 to GRM-49 WP 2FC007.000	N/A
O&M	Customer Services	Meter Reading - Supervision & Training	Non-RAMP	No	This activity was absorbed by CS Field Supervision due to fewer manual meter reads.	CS – Meter Reading clerks handle the timekeeping, payroll, scheduling of part-time meter readers, and various customer facility record and geographical coding updates necessary for meter reading operations. The clerical group also handles meter access issues and provides general administrative support to the CS – Meter Reading organization.	SCG-18-R GRM-47 to GRM-49 WP 2FC007.000	N/A
O&M	Customer Services	Meter Reading - Support	Non-RAMP	No	This activity was absorbed by CS Field Support due to fewer manual meter reads.	CS – Meter Reading clerks handle the timekeeping, payroll, scheduling of part-time meter readers, and various customer facility record and geographical coding updates necessary for meter reading operations. The clerical group also handles meter access issues and provides general administrative support to the CS – Meter Reading organization.	SCG-18-R GRM-47 to GRM-49 WP 2FC007.000	N/A
<b>O&amp;M</b>	<b>Customer Services</b>	<b>Customer Services - Office Operations</b>		<b>Yes</b>				
O&M	Customer Services	CCC - Operations	Non-RAMP	No	N/A	CCC-Operations expenses cover the costs of answering customer telephone calls related to Gas Leaks, Service Orders, and Billing and Payments; responding to incoming email from customers; responding to inquiries from socialgas.com website and My Account; processing faxed fumigation orders; and responding to other customer account related inquiries.  CCC-Operations are in scope of the spending accountability report because it is generally the first point of contact for emergencies; as such it provides a critical support role in the safety of the SoCalGas system and the public's well-being.  This workpaper includes activities, as described, designed to mitigate safety risks.	SCG-19-R MHB-7 to MHB-9 MHB-11 to MHB-20 WP 20O000.000	SCG-15-R-2E BMS-9 to BMS-13 WP 20O000.000
O&M	Customer Services	CCC - Operations	Update customer information for notification/access purposes	No	N/A	CCC-Operations expenses cover the costs of answering customer telephone calls related to Gas Leaks, Service Orders, and Billing and Payments; responding to incoming email from customers; responding to inquiries from socialgas.com website and My Account; processing faxed fumigation orders; and responding to other customer account related inquiries.  CCC-Operations are in scope of the spending accountability report because it is generally the first point of contact for emergencies; as such it provides a critical support role in the safety of the SoCalGas system and the public's well-being.  This workpaper includes activities, as described, designed to mitigate safety risks.	SCG-19-R MHB-7 to MHB-9 MHB-11 to MHB-20 WP 20O000.000	SCG-15-R-2E BMS-9 to BMS-13 WP 20O000.000
O&M	Customer Services	CCC - Operations	CSR Training, Quality Observations, CCC Safety Committee Liaison	No	N/A	CCC-Operations expenses cover the costs of answering customer telephone calls related to Gas Leaks, Service Orders, and Billing and Payments; responding to incoming email from customers; responding to inquiries from socialgas.com website and My Account; processing faxed fumigation orders; and responding to other customer account related inquiries.  CCC-Operations are in scope of the spending accountability report because it is generally the first point of contact for emergencies; as such it provides a critical support role in the safety of the SoCalGas system and the public's well-being.  This workpaper includes activities, as described, designed to mitigate safety risks.	SCG-19-R MHB-7 to MHB-9 MHB-11 to MHB-20 WP 20O000.000	SCG-15-R-2E BMS-9 to BMS-13 WP 20O000.000
O&M	Customer Services	CCC - Operations	Emergency Call Handling	No	N/A	CCC-Operations expenses cover the costs of answering customer telephone calls related to Gas Leaks, Service Orders, and Billing and Payments; responding to incoming email from customers; responding to inquiries from socialgas.com website and My Account; processing faxed fumigation orders; and responding to other customer account related inquiries.  CCC-Operations are in scope of the spending accountability report because it is generally the first point of contact for emergencies; as such it provides a critical support role in the safety of the SoCalGas system and the public's well-being.  This workpaper includes activities, as described, designed to mitigate safety risks.	SCG-19-R MHB-7 to MHB-9 MHB-11 to MHB-20 WP 20O000.000	SCG-15-R-2E BMS-9 to BMS-13 WP 20O000.000
<b>O&amp;M</b>	<b>Customer Services</b>	<b>Sub-Total CCC - Operations</b>		<b>Yes</b>				
O&M	Customer Services	CCC - Support	Non-RAMP	No	N/A			
<b>O&amp;M</b>	<b>Customer Services</b>	<b>Customer Services - Information</b>		<b>Yes</b>				
O&M	Customer Services	Renewable Gas - Customer Outreach	Non-RAMP	No	N/A			
O&M	Customer Services	Clean Transportation - Customer Outreach	Non-RAMP	No	N/A			
O&M	Customer Services	CI-Customer Strategy and Engagement -	Non-RAMP	No	N/A			

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Customer Services	CI-Customer Assistance Programs	Non-RAMP	No	N/A			
O&M	Customer Services	CI-Customer Assistance Programs	Natural Gas Appliance Testing (NGAT)	No	N/A	<p>The Customer Assistance Program area covers costs for the administration of assistance programs offered to residential customers with limited income and/or certain medical conditions. These programs include Energy Savings Assistance (ESA) Program Natural Gas Appliance Testing (NGAT), Medical Baseline Program, and the Gas Assistance Fund.</p> <p>ESA Program NGAT or carbon monoxide (CO) testing is a safety-related program for Customer Assistance's ESA Program participants. SoCalGas conducts CO testing on homes weatherized through the ESA Program in accordance with the ESA Program California Installation Standards Manual and the State-wide ESA Program Policy and Procedures Manual.</p> <p>This workpaper is in scope of the spending accountability report due to the NGAT activity that's designed to mitigate customers' exposure to unsafe levels of carbon monoxide.</p>	SCG-20-R ASC-24 to ASC-27 WP 21N002.000	SCG-16-2E BCP-5 to BCP-6 BCP-9 to BCP-11 BCP-30 to BCP-34 WP 21N002.000
O&M	Customer Services	Sub-Total CI-Customer Assistance Programs		Yes				
O&M	Customer Services	CI-Customer Segment Services	Non-RAMP	No	N/A			
O&M	Customer Services	Customer Services - Technologies, Policies & Solutions		Yes				
O&M	Customer Services	Business Strategy and Development	Non-RAMP	No	N/A	<p>The purpose of the Business Strategy and Development group is to provide analytical and execution support for initiatives in major strategic priority areas such as operational excellence, development and deployment of clean energy solutions for customers, and advocacy for sensible policies and regulations that support ratepayer interests and advance Commission policy. The group also coordinates long-range planning activities. Other responsibilities of this group include performing research and analysis on variety of issues as business need arises.</p>	SCG-21 LLA-35 to LLA-37 WP 2200-2229.000	SCG-12-R AI-5 to AI-6 WP 2RD000.000
O&M	Customer Services	Environmental Affairs	Non-RAMP	No	N/A			
O&M	Customer Services	Energy & Environmental Policy	Non-RAMP	No	<p>Energy &amp; Environmental Policy activities from 2019 to 2023 evolved into two cost center 2200-2396 Energy &amp; Env'tl Aff Mgr and 2200-1212 Energy Policy which resides in workpaper 2RD002</p>	<p>This group provides policy analysis, agency engagement and outreach related to policies, laws and regulations related to natural gas delivery and utilization. The team is responsible for regulatory proceedings at California Air Resource Board (CARB) and California Energy Commission (CEC) on natural gas utilization, environmental policy and regulation (such as greenhouse gas regulation and air quality) and energy policy and regulation (such as the CEC Integrated Energy Policy Report).</p>	SCG-21 LLA-24 to LLA-28 WP 2200-2396.000	SCG-29-R-E SPM-28 to SPM-38 WP 2AG006.000
O&M	Customer Services	Planning & Legislative Analysis	Non-RAMP	No	N/A	<p>Manages legislative analysis for SoCalGas and provide legislative support for SDG&amp;E. Provides analysis of legislative policies and emerging issues that could impact SoCalGas and its customers. Manages business unit teams to assess impact of legislation and set Company position or appropriate response to public policy issues. Directs the development of detailed analyses/studies of proposed rules and/or regulations</p>	SCG-21 LLA-24 to LLA-28 WP 2200-2505.000	SCG-29-R-E SPM-28 to SPM-38 WP 2AG006.000
O&M	Customer Services	Policy & Environmental Solutions NSS	Non-RAMP	No	N/A	<p>Lead the development and implementation of SoCalGas' public policy and planning efforts to secure natural gas' foundational role in meeting federal, state, regional and local energy and environmental policy goals. Responsible for public policy issues management, local climate/energy action/sustainability plans, and environmental strategy to support business goals.</p>	SCG-21 LLA-20 to LLA-22 WP 2RD002.000	SCG-29-R-E SPM-28 to SPM-38 WP 2AG006.000

ii. SoCalGas Advanced Meter Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll- up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
Capital	Advanced Meter	Advanced Meter		Yes			—	—	—	—	—	—	—	5,312	5,396	5,460	5,576	21,744
Capital	Advanced Meter	Advanced Meter	Non-RAMP	No	Completed	Completed	—	—	—	—	—	—	—	5,312	5,396	5,460	5,576	21,744

ii. SoCalGas Advanced Meter Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll- up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
Capital	Advanced Meter	Advanced Meter		Yes	—	(5,312)	(5,396)	(5,460)	(5,576)	(21,744)	—%	-100%	-100%	-100%	-100%	-100%
Capital	Advanced Meter	Advanced Meter	Non-RAMP	No	—	(5,312)	(5,396)	(5,460)	(5,576)	(21,744)	—%	-100%	-100%	-100%	-100%	-100%

ii. SoCalGas Advanced Meter Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
Capital	Advanced Meter	Advanced Meter		Yes																										
Capital	Advanced Meter	Advanced Meter	Non-RAMP	No	This program completed in 2018 and was comprised of a variety of work activities making it infeasible to identify a single unit of measurement.																									

ii. SoCalGas Advanced Meter Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
Capital	Advanced Meter	Advanced Meter		Yes													
Capital	Advanced Meter	Advanced Meter	Non-RAMP	No	Yes	No	This program completed in 2018. SoCalGas AMI is showing \$24.718 million in 2017 and \$7.524 million in 2018 as capital costs for rate base purposes only. Costs through 2018 are AMI implementation-related and are recorded in the Advanced Metering Infrastructure Balancing Account (AMIBA), as previously authorized in the AMI Decision D.10-04-027 and the 2016 GRC Decision D.16-06-054.	N/A	Under (U)	Under (U)	Under (U)	Completed	Yes	This program was completed in 2018. This variance is due to the methodology used to calculate the imputed authorized funding at the activity level for the GRC post-test years. The CPUC approved a post-test year mechanism for the SoCalGas attrition years, which can result in imputed dollars when a project has been completed. This is described in further detail in section 2.D above.	Expenditure for labor and non-labor costs associated with the Software Development group supporting the Advanced Metering Infrastructure (AMI) project. This group oversees the systems impacted by AM data, including the Headend Meter Data Management System (MDMS).	SCG-17-R RFG-23 to RFG-25 WP 00811A-811G	N/A

B. SoCalGas Information Technology & Cyber Security  
i. SoCalGas Information Technology & Cyber Security O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Information Technology & Cyber Security	Information Technology & Cyber Security		Yes			22,016	23,899	35,630	33,614	39,557	154,716	32,575	33,435	34,239	34,901	35,704	170,854
O&M	Information Technology & Cyber Security	Information Technology		Yes			21,511	23,111	29,670	28,301	28,819	131,411	31,812	32,652	33,436	34,083	34,867	166,851
O&M	Information Technology & Cyber Security	Director IT SoCalGas Applications	Non-RAMP	No	On-going	Annual	564	576	375	149	58	1,721	775	796	815	831	850	4,067
O&M	Information Technology & Cyber Security	SCG Work Management Services	Non-RAMP	No	On-going	Annual	1,181	561	1,260	1,442	1,386	5,830	1,307	1,341	1,373	1,400	1,432	6,854
O&M	Information Technology & Cyber Security	SCG GIS & CAD Services	Non-RAMP	No	On-going	Annual	312	279	168	163	158	1,081	185	189	194	198	202	968
O&M	Information Technology & Cyber Security	SCG Software Dev - Database	Non-RAMP	No	On-going	Annual	169	311	249	502	206	1,437	616	632	647	660	675	3,231
O&M	Information Technology & Cyber Security	SCG Apps Maj Mrk App - SCG	Non-RAMP	No	On-going	Annual	1,719	1,381	1,201	837	819	5,958	1,562	1,603	1,642	1,673	1,712	8,191
O&M	Information Technology & Cyber Security	Scalable Platform Servs - SCG	Non-RAMP	No	On-going	Annual	258	198	128	138	148	869	515	528	541	552	564	2,700
O&M	Information Technology & Cyber Security	CI Compute Support SCG	Non-RAMP	No	On-going	Annual	1,808	1,317	1,641	1,627	1,694	8,086	1,120	1,149	1,177	1,200	1,227	5,873
O&M	Information Technology & Cyber Security	CI Compute Provisioning SCG	Non-RAMP	No	On-going	Annual	62	—	2,596	1,922	630	5,209	688	706	723	737	754	3,607
O&M	Information Technology & Cyber Security	CI Standards	Non-RAMP	No	On-going	Annual	567	849	1,098	1,463	1,215	5,192	551	566	579	590	604	2,891
O&M	Information Technology & Cyber Security	IT Portfolio Management	Non-RAMP	No	On-going	Annual	415	465	441	522	710	2,554	650	667	683	697	713	3,411
O&M	Information Technology & Cyber Security	Architecture and Integration - SCG	Non-RAMP	No	On-going	Annual	560	579	472	413	400	2,425	569	584	598	609	623	2,983
O&M	Information Technology & Cyber Security	IT Telecom PMO	Non-RAMP	No	On-going	Annual	79	638	437	311	271	1,736	101	104	106	108	111	530
O&M	Information Technology & Cyber Security	IT Applications NSS	Non-RAMP	No	On-going	Annual	5,796	7,814	8,769	5,358	5,985	33,722	8,581	8,807	9,019	9,193	9,405	45,005
O&M	Information Technology & Cyber Security	IT Infrastructure NSS	Non-RAMP	No	On-going	Annual	7,619	6,961	9,958	12,006	14,002	50,546	14,239	14,615	14,966	15,256	15,607	74,684
O&M	Information Technology & Cyber Security	DCAM Program	Non-RAMP	No	2	2	—	72	1	—	—	74	—	—	—	—	—	—
O&M	Information Technology & Cyber Security	Enterprise Monitoring	Non-RAMP	No	On-going	Annual	—	519	565	804	629	2,518	—	—	—	—	—	—



Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Information Technology & Cyber Security	Clnt Tech & Depot Sve-SCG	Non-RAMP	No	On-going	Annual	224	374	134	35	4	771	354	363	372	379	388	1,856
O&M	Information Technology & Cyber Security	Director - Computing Infrastructure	Non-RAMP	No	On-going	Annual	178	203	—	387	324	1,092	—	—	—	—	—	—
O&M	Information Technology & Cyber Security	IT Infra PMO	Non-RAMP	No	On-going	Annual	—	14	178	221	177	590	—	—	—	—	—	—
<b>O&amp;M</b>	<b>Information Technology &amp; Cyber Security</b>	<b>Cyber Security</b>		<b>Yes</b>			<b>505</b>	<b>789</b>	<b>5,960</b>	<b>5,312</b>	<b>10,738</b>	<b>23,304</b>	<b>763</b>	<b>783</b>	<b>802</b>	<b>818</b>	<b>837</b>	<b>4,003</b>
O&M	Information Technology & Cyber Security	IT Information Security SCG	Firewall Admin	No	On-going	Annual	505	761	1,703	864	1,223	5,057	763	783	802	818	837	4,003
O&M	Information Technology & Cyber Security	Identity & Access Management	Firewall Admin	No	On-going	Annual	—	27	2,195	778	4,977	7,978	—	—	—	—	—	—
O&M	Information Technology & Cyber Security	IT & Operational Technology Systems	Internal Defenses	No	On-going	Annual	—	—	2,061	3,671	4,538	10,270	—	—	—	—	—	—

B. SoCalGas Information Technology & Cyber Security  
i. SoCalGas Information Technology & Cyber Security O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Information Technology & Cyber Security	Information Technology & Cyber Security		Yes	(10,559)	(9,536)	1,391	(1,288)	3,853	(16,139)	-32%	-29%	4%	-4%	11%	-9%
O&M	Information Technology & Cyber Security	Information Technology		Yes	(10,301)	(9,541)	(3,766)	(5,782)	(6,048)	(35,439)	-32%	-29%	-11%	-17%	-17%	-21%
O&M	Information Technology & Cyber Security	Director IT SoCalGas Applications	Non-RAMP	No	(212)	(220)	(440)	(682)	(792)	(2,346)	-27%	-28%	-54%	-82%	-93%	-58%
O&M	Information Technology & Cyber Security	SCG Work Management Services	Non-RAMP	No	(126)	(781)	(113)	42	(46)	(1,023)	-10%	-58%	-8%	3%	-3%	-15%
O&M	Information Technology & Cyber Security	SCG GIS & CAD Services	Non-RAMP	No	128	90	(26)	(34)	(44)	113	69%	47%	-13%	-17%	-22%	12%
O&M	Information Technology & Cyber Security	SCG Software Dev - Database	Non-RAMP	No	(447)	(321)	(398)	(158)	(470)	(1,794)	-73%	-51%	-62%	-24%	-70%	-56%
O&M	Information Technology & Cyber Security	SCG Apps Maj Mrk App - SCG	Non-RAMP	No	158	(222)	(441)	(836)	(892)	(2,234)	10%	-14%	-27%	-50%	-52%	-27%
O&M	Information Technology & Cyber Security	Scalable Platform Servs - SCG	Non-RAMP	No	(257)	(331)	(413)	(414)	(416)	(1,831)	-50%	-63%	-76%	-75%	-74%	-68%
O&M	Information Technology & Cyber Security	CI Compute Support SCG	Non-RAMP	No	688	167	464	427	467	2,213	61%	15%	39%	36%	38%	38%
O&M	Information Technology & Cyber Security	CI Compute Provisioning SCG	Non-RAMP	No	(626)	(706)	1,873	1,185	(124)	1,603	-91%	-100%	259%	161%	-16%	44%
O&M	Information Technology & Cyber Security	CI Standards	Non-RAMP	No	15	283	518	873	611	2,301	3%	50%	89%	148%	101%	80%
O&M	Information Technology & Cyber Security	IT Portfolio Management	Non-RAMP	No	(235)	(202)	(242)	(175)	(2)	(856)	-36%	-30%	-35%	-25%	-0%	-25%
O&M	Information Technology & Cyber Security	Architecture and Integration - SCG	Non-RAMP	No	(9)	(5)	(126)	(196)	(223)	(559)	-2%	-1%	-21%	-32%	-36%	-19%
O&M	Information Technology & Cyber Security	IT Telecom PMO	Non-RAMP	No	(22)	534	331	203	160	1,206	-22%	515%	311%	188%	144%	227%
O&M	Information Technology & Cyber Security	IT Applications NSS	Non-RAMP	No	(2,785)	(993)	(250)	(3,835)	(3,420)	(11,284)	-32%	-11%	-3%	-42%	-36%	-25%
O&M	Information Technology & Cyber Security	IT Infrastructure NSS	Non-RAMP	No	(6,620)	(7,655)	(5,009)	(3,250)	(1,604)	(24,138)	-46%	-52%	-33%	-21%	-10%	-32%
O&M	Information Technology & Cyber Security	DCAM Program	Non-RAMP	No	—	72	1	—	—	74	—%	100%	100%	—%	—%	100%
O&M	Information Technology & Cyber Security	Enterprise Monitoring	Non-RAMP	No	—	519	565	804	629	2,518	—%	100%	100%	100%	100%	100%

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Information Technology & Cyber Security	Clnt Tech & Depot Svc-SCG	Non-RAMP	No	(130)	11	(238)	(344)	(384)	(1,084)	-37%	3%	-64%	-91%	-99%	-58%
O&M	Information Technology & Cyber Security	Director - Computing Infrastructure	Non-RAMP	No	178	203	—	387	324	1,092	100%	100%	—%	100%	100%	100%
O&M	Information Technology & Cyber Security	IT Infra PMO	Non-RAMP	No	—	14	178	221	177	590	—%	100%	100%	100%	100%	100%
<b>O&amp;M</b>	<b>Information Technology &amp; Cyber Security</b>	<b>Cyber Security</b>		<b>Yes</b>	<b>(258)</b>	<b>6</b>	<b>5,158</b>	<b>4,495</b>	<b>9,901</b>	<b>19,301</b>	<b>-34%</b>	<b>1%</b>	<b>643%</b>	<b>549%</b>	<b>1183%</b>	<b>482%</b>
O&M	Information Technology & Cyber Security	IT Information Security SCG	Firewall Admin	No	(258)	(22)	901	46	386	1,054	-34%	-3%	112%	6%	46%	26%
O&M	Information Technology & Cyber Security	Identity & Access Management	Firewall Admin	No	—	27	2,195	778	4,977	7,978	—%	100%	100%	100%	100%	100%
O&M	Information Technology & Cyber Security	IT & Operational Technology Systems	Internal Defenses	No	—	—	2,061	3,671	4,538	10,270	—%	—%	100%	100%	100%	100%

B. SoCalGas Information Technology & Cyber Security  
i. SoCalGas Information Technology & Cyber Security O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance		
O&M	Information Technology & Cyber Security	Information Technology & Cyber Security		Yes																											
O&M	Information Technology & Cyber Security	Information Technology		Yes																											
O&M	Information Technology & Cyber Security	Director IT SoCalGas Applications	Non-RAMP	No	FTE	5	2	3	1	1	12	2	2	8	2	2	16	3	—	(5)	(1)	(1)	(4)	150%	—%	-63%	-50%	-50%	-25%		
O&M	Information Technology & Cyber Security	SCG Work Management Services	Non-RAMP	No	FTE	6	6	5	5	6	28	11	10	11	11	11	54	(5)	(4)	(6)	(6)	(5)	(26)	-45%	-40%	-55%	-55%	-45%	-48%		
O&M	Information Technology & Cyber Security	SCG GIS & CAD Services	Non-RAMP	No	FTE	3	2	1	1	1	8	1	1	1	1	1	5	2	1	—	—	—	3	200%	100%	—%	—%	—%	60%		
O&M	Information Technology & Cyber Security	SCG Software Dev - Database	Non-RAMP	No	FTE	1	3	2	3	1	10	4	5	4	4	4	21	(3)	(2)	(2)	(1)	(3)	(11)	-75%	-40%	-50%	-25%	-75%	-52%		
O&M	Information Technology & Cyber Security	SCG Apps Maj Mrk App - SCG	Non-RAMP	No	FTE	10	9	5	3	3	30	8	8	8	8	8	40	2	1	(3)	(5)	(5)	(10)	25%	13%	-38%	-63%	-63%	-25%		
O&M	Information Technology & Cyber Security	Scalable Platform Servs - SCG	Non-RAMP	No	FTE	1	1	1	1	1	5	2	4	2	2	2	12	(1)	(3)	(1)	(1)	(1)	(7)	-50%	-75%	-50%	-50%	-50%	-58%		
O&M	Information Technology & Cyber Security	CI Compute Support SCG	Non-RAMP	No	FTE	9	8	7	7	8	39	9	9	9	9	9	45	—	(1)	(2)	(2)	(1)	(6)	—%	-11%	-22%	-22%	-11%	-13%		
O&M	Information Technology & Cyber Security	CI Compute Provisioning SCG	Non-RAMP	No	This workpaper contains variable O&M costs including software maintenance costs, and hardware purchase costs. All expenditures pertain to CI Compute Provisioning. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																										
O&M	Information Technology & Cyber Security	CI Standards	Non-RAMP	No	FTE	4	4	5	7	5	25	5	4	5	5	5	24	(1)	—	—	2	—	1	-20%	—%	—%	40%	—%	4%		
O&M	Information Technology & Cyber Security	IT Portfolio Management	Non-RAMP	No	FTE	2	2	2	2	3	11	2	2	2	2	2	10	—	—	—	—	1	1	—%	—%	—%	—%	50%	10%		
O&M	Information Technology & Cyber Security	Architecture and Integration - SCG	Non-RAMP	No	FTE	3	3	3	1	1	11	3	3	3	3	3	15	—	—	—	(2)	(2)	(4)	—%	—%	—%	-67%	-67%	-27%		
O&M	Information Technology & Cyber Security	IT Telecom PMO	Non-RAMP	No	FTE	—	1	8	8	1	18	1	1	1	1	1	5	(1)	—	7	7	—	13	-100%	—%	700%	700%	—%	260%		
O&M	Information Technology & Cyber Security	IT Applications NSS	Non-RAMP	No	This workpaper contains variable O&M costs including FTEs, software maintenance costs, and managed service costs. All expenditures pertain to financial and operational applications. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																										
O&M	Information Technology & Cyber Security	IT Infrastructure NSS	Non-RAMP	No	This workpaper contains variable O&M costs including FTEs, software maintenance costs, and managed service costs. All expenditures pertain to Infrastructure including network engineering, data center, and maintenance subscriptions. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																										
O&M	Information Technology & Cyber Security	DCAM Program	Non-RAMP	No	FTE	—	1	—	—	—	1	—	—	—	—	—	—	—	1	—	—	—	1	—%	100%	—%	—%	—%	100%		
O&M	Information Technology & Cyber Security	Enterprise Monitoring	Non-RAMP	No	This workpaper contains variable O&M costs including software maintenance costs, and hardware purchase costs. All expenditures pertain to Enterprise Monitoring. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																										

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
O&M	Information Technology & Cyber Security	Clnt Tech & Depot Svc-SCG	Non-RAMP	No	FTE	—	2	1	—	—	3	—	2	3	3	3	11	—	—	(2)	(3)	(3)	(8)	—%	—%	-67%	-100%	-100%	-73%	
O&M	Information Technology & Cyber Security	Director - Computing Infrastructure	Non-RAMP	No	FTE	1	1	—	—	—	2	1	1	1	1	1	5	—	—	(1)	(1)	(1)	(3)	—%	—%	-100%	-100%	-100%	-60%	
O&M	Information Technology & Cyber Security	IT Infra PMO	Non-RAMP	No	FTE	—	1	1	2	1	5	—	—	—	—	—	—	1	1	2	1	5	—%	100%	100%	100%	100%	100%		
O&M	Information Technology & Cyber Security	Cyber Security		Yes																										
O&M	Information Technology & Cyber Security	IT Information Security SCG	Firewall Admin	No	FTE	1	1	5	4	5	16	1	1	3	3	3	11	—	—	2	1	2	5	—%	—%	67%	33%	67%	45%	
O&M	Information Technology & Cyber Security	Identity & Access Management	Firewall Admin	No	This workpaper contains variable O&M costs including software maintenance costs, and hardware purchase costs. All expenditures pertain to Identity & Access Management. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Information Technology & Cyber Security	IT & Operational Technology Systems	Internal Defenses	No	FTE	—	—	4	3	1	8	—	—	—	—	—	—	—	—	4	3	1	8	—%	—%	100%	100%	100%	100%	

B. SoCalGas Information Technology & Cyber Security  
i. SoCalGas Information Technology & Cyber Security O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Information Technology & Cyber Security	Information Technology & Cyber Security		Yes									
O&M	Information Technology & Cyber Security	Information Technology		Yes									
O&M	Information Technology & Cyber Security	Director IT SoCalGas Applications	Non-RAMP	No	No	Yes	N/A	O&M related work is being completed by leveraging current resources; as well as, redistributing work to the Cyber O&M workpaper Identity & Access Management	Under (U)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Information Technology & Cyber Security	SCG Work Management Services	Non-RAMP	No	No	Yes	N/A	Internal labor has been transitioned to support capital projects including, AM Web Portal Software Implementation, Operations Quality Process Implementation, and Click Modernization Phase II which are reported under the following IT Capital workpapers: IT Utility Operations Applications - RAMP and IT Utility Operations Applications. This has not caused a delay in O&M support.	Under (U)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Information Technology & Cyber Security	SCG GIS & CAD Services	Non-RAMP	No	No	No	N/A	N/A	Over (O)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Information Technology & Cyber Security	SCG Software Dev - Database	Non-RAMP	No	No	Yes	N/A	Database Administrators worked on more capital projects including Cloud Foundation & Enable Software and Centralize Cloud Application Mod Software; which are reported in IT Capital workpapers: IT Utility Operations Applications - RAMP and IT Enterprise Infrastructure. This has not caused delays to O&M support.	Under (U)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Information Technology & Cyber Security	SCG Apps Maj Mrk App - SCG	Non-RAMP	No	No	Yes	N/A	Reduction in FTEs due to a shift from internal labor to support various capital projects with major projects including Gas Measurement & Analysis Software Implementation and Project Harmony Software Implementation which is reported under IT Capital workpaper IT Utility Operations Applications - RAMP. This transition of work has not delayed O&M support.	Under (U)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Information Technology & Cyber Security	Scalable Platform Servs - SCG	Non-RAMP	No	No	Yes	N/A	Reduction in FTEs due to a shift from internal labor to support Mobile Phone Refresh capital project which is reported under IT Capital workpaper IT Utility Operations Hardware.	Under (U)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Information Technology & Cyber Security	CI Compute Support SCG	Non-RAMP	No	No	No	N/A	N/A	Under (U)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Information Technology & Cyber Security	CI Compute Provisioning SCG	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Information Technology & Cyber Security	CI Standards	Non-RAMP	No	No	No	N/A	N/A	Over (O)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Information Technology & Cyber Security	IT Portfolio Management	Non-RAMP	No	No	Yes	N/A	An additional FTE was brought in to support the centralization of IT contract renewals.	Over (O)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Information Technology & Cyber Security	Architecture and Integration - SCG	Non-RAMP	No	No	Yes	N/A	The variance is due to FTEs supporting more capital projects than was originally planned, including EDIX Modernization, SCG Digital Service Integration Platform, and Bank Reconciliation Project Upgrade which is reported under IT Capital Workpapers: IT Utility Operations Applications - RAMP, IT Enterprise Infrastructure, and IT Utility Operations Applications.	Under (U)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Information Technology & Cyber Security	IT Telecom PMO	Non-RAMP	No	No	No	N/A	N/A	Over (O)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Information Technology & Cyber Security	IT Applications NSS	Non-RAMP	No	Yes	No	Work was done with less 3rd party vendor assistance, as well as negotiating lower 3rd party rates by utilizing more offshore contractors than forecasted.	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Information Technology & Cyber Security	IT Infrastructure NSS	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Information Technology & Cyber Security	DCAM Program	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
O&M	Information Technology & Cyber Security	Enterprise Monitoring	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Information Technology & Cyber Security	Clnt Tech & Depot Svc-SCG	Non-RAMP	No	No	Yes	N/A	Due to supporting more capital projects than was originally planned. Capital projects supported by this area fall under IT capital workpapers IT Enterprise Infrastructure and IT Utility Operations Hardware. This has not caused delays in O&M support.	Under (U)	On Target (T)	Under (U)	Proceeding as Planned	Yes
O&M	Information Technology & Cyber Security	Director - Computing Infrastructure	Non-RAMP	No	No	Yes	N/A	O&M related work is being completed by leveraging current resources; as well as, redistributing work to the Cyber O&M workpaper Identity & Access Management.	Under (U)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Information Technology & Cyber Security	IT Infra PMO	Non-RAMP	No	No	Yes	N/A	Additional resources were added to support the evolving network infrastructure and perform comprehensive initialization, execution, and management of the IT PMO at SoCalGas.	Over (O)	On Target (T)	Over (O)	Proceeding as Planned	No
<b>O&amp;M</b>	<b>Information Technology &amp; Cyber Security</b>	<b>Cyber Security</b>		<b>Yes</b>									
O&M	Information Technology & Cyber Security	IT Information Security SCG	Firewall Admin	No	No	Yes	N/A	Additional FTE were brought in to support enterprise-scale security functions and integration services for business, operational, and IT technology assets.	Over (O)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Information Technology & Cyber Security	Identity & Access Management	Firewall Admin	No	Yes	No	This variance is due to emergent supporting projects such as PowerMax Storage Refresh, Enterprise VMware Refresh, Dell Transformational License Agreement Maintenance, and Broadcom SiteMinder. These projects were prioritized to refresh and replace major software used by SoCalGas that were at end of life.	NA	Over (O)	Over (O)	Over (O)	Emergent	No
O&M	Information Technology & Cyber Security	IT & Operational Technology Systems	Internal Defenses	No	Yes	Yes	The variance is due to supporting additional emergent projects such as Firewall Process Automation, Network Security Strategy Enablement, and Web Application Firewalls with Database Protection. These projects were prioritized to enhance firewall protection, reduce risk of manual errors, enhance resiliency of IT infrastructure, and to protect against external facing sites from potential disruptions and attacks.	Additional resources added to support the projects that moved from Sempra (corporate) cyber to SoCalGas to align with work that belongs at SoCalGas.	Over (O)	Over (O)	Over (O)	Emergent	No

