

Application of SAN DIEGO GAS & ELECTRIC )  
COMPANY for authority to update its gas and )  
electric revenue requirement and base rates )  
effective January 1, 2024 (U 902-M) )

Application No. 22-05-016

Exhibit No.: (SDG&E-12-WP-R)

REVISED WORKPAPERS TO  
PREPARED DIRECT TESTIMONY  
OF TYSON J. SWETEK  
ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY

BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA

AUGUST 2022



**2024 General Rate Case - REVISED  
INDEX OF WORKPAPERS**

**Exhibit SDG&E-12-WP-R - ELECTRIC DISTRIBUTION**

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**Overall Summary For Exhibit No. SDG&E-12-WP-R**

<b>Area:</b>	<b>ELECTRIC DISTRIBUTION</b>
<b>Witness:</b>	<b>Tyson J. Swetek</b>

Description	In 2021 \$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
<b>Non-Shared Services</b>	110,831	131,169	138,006	132,716
<b>Shared Services</b>	0	0	0	0
<b>Total</b>	<b>110,831</b>	<b>131,169</b>	<b>138,006</b>	<b>132,716</b>

*Note: Totals may include rounding differences.*

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek

**Summary of Non-Shared Services Workpapers:**

Description	In 2021 \$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
A. Reliability and Capacity	2,313	2,180	2,341	2,461
B. Construction Management	4,056	4,043	4,043	4,043
C. Electric System Operations	31,073	38,913	43,761	41,948
D. Kearny Operations Services	2,235	2,132	2,179	2,179
E. ET&D: Substation C&O	10,362	9,039	9,370	9,517
F. Distribution Design and Project Management	820	1,239	1,305	1,305
G. Electric Regional Operations	35,359	36,579	38,121	40,767
H. Skills & Compliance Training	2,839	3,829	3,829	3,829
I. Service Order Team (SOT)	4,061	4,069	4,069	4,069
J. Electric Engineering	2,084	2,460	2,494	2,503
K. Troubleshooting	9,634	9,634	9,634	9,634
L. Portfolio & Project Management	487	491	503	512
M. Compliance Management	3,061	13,886	13,682	7,274
N. Officer	1,287	1,287	1,287	1,287
O. Regional Public Affairs	1,160	1,388	1,388	1,388
<b>Total</b>	<b>110,831</b>	<b>131,169</b>	<b>138,006</b>	<b>132,716</b>

*Note: Totals may include rounding differences.*

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: A. Reliability and Capacity  
 Workpaper: 1ED001.000

**Summary for Category: A. Reliability and Capacity**

	In 2021\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	1,405	1,442	1,603	1,723
Non-Labor	907	738	738	738
NSE	0	0	0	0
<b>Total</b>	<b>2,312</b>	<b>2,180</b>	<b>2,341</b>	<b>2,461</b>
FTE	13.5	13.7	15.3	16.5

**Workpapers belonging to this Category:**

**1ED001.000 Reliability and Capacity**

Labor	1,405	1,442	1,603	1,723
Non-Labor	907	738	738	738
NSE	0	0	0	0
<b>Total</b>	<b>2,312</b>	<b>2,180</b>	<b>2,341</b>	<b>2,461</b>
FTE	13.5	13.7	15.3	16.5

*Note: Totals may include rounding differences.*

**Beginning of Workpaper**  
**1ED001.000 - Reliability and Capacity**

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek  
Category: A. Reliability and Capacity  
Category-Sub: 1. Reliability and Capacity  
Workpaper: 1ED001.000 - Reliability and Capacity

**Activity Description:**

Distribution Planning performs operational activities in support of operations and maintenance of the electric distribution system. This group forecasts, plans, and designs the electric distribution system to serve customers with safe and reliable electric energy. Electric distribution system load increases come from new customer connections to the system and increased loads from existing customers. Customer load growth drives the installation of new and upgraded facilities, circuits, and substations. Other functions are advising on generation interconnections and managing all aspects correlated with the Distribution Resources Planning (DRP) process (for more references to this process see my Testimony). Distribution Planning supports the design of the electric distribution system and construction of electric facilities to connect new customers to SDG&E's system and ultimately increase the capacity of the electric distribution system infrastructure to support both new load and DER throughout the service territory. The Reliability Team is responsible for reviewing, coding, and auditing outage information to enable correct classification, duration, customer counts, and indices. This team leads root cause analysis for unplanned, primary outages. This team also maintains the official data repository for outage data, known as the Reliability Database, which is the foundation for data reporting to internal and external entities. Other responsibilities include responding to customer inquiries related to outage information for their account(s) and supporting CPUC reporting requirements. It is not possible to identify a single work unit due to multiple activities in this workpaper such as monitoring, forecasting, responding to utilization of the electric distribution system, root cause analysis, outage reporting, etc.

**Forecast Explanations:**

**Labor - 3-YR Average**

The forecast method developed for this cost category is three year average. This method, along with including incremental adjustments, is most appropriate because a multi-year average accounts for recent year-to-year variation, while the three-year average represents the growth trends in generation interconnections and increasing complexity of interconnections (e.g. significantly more batteries paired with rooftop solar). As the work in this area has shifted more to generation interconnection projects, the labor allocations were reviewed and adjusted to reflect the change in work. Rising O&M costs associated with generation interconnection projects are offset by interconnection fees received as miscellaneous revenue.