B. SoCalGas Information Technology & Cyber Security  
i. SoCalGas Information Technology & Cyber Security O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Information Technology & Cyber Security	Information Technology & Cyber Security		Yes				
O&M	Information Technology & Cyber Security	Information Technology		Yes				
O&M	Information Technology & Cyber Security	Director IT SoCalGas Applications	Non-RAMP	No	N/A	This cost center supports the management and administration of various system-wide IT contracts and managed services.	SCG-26 CRO-16 to CRO-17 WP 2200-2372.000	SCG-21-R-E TLB/WJE-91 to TLB/WJE-20 WP 2200-0619.000
O&M	Information Technology & Cyber Security	SCG Work Management Services	Non-RAMP	No	N/A	This cost center represents support services for a broad range of client organizations, including: Gas Operations / Distribution, Construction, Generation and Environmental Services.	SCG-26 CRO-15 to CRO-16 WP 2200-2445.000	SCG-21-R-E TLB/WJE-16 to TLB/WJE-18 WP 2200-0302.000
O&M	Information Technology & Cyber Security	SCG GIS & CAD Services	Non-RAMP	No	N/A			
O&M	Information Technology & Cyber Security	SCG Software Dev - Database	Non-RAMP	No	N/A	This cost center provides maintenance and enhancement support for system wide database administration.	SCG-26 CRO-15 to CRO-16 WP 2200-2447.000	SCG-21-R-E TLB/WJE-19 to TLB/WJE-20 WP 2200-0619.000
O&M	Information Technology & Cyber Security	SCG Apps Maj Mrk App - SCG	Non-RAMP	No	N/A	Maintenance and enhancement programming support of contract, gas flow, measurement collection, and billing functions of MCS, ENVOY, SCBS, CCS, and CAT.	SCG-26 CRO-15 to CRO-16 WP 2200-2451.000	SCG-21-R-E TLB/WJE-1 to TLB/WJE-21 WP 2200-2089.000
O&M	Information Technology & Cyber Security	Scalable Platform Servs - SCG	Non-RAMP	No	N/A	Messaging and network activities for support and maintenance of messaging infrastructure, including E- mail, Calendaring, Instant Messaging, and SharePoint services.	SCG-26 CRO-16 to CRO-17 WP 2200-2458.000	SCG-21-R-E TLB/WJE-16 to TLB/WJE-18 WP 2200-2453.000
O&M	Information Technology & Cyber Security	CI Compute Support SCG	Non-RAMP	No	N/A			
O&M	Information Technology & Cyber Security	CI Compute Provisioning SCG	Non-RAMP	No	N/A			
O&M	Information Technology & Cyber Security	CI Standards	Non-RAMP	No	N/A			
O&M	Information Technology & Cyber Security	IT Portfolio Management	Non-RAMP	No	N/A	This cost center provides leadership in establishing policies, strategies, and architectural framework that help guide technology adoptions and alignment with the overall business. It develops awareness and statements of direction for emerging technology opportunities to enable key business strategies and goals	SCG-26 CRO-16 to CRO-17 WP 2200-2493.000	SCG-21-R-E TLB/WJE-20 to TLB/WJE-21 WP 2200-1220.000
O&M	Information Technology & Cyber Security	Architecture and Integration - SCG	Non-RAMP	No	N/A	This cost center is responsible for configuring secure file transfers between internal applications and with external business partners, including performance monitoring, tuning and problem resolution.	SCG-26 CRO-15 to CRO-16 WP 2200-2503.000	SCG-21-R-E TLB/WJE-16 to TLB/WJE-18 WP 2200-2272.000
O&M	Information Technology & Cyber Security	IT Telecom PMO	Non-RAMP	No	N/A			
O&M	Information Technology & Cyber Security	IT Applications NSS	Non-RAMP	No	N/A	The SoCalGas Non-Shared IT Applications costs represent labor and non-labor for systems where 100% of the activities directly support SoCalGas.	SCG-26 CRO-12 to CRO-13 WP 21T001.000	SCG-21-R-E TLB/WJE-12 to TLB/WJE-13 WP 21T001.000
O&M	Information Technology & Cyber Security	IT Infrastructure NSS	Non-RAMP	No	N/A			
O&M	Information Technology & Cyber Security	DCAM Program	Non-RAMP	No	N/A			
O&M	Information Technology & Cyber Security	Enterprise Monitoring	Non-RAMP	No	N/A			



Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Information Technology & Cyber Security	Clnt Tech & Depot Sve-SCG	Non-RAMP	No	A major project that started in 2021 - Digital Workspace, replacement of laptops that had related O&M charges, - wrapped up at the end of 2022 and had few trailing costs in 2023 that has led to the strong decline in spending related to this workpaper. The next projects to follow have had delays in starting, but are expected to pick up in 2024.	This cost center provides management and support services for system-wide Client Technology and IT Depot services.	SCG-26 CRO-16 to CRO-17 WP 2200-2453.000	SCG-21-R-E TLB/WJE-16 to TLB/WJE-18 WP 2200-2453.000
O&M	Information Technology & Cyber Security	Director - Computing Infrastructure	Non-RAMP	No	N/A	This cost center supports all of IT Operating Technology Infrastructure, including the group's support of other affiliates.	SCG-26 CRO-16 to CRO-17 WP 2200-2406.000	SCG-21-R-E TLB/WJE-19 to TLB/WJE-20 WP 2200-0619.000
O&M	Information Technology & Cyber Security	IT Infra PMO	Non-RAMP	No	N/A	This cost center will support IT PMO organization for Network and Infrastructure projects i.e., network performance, applications & infrastructure.	SCG-26 CRO-12 to CRO-13 WP 21T001.000	SCG-21-R-E TLB/WJE-19 to TLB/WJE-20 WP 2200-0619.000
<b>O&amp;M</b>	<b>Information Technology &amp; Cyber Security</b>	<b>Cyber Security</b>		<b>Yes</b>				
O&M	Information Technology & Cyber Security	IT Information Security SCG	Firewall Admin	No	N/A	The Security Engineering section provides enterprise-scale security functions and integration services for business, operational, and IT technology assets.	SCG-27-R GW-21 to GW-25 WP 2200-2469.000	SCG-22-R LRM-1 to LRM-17 WP 2200-0430.000
O&M	Information Technology & Cyber Security	Identity & Access Management	Firewall Admin	No	N/A	Cybersecurity supports the necessary resources and systems maintenance needs of the following functional cybersecurity areas: threat Intelligence; monitoring, alerting and detection; systems operations; incident response; etc.	N/A	SCG-22-R LRM-1 to LRM-17 WP 2200-0430.000
O&M	Information Technology & Cyber Security	IT & Operational Technology Systems	Internal Defenses	No	N/A	Cybersecurity supports the necessary resources and systems maintenance needs of the following functional cybersecurity areas: threat Intelligence; monitoring, alerting and detection; systems operations; incident response; etc.	N/A	SCG-22-R LRM-1 to LRM-17 WP 2200-0430.000

ii. SoCalGas Information Technology & Cyber Security Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
Capital	Information Technology & Cybersecurity	Information Technology & Cybersecurity		Yes			120,504	134,136	99,532	158,448	173,141	685,760	148,082	91,164	92,607	93,699	95,696	521,248
Capital	Information Technology & Cybersecurity	Sub-Total Information Technology		Yes			102,285	115,548	89,230	145,373	155,546	607,983	122,394	80,373	81,645	82,607	84,368	451,387
Capital	Information Technology & Cybersecurity	IT Utility Operations Applications	Non-RAMP	No	On-going	Annual	17,574	3,715	3,070	29,659	47,873	101,892	—	1,223	1,243	1,257	1,284	5,007
Capital	Information Technology & Cybersecurity	IT Utility Operations Applications - RAMP	Records Management	No	On-going	Annual	18,625	28,703	15,044	26,937	23,210	112,520	33,585	28,833	29,289	29,635	30,266	151,608
Capital	Information Technology & Cybersecurity	IT Utility Operations Applications - RAMP	Employee, Contractor, Customer, and Public Safety	No	On-going	Annual	3,228	6,115	6,687	7,105	5,064	28,199	103	197	200	203	207	910
Capital	Information Technology & Cybersecurity	Sub-Total IT Utility Operations Applications		Yes			39,427	38,533	24,801	63,702	76,147	242,611	33,689	30,253	30,732	31,094	31,757	157,525
Capital	Information Technology & Cybersecurity	IT Enterprise Infrastructure	Non-RAMP	No	On-going	Annual	33,599	60,301	48,320	53,657	68,916	264,794	61,602	36,324	36,899	37,334	38,130	210,289
Capital	Information Technology & Cybersecurity	Network/Telecom	Non-RAMP	No	On-going	Annual	4,281	13,884	10,647	11,758	6,268	46,836	24,191	11,473	11,655	11,792	12,044	71,155

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
Capital	Information Technology & Cybersecurity	IT Utility Operations Hardware	Non-RAMP	No	On-going	Annual	18,842	—	—	13,705	215	32,762	—	—	—	—	—	—
Capital	Information Technology & Cybersecurity	IT Utility Operations Hardware	Records Management	No	On-going	Annual	5,527	1,149	—	—	—	6,677	2,912	1,322	1,343	1,359	1,388	8,324
<b>Capital</b>	<b>Information Technology &amp; Cybersecurity</b>	<b>Sub-Total IT Utility Operations Hardware</b>		<b>Yes</b>			<b>24,370</b>	<b>1,149</b>	<b>—</b>	<b>13,705</b>	<b>215</b>	<b>39,439</b>	<b>2,912</b>	<b>1,322</b>	<b>1,343</b>	<b>1,359</b>	<b>1,388</b>	<b>8,324</b>
Capital	Information Technology & Cybersecurity	Customer Services	Non-RAMP	No	On-going	Annual	—	1,681	1,730	480	—	3,891	—	1,000	1,016	1,028	1,050	4,094
Capital	Information Technology & Cybersecurity	Incorporating AMI Data into Scheduling & Balancing Process	Non-RAMP	No	On-going	Annual	608	—	—	—	—	608	—	—	—	—	—	—
Capital	Information Technology & Cybersecurity	IT - Gas Operations R	Foundational Technology Systems	No	On-going	Annual	—	—	—	1,791	2,091	3,882	—	—	—	—	—	—
Capital	Information Technology & Cybersecurity	Asset Investment Planning & Management	Asset and Records Management	No	On-going	Annual	—	—	3,732	280	1,910	5,922	—	—	—	—	—	—
<b>Capital</b>	<b>Information Technology &amp; Cybersecurity</b>	<b>Cybersecurity - RAMP</b>	<b>Cybersecurity</b>	<b>No</b>	<b>On-going</b>	<b>Annual</b>	<b>18,219</b>	<b>18,587</b>	<b>10,302</b>	<b>13,074</b>	<b>17,594</b>	<b>77,777</b>	<b>25,688</b>	<b>10,791</b>	<b>10,962</b>	<b>11,091</b>	<b>11,328</b>	<b>69,861</b>

ii. SoCalGas Information Technology & Cyber Security Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
Capital	Information Technology & Cybersecurity	Information Technology & Cybersecurity		Yes	(27,578)	42,971	6,925	64,749	77,444	164,512	-19%	47%	7%	69%	81%	32%
Capital	Information Technology & Cybersecurity	Sub-Total Information Technology		Yes	(20,109)	35,175	7,585	62,766	71,178	156,596	-16%	44%	9%	76%	84%	35%
Capital	Information Technology & Cybersecurity	IT Utility Operations Applications	Non-RAMP	No	17,574	2,492	1,828	28,402	46,589	96,885	100%	204%	147%	2259%	3628%	1935%
Capital	Information Technology & Cybersecurity	IT Utility Operations Applications - RAMP	Records Management	No	(14,960)	(130)	(14,246)	(2,697)	(7,056)	(39,089)	-45%	-0%	-49%	-9%	-23%	-26%
Capital	Information Technology & Cybersecurity	IT Utility Operations Applications - RAMP	Employee, Contractor, Customer, and Public Safety	No	3,124	5,917	6,487	6,902	4,857	27,288	3022%	3002%	3240%	3407%	2348%	2998%
Capital	Information Technology & Cybersecurity	Sub-Total IT Utility Operations Applications		Yes	5,738	8,280	(5,931)	32,607	44,390	85,085	17%	27%	-19%	105%	140%	54%
Capital	Information Technology & Cybersecurity	IT Enterprise Infrastructure	Non-RAMP	No	(28,003)	23,977	11,421	16,323	30,787	54,505	-45%	66%	31%	44%	81%	26%
Capital	Information Technology & Cybersecurity	Network/Telecom	Non-RAMP	No	(19,910)	2,410	(1,008)	(35)	(5,776)	(24,319)	-82%	21%	-9%	-0%	-48%	-34%

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
Capital	Information Technology & Cybersecurity	IT Utility Operations Hardware	Non-RAMP	No	18,842	—	—	13,705	215	32,762	100%	—%	—%	100%	100%	100%
Capital	Information Technology & Cybersecurity	IT Utility Operations Hardware	Records Management	No	2,615	(173)	(1,343)	(1,359)	(1,388)	(1,647)	90%	-13%	-100%	-100%	-100%	-20%
<b>Capital</b>	<b>Information Technology &amp; Cybersecurity</b>	<b>Sub-Total IT Utility Operations Hardware</b>		<b>Yes</b>	<b>21,457</b>	<b>(173)</b>	<b>(1,343)</b>	<b>12,346</b>	<b>(1,173)</b>	<b>31,115</b>	<b>737%</b>	<b>-13%</b>	<b>-100%</b>	<b>909%</b>	<b>-85%</b>	<b>374%</b>
Capital	Information Technology & Cybersecurity	Customer Services	Non-RAMP	No	—	681	714	(548)	(1,050)	(203)	—%	68%	70%	-53%	-100%	-5%
Capital	Information Technology & Cybersecurity	Incorporating AMI Data into Scheduling & Balancing Process	Non-RAMP	No	608	—	—	—	—	608	100%	—%	—%	—%	—%	100%
Capital	Information Technology & Cybersecurity	IT - Gas Operations R	Foundational Technology Systems	No	—	—	—	1,791	2,091	3,882	—%	—%	—%	100%	100%	100%
Capital	Information Technology & Cybersecurity	Asset Investment Planning & Management	Asset and Records Management	No	—	—	3,732	280	1,910	5,922	—%	—%	100%	100%	100%	100%
<b>Capital</b>	<b>Information Technology &amp; Cybersecurity</b>	<b>Cybersecurity - RAMP</b>	<b>Cybersecurity</b>	<b>No</b>	<b>(7,469)</b>	<b>7,796</b>	<b>(660)</b>	<b>1,983</b>	<b>6,266</b>	<b>7,916</b>	<b>-29%</b>	<b>72%</b>	<b>-6%</b>	<b>18%</b>	<b>55%</b>	<b>11%</b>

ii. SoCalGas Information Technology & Cyber Security Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
Capital	Information Technology & Cybersecurity	Information Technology & Cybersecurity		Yes																										
Capital	Information Technology & Cybersecurity	Sub-Total Information Technology		Yes																										
Capital	Information Technology & Cybersecurity	IT Utility Operations Applications	Non-RAMP	No	This workpaper contains various projects that upgrade and modernize applications utilized for maintenance and operational support. The variety of work scope and varying dollars associated with this activity make it infeasible to identify an appropriate unit of measure.																									
Capital	Information Technology & Cybersecurity	IT Utility Operations Applications - RAMP	Records Management	No	This workpaper contains various projects to upgrade and modernize applications within the following categories: (1) Records and document management systems; (2) Work management systems; (3) Asset management systems; (4) Geographic Info Systems (GIS) applications, portals and mobile communications systems; and (5) Pressure & monitoring systems. The variety of work scope and varying dollars associated with this activity make it infeasible to identify an appropriate unit of measure.																									
Capital	Information Technology & Cybersecurity	IT Utility Operations Applications - RAMP	Employee, Contractor, Customer, and Public Safety	No	This workpaper contains various projects related to upgrade and modernize applications within the following categories: (1) Incident Management Systems and (2) Environmental Health & Safety System. The variety of work scope and varying dollars associated with this activity make it infeasible to identify an appropriate unit of measure.																									
Capital	Information Technology & Cybersecurity	Sub-Total IT Utility Operations Applications		Yes																										
Capital	Information Technology & Cybersecurity	IT Enterprise Infrastructure	Non-RAMP	No	This workpaper contains various projects within the following categories: (1) Data Center modernization; (2) Monitoring systems; (3) Storage expansion and capacity enhancements; and (4) Computing devices replacements. The variety of work scope and varying dollars associated with this activity make it infeasible to identify an appropriate unit of measure.																									
Capital	Information Technology & Cybersecurity	Network/Telecom	Non-RAMP	No	This workpaper contains various projects within the following categories: (1) Field Area Network modernization; (2) Wide Area Network modernization; (3) Local Area Network modernization; (4) Network communications and monitoring modernization; and (5) Network core modernization. The variety of work scope and varying dollars associated with this activity make it infeasible to identify an appropriate unit of measure.																									

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
Capital	Information Technology & Cybersecurity	IT Utility Operations Hardware	Non-RAMP	No	This workpaper contains various projects that replace and/or upgrade Records Management related Utility hardware utilized for maintenance and operational support. The variety of work scope and varying dollars associated with this activity make it infeasible to identify an appropriate unit of measure.																									
Capital	Information Technology & Cybersecurity	IT Utility Operations Hardware	Records Management	No	This workpaper contains various projects that replace and/or upgrade Records Management related Utility hardware utilized for maintenance and operational support. The variety of work scope and varying dollars associated with this activity make it infeasible to identify an appropriate unit of measure.																									
<b>Capital</b>	<b>Information Technology &amp; Cybersecurity</b>	<b>Sub-Total IT Utility Operations Hardware</b>		<b>Yes</b>																										
Capital	Information Technology & Cybersecurity	Customer Services	Non-RAMP	No	This workpaper contains various projects within the following categories: (1) Meter Set Assembly Inspection Enhancements and (2) Emergency Service and Safety Monitoring. The variety of work scope and varying dollars associated with this activity make it infeasible to identify an appropriate unit of measure.																									
Capital	Information Technology & Cybersecurity	Incorporating AMI Data into Scheduling & Balancing Process	Non-RAMP	No	This workpaper contains various projects within the following categories: (1) IT Software Projects - 5 years life span and (2) Advanced Meter Projects DCU /MTUs. The variety of work scope and varying dollars associated with this activity make it infeasible to identify an appropriate unit of measure.																									
Capital	Information Technology & Cybersecurity	IT - Gas Operations R	Foundational Technology Systems	No	This work paper contains various projects within the following categories: (1) Work Management and (2) Data Foundation. The variety of work scope and varying dollars associated with this activity make it infeasible to identify an appropriate unit of measure.																									
Capital	Information Technology & Cybersecurity	Asset Investment Planning & Management	Asset and Records Management	No	This work paper contains various projects within the following categories: (1) OPUS Asset Work Management and (2) OPUS Click and Integration. The variety of work scope and varying dollars associated with this activity make it infeasible to identify an appropriate unit of measure.																									
<b>Capital</b>	<b>Information Technology &amp; Cybersecurity</b>	<b>Cybersecurity - RAMP</b>	<b>Cybersecurity</b>	<b>No</b>	The variety of work scope and varying dollars associated with this activity make it infeasible to identify an appropriate unit of measure.																									

ii. SoCalGas Information Technology & Cyber Security Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
Capital	Information Technology & Cybersecurity	Information Technology & Cybersecurity		Yes									
Capital	Information Technology & Cybersecurity	Sub-Total Information Technology		Yes									
Capital	Information Technology & Cybersecurity	IT Utility Operations Applications	Non-RAMP	No	Yes	No	Variance due to emergent needs for end-of-life technology replacement with more reliable, secure, and new technology availability driving business value, such as Vista Work Force Management (Pacer Replacement), Development Security Operations, and Decision Analytics.	N/A	Over (O)	Over (O)	Over (O)	Expanded	No
Capital	Information Technology & Cybersecurity	IT Utility Operations Applications - RAMP	Records Management	No	Yes	No	The variance is due to work deferred to allow capacity for higher priority work, which shifted costs to IT Utility Operations Applications.	N/A	Under (U)	Under (U)	Under (U)	Proceeding as Planned	No
Capital	Information Technology & Cybersecurity	IT Utility Operations Applications - RAMP	Employee, Contractor, Customer, and Public Safety	No	Yes	No	Variance due to increased scope for end-of-life technology replacement with more reliable, secure, and cohesive solutions that also provide increased capability and usability, such as Environmental Health and Safety.	N/A	Over (O)	Over (O)	Over (O)	Expanded	No
Capital	Information Technology & Cybersecurity	Sub-Total IT Utility Operations Applications		Yes	Yes								No
Capital	Information Technology & Cybersecurity	IT Enterprise Infrastructure	Non-RAMP	No	Yes	No	Variance due to increased scope for end-of-life technology replacement with more reliable, secure, and cohesive solutions that also provide increased capability and usability, such as Splunk, Mainframe, and compute refresh.	N/A	Over (O)	Over (O)	Over (O)	Expanded	No
Capital	Information Technology & Cybersecurity	Network/Telecom	Non-RAMP	No	Yes	No	Some Network/Telecom work was re-prioritized to allow capacity for higher priority work, such as networking, radio communication, and related hardware and software.	N/A	Under (U)	Under (U)	Under (U)	Proceeding as Planned	No



Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
Capital	Information Technology & Cybersecurity	IT Utility Operations Hardware	Non-RAMP	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Expanded	No
Capital	Information Technology & Cybersecurity	IT Utility Operations Hardware	Records Management	No	No	No	N/A	N/A	Under (U)	Under (U)	Under (U)	Completed	Yes
<b>Capital</b>	<b>Information Technology &amp; Cybersecurity</b>	<b>Sub-Total IT Utility Operations Hardware</b>		<b>Yes</b>	<b>No</b>								<b>No</b>
Capital	Information Technology & Cybersecurity	Customer Services	Non-RAMP	No	No	No	N/A	N/A	Under (U)	Under (U)	Under (U)	Completed	Yes
Capital	Information Technology & Cybersecurity	Incorporating AMI Data into Scheduling & Balancing Process	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Completed	No
Capital	Information Technology & Cybersecurity	IT - Gas Operations R	Foundational Technology Systems	No	Yes	No	Variance due to emergent needs and new technology availability driving business value, such as Work Management.	N/A	Over (O)	Over (O)	Over (O)	Expanded	No
Capital	Information Technology & Cybersecurity	Asset Investment Planning & Management	Asset and Records Management	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Expanded	No
<b>Capital</b>	<b>Information Technology &amp; Cybersecurity</b>	<b>Cybersecurity - RAMP</b>	<b>Cybersecurity</b>	<b>No</b>	<b>Yes</b>	<b>No</b>	<b>Variance due to emergent needs to address evolving cybersecurity risks to the utilities, such as expanding perimeter protection through infrastructure upgrades and enhancements.</b>	<b>N/A</b>	<b>Over (O)</b>	<b>Over (O)</b>	<b>Over (O)</b>	<b>Expanded</b>	<b>No</b>

ii. SoCalGas Information Technology & Cyber Security Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
Capital	Information Technology & Cybersecurity	Information Technology & Cybersecurity		Yes				
Capital	Information Technology & Cybersecurity	Sub-Total Information Technology		Yes				
Capital	Information Technology & Cybersecurity	IT Utility Operations Applications	Non-RAMP	No	N/A	Applications support the development, implementation and maintenance of computer software utilized by customers, employees and/or vendor partners. Projects included in this budget code are related to enterprise-wide software applications in support of utility operations. This category includes costs for activities, as described, designed to mitigate reliability risks.	SCG-26 CRO-17 to CRO-39	SCG-21-R-E TLB/WJE-22 to TLB/WJE-66
Capital	Information Technology & Cybersecurity	IT Utility Operations Applications - RAMP	Records Management	No	N/A	Applications support the development, implementation and maintenance of computer software utilized by customers, employees and/or vendor partners. Projects included in this budget code are related to enterprise-wide software applications in support of utility operations. This category includes costs for activities, as described, of inaccurate or incomplete information that could result in the failure to construct, operate, and maintain SoCalGas' pipeline system safely or to satisfy regulatory compliance requirements.	SCG-26 CRO-17 to CRO-39	SCG-21-R-E TLB/WJE-22 to TLB/WJE-66
Capital	Information Technology & Cybersecurity	IT Utility Operations Applications - RAMP	Employee, Contractor, Customer, and Public Safety	No	N/A	Applications support the development, implementation and maintenance of computer software utilized by customers, employees and/or vendor partners. Projects included in this budget code are related to enterprise-wide software applications in support of utility operations. This category includes costs for activities, as described, designed to mitigate reliability risks.	SCG-26 CRO-17 to CRO-39	SCG-21-R-E TLB/WJE-22 to TLB/WJE-66
Capital	Information Technology & Cybersecurity	Sub-Total IT Utility Operations Applications		Yes				
Capital	Information Technology & Cybersecurity	IT Enterprise Infrastructure	Non-RAMP	No		IT Infrastructure supports the design, implementation and operation of the company's computing infrastructure. Projects included in this budget code are related to enterprise-wide infrastructure in support of utility operations. This category includes costs for activities, as described, designed to mitigate reliability risks.	SCG-26 CRO-17 to CRO-39	SCG-21-R-E TLB/WJE-22 to TLB/WJE-66
Capital	Information Technology & Cybersecurity	Network/Telecom	Non-RAMP	No		Networks enable communication, resource sharing, and data exchange among connected devices. Telecommunications involves the transmission of information over long distances.	SCG-26 CRO-17 to CRO-39	SCG-21-R-E TLB/WJE-22 to TLB/WJE-66

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
Capital	Information Technology & Cybersecurity	IT Utility Operations Hardware	Non-RAMP	No	N/A			
Capital	Information Technology & Cybersecurity	IT Utility Operations Hardware	Records Management	No	The activities in this workpaper were completed.	Hardware supports servers at the data center in order to avoid cyber threats from accessing business systems.	SCG-26 CRO-17 to CRO-39	SCG-21-R-E TLB/WJE-22 to TLB/WJE-66
<b>Capital</b>	<b>Information Technology &amp; Cybersecurity</b>	<b>Sub-Total IT Utility Operations Hardware</b>		<b>Yes</b>				
Capital	Information Technology & Cybersecurity	Customer Services	Non-RAMP	No	The activities in this workpaper were completed.	Implementation of an energy diversion program will allow SoCalGas to implement business and system processes across multiple organizations to better document, track, and manage energy diversion cases. The scope of this project is to develop an energy diversion mitigation order to manage, track, and report energy diversion cases. Enhancements to customer information system will provide visibility to several groups.	SCG-26 CRO-17 to CRO-39	SCG-21-R-E TLB/WJE-22 to TLB/WJE-66
Capital	Information Technology & Cybersecurity	Incorporating AMI Data into Scheduling & Balancing Process	Non-RAMP	No	N/A			
Capital	Information Technology & Cybersecurity	IT - Gas Operations R	Foundational Technology Systems	No	N/A	Foundational technology systems are used in every aspect of operations, customer engagement, and emergency response. Included are application systems, communication networks, monitoring systems, end-user systems, and hardware and software platforms hosted in the Companies' data centers and on internal and external cloud platforms.	SCG-26 CRO-17 to CRO-39	SCG-21-R-E TLB/WJE-22 to TLB/WJE-66
Capital	Information Technology & Cybersecurity	Asset Investment Planning & Management	Asset and Records Management	No	N/A			
<b>Capital</b>	<b>Information Technology &amp; Cybersecurity</b>	<b>Cybersecurity - RAMP</b>	<b>Cybersecurity</b>	<b>No</b>	<b>N/A</b>	<b>Cybersecurity capital projects improve or replace existing security capabilities to address the ever-changing threats and/or supported technologies. The projects support different NIST CSF 18 Functions and Categories, including Identify, Protect, Detect, Threat, Respond, and Recover.</b>	<b>SCG-27-R GW-25 to GW-62</b>	<b>SCG-22-R LRM-18 to LRM-26</b>