**Non-Labor - 3-YR Average**

The forecast method developed for this cost category is three year average. This method, along with including incremental adjustments, is most appropriate because a multi-year average accounts for recent year-to-year variation, while the three-year average represents the growth trends in generation interconnections and increasing complexity of interconnections (e.g. significantly more batteries paired with rooftop solar). Rising O&M costs associated with generation interconnection projects are offset by interconnection fees received as miscellaneous revenue.

**NSE - 3-YR Average**

N/A

*Note: Totals may include rounding differences.*



San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: A. Reliability and Capacity  
 Category-Sub: 1. Reliability and Capacity  
 Workpaper: 1ED001.000 - Reliability and Capacity

**Summary of Results:**

		<b>In 2021\$ (000) Incurred Costs</b>								
		<b>Adjusted-Recorded</b>					<b>Adjusted-Forecast</b>			
<b>Years</b>		<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	
Labor		588	244	1,205	1,308	1,405	1,442	1,603	1,723	
Non-Labor		402	480	503	775	907	738	738	738	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>990</b>	<b>725</b>	<b>1,707</b>	<b>2,083</b>	<b>2,313</b>	<b>2,180</b>	<b>2,341</b>	<b>2,461</b>	
FTE		5.5	2.2	11.4	12.2	13.5	13.7	15.3	16.5	

*Note: Totals may include rounding differences.*

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: A. Reliability and Capacity  
 Category-Sub: 1. Reliability and Capacity  
 Workpaper: 1ED001.000 - Reliability and Capacity

**Summary of Adjustments to Forecast:**

In 2021 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	3-YR Average	1,306	1,306	1,306	136	297	417	1,442	1,603	1,723
Non-Labor	3-YR Average	728	728	728	10	10	10	738	738	738
NSE	3-YR Average	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>2,034</b>	<b>2,034</b>	<b>2,034</b>	<b>146</b>	<b>307</b>	<b>427</b>	<b>2,180</b>	<b>2,341</b>	<b>2,461</b>
FTE	3-YR Average	12.3	12.3	12.3	1.4	3.0	4.2	13.7	15.3	16.5

**Forecast Adjustment Details:**

Year	Labor	NLbr	NSE	Total	FTE	Adj Type
2022	0	10	0	10	0.0	1-Sided Adj
<b>Explanation:</b>	Annual Synergi training - The Synergi software that we utilize implements new revisions and features every year. We also have new engineers and associates joining our team every year. There are also new BU's that are starting to utilize Synergi such as SPACE and the districts that will need training. This training allows an unlimited number of seats to attend and will cover all of the existing and future features and revisions of the software. The cost of this annual training is reflective of just sending 2 to 3 individuals to in person training. It presents SDG&E with significant cost savings while ensuring our staff is fully trained on the Synergi software.					
2022	10	0	0	10	0.1	1-Sided Adj
<b>Explanation:</b>	Engineering salary market adjustment triggered by challenges retaining and attracting skilled employees due to market wide resource shortages and demand for skilled workers.					
2022	126	0	0	126	1.3	1-Sided Adj
<b>Explanation:</b>	Please see supplemental workpapers for detailed explanation.					
<b>2022 Total</b>	<b>136</b>	<b>10</b>	<b>0</b>	<b>146</b>	<b>1.4</b>	
2023	0	10	0	10	0.0	1-Sided Adj
<b>Explanation:</b>	Annual Synergi training - The Synergi software that we utilize implements new revisions and features every year. We also have new engineers and associates joining our team every year. There are also new BU's that are starting to utilize Synergi such as SPACE and the districts that will need training. This training allows an unlimited number of seats to attend and will cover all of the existing and future features and revisions of the software. The cost of this annual training is reflective of just sending 2 to 3 individuals to in person training. It presents SDG&E with significant cost savings while ensuring our staff is fully trained on the Synergi software.					
2023	10	0	0	10	0.1	1-Sided Adj
<b>Explanation:</b>	Engineering salary market adjustment triggered by challenges retaining and attracting skilled employees due to market wide resource shortages and demand for skilled workers.					
2023	287	0	0	287	2.9	1-Sided Adj
<b>Explanation:</b>	Please see supplemental workpapers for detailed explanation.					
<b>2023 Total</b>	<b>297</b>	<b>10</b>	<b>0</b>	<b>307</b>	<b>3.0</b>	

Note: Totals may include rounding differences.

SDG&E/ELECTRIC DISTRIBUTION/Exh No:SDG&E-12-WP-R/Witness: T. Swetek

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: A. Reliability and Capacity  
 Category-Sub: 1. Reliability and Capacity  
 Workpaper: 1ED001.000 - Reliability and Capacity

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj_Type</u>
2024	0	10	0	10	0.0	1-Sided Adj
<b>Explanation:</b>	Annual Synergi training - The Synergi software that we utilize implements new revisions and features every year. We also have new engineers and associates joining our team every year . There are also new BU's that are starting to utilize Synergi such as SPACE and the districts that will need training . This training allows an unlimited number of seats to attend and will cover all of the existing and future features and revisions of the software. The cost of this annual training is reflective of just sending 2 to 3 individuals to in person training. It presents SDG&E with significant cost savings while ensuring our staff is fully trained on the Synergi software.					
2024	10	0	0	10	0.1	1-Sided Adj
<b>Explanation:</b>	Engineering salary market adjustment triggered by challenges retaining and attracting skilled employees due to market wide resource shortages and demand for skilled workers.					
2024	407	0	0	407	4.1	1-Sided Adj
<b>Explanation:</b>	Please see supplemental workpapers for detailed explanation.					
<b>2024 Total</b>	<b>417</b>	<b>10</b>	<b>0</b>	<b>427</b>	<b>4.2</b>	

Note: Totals may include rounding differences.