D. SoCalGas Administrative and General  
i. SoCalGas Administrative and General O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Administrative & General	Administrative & General		Yes			77,924	86,112	73,927	90,537	91,328	419,827	63,623	65,303	66,871	68,165	69,733	333,694
O&M	Administrative & General	Accounting & Finance, Legal, Regulatory Affairs, External Affairs		Yes			1,064	1,141	1,178	1,066	1,104	5,553	1,254	1,287	1,318	1,343	1,374	6,576
O&M	Administrative & General	Accounting Systems & Compliance	Non-RAMP	No	On-going	Annual	451	483	495	452	468	2,348	317	325	333	339	347	1,662
O&M	Administrative & General	Accounting Systems & Compliance	Consulting expertise to improve records management program	No	On-going	Annual	613	658	683	614	636	3,204	937	962	985	1,004	1,027	4,914
O&M	Administrative & General	Sub-Total Accounting Systems & Compliance		Yes			1,064	1,141	1,178	1,066	1,104	5,553	1,254	1,287	1,318	1,343	1,374	6,576
O&M	Administrative & General	Compensation & Benefits		Yes			328	333	295	578	878	2,412	777	798	817	832	852	4,075
O&M	Administrative & General	Health Benefits - Emp Assistance Program	Non-RAMP	No	On-going	Annual	328	333	295	578	878	2,412	777	798	817	832	852	4,075
O&M	Administrative & General	Corporate Center - General Administration		Yes			75,723	82,625	69,504	86,393	87,125	401,370	61,277	62,895	64,405	65,652	67,162	321,390
O&M	Administrative & General	SECC Outside Services Employees - F923.1	Non-RAMP	No	On-going	Annual	72,331	78,513	67,144	83,988	84,665	386,641	56,716	58,213	59,611	60,765	62,163	297,469
O&M	Administrative & General	SECC Outside Services Employees - F923.1	Records Management	No	On-going	Annual	118	121	124	126	129	618	118	121	124	126	129	619
O&M	Administrative & General	SECC Outside Services Employees - F923.1	Workplace Violence/Corporate Security	No	On-going	Annual	2,601	2,576	2,236	2,279	2,331	12,023	2,127	2,183	2,236	2,279	2,331	11,156
O&M	Administrative & General	SECC Outside Services Employees - F923.1	Cybersecurity	No	On-going	Annual	673	1,415	—	—	—	2,088	2,316	2,377	2,434	2,481	2,538	12,147
O&M	Administrative & General	Sub-Total SECC Outside Services Employees - F923.1		Yes			75,723	82,625	69,504	86,393	87,125	401,370	61,277	62,895	64,405	65,652	67,162	321,390

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Administrative & General	Risk Management		Yes			809	2,012	2,950	2,500	2,221	10,491	315	323	331	338	345	1,652
O&M	Administrative & General	Director of Risk	Non-RAMP	No	On-going	Annual	96	1,176	2,014	1,358	996	5,640	—	—	—	—	—	—
O&M	Administrative & General	Chief Risk Officer	Non-RAMP	No	On-going	Annual	385	448	443	505	544	2,325	—	—	—	—	—	—
O&M	Administrative & General	Oper Risk Mgmt-Seg	Non-RAMP	No	On-going	Annual	328	388	492	638	680	2,526	315	323	331	338	345	1,652

D. SoCalGas Administrative and General  
i. SoCalGas Administrative and General O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Administrative & General	Administrative & General		Yes	14,301	20,809	7,056	22,372	21,595	86,132	22%	32%	11%	33%	31%	26%
O&M	Administrative & General	Accounting & Finance, Legal, Regulatory Affairs, External Affairs		Yes	(190)	(146)	(140)	(278)	(271)	(1,024)	-15%	-11%	-11%	-21%	-20%	-16%
O&M	Administrative & General	Accounting Systems & Compliance	Non-RAMP	No	134	158	162	112	120	687	42%	49%	49%	33%	35%	41%
O&M	Administrative & General	Accounting Systems & Compliance	Consulting expertise to improve records management program	No	(324)	(304)	(301)	(390)	(391)	(1,710)	-35%	-32%	-31%	-39%	-38%	-35%
O&M	Administrative & General	Sub-Total Accounting Systems & Compliance		Yes	(190)	(146)	(140)	(278)	(271)	(1,024)	-15%	-11%	-11%	-21%	-20%	-16%
O&M	Administrative & General	Compensation & Benefits		Yes	(449)	(464)	(522)	(255)	27	(1,663)	-58%	-58%	-64%	-31%	3%	-41%
O&M	Administrative & General	Health Benefits - Emp Assistance Program	Non-RAMP	No	(449)	(464)	(522)	(255)	27	(1,663)	-58%	-58%	-64%	-31%	3%	-41%
O&M	Administrative & General	Corporate Center - General Administration		Yes	14,446	19,730	5,099	20,741	19,963	79,980	24%	31%	8%	32%	30%	25%
O&M	Administrative & General	SECC Outside Services Employees - F923.1	Non-RAMP	No	15,615	20,300	7,532	23,223	22,502	89,173	28%	35%	13%	38%	36%	30%
O&M	Administrative & General	SECC Outside Services Employees - F923.1	Records Management	No	—	(0)	(0)	(0)	(0)	(1)	—%	-0%	-0%	-0%	-0%	-0%
O&M	Administrative & General	SECC Outside Services Employees - F923.1	Workplace Violence/Corporate Security	No	474	393	0	0	(0)	867	22%	18%	0%	0%	-0%	8%
O&M	Administrative & General	SECC Outside Services Employees - F923.1	Cybersecurity	No	(1,643)	(962)	(2,434)	(2,481)	(2,538)	(10,059)	-71%	-40%	-100%	-100%	-100%	-83%
O&M	Administrative & General	Sub-Total SECC Outside Services Employees - F923.1		Yes	14,446	19,730	5,099	20,741	19,963	79,980	24%	31%	8%	32%	30%	25%

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Administrative & General	Risk Management		Yes	494	1,688	2,619	2,163	1,876	8,839	157%	522%	791%	641%	543%	535%
O&M	Administrative & General	Director of Risk	Non-RAMP	No	96	1,176	2,014	1,358	996	5,640	100%	100%	100%	100%	100%	100%
O&M	Administrative & General	Chief Risk Officer	Non-RAMP	No	385	448	443	505	544	2,325	100%	100%	100%	100%	100%	100%
O&M	Administrative & General	Oper Risk Mgmt-Seg	Non-RAMP	No	13	65	161	300	335	874	4%	20%	49%	89%	97%	53%

D. SoCalGas Administrative and General  
i. SoCalGas Administrative and General O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
O&M	Administrative & General	Administrative & General		Yes																										
O&M	Administrative & General	Accounting & Finance, Legal, Regulatory Affairs, External Affairs		Yes																										
O&M	Administrative & General	Accounting Systems & Compliance	Non-RAMP	No	FTE	7	7	7	8	7	36	7	7	7	7	7	35	—	—	—	1	—	1	—%	—%	—%	14%	—%	3%	
O&M	Administrative & General	Accounting Systems & Compliance	Consulting expertise to improve records management program	No	Activities to be performed include: (1) complete comprehensive review of current records management program; (2) address effectiveness of current records management program; and (3) provide best practice suggestions for improvements. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Administrative & General	Sub-Total Accounting Systems & Compliance		Yes																										
O&M	Administrative & General	Compensation & Benefits		Yes																										
O&M	Administrative & General	Health Benefits - Emp Assistance Program	Non-RAMP	No	Average Employee Count	7,554	7,911	8,135	8,469	8,623	40,692	8,624	8,624	8,624	8,624	8,624	43,120	(1,070)	(713)	(489)	(155)	(1)	(2,428)	-12%	-8%	-6%	-2%	-0%	-6%	
O&M	Administrative & General	Corporate Center - General Administration		Yes																										
O&M	Administrative & General	SECC Outside Services Employees - F923.1	Non-RAMP	No	The costs include allocations from the following Sempra Energy Corporate Center (SECC) functions: Outside Legal, Cash/Finance Fees, Facilities, Long Term Incentive Plan (LTIP), Supplemental Executive Retirement Plan (SERP), Finance, Legal, External Affairs, and Human Resources. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Administrative & General	SECC Outside Services Employees - F923.1	Records Management	No	The costs include allocations from the following functions: administration of and adherence to its record management policy and practices, resources to manage records, internal audits, and records storage and retention. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Administrative & General	SECC Outside Services Employees - F923.1	Workplace Violence/Corporate Security	No	The costs include allocations from the following functions: Mitigation for Planning, Awareness, and Incident Management of Workplace Violence. These mitigation efforts are managed by Corporate Security. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Administrative & General	SECC Outside Services Employees - F923.1	Cybersecurity	No	The costs include allocations from the following functions: defining the technology architecture required to support the technology strategy and govern the selection, deployment, and use of applications, infrastructure, and tools. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Administrative & General	Sub-Total SECC Outside Services Employees - F923.1		Yes																										



Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
O&M	Administrative & General	Risk Management		Yes																										
O&M	Administrative & General	Director of Risk	Non-RAMP	No	FTE	1	1	1	1	1	5	—	—	—	—	—	—	1	1	1	1	1	5	100%	100%	100%	100%	100%	100%	
O&M	Administrative & General	Chief Risk Officer	Non-RAMP	No	FTE	1	1	1	1	3	7	—	—	—	—	—	—	1	1	1	1	3	7	100%	100%	100%	100%	100%	100%	
O&M	Administrative & General	Oper Risk Mgmt-Seg	Non-RAMP	No	FTE	2	2	2	4	6	16	2	2	2	2	2	10	—	—	—	2	4	6	—%	—%	—%	100%	200%	60%	

D. SoCalGas Administrative and General  
i. SoCalGas Administrative and General O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Administrative & General	Administrative & General		Yes									
O&M	Administrative & General	Accounting & Finance, Legal, Regulatory Affairs, External Affairs		Yes									
O&M	Administrative & General	Accounting Systems & Compliance	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Administrative & General	Accounting Systems & Compliance	Consulting expertise to improve records management program	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Administrative & General	Sub-Total Accounting Systems & Compliance		Yes	No								No
O&M	Administrative & General	Compensation & Benefits		Yes									
O&M	Administrative & General	Health Benefits - Emp Assistance Program	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Administrative & General	Corporate Center - General Administration		Yes									
O&M	Administrative & General	SECC Outside Services Employees - F923.1	Non-RAMP	No	Yes	No	The variance in 2023 actuals is due to greater costs allocated to SoCalGas by Corporate Center for the LTIP and SERP programs, higher finance and bank fees incurred, higher facilities and maintenance costs, and an increase in outside services.	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Administrative & General	SECC Outside Services Employees - F923.1	Records Management	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Administrative & General	SECC Outside Services Employees - F923.1	Workplace Violence/Corporate Security	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Administrative & General	SECC Outside Services Employees - F923.1	Cybersecurity	No	Yes	No	The Cybersecurity group transferred staff from SECC to SoCalGas at the end of 2020, with a small subset then returning to SECC in 2022. To be consistent with prior years, the 2023 actuals are reported in the Information Technology and Cybersecurity section.	N/A	On Target (T)	On Target (T)	On Target (T)	Other	Yes
O&M	Administrative & General	Sub-Total SECC Outside Services Employees - F923.1		Yes	Yes								No

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Administrative & General	Risk Management		Yes									
O&M	Administrative & General	Director of Risk	Non-RAMP	No	No	Yes	N/A	The funding for this activity was previously included in SDG&E's TY 2019 GRC as a shared service function. Beginning in 2020, this was no longer a shared service function. In 2020, SoCalGas assigned a dedicated Director of Enterprise Risk & Compliance.	Over (O)	Over (O)	Over (O)	Emergent	No
O&M	Administrative & General	Chief Risk Officer	Non-RAMP	No	No	Yes	N/A	The funding for this activity was previously included in SDG&E's 2019 GRC as a shared service function. In 2020, SoCalGas assigned a dedicated Chief Risk Officer.	Over (O)	Over (O)	Over (O)	Emergent	No
O&M	Administrative & General	Oper Risk Mgmt-Seg	Non-RAMP	No	No	Yes	N/A	The funding for this activity was previously included in SDG&E's TY 2019 GRC as a shared service function. Beginning in 2020, this was no longer a shared service function. In 2020, SoCalGas assigned a dedicated Enterprise Risk & Compliance group.	Over (O)	Over (O)	Over (O)	Proceeding as Planned	No

D. SoCalGas Administrative and General  
i. SoCalGas Administrative and General O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Administrative & General	Administrative & General		Yes				
O&M	Administrative & General	Accounting & Finance, Legal, Regulatory Affairs, External Affairs		Yes				
O&M	Administrative & General	Accounting Systems & Compliance	Non-RAMP	No	N/A			
O&M	Administrative & General	Accounting Systems & Compliance	Consulting expertise to improve records management program	No	N/A			
O&M	Administrative & General	Sub-Total Accounting Systems & Compliance		Yes				
O&M	Administrative & General	Compensation & Benefits		Yes				
O&M	Administrative & General	Health Benefits - Emp Assistance Program	Non-RAMP	No	N/A			
O&M	Administrative & General	Corporate Center - General Administration		Yes				
O&M	Administrative & General	SECC Outside Services Employees - F923.1	Non-RAMP	No	N/A	Corporate Center Shared Services Allocations - Outside Services Employed: Corporate center allocated costs include security services provided to protect corporate assets and employees, security systems, and the Corporate Security (CSS) department. The CSS department is responsible for the development and management of programs and policies for security systems, security investigations, workplace violence avoidance, as well as crisis and security risk management services. Corporate Center function is also actively involved in activities designed to mitigate the identified risk of workplace violence by supporting the planning and incident management investigation as well as programs designed to mitigate the risk event before it occurs. This includes training, investigation, employee awareness, new hire screening, employee assistance, and corporate security activities.	SDG&E-26-R (SCG-28-R) MLD-10 to MLD-14	SDG&E-27-R-E (SCG-23-R-E) DRC-5 to DRC-10
O&M	Administrative & General	SECC Outside Services Employees - F923.1	Records Management	No	N/A			
O&M	Administrative & General	SECC Outside Services Employees - F923.1	Workplace Violence/Corporate Security	No	N/A			
O&M	Administrative & General	SECC Outside Services Employees - F923.1	Cybersecurity	No	The Cybersecurity group transferred staff from SECC to SoCalGas at the end of 2020, with a small subset then returning to SECC in 2022. To be consistent with prior years, the 2023 actuals are reported in the Information Technology and Cybersecurity section.	Corporate Center Shared Services Allocations - Outside Services Employed: Corporate center allocated costs include security services provided to protect corporate assets and employees, security systems, and the Corporate Security (CSS) department. The CSS department is responsible for the development and management of programs and policies for security systems, security investigations, workplace violence avoidance, as well as crisis and security risk management services. Corporate Center function is also actively involved in activities designed to mitigate the identified risk of workplace violence by supporting the planning and incident management investigation as well as programs designed to mitigate the risk event before it occurs. This includes training, investigation, employee awareness, new hire screening, employee assistance, and corporate security activities.	SDG&E-26-R (SCG-28-R) MLD-46	SDG&E-27-R-E (SCG-23-R-E) DRC-27
O&M	Administrative & General	Sub-Total SECC Outside Services Employees - F923.1		Yes				

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Administrative & General	Risk Management		Yes				
O&M	Administrative & General	Director of Risk	Non-RAMP	No	N/A	This workpaper is comprised of activities to continue to develop and continuously improve upon SoCalGas' Enterprise Risk Management (ERM) framework. The ERM facilitates the identification and management of enterprise risks, with an emphasis on safety, the identification and prioritization of effective mitigation measures and the incorporation of risk into the investment decision-making process. The Director of Risk and Compliance is responsible for developing and implementing the increased application of probabilistic and quantitative processes based upon data to assess risks and measure results of risk management efforts, supporting the Safety Model Assessment Proceeding (S-MAP) and other regulatory efforts, and partnering with the Accounting & Finance and Regulatory departments to support accurate and complete accountability reporting.	N/A	SCG-27-2R-E NNM-31 to NNM-36 WP 2SM006.000
O&M	Administrative & General	Chief Risk Officer	Non-RAMP	No	N/A	The role of Chief Risk Officer establishes the vision and guides the approach to the development and continuous improvement of SoCalGas' ERM framework. The ERM facilitates the identification and management of enterprise risks, with an emphasis on safety, the identification and prioritization of effective mitigation measures and the incorporation of risk into the investment decision-making process. This is a newly created position in 2019. The VP - Risk Management and Chief Risk Officer will continue to establish and guide risk management policy, promote the integration of risk concepts and analysis in asset management and investment processes, and to support the strengthening of SoCalGas' safety culture.	N/A	SCG-27-2R-E NNM-31 to NNM-36 WP 2SM006.000
O&M	Administrative & General	Oper Risk Mgmt-Seg	Non-RAMP	No	N/A	This cost center is focused on the development of risk framework and tools.	SCG-02 (SDG&E-02) GSF-3 to GSF 8	SCG-27-2R-E NNM-31 to NNM-36 WP 2SM006.000

C. SoCalGas Support Services  
i. SoCalGas Support Services O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Support Services	Support Services		Yes			67,861	75,950	83,501	84,454	93,703	405,469	75,694	77,692	79,558	81,097	82,963	397,004
O&M	Support Services	Environmental		Yes			4,490	5,255	7,929	6,983	8,205	32,862	7,563	7,762	7,949	8,102	8,289	39,665
O&M	Support Services	Environmental	Non-RAMP	No	On-going	Annual	2,023	2,351	5,018	4,211	5,356	18,959	4,748	4,874	4,991	5,087	5,204	24,905
O&M	Support Services	Environmental	Environmental Services and Safety Compliance Management Program (ESCMP)	No	On-going	Annual	85	147	109	134	138	613	110	113	116	118	121	577
O&M	Support Services	Environmental	Environmental Self-Assessment	No	On-going	Annual	532	418	422	435	418	2,225	478	491	503	513	524	2,509
O&M	Support Services	Environmental	Investigation of environmental exposure incidents	No	On-going	Annual	539	616	569	508	544	2,776	484	497	509	518	530	2,538
O&M	Support Services	Environmental	Compliance program to comply with the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)	No	On-going	Annual	2	9	2	6	2	21	19	19	19	20	20	97
O&M	Support Services	Environmental	Service Contracting	No	On-going	Annual	—	215	197	130	133	675	180	185	189	193	197	943
O&M	Support Services	Environmental	Asbestos Safety Program	No	On-going	Annual	560	662	703	726	811	3,462	786	807	826	842	861	4,122
O&M	Support Services	Environmental	SoCalGas Environmental Training	No	On-going	Annual	749	837	909	833	803	4,131	757	777	796	812	830	3,973
O&M	Support Services	Sub-Total Environmental		Yes			4,490	5,255	7,929	6,983	8,205	32,862	7,563	7,762	7,949	8,102	8,289	39,665
O&M	Support Services	Fleet Services & Facilities		Yes			60,926	68,390	72,979	74,716	82,821	359,831	64,613	66,319	67,912	69,226	70,818	338,888
O&M	Support Services	Facilities-Monterey Park Mgr	Non-RAMP	No	On-going	Annual	1,993	2,564	2,203	2,213	2,491	11,464	2,513	2,580	2,642	2,693	2,755	13,182
O&M	Support Services	Facilities GCT	Non-RAMP	No	On-going	Annual	1,345	724	1,205	1,593	2,571	7,438	1,631	1,674	1,714	1,747	1,787	8,552
O&M	Support Services	Director	Non-RAMP	No	On-going	Annual	82	156	268	401	424	1,331	125	128	131	134	137	654

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Support Services	Facility Operations	Non-RAMP	No	On-going	Annual	16,139	21,695	21,746	22,716	22,146	104,442	17,355	17,813	18,241	18,594	19,021	91,023
O&M	Support Services	Facility Operations	New Contract Security	No	On-going	Annual	62	71	31	552	573	1,289	236	242	248	253	259	1,238
O&M	Support Services	Facility Operations	Physical Security	No	On-going	Annual	351	510	794	1,305	2,453	5,413	17	17	18	18	19	89
O&M	Support Services	Facility Operations	Site Security Reviews	No	On-going	Annual	13	19	28	47	88	195	12	12	13	13	13	63
O&M	Support Services	Facility Operations	Additional Security Guards	No	Ongoing	Annual	567	1,218	1,605	1,288	1,241	5,919	857	880	901	918	939	4,495
O&M	Support Services	<b>Sub-Total Facility Operations</b>		Yes			17,132	23,513	24,205	25,907	26,500	117,257	18,477	18,965	19,420	19,796	20,251	96,908
O&M	Support Services	Amortization	Non-RAMP	No	On-going	Annual	21,893	23,405	20,936	20,242	19,608	106,085	22,301	22,890	23,440	23,893	24,443	116,966
O&M	Support Services	Amortization	Zero Emission Vehicles & Renewable Natural Gas Vehicles	No	On-going	Annual	—	—	96	2,182	4,680	6,958	—	—	—	—	—	—
O&M	Support Services	<b>Sub-Total Amortization</b>		Yes			21,893	23,405	21,032	22,424	24,288	113,043	22,301	22,890	23,440	23,893	24,443	116,966

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Support Services	Interest	Non-RAMP	No	On-going	Annual	2,069	2,486	2,373	2,519	3,875	13,323	2,853	2,928	2,999	3,057	3,127	14,964
O&M	Support Services	Interest	Zero Emission Vehicles & Renewable Natural Gas Vehicles	No	On-going	Annual	—	—	24	646	1,649	2,319	—	—	—	—	—	—
<b>O&amp;M</b>	<b>Support Services</b>	<b>Sub-Total Interest</b>		<b>Yes</b>			<b>2,069</b>	<b>2,486</b>	<b>2,397</b>	<b>3,166</b>	<b>5,524</b>	<b>15,642</b>	<b>2,853</b>	<b>2,928</b>	<b>2,999</b>	<b>3,057</b>	<b>3,127</b>	<b>14,964</b>
O&M	Support Services	Maintenance Operations	Non-RAMP	No	On-going	Annual	14,114	13,020	19,119	16,285	17,705	80,242	13,675	14,036	14,373	14,651	14,988	71,722
O&M	Support Services	Maintenance Operations	Zero Emission Vehicles & Renewable Natural Gas Vehicles	No	On-going	Annual	—	—	1	63	175	239	—	—	—	—	—	—
<b>O&amp;M</b>	<b>Support Services</b>	<b>Sub-Total Maintenance Operations</b>		<b>Yes</b>			<b>14,114</b>	<b>13,020</b>	<b>19,119</b>	<b>16,348</b>	<b>17,880</b>	<b>80,481</b>	<b>13,675</b>	<b>14,036</b>	<b>14,373</b>	<b>14,651</b>	<b>14,988</b>	<b>71,722</b>
O&M	Support Services	License Fees & Sales Tax	Non-RAMP	No	On-going	Annual	2,297	2,521	2,549	2,525	2,705	12,598	3,039	3,119	3,194	3,256	3,331	15,939
O&M	Support Services	License Fees & Sales Tax	Zero Emission Vehicles & Renewable Natural Gas Vehicles	No	On-going	Annual	—	—	—	140	436	576	—	—	—	—	—	—
<b>O&amp;M</b>	<b>Support Services</b>	<b>Sub-Total License Fees &amp; Sales Tax</b>		<b>Yes</b>			<b>2,297</b>	<b>2,521</b>	<b>2,549</b>	<b>2,665</b>	<b>3,142</b>	<b>13,174</b>	<b>3,039</b>	<b>3,119</b>	<b>3,194</b>	<b>3,256</b>	<b>3,331</b>	<b>15,939</b>
<b>O&amp;M</b>	<b>Support Services</b>	<b>Supply Management, Logistics &amp; Supplier Diversity</b>		<b>Yes</b>			<b>2,445</b>	<b>2,305</b>	<b>2,592</b>	<b>2,755</b>	<b>2,678</b>	<b>12,776</b>	<b>3,518</b>	<b>3,611</b>	<b>3,698</b>	<b>3,769</b>	<b>3,856</b>	<b>18,452</b>
O&M	Support Services	Fabrication & Repair	Non-RAMP	No	On-going	Annual	2,445	2,305	2,592	2,755	2,678	12,776	3,518	3,611	3,698	3,769	3,856	18,452



C. SoCalGas Support Services  
i. SoCalGas Support Services O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Support Services	Support Services		Yes	(7,833)	(1,742)	3,943	3,356	10,741	8,465	-10%	-2%	5%	4%	13%	2%
O&M	Support Services	Environmental		Yes	(3,072)	(2,507)	(19)	(1,120)	(84)	(6,802)	-41%	-32%	-0%	-14%	-1%	-17%
O&M	Support Services	Environmental	Non-RAMP	No	(2,725)	(2,523)	28	(877)	151	(5,946)	-57%	-52%	1%	-17%	3%	-24%
O&M	Support Services	Environmental	Environmental Services and Safety Compliance Management Program (ESCMP)	No	(25)	34	(7)	16	17	36	-23%	30%	-6%	14%	14%	6%
O&M	Support Services	Environmental	Environmental Self-Assessment	No	54	(73)	(81)	(78)	(106)	(284)	11%	-15%	-16%	-15%	-20%	-11%
O&M	Support Services	Environmental	Investigation of environmental exposure incidents	No	55	119	60	(10)	14	238	11%	24%	12%	-2%	3%	9%
O&M	Support Services	Environmental	Compliance program to comply with the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)	No	(17)	(10)	(17)	(14)	(18)	(76)	-89%	-53%	-90%	-70%	-90%	-78%
O&M	Support Services	Environmental	Service Contracting	No	(180)	30	8	(63)	(64)	(268)	-100%	16%	4%	-33%	-33%	-28%
O&M	Support Services	Environmental	Asbestos Safety Program	No	(226)	(145)	(123)	(116)	(50)	(660)	-29%	-18%	-15%	-14%	-6%	-16%
O&M	Support Services	Environmental	SoCalGas Environmental Training	No	(8)	60	113	21	(27)	158	-1%	8%	14%	3%	-3%	4%
O&M	Support Services	Sub-Total Environmental		Yes	(3,072)	(2,507)	(19)	(1,120)	(84)	(6,802)	-41%	-32%	-0%	-14%	-1%	-17%
O&M	Support Services	Fleet Services & Facilities		Yes	(3,687)	2,071	5,068	5,490	12,003	20,944	-6%	3%	7%	8%	17%	6%
O&M	Support Services	Facilities-Monterey Park Mgr	Non-RAMP	No	(520)	(16)	(438)	(480)	(264)	(1,718)	-21%	-1%	-17%	-18%	-10%	-13%
O&M	Support Services	Facilities GCT	Non-RAMP	No	(285)	(950)	(509)	(154)	784	(1,114)	-17%	-57%	-30%	-9%	44%	-13%
O&M	Support Services	Director	Non-RAMP	No	(43)	28	137	267	287	676	-34%	22%	104%	200%	210%	103%

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Support Services	Facility Operations	Non-RAMP	No	(1,215)	3,882	3,506	4,122	3,124	13,419	-7%	22%	19%	22%	16%	15%
O&M	Support Services	Facility Operations	New Contract Security	No	(174)	(171)	(217)	299	314	51	-74%	-71%	-88%	118%	122%	4%
O&M	Support Services	Facility Operations	Physical Security	No	334	493	776	1,286	2,434	5,324	1965%	2825%	4346%	7063%	13063%	5971%
O&M	Support Services	Facility Operations	Site Security Reviews	No	1	7	16	34	75	132	8%	53%	125%	263%	567%	209%
O&M	Support Services	Facility Operations	Additional Security Guards	No	(290)	338	704	370	302	1,424	-34%	38%	78%	40%	32%	32%
O&M	Support Services	<b>Sub-Total Facility Operations</b>		Yes	<b>(1,344)</b>	<b>4,549</b>	<b>4,785</b>	<b>6,111</b>	<b>6,249</b>	<b>20,350</b>	<b>-7%</b>	<b>24%</b>	<b>25%</b>	<b>31%</b>	<b>31%</b>	<b>21%</b>
O&M	Support Services	Amortization	Non-RAMP	No	(408)	516	(2,503)	(3,651)	(4,835)	(10,881)	-2%	2%	-11%	-15%	-20%	-9%
O&M	Support Services	Amortization	Zero Emission Vehicles & Renewable Natural Gas Vehicles	No	—	—	96	2,182	4,680	6,958	—%	—%	100%	100%	100%	100%
O&M	Support Services	<b>Sub-Total Amortization</b>		Yes	<b>(408)</b>	<b>516</b>	<b>(2,408)</b>	<b>(1,469)</b>	<b>(154)</b>	<b>(3,923)</b>	<b>-2%</b>	<b>2%</b>	<b>-10%</b>	<b>-6%</b>	<b>-1%</b>	<b>-3%</b>

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Support Services	Interest	Non-RAMP	No	(784)	(442)	(626)	(537)	748	(1,641)	-27%	-15%	-21%	-18%	24%	-11%
O&M	Support Services	Interest	Zero Emission Vehicles & Renewable Natural Gas Vehicles	No	—	—	24	646	1,649	2,319	—%	—%	100%	100%	100%	100%
<b>O&amp;M</b>	<b>Support Services</b>	<b>Sub-Total Interest</b>		<b>Yes</b>	<b>(784)</b>	<b>(442)</b>	<b>(602)</b>	<b>109</b>	<b>2,397</b>	<b>679</b>	<b>-27%</b>	<b>-15%</b>	<b>-20%</b>	<b>4%</b>	<b>77%</b>	<b>5%</b>
O&M	Support Services	Maintenance Operations	Non-RAMP	No	439	(1,016)	4,746	1,634	2,717	8,520	3%	-7%	33%	11%	18%	12%
O&M	Support Services	Maintenance Operations	Zero Emission Vehicles & Renewable Natural Gas Vehicles	No	—	—	1	63	175	239	—%	—%	100%	100%	100%	100%
<b>O&amp;M</b>	<b>Support Services</b>	<b>Sub-Total Maintenance Operations</b>		<b>Yes</b>	<b>439</b>	<b>(1,016)</b>	<b>4,747</b>	<b>1,697</b>	<b>2,892</b>	<b>8,759</b>	<b>3%</b>	<b>-7%</b>	<b>33%</b>	<b>12%</b>	<b>19%</b>	<b>12%</b>
O&M	Support Services	License Fees & Sales Tax	Non-RAMP	No	(742)	(598)	(645)	(731)	(625)	(3,341)	-24%	-19%	-20%	-22%	-19%	-21%
O&M	Support Services	License Fees & Sales Tax	Zero Emission Vehicles & Renewable Natural Gas Vehicles	No	—	—	—	140	436	576	—%	—%	—%	100%	100%	100%
<b>O&amp;M</b>	<b>Support Services</b>	<b>Sub-Total License Fees &amp; Sales Tax</b>		<b>Yes</b>	<b>(742)</b>	<b>(598)</b>	<b>(645)</b>	<b>(591)</b>	<b>(189)</b>	<b>(2,765)</b>	<b>-24%</b>	<b>-19%</b>	<b>-20%</b>	<b>-18%</b>	<b>-6%</b>	<b>-17%</b>
<b>O&amp;M</b>	<b>Support Services</b>	<b>Supply Management, Logistics &amp; Supplier Diversity</b>		<b>Yes</b>	<b>(1,073)</b>	<b>(1,306)</b>	<b>(1,105)</b>	<b>(1,014)</b>	<b>(1,178)</b>	<b>(5,676)</b>	<b>-30%</b>	<b>-36%</b>	<b>-30%</b>	<b>-27%</b>	<b>-31%</b>	<b>-31%</b>
O&M	Support Services	Fabrication & Repair	Non-RAMP	No	(1,073)	(1,306)	(1,105)	(1,014)	(1,178)	(5,676)	-30%	-36%	-30%	-27%	-31%	-31%

C. SoCalGas Support Services  
i. SoCalGas Support Services O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance						
O&M	Support Services	Support Services		Yes																															
O&M	Support Services	Environmental		Yes																															
O&M	Support Services	Environmental	Non-RAMP	No	The workpaper consists of activities that include: compliance programs, permits, third Party Consultants, Office & Field Supplies, and department vehicles (maintenance, registrations, and fuel). The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																														
O&M	Support Services	Environmental	Environmental Services and Safety Compliance Management Program (ESCMP)	No	FTE	2	2	2	2	2	10	2	2	2	2	2	10	—	—	—	—	—	—	—%	—%	—%	—%	—%	—%	—%					
O&M	Support Services	Environmental	Environmental Self-Assessment	No	Assessments	102	96	95	95	95	483	121	121	121	121	105	589	(19)	(25)	(26)	(26)	(10)	(106)	-16%	-21%	-21%	-21%	-10%	-18%						
O&M	Support Services	Environmental	Investigation of environmental exposure incidents	No	Agency Inspections	328	283	256	222	247	1,336	245	245	245	245	245	1,225	83	38	11	(23)	2	111	34%	16%	4%	-9%	1%	9%						
O&M	Support Services	Environmental	Compliance program to comply with the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)	No	Consultant(s)	—	1	—	—	—	1	1	1	1	1	1	5	(1)	—	(1)	(1)	(1)	(4)	-100%	—%	-100%	-100%	-100%	-80%						
O&M	Support Services	Environmental	Service Contracting	No	FTE	2	2	2	2	2	10	2	2	2	2	2	10	—	—	—	—	—	—	—%	—%	—%	—%	—%	—%						
O&M	Support Services	Environmental	Asbestos Safety Program	No	FTE	6	6	3	3	3	21	9	8	8	8	8	41	(3)	(2)	(5)	(5)	(5)	(20)	-33%	-25%	-63%	-63%	-63%	-49%						
O&M	Support Services	Environmental	SoCalGas Environmental Training	No	Attendees	3,545	3,693	3,683	4,847	4,016	19,784	3,797	3,797	3,797	3,797	3,797	18,985	(252)	(104)	(114)	1,050	219	799	-7%	-3%	-3%	28%	6%	4%						
O&M	Support Services	Sub-Total Environmental		Yes																															
O&M	Support Services	Fleet Services & Facilities		Yes																															
O&M	Support Services	Facilities-Monterey Park Mgr	Non-RAMP	No	FTE	5	2	2	4	4	17	7	2	4	4	4	21	(2)	—	(2)	—	—	(4)	-29%	—%	-50%	—%	—%	-19%						
O&M	Support Services	Facilities GCT	Non-RAMP	No	Square Footage	350,052	344,130	302,676	302,676	302,676	1,602,210	350,052	350,052	350,052	350,052	350,052	1,750,260	—	(5,922)	(47,376)	(47,376)	(47,376)	(148,050)	—%	-2%	-14%	-14%	-14%	-8%						
O&M	Support Services	Director	Non-RAMP	No	FTE	1	1	1	1	1	5	1	1	1	1	1	5	—	—	—	—	—	—	—%	—%	—%	—%	—%	—%						

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
O&M	Support Services	Facility Operations	Non-RAMP	No	FTE	34	37	36	40	37	184	47	51	48	50	50	246	(13)	(14)	(12)	(10)	(13)	(62)	-28%	-27%	-25%	-20%	-26%	-25%	
O&M	Support Services	Facility Operations	New Contract Security	No	Security Guards	1	1	1	6	6	15	2	2	2	3	3	12	(1)	(1)	(1)	3	3	3	-50%	-50%	-50%	100%	100%	25%	
O&M	Support Services	Facility Operations	Physical Security	No	Work Orders	333	532	764	1,077	1,150	3,856	7	12	17	24	19	79	326	520	747	1,053	1,131	3,777	4657%	4333%	4394%	4388%	5953%	4781%	
O&M	Support Services	Facility Operations	Site Security Reviews	No	Sites	90	124	111	130	128	583	90	124	111	130	128	583	—	—	—	—	—	—	—%	—%	—%	—%	—%	—%	
O&M	Support Services	Facility Operations	Additional Security Guards	No	Security Guards	6	13	18	14	14	65	10	10	10	10	10	50	(4)	3	8	4	4	15	-40%	30%	80%	40%	40%	30%	
O&M	Support Services	Sub-Total Facility Operations		Yes																										
O&M	Support Services	Amortization	Non-RAMP	No	This activity includes a variety of vehicle segments, pricing, and volume in order to meet business needs and requirements. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Support Services	Amortization	Zero Emission Vehicles & Renewable Natural Gas Vehicles	No	This activity includes a variety of vehicle segments, pricing, and volume in order to meet business needs and requirements. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Support Services	Sub-Total Amortization		Yes																										

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
O&M	Support Services	Interest	Non-RAMP	No	This activity includes a variety of vehicle segments, pricing, and volume in order to meet business needs and requirements. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Support Services	Interest	Zero Emission Vehicles & Renewable Natural Gas Vehicles	No	This activity includes a variety of vehicle segments, pricing, and volume in order to meet business needs and requirements. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
<b>O&amp;M</b>	<b>Support Services</b>	<b>Sub-Total Interest</b>		<b>Yes</b>																										
O&M	Support Services	Maintenance Operations	Non-RAMP	No	This activity includes a variety of vehicle segments, pricing, and volume in order to meet business needs and requirements. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Support Services	Maintenance Operations	Zero Emission Vehicles & Renewable Natural Gas Vehicles	No	This activity includes a variety of vehicle segments, pricing, and volume in order to meet business needs and requirements. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
<b>O&amp;M</b>	<b>Support Services</b>	<b>Sub-Total Maintenance Operations</b>		<b>Yes</b>																										
O&M	Support Services	License Fees & Sales Tax	Non-RAMP	No	This activity includes a variety of vehicle segments, pricing, and volume in order to meet business needs and requirements. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Support Services	License Fees & Sales Tax	Zero Emission Vehicles & Renewable Natural Gas Vehicles	No	This activity includes a variety of vehicle segments, pricing, and volume in order to meet business needs and requirements. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
<b>O&amp;M</b>	<b>Support Services</b>	<b>Sub-Total License Fees &amp; Sales Tax</b>		<b>Yes</b>																										
<b>O&amp;M</b>	<b>Support Services</b>	<b>Supply Management, Logistics &amp; Supplier Diversity</b>		<b>Yes</b>																										
O&M	Support Services	Fabrication & Repair	Non-RAMP	No	Movement	2,218	1,808	1,563	1,435	2,415	9,439																			
					Despite being able to quantify the movements in the Fabrication and Repairs Tool Shop, the unit of measurement varies by fabrications, new tool additions, retirements, and repair movements. Thus making the imputed unit measurements difficult to identify as a single activity.																									

C. SoCalGas Support Services  
i. SoCalGas Support Services O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Support Services	Support Services		Yes									
O&M	Support Services	Environmental		Yes									
O&M	Support Services	Environmental	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Support Services	Environmental	Environmental Services and Safety Compliance Management Program (ESCMP)	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Support Services	Environmental	Environmental Self-Assessment	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Support Services	Environmental	Investigation of environmental exposure incidents	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Support Services	Environmental	Compliance program to comply with the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)	No	No	Yes	N/A	It was determined that the in-house subject matter experts could complete the required compliance tasks for this program. As a result, no consultant was hired for this task.	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Support Services	Environmental	Service Contracting	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Support Services	Environmental	Asbestos Safety Program	No	No	Yes	N/A	The variance is due to lower than forecasted staffing levels. Analysis of staff responsibilities resulted in more efficient operating protocols that led to the permanent reduction of one (1) FTE in the Hazardous Materials operations team in addition to utilizing contract resources in lieu of hiring company employees and leveraging virtual training platforms instead of in-person options.	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Support Services	Environmental	SoCalGas Environmental Training	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Support Services	Sub-Total Environmental		Yes	No								No
O&M	Support Services	Fleet Services & Facilities		Yes									
O&M	Support Services	Facilities-Monterey Park Mgr	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Support Services	Facilities GCT	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Support Services	Director	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Support Services	Facility Operations	Non-RAMP	No	No	Yes	N/A	The variance is due to lower than forecasted mechanic and operator staffing levels.	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Support Services	Facility Operations	New Contract Security	No	No	Yes	N/A	The variance is due to added security presence due to increases in security incidents, primarily at Bakersfield, Industry, and Belvedere.	Over (O)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Support Services	Facility Operations	Physical Security	No	Yes	Yes	The variance is due to new security system preventative maintenance program, and additional maintenance on existing security equipment such as badge readers, fence repairs, cabling for sensors, video feeds, and other accessory equipment.	The variance is due to new security system preventative maintenance program, and additional maintenance on existing security equipment such as badge readers, fence repairs, cabling for sensors, video feeds, and other accessory equipment.	Over (O)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Support Services	Facility Operations	Site Security Reviews	No	No	No	N/A	N/A	Over (O)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Support Services	Facility Operations	Additional Security Guards	No	No	Yes	N/A	The variance is due to added security presence due to increases in security incidents, primarily at Chatsworth, Anaheim, and Compton.	Over (O)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Support Services	<b>Sub-Total Facility Operations</b>		<b>Yes</b>	<b>Yes</b>								<b>No</b>
O&M	Support Services	Amortization	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	Under (U)	Under (U)	Deferred	No
O&M	Support Services	Amortization	Zero Emission Vehicles & Renewable Natural Gas Vehicles	No	Yes	No	This is an emergent activity. The cost variance is due to the repayment of principal and California use tax for the acquisition of 404 RNG vehicles, 50 hydrogen vehicles, and 6 electric vehicles as of year-end 2023. The purchases of RNG vehicles are to help the State of California reach its climate and carbon neutrality goals. The purchases of zero emission vehicles, including hydrogen vehicles and electric vehicles, support California Governor Gavin Newsom Executive Order mandating that all new passenger trucks and cars sold in the state be emissions-free by 2035, and to meet California Air Resources Board advanced clean truck (ACT) regulation.	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
O&M	Support Services	<b>Sub-Total Amortization</b>		<b>Yes</b>	<b>No</b>								<b>No</b>



Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Support Services	Interest	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	Under (U)	Under (U)	Deferred	No
O&M	Support Services	Interest	Zero Emission Vehicles & Renewable Natural Gas Vehicles	No	Yes	No	This is an emergent activity. The cost variance is due to the annual payment of interest for the acquisition of 404 RNG vehicles, 50 hydrogen vehicles, and 6 electric vehicles as of year-end 2023. The purchases of RNG vehicles are to help the State of California reach its climate and carbon neutrality goals. The purchases of zero emission vehicles, including hydrogen vehicles and electric vehicles, support California Governor Gavin Newsom Executive Order mandating that all new passenger trucks and cars sold in the state be emissions-free by 2035, and to meet California Air Resources Board advanced clean truck (ACT) regulation.	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
O&M	Support Services	<b>Sub-Total Interest</b>		Yes	Yes		<b>The increase in interest expense in 2023 is due to significantly higher interest rates and increase in vehicle costs for vehicle acquisitions in 2023.</b>						No
O&M	Support Services	Maintenance Operations	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	Under (U)	Over (O)	Deferred	No
O&M	Support Services	Maintenance Operations	Zero Emission Vehicles & Renewable Natural Gas Vehicles	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
O&M	Support Services	<b>Sub-Total Maintenance Operations</b>		Yes	No								No
O&M	Support Services	License Fees & Sales Tax	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	Under (U)	Under (U)	Deferred	No
O&M	Support Services	License Fees & Sales Tax	Zero Emission Vehicles & Renewable Natural Gas Vehicles	No	No	No	N/A	N/A	Over (O)	Over (O)	Over (O)	Emergent	No
O&M	Support Services	<b>Sub-Total License Fees &amp; Sales Tax</b>		Yes	No								No
O&M	Support Services	<b>Supply Management, Logistics &amp; Supplier Diversity</b>		Yes									
O&M	Support Services	Fabrication & Repair	Non-RAMP	No	Yes	No	The 2023 actual cost variance to the authorized imputed is largely impacted by the 10% reduction in fabrication orders in 2023. Additionally, the Fabrication and Repairs department was also partially impacted due to lower than forecast staffing levels in 2023. The group experienced logistics position turnover and the time to backfill this specialized position reduced the productivity output. Further cost savings were achieved through process efficiencies optimizing internal versus third party repairs.	N/A	Under (U)	Under (U)	Under (U)	Proceeding as Planned	No

C. SoCalGas Support Services  
i. SoCalGas Support Services O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Support Services	Support Services		Yes				
O&M	Support Services	Environmental		Yes				
O&M	Support Services	Environmental	Non-RAMP	No	N/A			
O&M	Support Services	Environmental	Environmental Services and Safety Compliance Management Program (ESCMP)	No	N/A			
O&M	Support Services	Environmental	Environmental Self-Assessment	No	N/A			
O&M	Support Services	Environmental	Investigation of environmental exposure incidents	No	N/A			
O&M	Support Services	Environmental	Compliance program to comply with the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)	No	N/A	Proposition 65 requires businesses to provide warnings to Californians about significant exposures to chemicals that cause cancer, birth defects or other reproductive harm. These chemicals can be in the products that Californians purchase, in their homes or workplaces, or that are released into the environment. By requiring that this information be provided, Proposition 65 enables Californians to make informed decisions about their exposures to these chemicals.	SCG-25 DJ-10 to DJ-13 WP 2EV000.000	SCG-20-R AJG-10 to AJG-16 WP 2EV000.000
O&M	Support Services	Environmental	Service Contracting	No	N/A			
O&M	Support Services	Environmental	Asbestos Safety Program	No	N/A	Environmental Services responds dynamically to several changing factors in the SCG territory which cannot be expected to follow historical trending patterns. Regulatory instructions and requirements from government agencies expand the scope of Environmental attention annually. These Environmental Services cost centers include subject matter experts in air and water quality, biological resources, cultural resources, land planning, and managing the internal environmental governance of the company. The group supports ongoing environmental compliance, including obtaining environmental permits and approvals, developing environmental plans and conducting specialized environmental training.	SCG-25 DJ-7, DJ-10 to DJ-13 WP 2EV000.000	N/A
O&M	Support Services	Environmental	SoCalGas Environmental Training	No	N/A			
O&M	Support Services	Sub-Total Environmental		Yes				
O&M	Support Services	Fleet Services & Facilities		Yes				
O&M	Support Services	Facilities-Monterey Park Mgr	Non-RAMP	No	N/A	This cost center contains facility operations, houses the data center, maintenance expenses (e.g., mechanics and a manager labor, facility operations non-labor expenses such as general maintenance, janitorial, landscaping, and security maintenance) and a new employee learning center.	SCG-23-R CLH-37 to CLH-39 WP 2200-0696	SCG-19-R-2E BKG-21 to BKG 22 WP 2200-0696
O&M	Support Services	Facilities GCT	Non-RAMP	No	N/A	This activity consists of the facility operations and maintenance expenses (e.g., mechanic and manager labor, facility operations non-labor expenses such as general maintenance, janitorial, and security maintenance) for Gas Company Tower (GCT).	SCG-23-R CLH-37 to CLH-39 WP 2200-0735	SCG-19-R-2E BKG-22 to BKG-23 WP 2200-0735
O&M	Support Services	Director	Non-RAMP	No	N/A	This activity consists of the costs associated with the Director and support staff for Facility Operations.	SCG-23-R CLH-30 to CLH-34 WP 2RF001.000	SCG-18-R-E MF-31 WP 2RF001.000

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Support Services	Facility Operations	Non-RAMP	No	N/A	Facility Operations is tasked with operating an organization with safe, regulatory compliant, reliable, and suitable working environments for its employees. Some activities include: having safe and Americans with Disabilities Act ("ADA") compliant access to our customers at the branch offices; having proper training of facility maintenance personnel to comply with all applicable rules and regulations; conducting regular preventative maintenance of SoCalGas facilities and grounds to check that we are operating with energy efficiency, environmental awareness and safety of our employees and the public in mind; having storm water pollution control regulations; address cleanliness of our parking lots and potential storm water runoff and discharge from our facilities. SoCalGas's service territory encompasses approximately 20,000 square miles in diverse terrain throughout Central and Southern California, from Visalia to the Mexican border. Facility Operations provides operation and maintenance for 80 owned and staffed utility facilities averaging 47 years old. This workgroup contains the SoCalGas non-shared facility operation costs. Facility operations costs includes the labor and non-labor to support the maintenance of the SoCalGas facilities, which include operating bases, branch offices, and multi-use sites.	SCG-23-R CLH-30 to CLH-34 WP 2RF004.000	SCG-19-R-2E BKG-13 to BKG-17 WP 2RE004.000
O&M	Support Services	Facility Operations	New Contract Security	No	N/A	Security Guard Staffing at Non-Headquarter Facilities	SCG-23-R CLH-30 to CLH-34 WP 2RF004.000	SCG-19-R-2E BKG-13 to BKG-17 WP 2RE004.000
O&M	Support Services	Facility Operations	Physical Security	No	N/A	Physical security measures put in place for the security/safety of employees and infrastructure.	SCG-23-R CLH-30 to CLH-34 WP 2RF004.000	SCG-19-R-2E BKG-13 to BKG-17 WP 2RE004.000
O&M	Support Services	Facility Operations	Site Security Reviews	No	N/A			
O&M	Support Services	Facility Operations	Additional Security Guards	No	N/A	Security Guards at Headquarter Facilities	SCG-23-R CLH-30 to CLH-34 WP 2RF004.000	SCG-19-R-2E BKG-13 to BKG-17 WP 2RE004.000
<b>O&amp;M</b>	<b>Support Services</b>	<b>Sub-Total Facility Operations</b>		<b>Yes</b>				
O&M	Support Services	Amortization	Non-RAMP	No	N/A			
O&M	Support Services	Amortization	Zero Emission Vehicles & Renewable Natural Gas Vehicles	No	N/A	This activity represents the annual payment of principal, interest, and sales tax for fleet lease obligations for the zero emission vehicles (electric vehicles and hydrogen vehicles) and the renewable natural gas vehicles. SoCalGas is committed to decarbonizing its fleet of vehicles and equipment to help reduce greenhouse gas emissions. SoCalGas plans to replace 50% of the OTR fleet with alternative fuel vehicles, including electric, renewable natural gas, and hydrogen fuel cell electric vehicles by 2025 and 100% zero-emissions vehicles and equipment by 2035. Fleet Services projects specified lease duration terms and expected in service date according to the best of our knowledge of vehicle availability and technology in the market. The amortization terms vary according to the economic life of each class of vehicles.	SCG-23-R CLH-19 to CLH-22; WP 2RF003.001	SCG-18-R-E MF-20 to MF-23; WP-R 2RF004.000
<b>O&amp;M</b>	<b>Support Services</b>	<b>Sub-Total Amortization</b>		<b>Yes</b>				

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Support Services	Interest	Non-RAMP	No	N/A			
O&M	Support Services	Interest	Zero Emission Vehicles & Renewable Natural Gas Vehicles	No	N/A	This activity represents the annual payment of principal, interest, and sales tax for fleet lease obligations for the zero emission vehicles (electric vehicles and hydrogen vehicles) and the renewable natural gas vehicles. SoCalGas is committed to decarbonizing its fleet of vehicles and equipment to help reduce greenhouse gas emissions. SoCalGas plans to replace 50% of the OTR fleet with alternative fuel vehicles, including electric, renewable natural gas, and hydrogen fuel cell electric vehicles by 2025 and 100% zero-emissions vehicles and equipment by 2035. Fleet Services projects specified lease duration terms and expected in service date according to the best of our knowledge of vehicle availability and technology in the market. The amortization terms vary according to the economic life of each class of vehicles.	SCG-23-R CLH-22; WP 2RF003.002	SCG-18-R-E MF-20 to MF-23; WP 2RF004.000
<b>O&amp;M</b>	<b>Support Services</b>	<b>Sub-Total Interest</b>		<b>Yes</b>				
O&M	Support Services	Maintenance Operations	Non-RAMP	No	N/A			
O&M	Support Services	Maintenance Operations	Zero Emission Vehicles & Renewable Natural Gas Vehicles	No	N/A			
<b>O&amp;M</b>	<b>Support Services</b>	<b>Sub-Total Maintenance Operations</b>		<b>Yes</b>				
O&M	Support Services	License Fees & Sales Tax	Non-RAMP	No	N/A			
O&M	Support Services	License Fees & Sales Tax	Zero Emission Vehicles & Renewable Natural Gas Vehicles	No	N/A			
<b>O&amp;M</b>	<b>Support Services</b>	<b>Sub-Total License Fees &amp; Sales Tax</b>		<b>Yes</b>				
<b>O&amp;M</b>	<b>Support Services</b>	<b>Supply Management, Logistics &amp; Supplier Diversity</b>		<b>Yes</b>				
O&M	Support Services	Fabrication & Repair	Non-RAMP	No	N/A	This cost center supports the field requirements for fabricated materials, such as wedding bands, canopies, prefabricated regulator stations, shop modified pressure control fittings and specialty tools. This workshop also supplies approximately 300 inventoried materials which are distributed by the Pico Rivera general warehouse. The shop also performs maintenance, repair and calibration on pneumatic, hydraulic, electronic and gas driven tools and equipment.	SCG-22/SDG&E-20 DW-12 to DW-13 WP 2SS003.000	SCG-17-E JC-8 to JC11 WP 2SS002.000

ii. SoCalGas Support Services Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
Capital	Support Services	Support Services - Facilities		Yes			19,568	46,179	65,062	77,471	89,870	298,150	32,720	25,765	26,172	26,481	27,045	138,183
Capital	Support Services	Infrastructure & Improvements	Non-RAMP	No	On-going	Annual	15,508	42,133	52,327	66,095	82,861	258,924	29,778	21,475	21,815	22,072	22,543	117,684
Capital	Support Services	Infrastructure & Improvements - RAMP	Physical Security	No	On-going	Annual	1,669	2,137	4,413	7,473	3,712	19,403	679	329	334	338	346	2,026
Capital	Support Services	<b>Sub-Total Infrastructure &amp; Improvements</b>		<b>Yes</b>			<b>17,177</b>	<b>44,269</b>	<b>56,740</b>	<b>73,568</b>	<b>86,573</b>	<b>278,327</b>	<b>30,457</b>	<b>21,805</b>	<b>22,150</b>	<b>22,411</b>	<b>22,889</b>	<b>119,710</b>
Capital	Support Services	Safety/Environmental	Non-RAMP	No	On-going	Annual	2,391	758	2,196	1,361	368	7,073	2,263	1,564	1,589	1,608	1,642	8,667
Capital	Support Services	Bakersfield Multi-Use Facility	Non-RAMP	No	2	7	—	925	2,110	252	—	3,287	—	2,313	2,350	2,377	2,428	9,468
Capital	Support Services	Facility Energy Management Systems	Non-RAMP	No	2	4	—	227	4,017	2,290	2,929	9,463	—	83	84	85	87	338

ii. SoCalGas Support Services Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
Capital	Support Services	Support Services - Facilities		Yes	(13,152)	20,414	38,890	50,990	62,824	159,967	-40%	79%	149%	193%	232%	116%
Capital	Support Services	Infrastructure & Improvements	Non-RAMP	No	(14,270)	20,657	30,512	44,023	60,318	141,241	-48%	96%	140%	199%	268%	120%
Capital	Support Services	Infrastructure & Improvements - RAMP	Physical Security	No	990	1,807	4,078	7,134	3,366	17,376	146%	549%	1220%	2108%	974%	857%
Capital	Support Services	Sub-Total Infrastructure & Improvements		Yes	(13,279)	22,465	34,590	51,157	63,684	158,617	-44%	103%	156%	228%	278%	133%
Capital	Support Services	Safety/Environmental	Non-RAMP	No	128	(806)	606	(247)	(1,275)	(1,594)	6%	-52%	38%	-15%	-78%	-18%
Capital	Support Services	Bakersfield Multi-Use Facility	Non-RAMP	No	—	(1,388)	(240)	(2,126)	(2,428)	(6,182)	—%	-60%	-10%	-89%	-100%	-65%
Capital	Support Services	Facility Energy Management Systems	Non-RAMP	No	—	144	3,933	2,205	2,842	9,125	—%	175%	4693%	2601%	3282%	2702%

ii. SoCalGas Support Services Capital

Capital Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
Capital	Support Services	Support Services - Facilities		Yes																										
Capital	Support Services	Infrastructure & Improvements	Non-RAMP	No	Active Projects	92	119	91	94	93	489	77	99	77	78	77	408	15	20	14	16	16	81	19%	20%	18%	21%	21%	20%	
Capital	Support Services	Infrastructure & Improvements - RAMP	Physical Security	No	Sites	16	20	44	96	39	215	23	20	11	11	12	77	(7)	—	33	85	27	138	-30%	—%	300%	773%	225%	179%	
Capital	Support Services	Sub-Total Infrastructure & Improvements		Yes																										
Capital	Support Services	Safety/Environmental	Non-RAMP	No	Sites	22	10	18	18	9	77	18	11	13	13	13	68	4	(1)	5	5	(4)	9	22%	-9%	38%	38%	-31%	13%	
Capital	Support Services	Bakersfield Multi-Use Facility	Non-RAMP	No	Projects	1	1	1	1	—	4	1	1	1	1	1	5	—	—	—	—	(1)	(1)	—%	—%	—%	—%	-100%	-20%	
Capital	Support Services	Facility Energy Management Systems	Non-RAMP	No	Sites	0	4	39	54	23	120	0	3	2	2	2	9	—	1	37	52	21	111	—%	33%	1850%	2600%	1050%	1233%	

ii. SoCalGas Support Services Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
Capital	Support Services	Support Services - Facilities		Yes									
Capital	Support Services	Infrastructure & Improvements	Non-RAMP	No	Yes	Yes	The variance is primarily due to added renovation projects that support changing workplace requirements, improve the functionality of facilities, make safety improvements, support Americans with Disabilities Act (ADA) compliance, upgrade equipment, seismic upgrades where needed, and increase energy efficiency at Glendale Base, San Bernardino Base, Saticoy Base, Anaheim HQ, ERC HQ, MPK HQ, San Dimas Base, Pico Rivera Facility, Chatsworth HQ, Playa Del Rey Base, Wheeler Ridge, and Santa Barbara Base. Additionally, to support the blended work model of desk sharing to absorb additional capacity from growth, there was new scope for standardizing equipment including audiovisual conferencing technology, monitors, monitor arms, and furniture.	The variance is primarily due to added renovation projects that support changing workplace requirements, improve the functionality of facilities, make safety improvements, support ADA compliance, upgrade equipment, seismic upgrades where needed, and increase energy efficiency at Glendale Base, San Bernardino Base, Saticoy Base, Anaheim HQ, ERC HQ, MPK HQ, San Dimas Base, Pico Rivera Facility, Chatsworth HQ, Playa Del Rey Base, Wheeler Ridge, and Santa Barbara Base. Additionally, to support the blended work model of desk sharing to absorb additional capacity from growth, there was new scope for standardizing equipment including audiovisual conferencing technology, monitors, monitor arms, and furniture.	Over (O)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Support Services	Infrastructure & Improvements - RAMP	Physical Security	No	Yes	Yes	The variance is due to added projects for badge reader panels, advanced fencing and security system projects at bases, and branch office security upgrades. These projects were added to increase safety and security for employees working at bases and customers at branch offices due to an increase in security incidents.	The variance is due to added projects for badge reader panels, advanced fencing and security system projects at bases, and branch office security upgrades. These projects were added to increase safety and security for employees working at bases and customers at branch offices due to an increase in security incidents.	Over (O)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Support Services	Sub-Total Infrastructure & Improvements		Yes	Yes								No
Capital	Support Services	Safety/Environmental	Non-RAMP	No	No	Yes	N/A	The variance is due to earlier completion of automatic door projects at branch offices for ADA compliance thus less projects were completed in 2023. The remaining imputed authorized amount was not spent for Safety/Environmental and was re-prioritized to other project categories such as Infrastructure & Improvements and Facility Energy Management Systems.	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Support Services	Bakersfield Multi-Use Facility	Non-RAMP	No	Yes	Yes	The Bakersfield Base was completed earlier than expected; therefore, the imputed authorized amount was not spent for Bakersfield and was re-prioritized to other facilities project categories such as Infrastructure & Improvements and Facility Energy Management Systems.	The Bakersfield Base was completed earlier than expected; therefore, the imputed authorized amount was not spent for Bakersfield and was re-prioritized to other facilities project categories such as Infrastructure & Improvements and Facility Energy Management Systems.	On Target (T)	On Target (T)	Under (U)	Completed	Yes
Capital	Support Services	Facility Energy Management Systems	Non-RAMP	No	Yes	Yes	The variance is due to added sites for the installation of energy management systems. The sites were added to implement energy management systems at additional facilities and accelerate the deployment to meet California climate goals.	The variance is due to added sites for the installation of energy management systems. The sites were added to implement energy management systems at additional facilities and accelerate the deployment to meet California climate goals.	Over (O)	Over (O)	Over (O)	Expanded	No



ii. SoCalGas Support Services Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
Capital	Support Services	Support Services - Facilities		Yes				
Capital	Support Services	Infrastructure & Improvements	Non-RAMP	No	N/A	The Infrastructure & Improvements forecast funds necessary facility improvements, workspace changes, and equipment upgrades to adequately support business operations. Facility Operations identifies requirements based on the criticality of the facility, the age of the asset, and the implications for failure to complete the replacement or upgrade.	SCG-23-R CLH-40 to CLH-46 WP 00653A, 00653B	SCG-19-R-2E BKG-25 to BKG-31 WP 006530
Capital	Support Services	Infrastructure & Improvements - RAMP	Physical Security	No	N/A	Physical security systems provide protection enhancements to infrastructure to improve access control, intrusion detection, and interdiction capabilities to deter, detect, delay, or prevent undesirable events at Company facilities. The type and extent of security upgrades varies by facility, but several have been completed, including, fences, gates, and cameras.	SCG-23-R CLH-42, CLH-47 WP 00653D	SCG-19-R-2E BKG-25 to BKG-31 WP 006530.004, 006530.005
Capital	Support Services	Sub-Total Infrastructure & Improvements		Yes				
Capital	Support Services	Safety/Environmental	Non-RAMP	No	N/A	The Safety and Compliance projects include American with Disabilities ("ADA") improvements to improve customer access and accessibility to the branch offices, upgrades to fire systems, as well as to seismic retrofits at various facilities throughout the service territory.	SCG-23-R CLH-47 to CLH-48 WP 00654A, 00654B	SCG-19-R-2E BKG-31 to BKG-32 WP 006540
Capital	Support Services	Bakersfield Multi-Use Facility	Non-RAMP	No	The Bakersfield Base was completed; therefore, the remaining imputed authorized amount was not spent for Bakersfield and was re-prioritized to other project categories.	The new Bakersfield multi-use facility includes planning, permitting, and construction. Continuous customer expansion in this service territory requires a larger base than the current 2.66-acre site cannot accommodate. Expansion in the San Joaquin Valley to meet the needs of low-income customers is priority for SoCalGas. Further, SoCalGas is including a NGV refueling station at the base for on-site fleet-public fueling in order to expand its NGV refueling network of stations to support the greening of our fleet and to serve the trucking sector along the transportation corridor. The Facility will have the capacity to service the 20-year growth projection in the San Joaquin Valley. The Functions of the facility will include: (1) District Operations Base for company field crews (2) Remote field technical Training facility for San Joaquin area that will reduce lodging requirements and travel to and from Los Angeles; (3) Customer Demonstration Center to display emerging gas technologies; and (4) A meeting hub for San Joaquin Valley area with adequate conferencing capabilities. The site will be built in compliance with zero-net energy (ZNE) standards and include photovoltaic solar panels	SCG-23-R CLH-48 to CLH-49 WP 00671A	N/A
Capital	Support Services	Facility Energy Management Systems	Non-RAMP	No	N/A	Energy Management Systems consist of software and hardware that are integrated with the building's HVAC and lighting systems.	SCG-23-R CLH-49 to CLH-51 WP 00712A	SCG-19-R-2E BKG-30 WP 006530