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek  
Category: A. Reliability and Capacity  
Category-Sub: 1. Reliability and Capacity  
Workpaper: 1ED001.000 - Reliability and Capacity

**Determination of Adjusted-Recorded (Incurred Costs):**

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	480	216	1,110	1,224	1,222
Non-Labor	352	439	482	907	930
NSE	0	0	0	0	0
<b>Total</b>	<b>832</b>	<b>655</b>	<b>1,592</b>	<b>2,131</b>	<b>2,152</b>
FTE	4.9	2.0	10.7	11.3	11.6
<b>Adjustments (Nominal \$) **</b>					
Labor	-22	-21	-114	-113	0
Non-Labor	0	-5	-17	-191	-22
NSE	0	0	0	0	0
<b>Total</b>	<b>-22</b>	<b>-26</b>	<b>-131</b>	<b>-304</b>	<b>-22</b>
FTE	-0.2	-0.2	-0.9	-0.9	0.0
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	458	195	996	1,110	1,222
Non-Labor	352	434	466	716	907
NSE	0	0	0	0	0
<b>Total</b>	<b>810</b>	<b>629</b>	<b>1,461</b>	<b>1,827</b>	<b>2,129</b>
FTE	4.7	1.9	9.8	10.4	11.5
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	68	30	143	157	184
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>68</b>	<b>30</b>	<b>143</b>	<b>157</b>	<b>184</b>
FTE	0.8	0.3	1.6	1.8	2.0
<b>Escalation to 2021\$</b>					
Labor	61	19	66	41	0
Non-Labor	51	46	37	59	0
NSE	0	0	0	0	0
<b>Total</b>	<b>112</b>	<b>66</b>	<b>103</b>	<b>99</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2021\$)</b>					
Labor	588	244	1,205	1,308	1,405
Non-Labor	402	480	503	775	907
NSE	0	0	0	0	0
<b>Total</b>	<b>990</b>	<b>725</b>	<b>1,707</b>	<b>2,083</b>	<b>2,313</b>
FTE	5.5	2.2	11.4	12.2	13.5

\* After company-wide exclusions of Non-GRC costs

\*\* Refer to "Detail of Adjustments to Recorded" page for line item adjustments

Note: Totals may include rounding differences.

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: A. Reliability and Capacity  
 Category-Sub: 1. Reliability and Capacity  
 Workpaper: 1ED001.000 - Reliability and Capacity

**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs					
Years	2017	2018	2019	2020	2021
Labor	-22	-21	-114	-113	0
Non-Labor	0	-5	-17	-191	-22
NSE	0	0	0	0	0
<b>Total</b>	<b>-22</b>	<b>-26</b>	<b>-131</b>	<b>-304</b>	<b>-22</b>
FTE	-0.2	-0.2	-0.9	-0.9	0.0

**Detail of Adjustments to Recorded:**

Year	Labor	NLbr	NSE	FTE	Adj Type
2017	-22	0	0	-0.2	CCTR Transf To 2100-4111.000
<b>Explanation:</b>	Transfer labor and FTE for Cust Genr Team Ld from CC 2100-0124 in workpaper group 1ED001 Reliability and Capacity to CC 2100-4111 in workpaper group 1N002.000 Customer Programs and Business Services to align costs with where roles reside and are forecasted.				
<b>2017 Total</b>	<b>-22</b>	<b>0</b>	<b>0</b>	<b>-0.2</b>	
2018	-21	0	0	-0.2	CCTR Transf To 2100-4111.000
<b>Explanation:</b>	Transfer labor and FTE for Cust Genr Team Ld from CC 2100-0124 in workpaper group 1ED001 Reliability and Capacity to CC 2100-4111 in workpaper group 1N002.000 Customer Programs and Business Services to align costs with where roles reside and are forecasted.				
2018	0	-3	0	0.0	CCTR Transf To 2100-0076.000
<b>Explanation:</b>	Transfer Non-Labor associated with contract lineman for CC 2100-0122 in workpaper 1ED001 Reliability and Capacity to CC 2100-0076 in workpaper 1ED008.000 Electric Regional Operations to align costs with where roles reside and are forecasted.				
2018	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment to exclude \$86 related to Events and Tickets.				
2018	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
<b>2018 Total</b>	<b>-21</b>	<b>-5</b>	<b>0</b>	<b>-0.2</b>	
2019	-114	0	0	-0.9	CCTR Transf To 2100-4111.000
<b>Explanation:</b>	Transfer labor and FTE for Cust Genr Team Ld from CC 2100-0124 in workpaper group 1ED001 Reliability and Capacity to CC 2100-4111 in workpaper group 1N002.000 Customer Programs and Business Services to align costs with where roles reside and are forecasted.				
2019	0	-16	0	0.0	CCTR Transf To 2100-0076.000

*Note: Totals may include rounding differences.*

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: A. Reliability and Capacity  
 Category-Sub: 1. Reliability and Capacity  
 Workpaper: 1ED001.000 - Reliability and Capacity

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Transfer Non-Labor associated with contract lineman for CC 2100-0122 in workpaper 1ED001 Reliability and Capacity to CC 2100-0076 in workpaper 1ED008.000 Electric Regional Operations to align costs with where roles reside and are forecasted.				
2019	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment to exclude \$1154 related to Events and Tickets.				
<b>2019 Total</b>	<b>-114</b>	<b>-17</b>	<b>0</b>	<b>-0.9</b>	
2020	0	-10	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-3	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-9	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-2	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-113	0	0	-0.9	CCTR Transf To 2100-4111.000
<b>Explanation:</b>	Transfer labor and FTE for Cust Genr Team Ld from CC 2100-0124 in workpaper group 1ED001 Reliability and Capacity to CC 2100-4111 in workpaper group 1N002.000 Customer Programs and Business Services to align costs with where roles reside and are forecasted.				
2020	0	-155	0	0.0	CCTR Transf To 2100-0076.000
<b>Explanation:</b>	Transfer Non-Labor associated with contract lineman for CC 2100-0122 in workpaper 1ED001 Reliability and Capacity to CC 2100-0076 in workpaper 1ED008.000 Electric Regional Operations to align costs with where roles reside and are forecasted.				
2020	0	-11	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided transfer for Non-Labor associated with capital engineering for CC 2100-0122 in workpaper 1ED001 Reliability and Capacity to the Distribution Capital Pool to align activity where costs reside.				
<b>2020 Total</b>	<b>-113</b>	<b>-191</b>	<b>0</b>	<b>-0.9</b>	
2021	0	-9	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-4	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				

Note: Totals may include rounding differences.

San Diego Gas & Electric Company  
 2024 GRC - REVISED  
 Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: A. Reliability and Capacity  
 Category-Sub: 1. Reliability and Capacity  
 Workpaper: 1ED001.000 - Reliability and Capacity

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
2021	0	-8	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
<b>2021 Total</b>	<b>0</b>	<b>-22</b>	<b>0</b>	<b>0.0</b>	