E. SoCalGas Human Resources  
i. SoCalGas Human Resources O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Human Resources Dept, Safety, LTD & WC	Human Resources Dept, Safety, LTD & WC		Yes			15,018	17,979	19,043	18,724	20,327	91,091	20,889	21,441	21,956	22,380	22,895	109,561
O&M	Human Resources Dept, Safety, LTD & WC	SCG CEO President & COO and Chief of Human Resources & CAO	Non-RAMP	No	On-going	Annual	2,272	2,260	2,984	2,234	2,776	12,527	1,770	1,817	1,861	1,897	1,940	9,285
O&M	Human Resources Dept, Safety, LTD & WC	SCG Director HR Services	Non-RAMP	No	On-going	Annual	3,944	6,925	7,761	7,580	8,352	34,561	3,077	3,159	3,235	3,297	3,373	16,141
O&M	Human Resources Dept, Safety, LTD & WC	SCG Director HR Services	Workforce Planning - Software/Program Implementation.	No	On-going	Annual	114	726	605	805	658	2,908	2,599	2,668	2,732	2,785	2,849	13,631
O&M	Human Resources Dept, Safety, LTD & WC	Sub-Total SCG Director HR Services		Yes			4,058	7,651	8,365	8,385	9,010	37,469	5,676	5,826	5,966	6,082	6,222	29,772
O&M	Human Resources Dept, Safety, LTD & WC	SCG Director Safety & Wellness	Non-RAMP	No	On-going	Annual	514	324	782	1,049	323	2,993	596	611	626	638	653	3,124
O&M	Human Resources Dept, Safety, LTD & WC	SCG Director Safety & Wellness	HR sponsored employee contractor customer & public safety activities.	No	On-going	Annual	5,356	5,183	3,926	4,291	5,126	23,882	8,698	8,928	9,142	9,319	9,533	45,620
O&M	Human Resources Dept, Safety, LTD & WC	Sub-Total SCG Director Safety & Wellness		Yes			5,870	5,507	4,708	5,340	5,450	26,875	9,294	9,539	9,768	9,957	10,186	48,744
O&M	Human Resources Dept, Safety, LTD & WC	SCG Director Org Effectiveness	Non-RAMP	No	On-going	Annual	2,366	1,610	2,168	2,122	2,216	10,483	1,716	1,761	1,803	1,838	1,880	8,998
O&M	Human Resources Dept, Safety, LTD & WC	SCG Director Org Effectiveness	Knowledge Management and Training Strategy	No	On-going	Annual	453	950	818	642	875	3,738	2,433	2,497	2,557	2,607	2,667	12,761
O&M	Human Resources Dept, Safety, LTD & WC	Sub-Total SCG Director Org Effectiveness		Yes			2,819	2,560	2,986	2,764	3,092	14,221	4,149	4,258	4,360	4,445	4,547	21,759

E. SoCalGas Human Resources  
i. SoCalGas Human Resources O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Human Resources Dept, Safety, LTD & WC	Human Resources Dept, Safety, LTD & WC		Yes	(5,871)	(3,462)	(2,912)	(3,657)	(2,568)	(18,469)	-28%	-16%	-13%	-16%	-11%	-17%
O&M	Human Resources Dept, Safety, LTD & WC	SCG CEO President & COO and Chief of Human Resources & CAO	Non-RAMP	No	502	443	1,123	338	836	3,242	28%	24%	60%	18%	43%	35%
O&M	Human Resources Dept, Safety, LTD & WC	SCG Director HR Services	Non-RAMP	No	866	3,766	4,526	4,283	4,979	18,420	28%	119%	140%	130%	148%	114%
O&M	Human Resources Dept, Safety, LTD & WC	SCG Director HR Services	Workforce Planning - Software/Program Implementation.	No	(2,485)	(1,942)	(2,127)	(1,979)	(2,190)	(10,723)	-96%	-73%	-78%	-71%	-77%	-79%
O&M	Human Resources Dept, Safety, LTD & WC	Sub-Total SCG Director HR Services		Yes	(1,619)	1,824	2,399	2,304	2,789	7,697	-29%	31%	40%	38%	45%	26%
O&M	Human Resources Dept, Safety, LTD & WC	SCG Director Safety & Wellness	Non-RAMP	No	(82)	(287)	156	411	(330)	(132)	-14%	-47%	25%	64%	-50%	-4%
O&M	Human Resources Dept, Safety, LTD & WC	SCG Director Safety & Wellness	HR sponsored employee contractor customer & public safety activities.	No	(3,342)	(3,745)	(5,216)	(5,028)	(4,407)	(21,738)	-38%	-42%	-57%	-54%	-46%	-48%
O&M	Human Resources Dept, Safety, LTD & WC	Sub-Total SCG Director Safety & Wellness		Yes	(3,424)	(4,032)	(5,060)	(4,617)	(4,737)	(21,869)	-37%	-42%	-52%	-46%	-46%	-45%
O&M	Human Resources Dept, Safety, LTD & WC	SCG Director Org Effectiveness	Non-RAMP	No	650	(151)	365	284	336	1,484	38%	-9%	20%	15%	18%	16%
O&M	Human Resources Dept, Safety, LTD & WC	SCG Director Org Effectiveness	Knowledge Management and Training Strategy	No	(1,980)	(1,547)	(1,739)	(1,965)	(1,791)	(9,022)	-81%	-62%	-68%	-75%	-67%	-71%
O&M	Human Resources Dept, Safety, LTD & WC	Sub-Total SCG Director Org Effectiveness		Yes	(1,330)	(1,698)	(1,374)	(1,681)	(1,455)	(7,538)	-32%	-40%	-32%	-38%	-32%	-35%

E. SoCalGas Human Resources  
i. SoCalGas Human Resources O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
O&M	Human Resources Dept, Safety, LTD & WC	Human Resources Dept, Safety, LTD & WC		Yes																										
O&M	Human Resources Dept, Safety, LTD & WC	SCG CEO President & COO and Chief of Human Resources & CAO	Non-RAMP	No	FTE	3	4	5	6	6	23	6	4	4	6	6	26	(3)	(0)	1	(0)	—	(3)	-52%	-8%	15%	-7%	—%	-12%	
O&M	Human Resources Dept, Safety, LTD & WC	SCG Director HR Services	Non-RAMP	No	FTE	75	69	88	76	68	376	51	48	48	95	51	293	24	21	40	(19)	17	83	47%	44%	83%	-20%	33%	28%	
O&M	Human Resources Dept, Safety, LTD & WC	SCG Director HR Services	Workforce Planning - Software/Program Implementation.	No	FTE	1	5	5	6	5	22	5	8	8	8	5	34	(4)	(3)	(3)	(2)	—	(12)	-78%	-38%	-38%	-30%	—%	-36%	
O&M	Human Resources Dept, Safety, LTD & WC	Sub-Total SCG Director HR Services		Yes																										
O&M	Human Resources Dept, Safety, LTD & WC	SCG Director Safety & Wellness	Non-RAMP	No	FTE	5	5	5	5	5	25	5	5	5	5	5	25	—	—	—	—	—	—	—%	—%	—%	—%	—%	—%	
O&M	Human Resources Dept, Safety, LTD & WC	SCG Director Safety & Wellness	HR sponsored employee contractor customer & public safety activities.	No	FTE	30	30	34	24	30	148	77	56	56	68	68	325	(47)	(26)	(22)	(44)	(38)	(177)	-61%	-47%	-39%	-64%	-56%	-55%	
O&M	Human Resources Dept, Safety, LTD & WC	Sub-Total SCG Director Safety & Wellness		Yes																										
O&M	Human Resources Dept, Safety, LTD & WC	SCG Director Org Effectiveness	Non-RAMP	No	FTE	13	8	17	20	15	72	22	20	20	24	22	108	(9)	(12)	(3)	(4)	(7)	(36)	-41%	-60%	-17%	-18%	-32%	-33%	
O&M	Human Resources Dept, Safety, LTD & WC	SCG Director Org Effectiveness	Knowledge Management and Training Strategy	No	FTE	7	12	6	6	7	38	7	9	9	9	7	41	—	3	(3)	(3)	—	(3)	—%	33%	-33%	-33%	—%	-7%	
O&M	Human Resources Dept, Safety, LTD & WC	Sub-Total SCG Director Org Effectiveness		Yes																										

E. SoCalGas Human Resources  
i. SoCalGas Human Resources O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Human Resources Dept, Safety, LTD & WC	Human Resources Dept, Safety, LTD & WC		Yes									
O&M	Human Resources Dept, Safety, LTD & WC	SCG CEO President & COO and Chief of Human Resources & CAO	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Human Resources Dept, Safety, LTD & WC	SCG Director HR Services	Non-RAMP	No	Yes	Yes	The cost variance is attributed to additional Human Resources (HR) staff required to support a number of company-wide initiatives, including increased hiring of union field employees, the creation of an internal ethics investigation team, and movement between HR teams.	The unit variance is due to higher than forecast staffing levels and internal team realignment within the HR department.	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Human Resources Dept, Safety, LTD & WC	SCG Director HR Services	Workforce Planning - Software/Program Implementation.	No	Yes	No	The cost variance is due to SoCalGas's ability to leverage its Performance Management and Organizational Strategy (PMOS) team to create modeling and forecasting tools to develop workforce plans for business units and offset costs related to purchasing third-party workforce planning software.	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Human Resources Dept, Safety, LTD & WC	Sub-Total SCG Director HR Services		Yes	Yes								No
O&M	Human Resources Dept, Safety, LTD & WC	SCG Director Safety & Wellness	Non-RAMP	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Human Resources Dept, Safety, LTD & WC	SCG Director Safety & Wellness	HR sponsored employee contractor customer & public safety activities.	No	Yes	Yes	SoCalGas continued to reallocate some units and costs to another work group within Safety Management Systems to support Employee Safety. Also, SoCalGas was able to continue to support the planned Defensive Driver Training Instruction via a virtual format. This decision significantly impacted the represented employee time spent in training versus the in-vehicle format thus reducing the number of labor hours and the overall cost for this activity. Moreover, in 2023, SoCalGas changed its Defensive Driver Training service provider resulting in a modest cost savings.	SoCalGas continued to reallocate some units and costs to another work group within Safety Management Systems to support Employee Safety. Also, SoCalGas was able to continue to support the planned Defensive Driver Training Instruction via a virtual format. This decision significantly impacted the represented employee time spent in training versus the in-vehicle format thus reducing the number of labor hours and the need for the planned Driver Training In-Vehicle Instructors. These factors helped reduce the program unit requirements and the overall cost for this activity.	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Human Resources Dept, Safety, LTD & WC	Sub-Total SCG Director Safety & Wellness		Yes	Yes								No
O&M	Human Resources Dept, Safety, LTD & WC	SCG Director Org Effectiveness	Non-RAMP	No	No	Yes	N/A	The unit variance is due to lower than forecast staffing levels associated with unfilled positions within the Organizational Effectiveness department.	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
O&M	Human Resources Dept, Safety, LTD & WC	SCG Director Org Effectiveness	Knowledge Management and Training Strategy	No	Yes	No	The original time estimates within the authorized costs were inclusive of employee's time across the company including outside of the Organizational Effectiveness department. SoCalGas continued to reallocate these units and costs to other work groups in other departments thus the current units and costs only include the time spent on activities for employees within the Organizational Effectiveness department.	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Human Resources Dept, Safety, LTD & WC	Sub-Total SCG Director Org Effectiveness		Yes	Yes								No

E. SoCalGas Human Resources  
i. SoCalGas Human Resources O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Human Resources Dept, Safety, LTD & WC	Human Resources Dept, Safety, LTD & WC		Yes				
O&M	Human Resources Dept, Safety, LTD & WC	SCG CEO President & COO and Chief of Human Resources & CAO	Non-RAMP	No	N/A			
O&M	Human Resources Dept, Safety, LTD & WC	SCG Director HR Services	Non-RAMP	No	N/A	The HR Services department is comprised of five work units, including: (1) Staffing - Manages the recruitment and selection of a qualified and diverse workforce; (2) HR Research & Workforce Planning - Responsible for pre-employment testing and assessments used for internal and external selection; (3) HR Operations - Responsible for management and retention of all employee personnel records; (4) Compensation - Responsible for developing and delivering competitive compensation programs, ensuring legal compliance and adherence to wage and hour laws; and (5) Employee Care Services (ECS) - Responsible for Workers' Compensation program, short- and long-term disability, leaves of absence, and return-to-work programs, Family Medical Leave Act (FMLA), California Family Rights Act (CFRA), Pregnancy Disability Leave (PDL), temporary modified duty placements, and reasonable accommodations under the Americans with Disabilities Act (ADA), and the California Fair Employment and Housing Act (FEHA).	SCG-32 MG-19 to MG-23 WP 2HR004.000	SCG-28 -R-E AMN-9 to AMN-16 WP 2HR004.000
O&M	Human Resources Dept, Safety, LTD & WC	SCG Director HR Services	Workforce Planning - Software/Program Implementation.	No	N/A	The HR Services department is comprised of five work units, including: (1) Staffing - Manages the recruitment and selection of a qualified and diverse workforce; (2) HR Research & Workforce Planning - Responsible for pre-employment testing and assessments used for internal and external selection; (3) HR Operations - Responsible for management and retention of all employee personnel records; (4) Compensation - Responsible for developing and delivering competitive compensation programs, ensuring legal compliance and adherence to wage and hour laws; and (5) Employee Care Services (ECS) - Responsible for Workers' Compensation program, short- and long-term disability, leaves of absence, and return-to-work programs, Family Medical Leave Act (FMLA), California Family Rights Act (CFRA), Pregnancy Disability Leave (PDL), temporary modified duty placements, and reasonable accommodations under the Americans with Disabilities Act (ADA), and the California Fair Employment and Housing Act (FEHA).	SCG-32 MG-23 WP 2HR004.000	SCG-28 -R-E AMN-3 to AMN-6, AMN-40 WP 2HR004.000
O&M	Human Resources Dept, Safety, LTD & WC	Sub-Total SCG Director HR Services		Yes				
O&M	Human Resources Dept, Safety, LTD & WC	SCG Director Safety & Wellness	Non-RAMP	No	N/A			
O&M	Human Resources Dept, Safety, LTD & WC	SCG Director Safety & Wellness	HR sponsored employee contractor customer & public safety activities.	No	N/A	The Safety, Wellness and Disability Services department is responsible for positioning SoCalGas employees to lead healthy and productive lives. The services provided by the department extend from pre-employment health testing through the end of employment at SoCalGas. Services include: physical & mental wellness education; safety and industrial hygiene education and compliance; incident prevention, analysis and reporting; Workers' Compensation administration; short-term & long-term disability management; leave-of-absence administration; and return-to-work services.	SCG-32 MG-25 to MG-30 2HR006.000	SCG-28 -R-E AMN-16 to AMN-21 WP 2HR005.000 (Wellness) SCG-27-2R-E NNM-42 to NNM-54 WP 2SM003.000 (Safety)
O&M	Human Resources Dept, Safety, LTD & WC	Sub-Total SCG Director Safety & Wellness		Yes				
O&M	Human Resources Dept, Safety, LTD & WC	SCG Director Org Effectiveness	Non-RAMP	No	N/A	The Organizational Effectiveness (OE) department provides leadership, organizational, and employee development programs, instructional design services, and knowledge transfer and management programs for SoCalGas. OE consists of three work units providing services to SoCalGas: Organizational Development & Talent Management, Knowledge Management, and Learning & Development.	SCG-32 MG-30 to MG-33 2HR007.000	SCG-28 -R-E AMN-22 to AMN-26 WP 2HR007.000
O&M	Human Resources Dept, Safety, LTD & WC	SCG Director Org Effectiveness	Knowledge Management and Training Strategy	No	N/A	The Organizational Effectiveness (OE) department provides leadership, organizational, and employee development programs, instructional design services, and knowledge transfer and management programs for SoCalGas. OE consists of three work units providing services to SoCalGas: Organizational Development & Talent Management, Knowledge Management, and Learning & Development.	SCG-32 MG-30 to MG-33 2HR007.000	SCG-28 -R-E AMN-22 to AMN-26 WP 2HR007.000
O&M	Human Resources Dept, Safety, LTD & WC	Sub-Total SCG Director Org Effectiveness		Yes				

3. SoCalGas Balanced Programs - DIMP, TIMP, SIMP, Research Development & Demonstration Technology, and PSEP  
A. SoCalGas Balanced Programs Direct O&M Costs  
i. SoCalGas Balanced Programs Direct O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Balanced Program	TIMP & DIMP		Yes			120,266	152,021	151,115	174,790	174,451	772,644	92,741	95,189	97,475	99,361	101,647	486,413
O&M	Balanced Program	TIMP Project Support	TIMP Data Maintenance	No	On-going	Annual	1,067	1,524	1,494	1,584	2,729	8,397	1,777	1,824	1,868	1,904	1,948	9,321
O&M	Balanced Program	DIMP Project Support	DIMP Data Maintenance	No	On-going	Annual	435	573	624	860	929	3,420	1,769	1,815	1,859	1,895	1,938	9,276
O&M	Balanced Program	TIMP	ILI & ECDA - cleaning and assessing internal conditions of high-pressure pipelines	No	On-going	Annual	76,601	104,849	103,926	125,846	121,429	532,650	47,817	49,080	50,258	51,231	52,409	250,794
O&M	Balanced Program	DIMP	DIMP Programs (e.g., DREAMS, GIPP)	No	On-going	Annual	42,163	45,075	45,072	46,501	49,365	228,176	41,378	42,471	43,490	44,332	45,352	217,023

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
O&M	Balanced Program	Underground Storage - RSIMP	SIMP RAMP	No	On-going	Annual	13,795	15,924	16,716	16,847	18,882	82,165	20,324	20,861	21,362	21,775	22,276	106,597
O&M	Balanced Program	Research Development and Demonstration (RD&D) Technology Dev	Non-RAMP	No	On-going	Annual	13,143	16,045	18,037	14,948	8,947	71,119	15,395	15,802	16,181	16,494	16,874	80,746
O&M	Balanced Program	Line 235 Memorandum Account	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	No	On-Going	Annual	(377)	—	151	90	160	25	—	—	—	—	—	—
O&M	Balanced Program	PSEP Memorandum Account	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	No	On-Going	Annual	103	(50)	—	0	—	54	—	—	—	—	—	—
O&M	Balanced Program	PSEP Total	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	Yes			(274)	(50)	151	90	160	79	—	—	—	—	—	—



3. SoCalGas Balanced Programs - DIMP, TIMP, SIMP, Research Development & Demonstration Technology, and PSEP  
A. SoCalGas Balanced Programs Direct O&M Costs  
i. SoCalGas Balanced Programs Direct O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Balanced Program	TIMP & DIMP		Yes	27,525	56,832	53,640	75,429	72,805	286,231	30%	60%	55%	76%	72%	59%
O&M	Balanced Program	TIMP Project Support	TIMP Data Maintenance	No	(710)	(300)	(374)	(320)	781	(924)	-40%	-16%	-20%	-17%	40%	-10%
O&M	Balanced Program	DIMP Project Support	DIMP Data Maintenance	No	(1,334)	(1,242)	(1,235)	(1,035)	(1,010)	(5,855)	-75%	-68%	-66%	-55%	-52%	-63%
O&M	Balanced Program	TIMP	ILI & ECDA - cleaning and assessing internal conditions of high-pressure pipelines	No	28,784	55,770	53,668	74,615	69,020	281,856	60%	114%	107%	146%	132%	112%
O&M	Balanced Program	DIMP	DIMP Programs (e.g., DREAMS, GIPP)	No	785	2,604	1,581	2,169	4,014	11,153	2%	6%	4%	5%	9%	5%

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
O&M	Balanced Program	Underground Storage - RSIMP	SIMP RAMP	No	(6,529)	(4,936)	(4,646)	(4,928)	(3,394)	(24,432)	-32%	-24%	-22%	-23%	-15%	-23%
O&M	Balanced Program	Research Development and Demonstration (RD&D) Technology Dev	Non-RAMP	No	(2,252)	243	1,856	(1,546)	(7,927)	(9,627)	-15%	2%	11%	-9%	-47%	-12%
O&M	Balanced Program	Line 235 Memorandum Account	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	No	(377)	—	151	90	160	25	100%	—%	100%	100%	100%	100%
O&M	Balanced Program	PSEP Memorandum Account	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	No	103	(50)	—	0	—	54	100%	100%	—%	100%	—%	100%
O&M	Balanced Program	PSEP Total	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	Yes	(274)	(50)	151	90	160	79	100%	100%	100%	100%	100%	100%

3. SoCalGas Balanced Programs - DIMP, TIMP, SIMP, Research Development & Demonstration Technology, and PSEP  
A. SoCalGas Balanced Programs Direct O&M Costs  
i. SoCalGas Balanced Programs Direct O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance						
O&M	Balanced Program	TIMP & DIMP		Yes																															
O&M	Balanced Program	TIMP Project Support	TIMP Data Maintenance	No	This activity and the work completed in 2023 consist of data collection and management, database maintenance, and reporting for SDG&E under Shared Services. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																														
O&M	Balanced Program	DIMP Project Support	DIMP Data Maintenance	No	This activity and the work completed in 2023 consist of data collection and management, database maintenance, and reporting for SDG&E under Shared Services. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																														
O&M	Balanced Program	TIMP	ILI & ECDA - cleaning and assessing internal conditions of high-pressure pipelines	No	In-line Inspections (ILI)	37	14	26	17	22	116	21	21	21	21	21	105	16	(7)	5	(4)	1	11	76%	-33%	24%	-19%	5%	10%						
					External Corrosion Direct Assessments (ECDA)	28	5	8	8	11	60	20	20	20	20	20	100	8	(15)	(12)	(12)	(9)	(40)	40%	-75%	-60%	-60%	-45%	-40%						
					Direct Examination	—	—	19	6	6	31	—	—	—	—	—	—	—	—	19	6	6	31	—%	—%	100%	100%	100%	100%						
O&M	Balanced Program	DIMP	DIMP Programs (e.g., DREAMS, GIPP)	No	Riser Inspections (DRIP)	205,333	194,446	196,886	207,533	211,432	1,015,630	180,000	180,000	180,000	180,000	180,000	900,000	25,333	14,446	16,886	27,533	31,432	115,630	14%	8%	9%	15%	17%	13%						
					Service Inspections (SLIP)	48,672	62,835	66,411	76,274	72,657	326,849	60,000	60,000	60,000	60,000	60,000	300,000	(11,328)	2,835	6,411	16,274	12,657	26,849	-19%	5%	11%	27%	21%	9%						
					Site Mitigations (GIPP)	5,660	4,377	2,386	3,818	3,620	19,861	4,400	4,400	4,400	4,400	4,400	22,000	1,260	(23)	(2,014)	(582)	(780)	(2,139)	29%	-1%	-46%	-13%	-18%	-10%						

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
O&M	Balanced Program	Underground Storage - RSIMP	SIMP RAMP	No	Well Inspection	19	66	61	31	40	217	75	81	75	81	75	387	(56)	(15)	(14)	(50)	(35)	(170)	-75%	-19%	-19%	-62%	-47%	-44%	
O&M	Balanced Program	Research Development and Demonstration (RD&D) Technology Dev	Non-RAMP	No	Consistent with PUC 740.1, The Research Development & Demonstration (RD&D) projects support the following goals: safety, conservation, development of renewable resources and supply technologies, reliability, efficiency, and cost reduction. RD&D is focused on identifying, developing, and demonstrating technologies of significant potential value to customers and utility operations. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
O&M	Balanced Program	Line 235 Memorandum Account	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	No	The purpose of this subaccount is to record the cost of testing or replacement of Line 235 West Sections 1 and 2. Since the projects are not yet complete, there are no units to note.																									
O&M	Balanced Program	PSEP Memorandum Account	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	No	The purpose of this subaccount is to record the cost of testing or replacement of Line 235 West Sections 1 and 2. Since the projects are not yet complete, there are no units to note.																									
O&M	Balanced Program	PSEP Total	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	Yes																										

3. SoCalGas Balanced Programs - DIMP, TIMP, SIMP, Research Development & Demonstration Technology, and PSEP  
A. SoCalGas Balanced Programs Direct O&M Costs  
i. SoCalGas Balanced Programs Direct O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Balanced Program	TIMP & DIMP		Yes									
O&M	Balanced Program	TIMP Project Support	TIMP Data Maintenance	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Balanced Program	DIMP Project Support	DIMP Data Maintenance	No	Yes	No	DIMP complies with 49 CFR 192, Subpart P - Gas Distribution Pipeline Integrity Management and includes threat identification, risk assessment, and various programs to minimize threats and integrity concerns to reduce risk of pipeline incidents. DIMP Project Support activities are shared services and are informed by SDG&E's DIMP Programs/Projects and Activities Addressing Risks (PAARs). Costs are balanced to the GRC authorized cycle rather than on an individual year basis and accordingly, activities fluctuate year to year and individual year expenditures may vary from the authorized amount. As described in the 2019 GRC testimony, the shared services costs are driven by existing and new PAARs and while SDG&E continues to develop PAARs to address distribution integrity risks, the lower than forecasted expenses for Data Maintenance are attributable to shifting resources to focus on GIS data processing in support of DOT Transmission priorities.	N/A	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Balanced Program	TIMP	ILI & ECDA - cleaning and assessing internal conditions of high-pressure pipelines	No	Yes	No	TIMP complies with 49 CFR §192, Subpart O—Gas Transmission Pipeline Integrity Management, and includes activities such as threat identification and risk assessment, pipeline assessments, remediation, and other actions that minimize threats and integrity concerns to reduce risk of pipeline failure. The number of assessment projects vary year to year primarily based on the timing and intervals of prior assessments and compliance dates. Furthermore, integrity assessments remain variable based on external factors (e.g., risks and threats) and individual project costs will differ.	2023 units were not included in SoCalGas's 2019 GRC and for the purposes of the RSAR, SoCalGas adopted 2019 authorized units for post-test year reporting. As stated previously, the number of assessments vary year to year based on prescribed compliance-driven assessment cycles. Additionally, PHMSA allows the use of multiple assessment methods to comply with 49 CFR Part 192, Subpart O and the selected method may vary depending on SoCalGas's system knowledge, prior assessments, and findings. Units should be reviewed in aggregate rather than by assessment method.	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
						Yes	The 2023 variance in expenditures is due to an increase in baseline in-line inspection (ILI) assessments and the substantial changes to the program resulting from new regulations published during this TY2019 GRC cycle. SCG continues to prioritize ILI assessments to more comprehensively manage threats and risks on pipelines, which aligns with the expanded threat management requirements of new regulations.		On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	
						Yes	Additionally, pipelines with cracking (specifically, Stress Corrosion Cracking) and manufacturing threats required new technology (i.e., Electro Magnetic Acoustic Transducer [EMAT]) that lead to additional direct examinations and tool re-runs.		On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	
O&M	Balanced Program	DIMP	DIMP Programs (e.g., DREAMS, GIPP)	No	No	No	N/A	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
						Yes	N/A	DIMP complies with 49 CFR 192, Subpart P - Gas Distribution Pipeline Integrity Management and includes threat identification, risk assessment, and various programs to minimize threats and integrity concerns to reduce risk of pipeline incidents. Units for the DIMP activities are comprised of work for the Distribution Riser Inspection Project (DRIP), Sewage Lateral Inspection Program (SLIP), and Gas Infrastructure Protection Project (GIPP). These units are representative of the major activities performed under the DIMP, although there are costs related to other PAARs and program management activities for which the identification of a single unit is not feasible. The SLIP level of activity in 2023 was higher than forecasted because inspections were conducted in areas where sewer pipes were in better conditions and allowed for an increase in production.					
						No	N/A	N/A					