*Note: Totals may include rounding differences.*

**Supplemental Workpapers for Workpaper 1ED001.000**



San Diego Gas & Electric Company

TY2024 GRC FORECAST - DETAILS

2024 GRC - REVISED

Non-Shared Service Workpapers

Initiative/Description	Labor Non-Labor	Non-RAMP	Rate (ea./ft./mile)	Split	2022			2023			2024			Total Cost	Explanation
					# of units	Cost per unit	Total cost	# of units	Cost per unit	Total cost	# of units	Cost per unit	Total cost		
DER Interconnection Workload Demands and Compliance Projects - Engr II	Labor	Non-Ramp	FTE	1%	1	\$ 99,000	\$ 743	1	\$ 99,000	\$ 990	1	\$ 99,000	\$ 990	\$ 2,723	Adds Engineer II in 2022 assuming April hire date (1 FTE * \$99K * 9/12 months * 1% O&M), in support of DRP and High DER proceedings which include new processes and mandates to support ICA, Generation Interconnection and the Distribution Planning Process.
DER Interconnection Workload Demands and Compliance Projects - Distribution Policy Manager	Labor	Non-Ramp	FTE	1%	1	\$ 147,000	\$ 490	1	\$ 147,000	\$ 1,470	1	\$ 147,000	\$ 1,470	\$ 3,430	Adds Distribution Policy Manager in 2022 assuming September hire date (1 FTE * \$147K * 4/12 months * 1% O&M), in support of DRP and High DER proceedings which include new processes and mandates to support ICA, Generation Interconnection and the Distribution Planning Process.
DER Interconnection Workload Demands and Compliance Projects - Dist Planning Proj Mgr	Labor	Non-Ramp	FTE	1%	1	\$ 128,000	\$ 960	1	\$ 128,000	\$ 1,280	1	\$ 128,000	\$ 1,280	\$ 3,520	Adds Distribution Planning Project Manager in 2022 assuming April hire date (1 FTE * \$128K * 9/12 months * 1% O&M), in support of DRP and High DER proceedings which include new processes and mandates to support ICA, Generation Interconnection and the Distribution Planning Process.
DER Interconnection Workload Demands and Compliance Projects - DER Principal Engineer	Labor	Non-Ramp	FTE	1%	1	\$ 144,000	\$ 1,080	1	\$ 144,000	\$ 1,440	1	\$ 144,000	\$ 1,440	\$ 3,960	Adds DER Principal Engineer in 2022 assuming April hire date (1 FTE * \$144K * 9/12 months * 1% O&M), in support of DRP and High DER proceedings which include new processes and mandates to support ICA, Generation Interconnection and the Distribution Planning Process.
DER Interconnection Workload Demands and Compliance Projects - Dist Planning Proj Mgr	Labor	Non-Ramp	FTE	1%			\$ -	1	\$ 128,000	\$ 960	1	\$ 128,000	\$ 1,280	\$ 2,240	Adds Distribution Planning Project Manager in 2023 assuming April hire date (1 FTE * \$128K * 9/12 months * 1% O&M), in support of DRP and High DER proceedings which include new processes and mandates to support ICA, Generation Interconnection and the Distribution Planning Process.
DER Interconnection Workload Demands and Compliance Projects - Dist Planning Proj Mgr	Labor	Non-Ramp	FTE	1%			\$ -	1	\$ 128,000	\$ 427	1	\$ 128,000	\$ 1,280	\$ 1,707	Adds Distribution Planning Project Manager in 2023 assuming September hire date (1 FTE * \$128K * 4/12 months * 1% O&M), in support of DRP and High DER proceedings which include new processes and mandates to support ICA, Generation Interconnection and the Distribution Planning Process.
DER Interconnection Workload Demands and Compliance Projects - Distribution Planning Engineer	Labor	Non-Ramp	FTE	1%			\$ -	1	\$ 114,000	\$ 855	1	\$ 114,000	\$ 1,140	\$ 1,995	Adds Distribution Planning Engineer in 2023 assuming April hire date (1 FTE * \$114K * 9/12 months * 1% O&M), in support of DRP and High DER proceedings which include new processes and mandates to support ICA, Generation Interconnection and the Distribution Planning Process.
DER Interconnection Workload Demands and Compliance Projects - Distribution Planning Analyst	Labor	Non-Ramp	FTE	1%			\$ -	1	\$ 99,000	\$ 330	1	\$ 99,000	\$ 990	\$ 1,320	Adds Distribution Planning Analyst in 2023 assuming September hire date (1 FTE * \$99K * 4/12 months * 1% O&M), in support of DRP and High DER proceedings which include new processes and mandates to support ICA, Generation Interconnection and the Distribution Planning Process.
DER Interconnection Workload Demands and Compliance Projects - Dist Planning Proj Mgr	Labor	Non-Ramp	FTE	1%			\$ -			\$ -	1	\$ 128,000	\$ 960	\$ 960	Adds Distribution Planning Project Manager in 2024 assuming April hire date (1 FTE * \$128K * 9/12 months * 1% O&M), in support of DRP and High DER proceedings which include new processes and mandates to support ICA, Generation Interconnection and the Distribution Planning Process.
DER Interconnection Workload Demands and Compliance Projects - Dist Planning Proj Mgr	Labor	Non-Ramp	FTE	1%			\$ -			\$ -	1	\$ 128,000	\$ 427	\$ 427	Adds Distribution Planning Project Manager in 2024 assuming September hire date (1 FTE * \$128K * 4/12 months * 1% O&M), in support of DRP and High DER proceedings which include new processes and mandates to support ICA, Generation Interconnection and the Distribution Planning Process.
DER Interconnection Workload Demands and Compliance Projects - Distribution Planning Engineer	Labor	Non-Ramp	FTE	1%			\$ -			\$ -	1	\$ 114,000	\$ 855	\$ 855	Adds Distribution Planning Engineer in 2024 assuming April hire date (1 FTE * \$114K * 9/12 months * 1% O&M), in support of DRP and High DER proceedings which include new processes and mandates to support ICA, Generation Interconnection and the Distribution Planning Process.
DER Interconnection Workload Demands and Compliance Projects - Customer Generation DER Project Mgr II	Labor	Non-Ramp	FTE	94%	1	\$ 128,000	\$ 90,240	1	\$ 128,000	\$ 120,320	1	\$ 128,000	\$ 120,320	\$ 330,880	Adds Customer Generation DER Project Mgr II in 2022 assuming April hire date (1 FTE * \$128K * 9/12 months * 94% O&M), in support of rapid increases in large, complex Rule 21 & WDAT DER interconnection applications. In addition to Rule 21, Microgrid OIR, ELRP, and NEM regulatory proceedings which include new processes and mandates to support DER Interconnections as well as new annual audit/reports, data requests, and stakeholder forums.
DER Interconnection Workload Demands and Compliance Projects - Customer Generation Project Managers	Labor	Non-Ramp	FTE	94%			\$ -	1	\$ 128,000	\$ 30,080	1	\$ 128,000	\$ 120,320	\$ 150,400	Adds Customer Generation Project Manager in 2023 assuming October hire date (1 FTE * \$128K * 3/12 months * 94% O&M), in support of rapid increases in large, complex Rule 21 & WDAT DER interconnection applications. In addition to Rule 21, Microgrid OIR, ELRP, and NEM regulatory proceedings which include new processes and mandates to support DER Interconnections as well as new annual audit/reports, data requests, and stakeholder forums.
DER Interconnection Workload Demands and Compliance Projects - Customer Generation Business Advisor	Labor	Non-Ramp	FTE	100%	1	\$ 129,000	\$ 32,250	1	\$ 129,000	\$ 129,000	1	\$ 129,000	\$ 129,000	\$ 290,250	Adds Customer Generation Business Advisor II in 2022 assuming October hire date (1 FTE * \$129K * 3/12 months * 100% O&M), in support of rapid increases in large, complex Rule 21 & WDAT DER interconnection applications. In addition to Rule 21, Microgrid OIR, ELRP, and NEM regulatory proceedings which include new processes and mandates to support DER Interconnections as well as new annual audit/reports, data requests, and stakeholder forums.
DER Interconnection Workload Demands and Compliance Projects - Customer Generation Tariff Policy & Compliance Advisor	Labor	Non-Ramp	FTE	100%			\$ -			\$ -	1	\$ 99,000	\$ 24,750	\$ 24,750	Adds Customer Generation Tariff Policy & Compliance Advisor in 2024 assuming October hire date (1 FTE * \$99K * 3/12 months * 100% O&M), in support of rapid increases in large, complex Rule 21 & WDAT DER interconnection applications. In addition to Rule 21, Microgrid OIR, ELRP, and NEM regulatory proceedings which include new processes and mandates to support DER Interconnections as well as new annual audit/reports, data requests, and stakeholder forums.
	Labor					\$ 125,763			\$ 287,152			\$ 406,502	\$ 819,416		

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek  
Category: B. Construction Management  
Workpaper: 1ED002.000

**Summary for Category: B. Construction Management**

	In 2021\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	151	206	206	206
Non-Labor	3,905	3,837	3,837	3,837
NSE	0	0	0	0
<b>Total</b>	<b>4,056</b>	<b>4,043</b>	<b>4,043</b>	<b>4,043</b>
FTE	1.5	1.9	1.9	1.9

**Workpapers belonging to this Category:**

**1ED002.000 Construction Management**

Labor	151	206	206	206
Non-Labor	3,905	3,837	3,837	3,837
NSE	0	0	0	0
<b>Total</b>	<b>4,056</b>	<b>4,043</b>	<b>4,043</b>	<b>4,043</b>
FTE	1.5	1.9	1.9	1.9

*Note: Totals may include rounding differences.*

**Beginning of Workpaper**  
**1ED002.000 - Construction Management**

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek  
Category: B. Construction Management  
Category-Sub: 1. Construction Management  
Workpaper: 1ED002.000 - Construction Management

**Activity Description:**

Construction Management provides oversight of all construction performed by Contractors on the electric distribution system. This oversight promotes all work being built to SDG&E engineering, design, and safety standards and in accordance with GO 95 and GO 128 rules for construction. The O&M portion of construction work conducted by Construction Management includes O&M activities associated with completing construction of capital projects, installation and removal of transformers, and repairs and management of street lighting. The Construction Management group is responsible for administrative activities associated with capital construction work, and also supports the Corrective Maintenance Program by monitoring and tracking those jobs which are constructed by contractors. No single work unit is identifiable for this workpaper due to the variety of activities performed, as described above.

**Forecast Explanations:**

**Labor - 3-YR Average**

The labor costs in this workpaper utilize a Three-Year Average forecast methodology. Labor costs include the O&M portion of multiple employees whose labor costs are split among various plan categories. The O&M percentage of this labor varies depending on the activities performed by the employees. A three-year average forecast methodology is most appropriate for labor because it accounts for this variation while still representing recent sustained staffing and operating costs that are expected into the foreseeable future.

**Non-Labor - 3-YR Average**

The non-labor costs in this workpaper utilize a Three-Year Average forecast methodology. Non-labor costs are primarily composed of O&M construction costs associated with capital construction, which vary depending upon the capital project and therefore also vary year to year. A three-year average forecast methodology is most appropriate for non-labor because it accounts for this variation while still representing recent sustained costs that are expected into the foreseeable future.

**NSE - 3-YR Average**

N/A

**Summary of Results:**

		In 2021\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2017	2018	2019	2020	2021	2022	2023	2024	
Labor		367	333	299	169	151	207	207	207	
Non-Labor		4,291	4,257	3,527	4,079	3,905	3,838	3,838	3,838	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>4,657</b>	<b>4,590</b>	<b>3,826</b>	<b>4,247</b>	<b>4,056</b>	<b>4,045</b>	<b>4,045</b>	<b>4,045</b>	
FTE		3.6	3.0	2.1	2.2	1.5	1.9	1.9	1.9	

*Note: Totals may include rounding differences.*

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: B. Construction Management  
 Category-Sub: 1. Construction Management  
 Workpaper: 1ED002.000 - Construction Management

**Summary of Adjustments to Forecast:**

In 2021 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	3-YR Average	206	206	206	0	0	0	206	206	206
Non-Labor	3-YR Average	3,837	3,837	3,837	0	0	0	3,837	3,837	3,837
NSE	3-YR Average	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>4,043</b>	<b>4,043</b>	<b>4,043</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,043</b>	<b>4,043</b>	<b>4,043</b>
FTE	3-YR Average	1.9	1.9	1.9	0.0	0.0	0.0	1.9	1.9	1.9

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj Type</u>
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*Note: Totals may include rounding differences.*

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek  
Category: B. Construction Management  
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Workpaper: 1ED002.000 - Construction Management