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
O&M	Balanced Program	Underground Storage - RSIMP	SIMP RAMP	No	No	Yes	N/A	Well inspections are managed to compliance cycles and should be reviewed in aggregate accordingly. For the purposes of the RSAR, SoCalGas adopted 2018 and 2019 authorized units on a bi-annual basis for imputed authorized units; however, changes to well statuses or compliance cycles over time are not considered in these units. As storage well statuses change year over year, completed units are expected to vary. For example, in 2023, the number of well inspections was lower than in previous years due to more extensions granted by CalGEM and operational activities that increased the time between reassessments (e.g., well isolation).	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	No
O&M	Balanced Program	Research Development and Demonstration (RD&D) Technology Dev	Non-RAMP	No	Yes	No	The 2019 GRC Decision required that prior to SoCalGas recording 2021 expenses to the RD&D Expense Account Memorandum Account, it should submit a Tier 3 Advice Letter and include a Research Plan for the following calendar year. In addition to the requirements outlined in the 2019 GRC Decision, the Commission provided guidance in 2022 for future RD&D Research Plans in Resolution G-3586, which authorized SoCalGas to record in the one-way RDDEA balancing account expenses for multi-year projects approved and contracted prior to the Resolution. On June 15, 2022, SoCalGas submitted its 2023 RD&D Program Research Plan AL 5991-G. On November 30, 2023, seventeen months after filing AL 5991-G, the Commission issued Resolution G-3601, which partially approved and modified SoCalGas's AL 5991-G to set the funding level for the 2023 RD&D Plan at \$16,874,000 and disallowed 8 of 17 previously approved research subprograms. In 2023, the lower-than-expected expenses were due to a delay in obtaining a timely resolution for the research plan. In Resolution G-3601 the Commission allowed SoCalGas to propose how it would reallocate the amounts for the disallowed areas. SoCalGas filed AL 6273-G proposing reallocations.	N/A	Under (U)	Under (U)	Under (U)	Deferred	No
O&M	Balanced Program	Line 235 Memorandum Account	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Balanced Program	PSEP Memorandum Account	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
O&M	Balanced Program	PSEP Total	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	Yes	No								No

3. SoCalGas Balanced Programs - DIMP, TIMP, SIMP, Research Development & Demonstration Technology, and PSEP  
A. SoCalGas Balanced Programs Direct O&M Costs  
i. SoCalGas Balanced Programs Direct O&M

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Balanced Program	TIMP & DIMP		Yes				
O&M	Balanced Program	TIMP Project Support	TIMP Data Maintenance	No	N/A			
O&M	Balanced Program	DIMP Project Support	DIMP Data Maintenance	No	N/A	DIMP complies with 49 CFR 192, Subpart P— Gas Distribution Pipeline Integrity Management and identifies and reduces pipeline integrity risks for distribution pipelines, as required under the Pipeline Integrity, Protection, Enforcement and Safety Act of 2006.	SCG-14 MTM-20 to MTM-28 WP 2TD000.001	SCG-09 AK-TS-36 to AK-TS-47 WP 2TD002.000
O&M	Balanced Program	TIMP	ILI & ECDA - cleaning and assessing internal conditions of high-pressure pipelines	No	N/A	TIMP complies with 49 CFR 192, Subpart O—Gas Transmission Pipeline Integrity Management, and includes activities such as threat identification and risk assessment, pipeline assessments, remediation, and other actions that minimize threats and integrity concerns to reduce risk of pipeline failure.	SCG-14 MTM-13 to MTM-19 & MTM-29 to MTM-31 WP 2TD000.000	SCG-09 AK-TS-27 to AK-TS-36 WP 2TD001.000
					N/A	TIMP complies with 49 CFR 192, Subpart O—Gas Transmission Pipeline Integrity Management, and includes activities such as threat identification and risk assessment, pipeline assessments, remediation, and other actions that minimize threats and integrity concerns to reduce risk of pipeline failure.	SCG-14 MTM-13 to MTM-19 & MTM-29 to MTM-31 WP 2TD000.000	SCG-09 AK-TS-27 to AK-TS-36 WP 2TD001.000
					N/A	TIMP complies with 49 CFR 192, Subpart O—Gas Transmission Pipeline Integrity Management, and includes activities such as threat identification and risk assessment, pipeline assessments, remediation, and other actions that minimize threats and integrity concerns to reduce risk of pipeline failure.	SCG-14 MTM-13 to MTM-19 & MTM-29 to MTM-31 WP 2TD000.000	SCG-09 AK-TS-27 to AK-TS-36 WP 2TD001.000
O&M	Balanced Program	DIMP	DIMP Programs (e.g., DREAMS, GIPP)	No	N/A	DIMP complies with 49 CFR 192, Subpart P— Gas Distribution Pipeline Integrity Management and identifies and reduces pipeline integrity risks for distribution pipelines, as required under the Pipeline Integrity, Protection, Enforcement and Safety Act of 2006.	SCG-14 MTM-20 to MTM-28 WP 2TD000.001	SCG-09 AK-TS-36 to AK-TS-47 WP 2TD002.000

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
O&M	Balanced Program	Underground Storage - RSIMP	SIMP RAMP	No	N/A	SIMP complies with California Geologic Energy Management Division (CalGEM) and PHMSA regulations, SoCalGas is required to have prescriptive Risk Management Plans, records management plan, and an emergency response plan; maintain well construction and design standards and manage records; perform mechanical integrity testing, pressure testing, and other inspection, monitoring, and remediation activities; and submit regular reporting to regulators.	SCG 10 NPN-25 to NPN-28 WP 2US002.000	SCG-09 AK-TS-47 to AK-TS-52 WP 2TD003.000
O&M	Balanced Program	Research Development and Demonstration (RD&D) Technology Dev	Non-RAMP	No	N/A	The Research Development & Demonstration (RD&D) organization is focused on identifying, assessing, developing, demonstrating and deploying emerging new technologies of significant potential value to customers and utility operations. The RD&D program budget is tracked in a one-way balancing account treatment. SoCalGas will propose in its next General Rate Case (GRC) proceeding to return the unspent funds in rates to customers. Overspent funds may not be recovered from ratepayers and shareholders will absorb the balance in the event actual expenses exceed authorized levels.	SCG-21 LLA-9 to LLA-20 WP 2RD001.000	SCG-12-R AI-44 to AI-56 WP 2RD001.001
O&M	Balanced Program	Line 235 Memorandum Account	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	No	N/A			
O&M	Balanced Program	PSEP Memorandum Account	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	No	N/A			
O&M	Balanced Program	PSEP Total	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	Yes				



ii. SoCalGas Balanced Programs Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
Capital	Balanced Programs	TIMP & DIMP Total		Yes			228,214	270,545	325,499	284,932	304,507	1,413,697	243,273	124,796	126,770	128,265	130,999	754,103
Capital	Balanced Programs	DIMP	DIMP Programs & records management	No	On-going	Annual	5,085	4,526	4,214	4,370	4,486	22,681	3,168	2,176	2,211	2,237	2,284	12,076
Capital	Balanced Programs	DIMP	DIMP Programs - High Pressure Risk	No	On-going	Annual	649	1,686	838	762	559	4,494	109,015	22,290	22,643	22,910	23,398	200,257
Capital	Balanced Programs	DIMP	DIMP Programs - Medium Pressure Risk	No	On-going	Annual	114,754	187,938	207,827	186,620	164,262	861,401	68,856	45,139	45,853	46,394	47,383	253,626
Capital	Balanced Programs	Sub-Total DIMP		Yes			120,488	194,150	212,879	191,752	169,308	888,576	181,040	69,606	70,707	71,541	73,066	465,959

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
Capital	Balanced Programs	TIMP - Dist	ILI & ECDA - cleaning and assessing internal conditions of high-pressure pipelines	No	On-going	Annual	4,946	3,473	3,641	15,095	18,263	45,418	5,748	4,844	4,921	4,979	5,085	25,578
Capital	Balanced Programs	TIMP - Trans	ILI & ECDA - cleaning and assessing internal conditions of high-pressure pipelines	No	On-going	Annual	98,029	68,396	104,401	69,528	104,765	445,119	52,298	48,981	49,756	50,343	51,416	252,793
Capital	Balanced Programs	TIMP	TIMP Programs & records management	No	On-going	Annual	4,751	4,526	4,578	8,557	12,172	34,584	4,187	1,365	1,386	1,403	1,433	9,773
<b>Capital</b>	<b>Balanced Programs</b>	<b>Sub-Total TIMP</b>		<b>Yes</b>			<b>107,726</b>	<b>76,395</b>	<b>112,620</b>	<b>93,180</b>	<b>135,199</b>	<b>525,121</b>	<b>62,233</b>	<b>55,190</b>	<b>56,063</b>	<b>56,724</b>	<b>57,934</b>	<b>288,144</b>

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Project Life (Years)	Project Year	Actual Cost 2019	Actual Cost 2020	Actual Cost 2021	Actual Cost 2022	Actual Cost 2023	Actual Cost to Date (\$)	Imputed Authorized Cost 2019	Imputed Authorized Cost 2020	Imputed Authorized Cost 2021	Imputed Authorized Cost 2022	Imputed Authorized Cost 2023	Imputed Authorized Cost to Date (\$)
Capital	Balanced Programs	SIMP Total	Well Integrity Management inclusive of inspection of wells, plugging and abandonment, data management, etc.	No	On-going	Annual	64,118	81,631	87,231	59,586	60,786	353,352	60,402	40,417	41,057	41,541	42,426	225,843
					Ongoing	Annual												
Capital	Balanced Programs	PSEP Memorandum Account	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	No	On-going	Annual	—	—	29,174	—	5,430	34,604	—	—	—	—	—	—
Capital	Balanced Programs	Line 235 Memorandum Account	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	No	On-going	Annual	—	—	(152)	—	—	(152)	—	—	—	—	—	—
Capital	Balanced Programs	PSEP Total	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	Yes			—	—	29,022	—	5,430	34,452	—	—	—	—	—	—

ii. SoCalGas Balanced Programs Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
Capital	Balanced Programs	TIMP & DIMP Total		Yes	(15,058)	145,750	198,729	156,667	173,508	659,595	-6%	117%	157%	122%	132%	87%
Capital	Balanced Programs	DIMP	DIMP Programs & records management	No	1,917	2,350	2,003	2,133	2,202	10,606	61%	108%	91%	95%	96%	88%
Capital	Balanced Programs	DIMP	DIMP Programs - High Pressure Risk	No	(108,366)	(20,604)	(21,805)	(22,148)	(22,839)	(195,763)	-99%	-92%	-96%	-97%	-98%	-98%
Capital	Balanced Programs	DIMP	DIMP Programs - Medium Pressure Risk	No	45,898	142,799	161,974	140,226	116,879	607,775	67%	316%	353%	302%	247%	240%
Capital	Balanced Programs	Sub-Total DIMP		Yes	(60,552)	124,544	142,172	120,211	96,242	422,617	-33%	179%	201%	168%	132%	91%

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
Capital	Balanced Programs	TIMP - Dist	ILI & ECDA - cleaning and assessing internal conditions of high-pressure pipelines	No	(802)	(1,371)	(1,280)	10,116	13,177	19,840	-14%	-28%	-26%	203%	259%	78%
Capital	Balanced Programs	TIMP - Trans	ILI & ECDA - cleaning and assessing internal conditions of high-pressure pipelines	No	45,731	19,415	54,645	19,186	53,349	192,326	87%	40%	110%	38%	104%	76%
Capital	Balanced Programs	TIMP	TIMP Programs & records management	No	564	3,161	3,192	7,154	10,739	24,811	13%	232%	230%	510%	750%	254%
<b>Capital</b>	<b>Balanced Programs</b>	<b>Sub-Total TIMP</b>		<b>Yes</b>	<b>45,494</b>	<b>21,205</b>	<b>56,557</b>	<b>36,456</b>	<b>77,266</b>	<b>236,977</b>	<b>73%</b>	<b>38%</b>	<b>101%</b>	<b>64%</b>	<b>133%</b>	<b>82%</b>

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Cost Difference 2019	Annual Cost Difference 2020	Annual Cost Difference 2021	Annual Cost Difference 2022	Annual Cost Difference 2023	Cost to Date Difference (\$)	Annual Cost Percent Variance 2019	Annual Cost Percent Variance 2020	Annual Cost Percent Variance 2021	Annual Cost Percent Variance 2022	Annual Cost Percent Variance 2023	Cost to Date Percent Variance
Capital	Balanced Programs	SIMP Total	Well Integrity Management inclusive of inspection of wells, plugging and abandonment, data management, etc.	No	3,716	41,214	46,175	18,045	18,359	127,509	6%	102%	112%	43%	43%	56%
Capital	Balanced Programs	PSEP Memorandum Account	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	No	—	—	29,174	—	5,430	34,604	—%	—%	100%	—%	100%	100%
Capital	Balanced Programs	Line 235 Memorandum Account	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	No	—	—	(152)	—	—	(152)	—%	—%	100%	—%	—%	100%
Capital	Balanced Programs	PSEP Total	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	Yes	—	—	29,022	—	5,430	34,452	—%	—%	100%	—%	100%	100%

ii. SoCalGas Balanced Programs Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
Capital	Balanced Programs	TIMP & DIMP Total		Yes																										
Capital	Balanced Programs	DIMP	DIMP Programs & records management	No	This activity and the work completed in 2023 consist of database enhancements and associated data management activities. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Balanced Programs	DIMP	DIMP Programs - High Pressure Risk	No	DIMP Programs - High Pressure Risk Site Mitigations (GIPP)	372	358	114	322	130	1,296	286	286	282	282	282	1,418	86	72	(168)	40	(152)	(122)	30%	25%	-60%	14%	-54%	-9%	
Capital	Balanced Programs	DIMP	DIMP Programs - Medium Pressure Risk	No	DIMP Programs - Medium Pressure Risk Miles DREAMS (VIPP and BSRP)	74.4	115	140	156	155	640	107	107	107	107	107	535	(32.6)	8	33	49	48	105	-30%	7%	31%	46%	45%	20%	
Capital	Balanced Programs	Sub-Total DIMP		Yes																										

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
Capital	Balanced Programs	TIMP - Dist	ILI & ECDA - cleaning and assessing internal conditions of high-pressure pipelines	No	This activity and the work completed in 2019-2023 consists of pipeline remediation work as a result of integrity assessment findings. The number and types of remediation are driven by each assessment. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Balanced Programs	TIMP - Trans	ILI & ECDA - cleaning and assessing internal conditions of high-pressure pipelines	No	This activity and the work completed in 2019-2023 consists of pipeline remediation work as a result of integrity assessment findings. The number and types of remediation are driven by each assessment. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Balanced Programs	TIMP	TIMP Programs & records management	No	This activity and the work completed in 2023 consist of database enhancements and associated data management activities. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Balanced Programs	Sub-Total TIMP		Yes																										



Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Unit of Measure (Unit Type)	Actual Units 2019	Actual Units 2020	Actual Units 2021	Actual Units 2022	Actual Units 2023	Actual Units to Date	Imputed Authorized Units 2019	Imputed Authorized Units 2020	Imputed Authorized Units 2021	Imputed Authorized Units 2022	Imputed Authorized Units 2023	Imputed Authorized Units to Date	Annual Units Difference 2019	Annual Units Difference 2020	Annual Units Difference 2021	Annual Units Difference 2022	Annual Units Difference 2023	Units to Date Difference	Annual Units Percent Variance 2019	Annual Units Percent Variance 2020	Annual Units Percent Variance 2021	Annual Units Percent Variance 2022	Annual Units Percent Variance 2023	Units to Date Percent Variance	
Capital	Balanced Programs	SIMP Total	Well Integrity Management inclusive of inspection of wells, plugging and abandonment, data management, etc.	No	Plug & Abandonments	7	12	—	2	—	21	0	0	0	—	—	—	7	12	—	2	—	21	100%	100%	—%	100%	—%	100%	
					Workovers	19	66	60	31	40	216	75	81	75	81	75	81	387	(56)	(15)	(15)	(50)	(35)	(171)	(75%)	(19%)	(20%)	(62%)	(47%)	(44%)
Capital	Balanced Programs	PSEP Memorandum Account	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	No	This activity and the work completed in 2023 consist of the engineering, survey, environmental, and cathodic protection activities for the retrofits on the acquired PG&E Line 306. The variety of work activities in this category makes it infeasible to identify a single unit of measurement.																									
Capital	Balanced Programs	Line 235 Memorandum Account	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	No	The capital costs associated with the Line 235 Memorandum include labor and non-labor activities that can't be described as a single unit of measure. These activities are associated with the execution of hydrotest projects.																									
Capital	Balanced Programs	PSEP Total	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	Yes																										

ii. SoCalGas Balanced Programs Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
Capital	Balanced Programs	TIMP & DIMP Total		Yes									
Capital	Balanced Programs	DIMP	DIMP Programs & records management	No	Yes	No	DIMP complies with 49 CFR 192, Subpart P - Gas Distribution Pipeline Integrity Management and includes threat identification, risk assessment, and various programs to minimize threats and integrity concerns to reduce risk of pipeline incidents. DIMP records management activities are informed by DIMP and are driven by continuous enhancement and administration of system databases through software enhancements and data management for Projects and Activities Addressing Risks (PAARs). Accordingly, activities fluctuate year-to-year and may vary from the authorized amount. The cost variance is attributed to the calculation used to impute authorized funding at the activity level for the GRC post-test years. The CPUC approved a post-test year mechanism for the SoCalGas attrition years rather than a specific funding level by activity for each year. This is described in further detail in section 2D above.	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Balanced Programs	DIMP	DIMP Programs - High Pressure Risk	No	Yes	Yes	DIMP complies with 49 CFR 192, Subpart P - Gas Distribution Pipeline Integrity Management and includes threat identification, risk assessment, and various programs to minimize threats and integrity concerns to reduce risk of pipeline incidents.  This RAMP mitigation is primarily driven by the high-pressure Gas Infrastructure Protection Project (GIPP) activity. In 2019, SoCalGas reallocated resources and costs for the DIMP between the high-pressure and medium-pressure RAMP chapters to better support risk management activities. Generally, SoCalGas's GIPP costs may vary year-to-year based on remediation measures.	The units identified in this report are a component and not the entirety of activities and costs supporting DIMP. They represent Gas Infrastructure Protection Project (GIPP) work on high-pressure assets and the authorized units were derived from the total GIPP 2019 authorized units using a ratio of high-pressure and medium-pressure assets. However, GIPP is forecasted and managed at the program level and the actual number of high-pressure vs. medium-pressure mitigations may vary year-to-year due to operational considerations.	On Target (T)	On Target (T)	Under (U)	Proceeding as Planned	Yes
Capital	Balanced Programs	DIMP	DIMP Programs - Medium Pressure Risk	No	Yes	Yes	DIMP complies with 49 CFR 192, Subpart P - Gas Distribution Pipeline Integrity Management and includes threat identification, risk assessment, and various projects to minimize threats and integrity concerns to reduce risk of pipeline incidents. Projects are managed to compliance and operational considerations and accordingly, activities fluctuate year-to-year and may vary from the authorized amount. The spending variance is primarily driven by the reallocation of resources and costs described in the above variance explanation for the "DIMP Programs - High Pressure Risk" activity to prioritize medium-pressure activities.	The units identified in this report are a component and not the entirety of activities and costs supporting the DIMP. They represent the Vintage Integrity Plastic Plan (VIPP) and Bare Steel Replacement Plan (BSRP) work on non-state-of-the-art distribution pipeline. SoCalGas's year-over-year replacements are informed by the Distribution Risk Evaluation and Monitoring System (DREAMS) model and activity levels have increased since TY 2019 in alignment with the D.19-09-051.	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Balanced Programs	Sub-Total DIMP		Yes	Yes								No

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
Capital	Balanced Programs	TIMP - Dist	ILI & ECDA - cleaning and assessing internal conditions of high-pressure pipelines	No	Yes	No	<p>TIMP complies with 49 CFR 192, Subpart O - Gas Transmission Pipeline Integrity Management and includes threat identification, risk analysis, pipeline assessments, remediation, and other actions that minimize threats and integrity concerns to reduce risk of pipeline failure.</p> <p>The variance in expenditures is primarily due to an increase in baseline in-line inspection (ILI) assessments, most of which required retrofits, and the substantial changes to the program resulting from new regulations published during this TY2019 GRC cycle. SCG continues to prioritize ILI assessments to more comprehensively manage threats and risks on pipelines, which aligns with the expanded threat management requirements of the new regulations such as those enhancing the activities required to assess and remediate stress corrosion cracking (SCC) and manufacturing threats. The expanded utilization of advanced inspection tools increased the number of immediate repair conditions discovered which resulted in additional remediation work.</p> <p>In general, the TIMP activity level is driven by assessment requirements and pipeline safety considerations, as well as the resulting remediation and repair needs. TIMP remediation activities are informed by assessment findings and may vary from pipeline to pipeline and year to year, and in some cases, remediation activities are a result of the previous year's assessment findings.</p>	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Balanced Programs	TIMP - Trans	ILI & ECDA - cleaning and assessing internal conditions of high-pressure pipelines	No	Yes	No	<p>TIMP complies with 49 CFR 192, Subpart O - Gas Transmission Pipeline Integrity Management and includes threat identification, risk analysis, pipeline assessments, remediation, and other actions that minimize threats and integrity concerns to reduce risk of pipeline failure.</p> <p>The variance in expenditures is primarily due to an increase in baseline in-line inspection (ILI) assessments, most of which required retrofits, and the substantial changes to the program resulting from new regulations published during this TY2019 GRC cycle. SCG continues to prioritize ILI assessments to more comprehensively manage threats and risks on pipelines, which aligns with the expanded threat management requirements of the new regulations such as those enhancing the activities required to assess and remediate stress corrosion cracking (SCC) and manufacturing threats. The expanded utilization of advanced inspection tools increased the number of immediate repair conditions discovered which resulted in additional remediation work.</p> <p>In general, the TIMP activity level is driven by assessment requirements and pipeline safety considerations, as well as the resulting remediation and repair needs. TIMP remediation activities are informed by assessment findings and may vary from pipeline to pipeline and year to year, and in some cases, remediation activities are a result of the previous year's assessment findings.</p>	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Balanced Programs	TIMP	TIMP Programs & records management	No	Yes	No	<p>TIMP complies with 49 CFR 192, Subpart O - Gas Transmission Pipeline Integrity Management and includes threat identification, risk analysis, pipeline assessments, remediation, and other actions that minimize threats and integrity concerns to reduce risk of pipeline failure. TIMP records management activities are driven by continuous enhancement and administration of system databases through software enhancements and data management for the TIMP. Additionally, in 2023, development of an enterprise data lake with TIMP data continues to drive the variance in the actual expenditures.</p>	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
<b>Capital</b>	<b>Balanced Programs</b>	<b>Sub-Total TIMP</b>		<b>Yes</b>	<b>Yes</b>								<b>No</b>

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Annual Spending Variance Explanation Required?	Annual Unit Variance Explanation Required?	Cost Variance Explanation	Unit Variance Explanation	Forecast Scope Status	Forecast Schedule Status	Forecast Spending Status	Status	Status Variance Explanation Required?
Capital	Balanced Programs	SIMP Total	Well Integrity Management inclusive of inspection of wells, plugging and abandonment, data management, etc.	No	Yes	No	SIMP complies with 49 CFR §192.12 and 14 CCR §1726.6 – Requirements for Underground Gas Storage Projects, Mechanical Integrity Testing and includes threat identification, risk analysis, assessments, remediation, and other actions that minimize threats and integrity concerns to reduce risk of well-related incidents.  The cost variance is attributed to the calculation used to impute authorized funding at the activity level for the GRC post-test years. The CPUC approved a post-test year mechanism for the SoCalGas attrition years rather than a specific funding level by activity for each year. This is described in further detail in section 2D above. Additionally, the cost of well remediation is influenced by results of integrity assessments and inspections and remains variable.	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
						Yes		The units identified are a component and not the entirety of activities and costs supporting the SIMP, which complies with 14 CCR §1726.6(a). Based on a re-evaluation of the scope of work and cost drivers, it has been determined that an improved unit for this activity is the number of SIMP inspections performed on wells. Program activity varies year to year due to compliance and operational considerations (e.g., 24-month reassessment cycle requirements to be balanced with reliability and CalGEM approval of assessment interval extensions). Additionally, well remediation activities are influenced by the results of integrity inspections, which remain variable.					
Capital	Balanced Programs	PSEP Memorandum Account	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	No	Yes	No	SoCalGas proposed a full replacement of Supply Line (SL) 44-1008 in the 2019 GRC (A.17-10-008), which the Commission in D.19-09-051 did not authorize and determined that "authorization for Line 44-1008 should be requested in SoCalGas's next GRC application." In lieu of a full replacement of Supply Line 44-1008, SoCalGas evaluated an alternative to the replacement of SL 44-1008, which materialized with the purchase of PG&E's Line 306. The purchase and enhancement of Line 306 as an alternative to the full replacement of Supply Line 44-1008 will result in savings to ratepayers. The actuals reflect the capital expenditures associated with the PSEP Memorandum Account (PSEPMA), including engineering, survey, environmental, and cathodic protection activities for the various retrofits to Line 306. For information on the PSEPMA, refer to the balanced programs Section C. vii. of this report.	N/A	On Target (T)	On Target (T)	Over (O)	Proceeding as Planned	No
Capital	Balanced Programs	Line 235 Memorandum Account	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	No	No	No	N/A	N/A	On Target (T)	On Target (T)	On Target (T)	Proceeding as Planned	No
Capital	Balanced Programs	PSEP Total	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	Yes	Yes	No							No

ii. SoCalGas Balanced Programs Capital

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
Capital	Balanced Programs	TIMP & DIMP Total		Yes				
Capital	Balanced Programs	DIMP	DIMP Programs & records management	No	N/A	DIMP complies with 49 CFR 192, Subpart P— Gas Distribution Pipeline Integrity Management and identifies and reduces pipeline integrity risks for distribution pipelines, as required under the Pipeline Integrity, Protection, Enforcement and Safety Act of 2006.	SCG-14 MTM-31 to MTM-33 WP 002770	SCG-09 AK-TS-83 to AK-TS-85 WP 002770
Capital	Balanced Programs	DIMP	DIMP Programs - High Pressure Risk	No	<p>DIMP complies with 49 CFR 192, Subpart P - Gas Distribution Pipeline Integrity Management and includes threat identification, risk assessment, and various programs to minimize threats and integrity concerns to reduce risk of pipeline incidents. This RAMP mitigation is primarily driven by the high-pressure Gas Infrastructure Protection Project (GIPP) activity. In 2019, SoCalGas reallocated resources and costs for the DIMP between the high-pressure and medium-pressure RAMP chapters to better support risk management activities. Generally, SoCalGas's GIPP costs may vary year-to-year based on remediation measures.</p> <p>The units identified in this report represent the GIPP and are a component and not the entirety of activities and costs supporting the DIMP. The authorized units were derived from the total GIPP 2019 authorized units using a ratio of high-pressure and medium-pressure assets. However, GIPP is forecasted and managed at the program level and the actual number of high-pressure vs. medium-pressure mitigations may vary year-to-year due to operational considerations and complexity of mitigations (i.e., standard vs. non-standard).</p>	DIMP complies with 49 CFR 192, Subpart P— Gas Distribution Pipeline Integrity Management and identifies and reduces pipeline integrity risks for distribution pipelines, as required under the Pipeline Integrity, Protection, Enforcement and Safety Act of 2006.	SCG-14 MTM-31 to MTM-33 WP 002770	SCG-09 AK-TS-83 to AK-TS-85 WP 002770
Capital	Balanced Programs	DIMP	DIMP Programs - Medium Pressure Risk	No	N/A	DIMP complies with 49 CFR 192, Subpart P— Gas Distribution Pipeline Integrity Management and identifies and reduces pipeline integrity risks for distribution pipelines, as required under the Pipeline Integrity, Protection, Enforcement and Safety Act of 2006.	SCG-14 MTM-31 to MTM-33 WP 002770	SCG-09 AK-TS-83 to AK-TS-85 WP 002770
Capital	Balanced Programs	Sub-Total DIMP		Yes				

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
Capital	Balanced Programs	TIMP - Dist	ILI & ECDA - cleaning and assessing internal conditions of high-pressure pipelines	No	N/A	TIMP complies with 49 CFR 192, Subpart O—Gas Transmission Pipeline Integrity Management, and includes activities such as threat identification and risk assessment, pipeline assessments, remediation, and other actions that minimize threats and integrity concerns to reduce risk of pipeline failure.	SCG-14 MTM-29 to MTM-31 WP P03120 & 002760	SCG-09 AK-TS-74 to AK-TS-83 WP 002760
Capital	Balanced Programs	TIMP - Trans	ILI & ECDA - cleaning and assessing internal conditions of high-pressure pipelines	No	N/A	TIMP complies with 49 CFR 192, Subpart O—Gas Transmission Pipeline Integrity Management, and includes activities such as threat identification and risk assessment, pipeline assessments, remediation, and other actions that minimize threats and integrity concerns to reduce risk of pipeline failure.	SCG-14 MTM-29 to MTM-31 WP P03120 & 002760	SCG-09 AK-TS-74 to AK-TS-83 WP P03120
Capital	Balanced Programs	TIMP	TIMP Programs & records management	No	N/A	TIMP complies with 49 CFR 192, Subpart O—Gas Transmission Pipeline Integrity Management, and includes activities such as threat identification and risk assessment, pipeline assessments, remediation, and other actions that minimize threats and integrity concerns to reduce risk of pipeline failure.	SCG-14 MTM-29 to MTM-31 WP P03120 & 002760	SCG-09 AK-TS-74 to AK-TS-83 WP P07560
<b>Capital</b>	<b>Balanced Programs</b>	<b>Sub-Total TIMP</b>		<b>Yes</b>				

Type	Witness Area (Line of Business)	WP Activity Description (Spending Category)	RAMP Mitigation Activity	Roll-up	Status Variance Explanation	WP Activity Description	2019 GRC Testimony Location	2024 GRC Testimony Location
Capital	Balanced Programs	SIMP Total	Well Integrity Management inclusive of inspection of wells, plugging and abandonment, data management, etc.	No	N/A	SIMP complies with California Geologic Energy Management Division (CalGEM) and PHMSA regulations, SoCalGas is required to have prescriptive Risk Management Plans, records management plan, and an emergency response plan; maintain well construction and design standards and manage records; perform mechanical integrity testing, pressure testing, and other inspection, monitoring, and remediation activities; and submit regular reporting to regulators.	SCG-10-R NPN-51 to NPN-57 WP 004410	SCG-09 AK-TS-85 to AK-TS-88 WP 004410
Capital	Balanced Programs	PSEP Memorandum Account	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	No	N/A	SoCalGas proposed a full replacement of Supply Line (SL) 44-1008.	SCG-15-R RDP-A-53 WP-S-C WP-III-A94 to WP-III-A108	SCG-08 BGK-31 to BGK-32 WP-S WP-296 to WP-314
Capital	Balanced Programs	Line 235 Memorandum Account	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	No	N/A			
Capital	Balanced Programs	PSEP Total	Approved PSEP program to test or replace High Consequence Area High Pressure pipelines	Yes				