**Determination of Adjusted-Recorded (Incurred Costs):**

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	178	172	141	1	59
Non-Labor	3,755	3,861	3,259	4,502	3,889
NSE	0	0	0	0	0
<b>Total</b>	<b>3,932</b>	<b>4,033</b>	<b>3,400</b>	<b>4,503</b>	<b>3,948</b>
FTE	1.3	0.6	0.3	0.0	0.3
<b>Adjustments (Nominal \$) **</b>					
Labor	108	94	106	142	72
Non-Labor	-4	-15	7	-731	16
NSE	0	0	0	0	0
<b>Total</b>	<b>104</b>	<b>80</b>	<b>114</b>	<b>-589</b>	<b>89</b>
FTE	1.8	1.9	1.6	1.8	1.0
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	286	266	247	143	132
Non-Labor	3,750	3,847	3,266	3,770	3,905
NSE	0	0	0	0	0
<b>Total</b>	<b>4,036</b>	<b>4,113</b>	<b>3,513</b>	<b>3,913</b>	<b>4,036</b>
FTE	3.1	2.6	1.8	1.8	1.3
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	42	40	35	20	20
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>42</b>	<b>40</b>	<b>35</b>	<b>20</b>	<b>20</b>
FTE	0.5	0.4	0.3	0.4	0.2
<b>Escalation to 2021\$</b>					
Labor	38	26	16	5	0
Non-Labor	541	410	261	308	0
NSE	0	0	0	0	0
<b>Total</b>	<b>579</b>	<b>436</b>	<b>277</b>	<b>314</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2021\$)</b>					
Labor	367	333	299	169	151
Non-Labor	4,291	4,257	3,527	4,079	3,905
NSE	0	0	0	0	0
<b>Total</b>	<b>4,657</b>	<b>4,590</b>	<b>3,826</b>	<b>4,247</b>	<b>4,056</b>
FTE	3.6	3.0	2.1	2.2	1.5

\* After company-wide exclusions of Non-GRC costs

\*\* Refer to "Detail of Adjustments to Recorded" page for line item adjustments

Note: Totals may include rounding differences.

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek  
Category: B. Construction Management  
Category-Sub: 1. Construction Management  
Workpaper: 1ED002.000 - Construction Management

**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs					
Years	2017	2018	2019	2020	2021
Labor	108	94	106	142	72
Non-Labor	-4	-15	7	-731	16
NSE	0	0	0	0	0
<b>Total</b>	<b>104</b>	<b>80</b>	<b>114</b>	<b>-589</b>	<b>89</b>
FTE	1.8	1.9	1.6	1.8	1.0

**Detail of Adjustments to Recorded:**

Year	Labor	NLbr	NSE	FTE	Adj Type
2017	-1	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	0	-2	0	-0.1	CCTR Transf To 2100-4096.000
<b>Explanation:</b>	Transfer labor, FTEs and Non-Labor for Continuous Improvement & Permitting department costs from cost center 2100-0703 in workpaper 1ED002 Construction Management to cost center 2100-4096 in workpaper 1ED007 Distribution Design and Project Management (DPM) to align costs with where roles reside and are forecated.				
2017	-39	-2	0	-0.3	CCTR Transf To 2100-4096.000
<b>Explanation:</b>	Transfer labor, FTEs and Non-Labor for Continuous Improvement & Permitting department costs from cost center 2100-3986 in workpaper 1ED002 Construction Management to cost center 2100-4096 in workpaper 1ED007 Distribution Design and Project Management (DPM) to align costs with where roles reside and are forecated.				
2017	148	0	0	2.3	CCTR Transf From 2100-0009.000
<b>Explanation:</b>	Transfer labor and FTE associated with Lighting Specialists from cost center 2100-0009 in workpaper group 100000 Billing to cost center 2100-0137 in workpaper group 1ED002 Construction Management to align costs with where roles reside and are forecasted.				
<b>2017 Total</b>	<b>108</b>	<b>-4</b>	<b>0</b>	<b>1.8</b>	
2018	0	0	0	0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	0	1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	-4	-8	0	-0.1	CCTR Transf To 2100-4096.000

Note: Totals may include rounding differences.

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek  
Category: B. Construction Management  
Category-Sub: 1. Construction Management  
Workpaper: 1ED002.000 - Construction Management

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Transfer labor, FTEs and Non-Labor for Continuous Improvement & Permitting department costs from cost center 2100-0703 in workpaper 1ED002 Construction Management to cost center 2100-4096 in workpaper 1ED007 Distribution Design and Project Management (DPM) to align costs with where roles reside and are forecated.				
2018	155	0	0	2.4	CCTR Transf From 2100-0009.000
<b>Explanation:</b>	Transfer labor and FTE associated with Lighting Specialists from cost center 2100-0009 in workpaper group 100000 Billing to cost center 2100-0137 in workpaper group 1ED002 Construction Management to align costs with where roles reside and are forecasted.				
2018	-57	-6	0	-0.5	CCTR Transf To 2100-4096.000
<b>Explanation:</b>	Transfer labor, FTEs and Non-Labor for Continuous Improvement & Permitting department costs from cost center 2100-3986 in workpaper 1ED002 Construction Management to cost center 2100-4096 in workpaper 1ED007 Distribution Design and Project Management (DPM) to align costs with where roles reside and are forecated.				
2018	0	-2	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
<b>2018 Total</b>	<b>94</b>	<b>-15</b>	<b>0</b>	<b>1.9</b>	
2019	-1	-3	0	-0.1	CCTR Transf To 2100-4096.000
<b>Explanation:</b>	Transfer labor, FTEs and Non-Labor for Continuous Improvement & Permitting department costs from cost center 2100-0703 in workpaper 1ED002 Construction Management to cost center 2100-4096 in workpaper 1ED007 Distribution Design and Project Management (DPM) to align costs with where roles reside and are forecated.				
2019	-12	-7	0	-0.1	CCTR Transf To 2100-4096.000
<b>Explanation:</b>	Transfer labor, FTEs and Non-Labor for Continuous Improvement & Permitting department costs from cost center 2100-3986 in workpaper 1ED002 Construction Management to cost center 2100-4096 in workpaper 1ED007 Distribution Design and Project Management (DPM) to align costs with where roles reside and are forecated.				
2019	119	17	0	1.8	CCTR Transf From 2100-0009.000
<b>Explanation:</b>	Transfer labor, non-labor and FTE associated with Lighting Specialists from cost center 2100-0009 in workpaper group 100000 Billing to cost center 2100-0137 in workpaper group 1ED002 Construction Management to align costs with where roles reside and are forecasted.				
<b>2019 Total</b>	<b>106</b>	<b>7</b>	<b>0</b>	<b>1.6</b>	
2020	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				