C. SoCalGas Regulatory Account 2023 Cumulative Balances

i. SoCalGas Regulatory Accounts – DIMPBA

SoCalGas DIMPBA Details Revenue Requirements (\$000)						
Program Cycle 2019-2023						
Two-Way						
	(a)	(b)	(c)	(d) = (b) - (c)	(e)	(f) = (a) + (d) + (e)
	Beginning Balance	Actual	Authorized	Under/(Over) Collection	Interest	Ending Balance
<b>Year 2023</b>						
Beginning Balance	77,557					77,557
O&M		49,276	45,353	3,923		3,923
Capital-Related Costs		92,383	24,883	67,500		67,500
Interest					5,792	5,792
<b>Subtotal</b>	<b>77,557</b>	<b>141,659</b>	<b>70,236</b>	<b>71,423</b>	<b>5,792</b>	<b>154,772</b>



ii. SoCalGas Regulatory Accounts – TIMPBA

SoCalGas TIMPBA Details Revenue Requirements (\$000)						
Program Cycle 2019-2023						
Two-Way						
	(a)	(b)	(c)	(d) = (b) - (c)	(e)	(f) = (a) + (d) + (e)
	Beginning Balance	Actual	Authorized	Under/(Over) Collection	Interest	Ending Balance
<b>Year 2023</b>						
Beginning Balance	267,414					267,414
O&M		121,233	52,408	68,825		68,825
Capital-Related Costs		45,019	5,333	39,686		39,686
Interest					16,078	16,078
<b>Subtotal</b>	<b>267,414</b>	<b>166,252</b>	<b>57,741</b>	<b>108,511</b>	<b>16,078</b>	<b>392,003</b>

iii. SoCalGas Regulatory Account – SIMPBA

SoCalGas SIMPBA Details Revenue Requirements (\$000)						
Program Cycle 2019-2023						
Two-Way						
	(a)	(b)	(c)	(d) = (b) - (c)	(e)	(f) = (a) + (d) + (e)
	Beginning Balance	Actual	Authorized	Under/(Over) Collection	Interest	Ending Balance
<b>Year 2023</b>						
Beginning Balance	21,714					21,714
O&M		18,876	22,276	(3,400)		(3,400)
Capital-Related Costs		30,975	1,596	29,379		29,379
Interest					1,761	1,761
<b>Subtotal</b>	<b>21,714</b>	<b>49,851</b>	<b>23,872</b>	<b>25,979</b>	<b>1,761</b>	<b>49,454</b>

iv. SoCalGas Regulatory Accounts – RD&D

SoCalGas RD&D Expense Account Details Revenue Requirements (\$000)						
Program Cycle 2019-2023						
Two-Way						
	(a)	(b)	(c)	(d) = (b) - (c)	(e)	(f) = (a) + (d) + (e)
	Beginning Balance	Actual	Authorized	Under/(Over) Collection	Interest	Ending Balance
<b>Year 2023</b>						
Beginning Balance	(1,852)					(1,852)
O&M		8,968	16,872	(7,904)		(7,904)
Capital-Related Costs						
Interest					(328)	(328)
<b>Subtotal</b>	<b>(1,852)</b>	<b>8,968</b>	<b>16,872</b>	<b>(7,904)</b>	<b>(328)</b>	<b>(10,084)</b>

v. SoCalGas Regulatory Accounts - L235MA

SoCalGas L235MA Details Revenue Requirements (\$000)						
	(a)	(b)	(c)	(d) = (b) - (c)	(e)	(f) = (a) + (d) + (e)
	<b>Beginning Balance</b>	<b>Actual</b>	<b>Authorized</b>	<b>Under/(Over) Collection</b>	<b>Interest</b>	<b>Ending Balance</b>
<b>Year 2023</b>						
Beginning Balance	593					593
O&M		205		205		205
Capital-Related Costs						
Interest					37	37
<b>Subtotal</b>	<b>593</b>	<b>205</b>		<b>205</b>	<b>37</b>	<b>835</b>

vi. SoCalGas Regulatory Accounts - MROWMA

SoCalGas MROWMA Details Revenue Requirements (\$000)						
	(a)	(b)	(c)	(d) = (b) - (c)	(e)	(f) = (a) + (d) + (e)
	<b>Beginning Balance</b>	<b>Actual</b>	<b>Authorized</b>	<b>Under/(Over) Collection</b>	<b>Interest</b>	<b>Ending Balance</b>
<b>Year 2023</b>						
Beginning Balance	35,108					35,108
O&M						
Capital-Related Costs		12,918		12,918		12,918
Interest					2,154	2,154
<b>Subtotal</b>	<b>35,108</b>	<b>12,918</b>		<b>12,918</b>	<b>2,154</b>	<b>50,180</b>

vii. SoCalGas Regulatory Accounts - PSEPMA

SoCalGas PSEPMA Details Revenue Requirements (\$000) Program Cycle 2019-2023						
	(a)	(b)	(c)	(d) = (b) - (c)	(e)	(f) = (a) + (d) + (e)
	Beginning Balance	Actual	Authorized	Under/(Over) Collection	Interest	Ending Balance
<b>Year 2023</b>						
Beginning Balance	5,194					5,194
O&M						
Capital-Related Costs		3,335		3,335		3,335
Interest					356	356
<b>Subtotal</b>	<b>5,194</b>	<b>3,335</b>		<b>3,335</b>	<b>356</b>	<b>8,885</b>

**D. SoCalGas Balanced Program Regulatory Account Disposition of Cost Recovery**

**i. TIMP & DIMP & SIMP (same for all three programs)**

Per D.19-09-051, the TIMPBA and Post-2011 DIMPBA and SIMPBA will continue for the 2019 GRC cycle. Any over- or under-collected balance at the end of each year within the GRC cycle will be carried over to the following year. For any under-collections as a result of overspending up to 35% of the total authorized O&M and capital expenditures, SoCalGas will submit a Tier 3 advice letter seeking recovery of the under-collected amount. For under-collections due to overspending greater than 35% of the total authorized O&M and capital expenditures, SoCalGas will seek recovery through a separate application. If SoCalGas has not overspent in excess of the total authorized O&M and capital expenditures for the current GRC cycle, but an under-collection exists due to compounding of actual capital revenue requirement recorded in the balancing account, SoCalGas will incorporate the under-collected balance in its annual regulatory account balance update submittal for recovery in the subsequent year's rates. For any unspent funds at the end of the current GRC cycle, SoCalGas will propose in its next GRC proceeding to return the unspent funds in rates to customers.

**ii. TIMPBA**

On November 23, 2022, SoCalGas submitted Tier 3 Advice Letter 6060 for recovery of the under-collection balance of approximately \$238.8 million as of September 30, 2022. At the time of the preparation of this report, the Commission has issued a draft resolution approving Advice Letter 6060.

**iii. DIMPBA**

On November 17, 2023, SoCalGas submitted Tier 3 Advice Letter 6224-G for recovery of the under-collection balance of approximately \$81.4 million as of January 31, 2023. The advice letter is pending Commission approval.

**iv. Research Development and Demonstration Expense Account (RDDEA)**

The RDDEA is a one-way regulatory account created pursuant to D.19-09-051. Any over- or under-collected balance at the end of each year within the GRC cycle will be carried over to the following year. Under-collections may not be recovered from ratepayers and shareholders will absorb the balance in the event actual expenses exceed authorized levels. On November 30,

2023, the CPUC issued Resolution G-3601 partially approving SoCalGas's 2023 Research, Development, and Demonstration (RD&D) Plan. Due to the delayed issuance of a resolution to Advice Letter 5991-G, Resolution G-3601 also authorizes SoCalGas to carry over unspent RD&D funds at the end of 2023 to the following year to allow SoCalGas to spend its approved 2023 RD&D funding in 2024.

**v. Line 235 Memorandum Account (L235MA)**

SoCalGas shall seek amortization of PSEP Cost Subaccount balance of the L235MA in a Tier 2 advice letter submitted at the conclusion of Line 235 West Sections 1 and 2 testing or replacement. The Tier 2 advice letter will provide clear accounting delineations of which costs are subject to the TIMP and which costs are subject to the PSEP. Such PSEP costs shall not be placed into rates for recovery and such TIMP costs shall be made subject to refund until the advice letter is approved.

**vi. Morongo Rights of Way Memorandum Account (MROWMA)**

The disposition of the MROWMA balance related to completed projects through December 31, 2021, will be addressed in SoCalGas's TY 2024 General Rate Case and any additional projects will be addressed in the TY 2028 General Rate Case or other applicable proceeding designated by the Commission.

**vii. Pipeline Safety Enhancement Plan Memorandum Account (PSEPMA)**

The PSEP-GRC and Line 44 Subaccount balances of the PSEPMA will be addressed in SoCalGas's TY 2024 General Rate Case.



**ATTACHMENT C – GRC Testimony and Workpaper Hyperlinks**

TY 2019 GRC A.17-10-007/008						
Exh. No.	Exh. Title	Witness Name	Testimony	O&M Workpapers	Capital Workpapers	Supplemental Workpapers
SCG-01-2R	Policy Overview	Brett Lane	<a href="#">SCG-01-2R Policy Overview</a>	N/A	N/A	N/A
SCG-02 (SDGE-02)-R	Risk Management and Policy, Enterprise Risk Management Organization	Diane Day, Greg Flores, and Jamie York	<a href="#">SCG-02 (SDGE-02)-R Risk Management and Policy</a>	<a href="#">SCG-02-WP Gregory Flores-Enterprise Risk Management</a>	N/A	N/A
SCG-03 (SDGE-03)-R	Fueling our Future Policy	Hal Snyder and Randal Clark	<a href="#">SCG-03 (SDGE-03)-R Fueling our Future Policy</a>	N/A	N/A	N/A
SCG-04-R	Gas Distribution	Gina Orozco-Mejia	<a href="#">SCG-04-R Gas Distribution</a>	<a href="#">SCG-04-WP Gina Orozco-Mejia-Gas Distribution</a>	<a href="#">SCG-04-CWP Gina Orozco-Mejia-Gas Distribution</a>	N/A
SCG-05-R	Gas System Integrity	Omar Rivera	<a href="#">SCG-05-R Gas System Integrity</a>	<a href="#">SCG-05-WP Omar Rivera-Gas System Integrity</a>	N/A	N/A
SCG-06	Gas Transmission Operation	Beth Musich	<a href="#">SCG-06 Gas Transmission Operation</a>	<a href="#">SCG-06-WP Beth Musich-Gas Transmission Operation</a>	N/A	N/A
SCG-07	Gas Transmission	Beth Musich and Michael Bermel	<a href="#">SCG-07 Gas Transmission</a>	<a href="#">SCG-07-CWP Beth Musich and Michael Bermel-Gas Transmission</a>	N/A	N/A
SCG-08-R	Gas Major Projects	Michael Bermel	<a href="#">SCG-08R-Gas Major Projects</a>	<a href="#">SCG-08-WP Michael Bermel-Gas Major Projects</a>	<a href="#">SCG-08-CWP Michael Bermel-Gas Major Projects</a>	N/A
SCG-09-R	Gas Engineering	Deanna Haines	<a href="#">SCG-09-R Gas Engineering</a>	<a href="#">SCG-09-WP-R Deana Haines-Gas Engineering</a>	<a href="#">SCG-09-CWP Deana Haines-Gas Engineering</a>	N/A
SCG-10-R	Underground Storage	Neil Navin	<a href="#">SCG-10-R Underground Storage</a>	<a href="#">SCG-10-WP-R Neil Navin-Underground Storage</a>	<a href="#">SCG-10-CWP-R Neil Navin-Underground Storage</a>	N/A
SCG-11	Aliso Canyon Turbine Replacement	David Buczkowski	<a href="#">SCG-11 Aliso Canyon Turbine Replacement</a>	<a href="#">SCG-11-CWP David Buczkowski-ACR Project Cost and Schedule Workpapers</a>	N/A	N/A
SCG-12	Aliso Incident Expenditure Requirements	Andrew Steinberg	<a href="#">SCG-12 Aliso Incident Expenditure Requirements</a>	<a href="#">SCG-12-WP Andrew Steinberg-Aliso Expense Requirements</a>	N/A	N/A
SCG-13	Gas Control Systems and Operations Planning	Devin Zornier	<a href="#">SCG-13 Gas Control Systems and Operations Planning</a>	<a href="#">SCG-13-WP Devin Zornizer-Gas Control Systems and Operations Planning</a>	N/A	N/A
SCG-14	Pipeline Integrity for Transmission and Distribution	Maria Martinez	<a href="#">SCG-14 Pipeline Integrity for Transmission and Distribution</a>	<a href="#">SCG-14-WP Maria Martinez-Pipeline Integrity for Transmission and Distribution</a>	<a href="#">SCG-14-CWP- Maria Martinez-Pipeline Integrity for Transmission and Distribution</a>	N/A
SCG-15-R	Pipeline Safety Enhancement Plan (PSEP)	Rick Phillips	<a href="#">SCG-15-R Pipeline Safety and Enhancement Plan (PSEP)</a>	<a href="#">SCG-15-WP- Rick Phillips Pipeline Safety and Enhancement Plan (PSEP)</a>	<a href="#">SCG-15-CWP Rick Phillips Pipeline Safety and Enhancement Plan (PSEP)</a>	N/A
SCG-16	Gas Procurement	Martin Lazarus	<a href="#">SCG-16 Gas Procurement</a>	<a href="#">SCG-16-WP Martin Lazarus Gas Procurement</a>	N/A	N/A
SCG-17-R	Advanced Metering Infrastructure Policy	Rene Garcia	<a href="#">SCG-17-R Advanced Metering Infrastructure Policy</a>	<a href="#">SCG-17-WP-R Rene Garcia-Advanced Metering Infrastructure Policy</a>	<a href="#">SCG-17-CWP Rene Garcia-Advanced Metering Infrastructure Policy</a>	N/A
SCG-18-R	Customer Service-Field and Meter Reading	Gwen Marelli	<a href="#">SCG-18-R Customer Service-Field and Meter Reading</a>	<a href="#">SCG-18-WP Gwen Marelli-Customer Service-Field and Meter Reading</a>	N/A	N/A
SCG-19-R	Customer Service-Office Operations	Michael Baldwin	<a href="#">SCG-19-R Customer Service-Office Operations</a>	<a href="#">SCG-19-WP-R Michael Baldwin- Customer Service-Office Operations</a>	N/A	N/A
SCG-19-S	Customer Service-Office Operations Supplemental Testimony	Michael Baldwin	<a href="#">SCG-19-S Customer Service-Office Operations</a>	N/A	N/A	N/A

SCG-20-R	Customer Service-Information	Andrw Cheung	<a href="#">SCG-20-R Customer Service-Information</a>	<a href="#">SCG-20-WP Andrew Cheung-Customer Service-Information</a>	N/A	N/A
SCG-21	Customer Service-Technologies, Policies and Solutions	Lisa Alexander	<a href="#">SCG-21 Customer Service- Technologies, Policies and Solutions</a>	<a href="#">SCG-21-WP Lisa Alexander-Customer Service-Technologies, Policies and Solutions</a>	N/A	N/A
SCG-22/SDGE-20-R	Supply Management, Logistics and Supplier Diversity	Denita Willoughby	<a href="#">SCG-22/SDGE-20-R Supply Management, Logistics and Supplier Diversity</a>	<a href="#">SCG-22-WP Denita Willoughby- Supply Management, Logistics and Supplier Diversity</a>	N/A	N/A
SCG-23-R	Fleet Services and Facilities Operations	Carmen Herrera	<a href="#">SCG-23-R Fleet Services and Facilities Operations</a>	<a href="#">SCG-23-WP Carmen Herrera-Fleet Services and Facilities Operations</a>	<a href="#">SCG-23-CWP Carmen Herrera-Fleet Services and Facilities Operations</a>	<a href="#">SCG-23-WP-S Carmen Herrera-Fleet Services and Facilities Operations</a>
SCG-24	Real Estate	Dale Tattersale	<a href="#">SCG-24 Real Estate</a>	<a href="#">SCG-24-WP-R Dale Tattersall-Real Estate</a>	N/A	N/A
SCG-25-R	Environmental Services	Darell Johnson	<a href="#">SCG-25-R Environmental Services</a>	<a href="#">SCG-25-WP-R Darrell Johnson-Environmental Services</a>	N/A	N/A
SCG-26	Information Technologies	Christopher Olmsted	<a href="#">SCG-26 Information Technologies</a>	<a href="#">SCG-26-WP Christopher Olmsted- Information Technologies</a>	<a href="#">SCG-26-CWP Christopher Olmsted- Information Technologies</a>	N/A
SCG-27-R	Cybersecurity	Gavin Worden	<a href="#">SCG-27-R Cybersecurity</a>	<a href="#">SCG-27-WP-R Gavin Worden-Cybersecurity</a>	<a href="#">SCG-27-CWP Gavin Worden-Cybersecurity</a>	N/A
SCG-28/SDGE-26-R	Corpoate Center-General	Mia DeMontigny	<a href="#">SCG-28/SDGE-26-R Corpoate Center-General</a>	<a href="#">SCG-28-WP-R (SDG&amp;E-26-WP-R) M.L.DeMontigny_CorporateCenterGeneralAdministration.pdf</a>	N/A	N/A
SCG-29/SDGE-27	Corporate Center-Insurance	Neil Cayabyab	<a href="#">SCG-29/SDGE-27 Corporate Center-Insurance</a>	<a href="#">SCG-29/SDGE-27-WP-S Neil Navin-Corporate Center-Insurance</a>	N/A	N/A
SCG-30/SDGE-28	Corporate Center-Compensation and Benefits	Debbie Robinson	<a href="#">SCG-30/SDGE-28 Corporate Center-Compensation and Benefits</a>	<a href="#">SCG-30-WP Debbie Robinson-Corporate Center-Compensation and Benefits</a>	N/A	N/A
SCG-31/SDGE-29	Corporate Center-Pension and PBOPs	Debbie Robinson	<a href="#">SCG-31/SDGE-29 Corporate Center-Pension and PBOPs</a>	<a href="#">SCG-31-WP Debbie Robinson-Corporate Center-Pension and PBOPs</a>	N/A	N/A
SCG-32	Human Resource Department, Safety and Long -Term Disability and Workers' Compensation	Mary Gevorkian	<a href="#">SCG-32 Human Resource Department, Safety and Long -Term Disability and Workers' Compensation</a>	<a href="#">SCG-32-WP Mary Gevorkia-Human Resource Department, Safety and Long -Term Disability and Workers' Compensation</a>	N/A	N/A
SCG-33	Accounting and Fianance, Legal, Regulatory Affairs, External Affairs	Stacey Lee	<a href="#">SCG-33 Accounting and Fianance, Legal, Regulatory Affairs, External Affairs</a>	<a href="#">SCG-33-WP Stacey Lee-Accounting and Fianance, Legal, Regulatory Affairs, External Affairs</a>	N/A	N/A
SCG-34-2R/SDGE-32-2R	Shared Services and Shared Assets Billing, Segmentations, and Capital Reassignments	James Vanderhye	<a href="#">SCG-34-2R/SDGE-32-2R Shared Services and Shared Assets Billing, Segmentations, and Capital Reassignments</a>	<a href="#">SCG-34-WP-R/SDGE-32WP-S-R James Vanderhye-Shared Services and Shared Assets Billing, Segmentations, and Capital Reassignments</a>	N/A	N/A
SCG-35-2R	Rate Base	Patrick Moersen	<a href="#">SCG-35-2R Rate Base</a>	<a href="#">SCG-35-WP-2R Patrick Moersen-Rate Base</a>	N/A	N/A
SCG-36-R	Depreciation	Flora Ngai	<a href="#">SCG-36-R Depreciation</a>	<a href="#">SCG-36-WP-R Flora Ngai-Depreciation</a>	N/A	N/A
SCG-37-2R	Tax	Ragan Reeves	<a href="#">SCG-37-2R Tax</a>	<a href="#">SCG-37-WP-2R Ragan Reeves-Tax</a>	N/A	<a href="#">SCG-37-WP-S Ragan Reeves-Tax</a>
SCG-38-2R	Working Cash	Karen Chan	<a href="#">SCG-38-2R Working Cash</a>	<a href="#">SCG-38-WP-2R Karen Chan-Working Cash</a>	N/A	N/A
SCG-39	Gas Customer Forecast	Rose-Marie Payan	<a href="#">SCG-39 Gas Customer Forecast</a>	<a href="#">SCG-39-WP-S Rose-Marie Payan-Gas Customer Forecast</a>	N/A	N/A

SCG-40	Cost Escalation	Scott Wilder	<a href="#">SCG-40 Cost Escalation</a>	N/A	N/A	<a href="#">SCG-40-WP-S Scott Wilder-Cost Escalation</a>
SCG-41-2R	Miscellaneous Revenues	Annette Steffen	<a href="#">SCG-41-2R Miscellaneous Revenue</a>	<a href="#">SCG-41-WP-2R Annette Steffen-Miscellaneous Revenue</a>	N/A	N/A
SCG-42	Regulatory Accounts	Rae Marie Yu	<a href="#">SCG-42 Regulatory Accounts</a>	N/A	N/A	N/A
SCG-42-S	Regulatory Accounts Supplemental	Rae Marie Yu	<a href="#">SCG-42-S Regulatory Accounts</a>	N/A	N/A	N/A
SCG-43-2R	Summary of Earnings	Ryan Hom	<a href="#">SCG-43-2R Summary of Earnings</a>	N/A	N/A	N/A
SCG-44-2R	Post Test-Year Ratemaking	Jawaad Malik	<a href="#">SCG-44-2R Post Test-Year Ratemaking</a>	<a href="#">SCG-44-WP-2R Jawaad Malik-Post Test-Year Ratemaking</a>	N/A	N/A
SCG-45/SDGE-44	Compliance	Jamie York	<a href="#">SCG-45/SDGE-44 Compliance</a>	N/A	N/A	N/A
SCG-46-3R	Present and Proposed Transportation Revenues and Rates	Sharim Chaudhury	<a href="#">SCG-46-3R Present and Proposed Transportation Revenues and Rates</a>	N/A	N/A	N/A
SCG-47-R	Mobilehome Park Utility Upgrade Program	Joeseph Velasquez	<a href="#">SCG-47-R Mobilehome Park Utility Upgrade Program</a>	N/A	N/A	N/A
SCG-48	Present Rate Review	Ryan Hom	<a href="#">SCG-48 Present Rate Review</a>	N/A	N/A	N/A
SCG-49/SDGE-49	Case Management Exhibit	Chuck Manzuk	<a href="#">SCG-49/SDGE-49 Case Management Exhibits</a>	N/A	N/A	N/A
Joint-01 SCG-SDGE CforAT	Accessibility Issues	Chuck Manzuk and Melissa Kasnitz	<a href="#">Joint-01 SCG-SDGE CforAT Accessibility Issues</a>	N/A	N/A	N/A

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Exh. No.	Exh. Title	Witness Name on Testimony	Testimony	O&M Workpapers	Capital Workpapers	Supplemental Workpapers	Supplemental Workpapers	Supplemental Workpapers	Supplemental Workpapers	Supplemental Workpapers	Supplemental Workpapers	Supplemental Workpapers	Supplemental Workpapers
SCG-01-2R	Policy Overview	Maryam Brown	<a href="#">SCG-01-2R Policy</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-02-R, Ch 1	SCG-02, Ch 2	Jonathan Peress and Michelle Sim	<a href="#">SCG-02-R Sustainability Climate Change</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-03-2R-E/SDGE-03-2R-E	Risk Management Policy (Chapter 1) and RAMP to GRC Integration (Chapter 2)	Deana Ng, Gregory Flores, and Scott Pearson	<a href="#">SCG-03-2R-E/SDG&amp;E-03-2R-E Risk Management</a>	<a href="#">SCG-03 WP-R RAMP to GRC</a>	<a href="#">SCG-03 CWP-2R RAMP to GRC</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-03-S-2R-E/SDGE-03-S-2R-E	Post-Test Year Risk Spend Efficiency Calculations	Gregory Flores and Scott Pearson	<a href="#">SCG-03-S-2R-E/SDG&amp;E-03-S-2R-E Post-Test Year Risk</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-04-R-E	Gas Distribution	Mario Aguirre	<a href="#">SCG-04-R-E Gas Distribution</a>	<a href="#">SCG-04 WP-R-2E Gas Distribution</a>	<a href="#">SCG-04 CWP-R Gas Distribution</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-05	Gas System Staff and Technology	Wallace Rawls	<a href="#">SCG-05 Gas System Staff and Technology</a>	<a href="#">SCG-05 WP-R Gas Staff and Technology</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-06-2R-E	Gas Transmission Operations and Construction	Chiapa, Hruby and Bell	<a href="#">SCG-06-2R-E Gas Transmission Operations and Construction</a>	<a href="#">SCG-06 WP-R-E Gas Transmission Operations and Construction</a>	<a href="#">SCG-06 CWP-R-E Gas Transmission Operations and Construction</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-07-R	Gas Engineering	Maria Martinez	<a href="#">SCG-07-R Gas Engineering</a>	<a href="#">SCG-07 WP-R Gas Engineering</a>	<a href="#">SCG-07 CWP-R Gas Engineering</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-08	Pipeline Safety Enhancement Plan (PSEP)	Bill Kostelnik	<a href="#">SCG-08 Pipeline Safety Enhancement Plan (PSEP)</a>	<a href="#">SCG-08 WP Pipeline Safety Enhancement Plan (PSEP)</a>	<a href="#">SCG-08 CWP-E Pipeline Safety Enhancement Plan (PSEP)v.1</a>	<a href="#">SCG-08 WP-S Pipeline Safety Enhancement Plan (PSEP)v.2</a>	<a href="#">SCG-08 WP-S Pipeline Safety Enhancement Plan (PSEP)v.3</a>	<a href="#">SCG-08 WP-S Pipeline Safety Enhancement Plan (PSEP)v.4</a>	<a href="#">SCG-08 WP-S Pipeline Safety Enhancement Plan (PSEP)v.5</a>	<a href="#">SCG-08 WP-S Pipeline Safety Enhancement Plan (PSEP)v.6</a>	<a href="#">SCG-08 WP-S Pipeline Safety Enhancement Plan (PSEP)v.7</a>	<a href="#">SCG-08 WP-S Pipeline Safety Enhancement Plan (PSEP)v.8</a>	<a href="#">SCG-08 WP-S Pipeline Safety Enhancement Plan (PSEP)v.8</a>
SCG-09	Gas Integrity Management Programs	Amy Kitson and Travis Sera	<a href="#">SCG-09 Gas Integrity Management Programs</a>	<a href="#">SCG-09 WP Gas Integrity Management Programs</a>	<a href="#">SCG-09 CWP Gas Integrity Management Programs</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-10-R	Gas Storage Operations and Construction	Larry Bittleston, Steve Hruby	<a href="#">SCG-10-R Gas Storage Operations and Construction</a>	<a href="#">SCG-10 WP-R-E Gas Storage Operations and Construction</a>	<a href="#">SCG-10 CWP-R Gas Storage Operations and Construction</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-11	Gas Acquisition	Martin F. Lazarus	<a href="#">SCG-11 Gas Acquisition</a>	<a href="#">SCG-11 WP Gas Acquisition</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-12-R	Clean Energy Innovations	Armando Infanzon	<a href="#">SCG-12-R Clean Energy Innovations</a>	<a href="#">SCG-12 WP-R-E Clean Energy Innovations</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-13	Customer Information System Replacement Program	Evan Goldman	<a href="#">SCG-13 CIS Replacement Program</a>	<a href="#">SCG-13 WP-2E CIS Replacement Program</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-14-R	Customer Services – Field and Advanced Meter Operations	Daniel J. Rendler	<a href="#">SCG-14-R Customer Services – Field and Advanced Meter Operations</a>	<a href="#">SCG-14 WP-R-E Customer Services-Field and Advanced Meter Operations</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-15-R-2E	Customer Services - Office Operations	Bernie Sides	<a href="#">SCG-15-R-2E Customer Services - Office Operations</a>	<a href="#">SCG-15 WP-E Customer Services-Office Operations</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-15-S	Customer Services - Office Operations Supplemental	Bernie Sides	<a href="#">SCG-15-S Customer Services - Office Operations</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-16-2E	Customer Services – Information	Brian C. Prusnek	<a href="#">SCG-16-2E Customer Service - Information</a>	<a href="#">SCG-16 WP-R-E Customer Services Information</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-17-E	Supply Management, Logistics, & Supplier Diversity	Joseph Chow	<a href="#">SCG-17-E Supply Management, Logistics, &amp; Supplier Diversity</a>	<a href="#">SCG-17 WP Supply Management, Logistics and Supplier Diversity</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-18-R-E	Fleet Services	Michael Franco	<a href="#">SCG-18-R-E Fleet Services</a>	<a href="#">SCG-18 WP-R-E Fleet Services</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-19-R-2E	Real Estate & Facility Operations	Brenton Guy	<a href="#">SCG-19-R-2E Real Estate &amp; Facility Operations</a>	<a href="#">SCG-19 WP-R Real Estate Facility Operations</a>	<a href="#">SCG-19 CWP-E Redacted Real Estate Facility Operations</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-20-R	Environment Services	Albert Garcia	<a href="#">SCG-20-R Environment Services</a>	<a href="#">SCG-20 WP-R-E Environment Services</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-21, Ch 1-R-E	Information Technology Policy (Chapter 1) and Information Technology O&M and Capital (Chapter 2)	Ben Gordon, Tia Ballard, William Exon	<a href="#">SCG-21, Ch 1-R-E Information Technology</a>	<a href="#">SCG-21 WP-R-2E Information Technology</a>	<a href="#">SCG-21 CWP-R Information Technology</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-22-R	Cybersecurity	Lance Mueller	<a href="#">SCG-22-R Cybersecurity</a>	<a href="#">SCG-22 WP Cybersecurity</a>	<a href="#">SCG-22 CWP-R Cybersecurity</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-23-R-E/SDG&E-27-R-E	Corporate Center - General Administration	Derick R. Cooper	<a href="#">SCG-23-R-E/SDG&amp;E-27-R-E Corporate Center - General Administration</a>	<a href="#">SCG-23-R-E/SDG&amp;E-27 WP-R-E Corporate Center - General Administration</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

SCG-24/SDG&E-28	Corporate Center - Insurance	Dennis J. Gaughan	<a href="#">SCG-24/SDG&amp;E-28 Corporate Center - Insurance</a>	<a href="#">SCG-24/SDG&amp;E-28 WP Corporate Center Insurance</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-25-R-E/SDG&E-29-R-E	Corporate Center - Compensation & Benefits	Debbie S. Robinson	<a href="#">SCG-25-R-E/SDG&amp;E-29-R-E Corporate Center - Compensation &amp; Benefits</a>	<a href="#">SCG-25 WP-E Corporate Center Compensation and Benefits</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-26/SDG&E-30	Corporate Center - Pension and Postretirement Benefits Other than Pension	Peter H. Andersen	<a href="#">SCG-26/SDG&amp;E-30 Corporate Center - Pension and Postretirement Benefits Other than Pension</a>	<a href="#">SCG-26 WP Corporate Center Pension and Postretirement Benefits Other than Pension</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-27-2R-E	Safety & Risk Management Systems	Neena N. Master	<a href="#">SCG-27-2R-E Safety &amp; Risk Management Systems</a>	<a href="#">SCG-27 WP-R-E Safety and Risk Management Systems</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-28-R-E	People and Culture Department	Abigail Nishimoto	<a href="#">SCG-28-R-E People and Culture Department</a>	<a href="#">SCG-28 WP-R-E People and Culture Department</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-29-R-E	Administrative and General	Sara P. Mijares	<a href="#">SCG-29-R-E Administrative and General</a>	<a href="#">SCG-29 WP-R-E Administrative and General</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-30-R/SDG&E-34-R	Shared Services Billing, Shared Assets Billing, Segmentation, & Capital Reassignments	Angel N. Le & Paul D. Malin	<a href="#">SCG-30-R/SDG&amp;E-34-R Shared Services Billing, Shared Assets Billing, Segmentation, &amp; Capital Reassignments</a>	<a href="#">SCG-30/SDG&amp;E-34-WP-R Shared Services Billing, Assets Billing, Segmentation and Capital Reassignments</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-31-2R	Rate Base	Patrick D. Moersen	<a href="#">SCG-31-2R Rate Base</a>	<a href="#">SCG-31 WP-2R Rate Base</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-32-2R	Depreciation	Dane A. Watson	<a href="#">SCG-32-2R Depreciation</a>	N/A	N/A	<a href="#">SCG-32 WP Depreciation v.1</a>	<a href="#">SCG-32 WP Depreciation v.2</a>	<a href="#">SCG-32 WP Depreciation v.3</a>	<a href="#">SCG-32 WP Depreciation v.4</a>	<a href="#">SCG-32 WP Depreciation v.5</a>	<a href="#">SCG-32 WP Depreciation v.6</a>	<a href="#">SCG-32 WP Depreciation v.7</a>	N/A	N/A
SCG-33-2R	Tax	Ragan Reeves	<a href="#">SCG-33-2R Tax</a>	<a href="#">SCG-33 WP-2R Tax</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-34-2R-E	Working Cash	Alexandra N. Hornbeck	<a href="#">SCG-34-2R-E Working Cash</a>	<a href="#">SCG-34 WP-2R-E Working Cash</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-35	Gas Customer Forecast	Scott Wilder	<a href="#">SCG-35 Gas Customer Forecast</a>	<a href="#">SCG-35 WP Gas Customer Forecast</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-36	Cost Escalation	Scott Wilder	<a href="#">SCG-36 Cost Escalation</a>	<a href="#">SCG-36 WP Cost Escalation</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-37-R	Miscellaneous Revenues	Jackie Roberts	<a href="#">SCG-37-R Miscellaneous Revenues</a>	<a href="#">SCG-37 WP-R Misc Revenues</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-38-R-E	Regulatory Accounts	Rae Marie Yu	<a href="#">SCG-38-R-E Regulatory Accounts</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-39-2R	Summary of Earnings	Ryan Hom	<a href="#">SCG-39-2R Summary of Earnings</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-40-2R-E	Post-Test Year Ratemaking	Khai Nguyen	<a href="#">SCG-40-2R-E Post-Test Year Ratemaking</a>	<a href="#">SCG-40 WP-2R-E Post-Test Year Ratemaking</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-41/SDG&E-46	Compliance	Lauren Godinez Frazer	<a href="#">SCG-41/SDG&amp;E-46 Compliance</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-42-R	Present and Proposed Gas Transportation Revenues & Rates	Sharim Chaudhury	<a href="#">SCG-42-R Present and Proposed Gas Transportation Revenues &amp; Rates</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-43-S	Supplemental Testimony – Affordability Metrics – Gas	Sharim Chaudhury	<a href="#">SCG-43-S Supplemental Testimony – Affordability Metrics – Gas</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-44	Updated Results of Operations	Ryan Hom	<a href="#">SCG-44 Updated Results of Operations</a>	<a href="#">SCG-44 WP Updated Results of Operations</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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Exh. No.	Exh. Title	Witness Name	Testimony	O&M Workpapers	Capital Workpapers	Supplemental Workpapers	Supplemental Workpapers
SDG&E-01-R	Policy Overview	Caroline Winn	<a href="#">SDG&amp;E-01-R Policy Overview</a>	N/A	N/A	N/A	N/A
SDG&E-02-R/SCG-02-R	Risk Management & Policy, Enterprise Risk	Diana Day, Gregory Flores, and Jamie York	<a href="#">SDG&amp;E-02-R/SCG-02-R Risk Management &amp; Policy, Enterprise Risk</a>	<a href="#">SDG&amp;E-02 WP Enterprise Risk Management</a>	N/A	N/A	N/A
SDG&E-03-R/SCG-03-R	Fueling our Future Policy	Hal Snyder and Randal Clark	<a href="#">SDG&amp;E-03-R/SCG-03-R Fueling our Future Policy</a>	N/A	N/A	N/A	N/A
SDG&E-04-R	Gas Distribution	Gina Orozco-Mejia	<a href="#">SDG&amp;E-04-R Gas Distribution</a>	<a href="#">SDG&amp;E-04-R-WP Gas Distribution</a>	<a href="#">SDG&amp;E-04-CWP Gas Distribution</a>	N/A	N/A
SDG&E-05	Gas System Integrity	Omar Rivera	<a href="#">SDG&amp;E-05 Gas System Integrity</a>	<a href="#">SDG&amp;E-05-WP Gas System Integrity</a>	N/A	N/A	N/A
SDG&E-06	Gas Transmission Operation	Beth Musich	<a href="#">SDG&amp;E-06 Gas Transmission Operations</a>	<a href="#">SDG&amp;E-06-WP Gas Transmission Operations</a>	N/A	N/A	N/A
SDG&E-07-R	Gas Transmission Operations Capital	Michael Bermel and Beth Musich	<a href="#">SDG&amp;E-07-R Gas Transmission Operations Capital</a>	N/A	<a href="#">SDG&amp;E-07-R-CWP Gas Transmission Operations Capital</a>	N/A	N/A
SDG&E-08	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SDG&E-09-R	Gas Engineering	Deanna Haines	<a href="#">SDG&amp;E-09-R Gas Engineering</a>	N/A	<a href="#">SDG&amp;E-09-CWP-Gas Engineering</a>	N/A	N/A
SDG&E-10	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SDG&E-11	TIMP-DIMP	Maria Martinez	<a href="#">SDG&amp;E-11 TIMP-DIMP</a>	<a href="#">SDG&amp;E-11-WP TIMP-DIMP</a>	<a href="#">SDG&amp;E-11-CWP TIMP-DIMP</a>	N/A	N/A
SDG&E-12	Electric & Fuel Procurement	Kendall Helm	<a href="#">SDG&amp;E-12 Electric &amp; Fuel Procurement</a>	<a href="#">SDG&amp;E-12-WP Electric &amp; Fuel Procurement</a>	N/A	N/A	N/A
SDG&E-13	Distributed Energy Resource Policy	Alan Dulgeroff	<a href="#">SDG&amp;E-13 Distributed Energy Resource Policy</a>	N/A	N/A	N/A	N/A
SDG&E-14-R	Electric Distribution-Capital	Alan Colton	<a href="#">SDG&amp;E-14-R Electric Distribution-Capital</a>	N/A	<a href="#">SDG&amp;E-14-R-CWP Electric Distribution-Capital</a>	N/A	N/A
SDG&E-15-2R	Electric Distribution-O&M	William Speer	<a href="#">SDG&amp;E-15-2R Electric Distribution</a>	<a href="#">SDG&amp;E-15-WP Electric Distribution</a>	N/A	<a href="#">SDG&amp;E-15-S-WP Electric Distribution</a>	N/A
SDG&E-16	Electric Generation	Daniel Baerman	<a href="#">SDG&amp;E-16 Electric Generation</a>	<a href="#">SDG&amp;E-16-WP Electric Generation</a>	<a href="#">SDG&amp;E-16-CWP Electric Generation</a>	N/A	N/A
SDG&E-17-R	Customer Services-Field	Gwen Marelli	<a href="#">SDG&amp;E-17-R Customer Services-Field</a>	<a href="#">SDG&amp;E-17-R-WP Customer Services-Field</a>	N/A	N/A	N/A
SDG&E-18	Customer Services-Office Operations	Jerry Stewart	<a href="#">SDG&amp;E-18 Customer Services-Operations</a>	<a href="#">SDG&amp;E-18-WP Customer Services-Operations</a>	N/A	N/A	N/A
SDG&E-18-S	Customer Services-Office Operations Supplemental	Jerry Stewart	<a href="#">SDG&amp;E-18-S Customer Services-Operations</a>	N/A	N/A	N/A	N/A
SDG&E-19	Customer Services-Information & Technologies	Lisa Davidson	<a href="#">SDG&amp;E-19 Customer Services-Information &amp; Technologies</a>	<a href="#">SDG&amp;E-19-WP Customer Services-Information &amp; Technologies</a>	N/A	N/A	N/A
SDG&E-20/SCG-22	Supply Management, Logistics & Supplier Diversity	Denita Willoughby	<a href="#">SDG&amp;E-20/SCG-22 Supply Management, Logistics &amp; Supplier Diversity</a>	<a href="#">SDG&amp;E-20-WP Supply Management, Logistics &amp; Supplier Diversity</a>	N/A	N/A	N/A
SDG&E-21-R	Fleet Services	Carmen Herrera	<a href="#">SDG&amp;E-21-R Fleet Services</a>	<a href="#">SDG&amp;E-21-WP Public-Fleet Services</a>	N/A	<a href="#">SDG&amp;E-21-S-WP Public-Fleet Services</a>	N/A
SDG&E-22	Real Estate, Land Services & Facilities	Dale Tattersall	<a href="#">SDG&amp;E-22 Real Estate, Land Services &amp; Facilities</a>	<a href="#">SDG&amp;E-22-WP Real Estate, Land Services &amp; Facilities</a>	<a href="#">SDG&amp;E-22-CWP Real Estate, Land Services &amp; Facilities</a>	N/A	N/A
SDG&E-23	Environmental Services	Nancy Clancy	<a href="#">SDG&amp;E-23 Environmental Services</a>	<a href="#">SDG&amp;E-23-WP Environmental Services</a>	N/A	N/A	N/A
SDG&E-24-R	Information Technology	Christopher Olmsted	<a href="#">SDG&amp;E-24-R Information Technology</a>	<a href="#">SDG&amp;E-24-R-WP Information Technology</a>	<a href="#">SDG&amp;E-24-CWP Information Technology</a>	N/A	N/A
SDG&E-25	Cybersecurity	Gavin Worden	<a href="#">SDG&amp;E-25 Cybersecurity</a>	<a href="#">SDG&amp;E-25-WP Cybersecurity</a>	<a href="#">SDG&amp;E-25-CWP Cybersecurity</a>	N/A	N/A

SDG&E-26-R/SCG-28-R	Corporate Center-General Administration	Mia DeMontigny	<a href="#">SDG&amp;E-26-R/SCG-28-R Corporate Center-General Administration</a>	<a href="#">SDG&amp;E-26-R/SCG-28-R-WP Corporate Center-General Administration</a>	N/A	N/A	N/A
SDG&E-27/SCG-29	Corporate Center-Insurance	Neil Cayabyab	<a href="#">SDG&amp;E-27/SCG-29 Corporate Center-Insurance</a>	<a href="#">SDG&amp;E-27/SCG-29-WP Corporate Center-Insurance</a>	N/A	N/A	N/A
SDG&E-28/SCG-30	Corporate Center-Compensation and Benefits	Debbie Robinson	<a href="#">SDG&amp;E-28/SCG-30 Corporate Center-Compensation and Benefits</a>	<a href="#">SDG&amp;E-28-WP Corporate Center-Compensation and Benefits</a>	N/A	N/A	N/A
SDG&E-29/SCG-31	Corporate Center-Pensions and PBOs	Debbie Robinson	<a href="#">SDG&amp;E-29/SCG-31 Corporate Center-Pension and PBOs</a>	<a href="#">SDG&amp;E-29-WP Corporate Center-Pension and PBOs</a>	N/A	N/A	N/A
SDG&E-30	Human Resources, Long-Term Disability and Workers' Comp	Tashonda Taylor	<a href="#">SDG&amp;E-30 Human Resources, Long-Term &amp; Workers' Comp</a>	<a href="#">SDG&amp;E-30-WP Human Resources, Long-Term &amp; Workers' Comp</a>	N/A	N/A	N/A
SDG&E-31-R	Accounting & Finance, Legal, Regulatory Affairs, External Affairs	Sandra Hrma	<a href="#">SDG&amp;E-31-R Accounting &amp; Finance, Legal, Regulatory Affairs, External Affairs</a>	<a href="#">SDG&amp;E-31-WP Accounting &amp; Finance, Legal, Regulatory Affairs, External Affairs</a>	N/A	N/A	N/A
SDG&E-32-2R/SCG-34-2R	Shared Services & Shared Assets Billing, Segmentation & Capital Reassignments	James Vanderhyc	<a href="#">SDG&amp;E-32-2R/SCG-34-2R Shared Services &amp; Assets Billing, Segmentation &amp; Capital Reassignments</a>	<a href="#">SDG&amp;E-32-R/SCG-34-R-WP Shared Services &amp; Assets Billing, Segmentation &amp; Capital Reassignments</a>	N/A	N/A	N/A
SDG&E-33-2R	Rate Base	Craig Gentes	<a href="#">SDG&amp;E-33-2R Rate Base</a>	<a href="#">SDG&amp;E-33-2R-WP Rate Base</a>	N/A	N/A	N/A
SDG&E-34	Depreciation	Matthew Vanderbilt	<a href="#">SDG&amp;E-34 Depreciation</a>	N/A	N/A	<a href="#">SDG&amp;E-34-R-WP Depreciation V.1</a>	<a href="#">SDG&amp;E-34-WP Depreciation V.2</a>
SDG&E-35-2R	Tax	Ragan Reeves	<a href="#">SDG&amp;E-35-2R Tax</a>	<a href="#">SDG&amp;E-35-2R-WP Tax</a>	N/A	<a href="#">SDG&amp;E-35-S/SCG-37-WP Tax</a>	N/A
SDG&E-36-2R	Working Cash	Steven Dais	<a href="#">SDG&amp;E-36-2R Working Cash</a>	<a href="#">SDG&amp;E-36-2R-WP Public-Working Cash</a>	N/A	N/A	N/A
SDG&E-37	Gas Customer Forecast	Rose-Marie Payan	<a href="#">SDG&amp;E-37 Gas Customer Forecast</a>	<a href="#">SDG&amp;E-37-WP Gas Customer Forecast</a>	N/A	N/A	N/A
SDG&E-38	Electric Customer Forecast	Kenneth Schiermeyer	<a href="#">SDG&amp;E-38 Electric Customer Forecast</a>	<a href="#">SDG&amp;E-38-WP Electric Customer Forecast</a>	N/A	N/A	N/A
SDG&E-39	Cost Escalation	Scott Wilder	<a href="#">SDG&amp;E-39 Cost Escalation</a>	<a href="#">SDG&amp;E-39-WP Cost Escalation</a>	N/A	N/A	N/A
SDG&E-40-2R	Miscellaneous Revenues	Eric Dalton	<a href="#">SDG&amp;E-40-2R Miscellaneous Revenues</a>	<a href="#">SDG&amp;E-40-2R-WP Miscellaneous Revenues</a>	N/A	N/A	N/A
SDG&E-41	Regulatory Accounts	Norma Jasso	<a href="#">SDG&amp;E-41 Regulatory Accounts</a>	N/A	N/A	N/A	N/A
SDG&E-41-S	Regulatory Accounts Supplemental	Norma Jasso	<a href="#">SDG&amp;E-41-S Regulatory Accounts</a>	N/A	N/A	N/A	N/A
SDG&E-42-2R	Summary of Earnings	Ryan Hom	<a href="#">SDG&amp;E-42-2R Summary of Earnings</a>	N/A	N/A	N/A	N/A
SDG&E-43-2R	Post-Test Year Ratemaking	Kenneth Deremer	<a href="#">SDG&amp;E-43-2R Post-Test Year Ratemaking</a>	<a href="#">SDG&amp;E-43-2R-WP Post-Test Year Ratemaking</a>	N/A	N/A	N/A
SDG&E-44/SCG-45	Compliance	Jamie York	<a href="#">SDG&amp;E-44/SCG-45 Compliance</a>	N/A	N/A	N/A	N/A
SDG&E-45-3R	Present and Proposed Gas Transportation Revenues & Rates	Sharim Chaudhury	<a href="#">SDG&amp;E-45-3R Present &amp; Proposed Gas Transportation Revenues &amp; Rates</a>	N/A	N/A	N/A	N/A
SDG&E-46-2R	Present and Proposed Electric Revenues & Rates	Jeffery Shaughnessy	<a href="#">SDG&amp;E-46-2R Present and Proposed Electric Revenues &amp; Rates</a>	N/A	N/A	N/A	N/A
SDG&E-47	Mobilehome Park Utility Upgrade Program	Joseph Velasquez	<a href="#">SDG&amp;E-47 Mobilehome Park Utility Upgrade Program</a>	N/A	N/A	N/A	N/A
SDG&E-48	Present Rate Revenues	Ryan Hom	<a href="#">SDG&amp;E-48 Present Rate</a>	N/A	N/A	N/A	N/A
SDG&E-49/SCG-49	Case Mangement Exhibit	Chuck Manzuk	<a href="#">SDG&amp;E-49/SCG-49 Case Management Exhibit</a>	N/A	N/A	N/A	N/A
SDG&E-50-S	Year-Round Wildfire Risk Mitigation	David Geier	<a href="#">SDG&amp;E-50-S Year-Round Wildfire Risk Mitigation</a>	N/A	N/A	N/A	N/A
Joint-01 SDGE-SCG CforAT	Accessibility Issues	Chuck Manzuk and Melissa Kasnitz	<a href="#">Joint-01/SDGE-SCG-CforAT Accessibility Issues</a>	N/A	N/A	N/A	N/A



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Exh. No.	Exh. Title	Witness Name	Testimony	O&M Workpapers	Capital Workpapers	Supplemental Workpapers	Supplemental Workpapers	Supplemental Workpapers	Supplemental Workpapers	Supplemental Workpapers	Supplemental Workpapers	Supplemental Workpapers	Supplemental Workpapers	Supplemental Workpapers	Supplemental Workpapers	Supplemental Workpapers	Supplemental Workpapers	Supplemental Workpapers	
SDG&E-01-R	Policy Overview	Bruce Folkmann	SDG&E-01-R Policy	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SDG&E-02	Sustainability Policy	Estela de Llanos	SDG&E-02 Sustainability Policy	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SDG&E-03 Chpt 1	Risk Management	Michael Schneider, Gregory Flores, and Scott Pearson	SCG-03-S-2R-E, SDG&E-03-S-2R-E	SDG&E-03-WP-R, RAMP in GRC	SDG&E-03-WP-R, RAMP in GRC	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SDG&E-04-R	Gas Distribution	Patrick Kinsella	SDG&E-04-R-E Gas Distribution	SDG&E-04-WP-R Gas Distribution	SDG&E-04-WP-R Gas Distribution	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SDG&E-05	Gas System Staff and Technology	Wallace Rawls	SDG&E-05 Gas System Staff and Technology	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SDG&E-06	Gas Transmission Operations and Construction	Rick Chiapa and Steve Hruby	SDG&E-06-R-E Gas Transmission Operations and Construction	SDG&E-06-WP-R Gas Transmission Operations and Construction	SDG&E-06-WP-R Gas Transmission Operations and Construction	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SDG&E-07-R	Gas Engineering	Maria Martinez	SDG&E-07-R Gas Engineering	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SDG&E-08	Pipeline Safety Enhancement Plan (PSEP)	Norm Kohls	SDG&E-08 Pipeline Safety Enhancement Plan (PSEP)	N/A	N/A	SDG&E-08-WP-S, V, Public Pipeline Safety Enhancement Plan (PSEP)	SDG&E-08-WP-S, V, Public Pipeline Safety Enhancement Plan (PSEP)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SDG&E-09-R	Gas Integrity Programs	Amy Kitson and Travis Sera	SDG&E-09-R Gas Integrity Programs	SDG&E-09-WP-R Gas Integrity Programs	SDG&E-09-WP-R Gas Integrity Programs	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SDG&E-10	Energy Procurement	Christopher Summers	SDG&E-10 Energy Procurement	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SDG&E-11-R	Electric Distribution	Olivia Reyes	SDG&E-11-R Electric Distribution Capital	N/A	SDG&E-11-WP-R Electric Distribution Capital	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SDG&E-12-R	Electric Distribution-O&M	Tyson Swetick	SDG&E-12-R-E Electric Distribution O&M	SDG&E-12-WP-R Electric Distribution O&M	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SDG&E-13-2R	Electric Distributions Wildfire Mitigation and Vegetation Management	Johnathan Woldeniarum	SDG&E-13-2R-E Electric Distribution, Wildfire Mitigation and Vegetation Management	N/A	SDG&E-13-WP-2R-E Electric Distribution, Wildfire Mitigation and Vegetation Management	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SDG&E-14	Electric Generation	Daniel S Baerman	SDG&E-14-E Electric Generation	SDG&E-14-WP-E Electric Generation	SDG&E-14-WP-E Electric Generation	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SDG&E-15-R	Clean Energy Innovations	Fernando Valero	SDG&E-15-R-E Clean Energy Innovations	N/A	SDG&E-15-WP-R-E Public Clean Energy Innovations	SDG&E-15-WP-S, V, Public Clean Energy Innovations	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SDG&E-16	Customer Information System Replacement Policy	Therese C Sacco	SDG&E-16 Customer Information System Replacement Policy	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SDG&E-17-R	Customer Services-Field and Advanced Meter Operations	David H Thai	SDG&E-17-R Customer Services Field and Advanced Meter Operations	N/A	SDG&E-17-WP-R Customer Services Field and Advanced Meter Operations	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SDG&E-18	Customer Services-Office Operations	Sandra F Baule	SDG&E-18-E Customer Services Office Operations	N/A	SDG&E-18-WP-R Customer Services Office Operations	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SDG&E-18-S	Customer Services-Office Supplemental	Sandra F Baule	SDG&E-18-S Customer Services Office Operations	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SDG&E-19	Customer Services-Information	Sandra F Baule	SDG&E-19-E Customer Services Information	N/A	SDG&E-19-WP-E Customer Services Information	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SDG&E-20	Supply Management Logistics and Supplier Diversity	Daniel Castillo	SDG&E-20 Supply Management Logistics and Supplier Diversity	N/A	SDG&E-20-WP-E Supply Management Logistics and Supplier Diversity	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SDG&E-21	Clean Transportation	Jennifer Reynolds	SDG&E-21 Clean Transportation	N/A	SDG&E-21-WP Clean Transportation	SDG&E-21-CWP Clean Transportation	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SDG&E-22-R	Fleet Services	Arthur Alvarez	SDG&E-22-R-E Fleet Services	N/A	SDG&E-22-WP-R-E Fleet Services	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SDG&E-23	Real Estate Land Services and Facility Operations	Dale Tattersall	SDG&E-23 Real Estate Land Services and Facility Operations	N/A	SDG&E-23-WP Real Estate Land Services and Facility Operations	SDG&E-23-CWP Real Estate Land Services and Facility Operations	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SDG&E-24	Environmental Services and San Onofre Nuclear Generations Station-SOFG	Brittany Applestein Szyz	SDG&E-24 Environmental Services and San Onofre Nuclear Generations Station-SOFG	N/A	SDG&E-24-WP Environmental Services and San Onofre Nuclear Generations Station-SOFG	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SDG&E-25	Information Technology	Ben W Gordon, Tia L Ballard and William J Exon	SDG&E-25 Information Technology	N/A	SDG&E-25-WP Information Technology	SDG&E-25-CWP Information Technology	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SDG&E-26-R	Cybersecurity	Lance Mueller	SDG&E-26-R Cybersecurity	N/A	SDG&E-26-WP Cybersecurity	SDG&E-26-CWP Cybersecurity	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SCG-23-R/SDG&E-27-R	Corporate Center-General Administration	Derrick R Cooper	SCG-23-R-E/SDG&E-27-R-E Corporate Center General Administration	N/A	SCG-23-WP-R-E/SDG&E-27-WP-R-E Corporate Center General Administration	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SCG-24/SDG&E-28	Corporate Center-Insurance	Dennis J Gaughan	SCG-24/SDG&E-28 Corporate Center Insurance	N/A	SCG-24-WP/SDG&E-28-WP Corporate Center Insurance	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SCG-25-R/SDG&E-29-R	Corporate Center-Compensation and Benefits	Debbie S Robinson	SCG-25-R-E/SDG&E-29-R-E Corporate Center Compensation and Benefits	N/A	SCG-25-WP-R-E/SDG&E-29-WP-R-E Corporate Center Compensation and Benefits	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SCG-26/SDG&E-30	Pension and Post Retirement Benefits Other Than Pension	Peter H Andersen	SCG-26/SDG&E-30 Pension and Post Retirement Benefits Other Than Pension	N/A	SCG-26-WP/SDG&E-30-WP Pension and Post Retirement Benefits Other Than Pension	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SCG-30-R/SDG&E-34-R	Shared Services Billing Segregation and Capital Reassessments	Angel N Le and Paul D Main	SDG&E-30-R Shared Services Billing Segregation and Capital Reassessments	N/A	SDG&E-30-WP-R Shared Services Billing Segregation and Capital Reassessments	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SDG&E-31-R	Safety and Risk Management Systems	Kenneth J Deremer	SDG&E-31-R-E Safety and Risk Management Systems	N/A	SDG&E-31-WP-R-E Safety and Risk Management Systems	SDG&E-31-CWP-E Safety and Risk Management Systems	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SDG&E-32	People and Culture	Alexandra G Taylor	SDG&E-32 People and Culture	N/A	SDG&E-32-WP People and Culture	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SDG&E-33-R	Administrative and General	Rajan Agarwal	SDG&E-33-R-E Administrative and General	N/A	SDG&E-33-WP-R-E Administrative and General	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SDG&E-34-R	State Base	Steven P Dais	SDG&E-34-R State Base	N/A	SDG&E-34-WP-R State Base	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SDG&E-36-R	Depreciation	Dane A Watson	SDG&E-36-R Depreciation	N/A	SDG&E-36-WP-R Depreciation	SDG&E-36-CWP-R Depreciation	SDG&E-36-WP-V, V.1 Depreciation	SDG&E-36-WP-V, V.2 Depreciation	SDG&E-36-WP-V, V.3 Depreciation	SDG&E-36-WP-V, V.4 Depreciation	SDG&E-36-WP-V, V.5 Depreciation	SDG&E-36-WP-V, V.6 Depreciation	SDG&E-36-WP-V, V.7 Depreciation	SDG&E-36-WP-V, V.8 Depreciation	SDG&E-36-WP-V, V.9 Depreciation	SDG&E-36-WP-V, V.10 Depreciation	SDG&E-36-WP-V, V.11 Depreciation	SDG&E-36-WP-V, V.12 Depreciation	SDG&E-36-WP-V, V.13 Depreciation
SDG&E-37-R	Tax	Ragan G Reeves	SDG&E-37-R Tax	N/A	SDG&E-37-WP-R Tax	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
SDG&E-38-R	Working Cash	Jack M Guiffi	SDG&E-38-R Working Cash	N/A	SDG&E-38-WP-R Working Cash	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	

SDG&E-39	Gas Customer Forecast	Scott Wilder	<a href="#">SDG&amp;E-39 Gas Customer Forecast</a>	<a href="#">SDG&amp;E-39 W.P. Gas Customer Forecast</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SDG&E-40	Electric Customer Forecast	Kenneth E Schiermeyer	<a href="#">SDG&amp;E-40 Electric Customer Forecast</a>	<a href="#">SDG&amp;E-40 W.P. Electric Customer Forecast</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SDG&E-41	Cost Escalation	Scott Wilder	<a href="#">SDG&amp;E-41 Cost Escalation</a>	<a href="#">SDG&amp;E-41 W.P. Cost Escalation</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SDG&E-42-R	Miscellaneous Revenues	Christine Fisher	<a href="#">SDG&amp;E-42-R Miscellaneous Revenues</a>	<a href="#">SDG&amp;E-42 W.P.R. Miscellaneous Revenues</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SDG&E-43-R	Regulatory Accounts	Jason Kupfersmid	<a href="#">SDG&amp;E-43-R Regulatory Accounts</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SDG&E-44-R	Summary of Earnings	Ryan Hom	<a href="#">SDG&amp;E-44-R Summary of Earnings</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SDG&E-45-R	Post-Test Year Ratemaking	Melanie E Hancock	<a href="#">SDG&amp;E-45-R Post-Test Year Ratemaking</a>	<a href="#">SDG&amp;E-45 W.P.R. Post-Test Year Ratemaking</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-40-S/ SDG&E-45-S	Post-Test Year Ratemaking	Khai Nguyen and Melanie E Hancock	<a href="#">SCG-40-S/SDG&amp;E-45-S Post-Test Year Ratemaking</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SCG-41/ SDG&E-46	Compliance	Lauren Godinez Frazer	<a href="#">SCG-41/SDG&amp;E-46 Compliance</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SDG&E-47-R	Gas Rates	Sharim B Chaudhury	<a href="#">SDG&amp;E-47-R Gas Rates</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SDG&E-48-R	Electric Rates	Jeff Stein	<a href="#">SDG&amp;E-48-R Electric Rates</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SDG&E-49-S	Wildfire Mitigation and Vegetation Management Strategy	Kevin C Geraghty	<a href="#">SDG&amp;E-49-S Wildfire Mitigation and Vegetation Management Strategy</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SDG&E-50-S	Affordability Metrics-Electric	Rachelle R Bacz	<a href="#">SDG&amp;E-50-S Affordability Metrics-Electric</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SDG&E-51-S	Affordability Metrics-Gas	Sharim Chaudhury	<a href="#">SDG&amp;E-51-S Affordability Metrics-Gas</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SDG&E-52	Updated Results of Operations	Ryan Hom	<a href="#">SDG&amp;E-52 Updated Results of Operations</a>	<a href="#">SDG&amp;E-52 Updated Results of Operations</a>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A