Note: Totals may include rounding differences.



San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: B. Construction Management  
 Category-Sub: 1. Construction Management  
 Workpaper: 1ED002.000 - Construction Management

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
2020	0	-3	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-3	-1	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-4	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	158	32	0	2.2	CCTR Transf From 2100-0009.000
<b>Explanation:</b>	Transfer labor, non-labor and FTE associated with Lighting Specialists from cost center 2100-0009 in workpaper group 100000 Billing to cost center 2100-0137 in workpaper group 1ED002 Construction Management to align costs with where roles reside and are forecasted.				
2020	-4	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-13	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-27	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-3	-673	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-24	0	0.0	CCTR Transf To 2100-4096.000
<b>Explanation:</b>	Transfer Non-Labor for Continuous Improvement & Permitting department costs from cost center 2100-0703 in workpaper 1ED002 Construction Management to cost center 2100-4096 in workpaper 1ED007 Distribution Design and Project Management (DPM) to align costs with where roles reside and are forecasted.				
2020	-6	-16	0	-0.1	CCTR Transf To 2100-4096.000
<b>Explanation:</b>	Transfer labor, FTEs and Non-Labor for Continuous Improvement & Permitting department costs from cost center 2100-3986 in workpaper 1ED002 Construction Management to cost center 2100-4096 in workpaper 1ED007 Distribution Design and Project Management (DPM) to align costs with where roles reside and are forecasted.				
<b>2020 Total</b>	<b>142</b>	<b>-731</b>	<b>0</b>	<b>1.8</b>	
2021	0	-15	0	0.0	1-Sided Adj

Note: Totals may include rounding differences.

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
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Category: B. Construction Management  
Category-Sub: 1. Construction Management  
Workpaper: 1ED002.000 - Construction Management

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	27	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-3	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	96	79	0	1.2	CCTR Transf From 2100-0009.000
<b>Explanation:</b>	Transfer labor, non-labor and FTE associated with Lighting Specialists from cost center 2100-0009 in workpaper group 100000 Billing to cost center 2100-0137 in workpaper group 1ED002 Construction Management to align costs with where roles reside and are forecasted.				
2021	0	-4	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-4	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	-12	-41	0	-0.1	CCTR Transf To 2100-4096.000
<b>Explanation:</b>	Transfer labor, FTEs and Non-Labor for Continuous Improvement & Permitting department costs from cost center 2100-0703 in workpaper 1ED002 Construction Management to cost center 2100-4096 in workpaper 1ED007 Distribution Design and Project Management (DPM) to align costs with where roles reside and are forecasted.				
2021	-12	-21	0	-0.1	CCTR Transf To 2100-4096.000
<b>Explanation:</b>	Transfer labor, FTEs and Non-Labor for Continuous Improvement & Permitting department costs from cost center 2100-3986 in workpaper 1ED002 Construction Management to cost center 2100-4096 in workpaper 1ED007 Distribution Design and Project Management (DPM) to align costs with where roles reside and are forecasted.				

Note: Totals may include rounding differences.

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek  
Category: B. Construction Management  
Category-Sub: 1. Construction Management  
Workpaper: 1ED002.000 - Construction Management

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>2021 Total</b>	<b>72</b>	<b>16</b>	<b>0</b>	<b>1.0</b>	

*Note: Totals may include rounding differences.*

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: B. Construction Management  
 Category-Sub: 1. Construction Management  
 Workpaper: 1ED002.000 - Construction Management

**RAMP Item # 1**

**RAMP Activity**

RAMP Chapter: SDG&E-Risk-8 Incident Involving an Employee

RAMP Line Item ID: C01

RAMP Line Item Name: Mandatory Employee Health and Safety Training Programs and Standardized Policies

Tranche(/s): Tranche1: N/A

**GRC Forecast Cost Estimates (\$000)**

	2021 Historical Embedded Cost (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2024 RAMP Range (2020 Incurred \$)	
					Low	High
Tranche 1 Cost Estimate	3	8	8	8	776	940

**Cost Estimate Changes from RAMP:**

Construction Management 3-yr average RAMP base equals \$8k.

**GRC Work Unit/Activity Level Estimates**

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2024 RAMP Range Activities	
					Low	High
Tranche 1 # of employees	81.00	81.00	81.00	81.00	4,400.00	4,800.00

**Work Unit Changes from RAMP:**

Construction Management portion of RAMP item.

**Risk Spend Efficiency (RSE)**

	GRC RSE	RAMP RSE
Tranche 1	0.000	0.000

**RSE Changes from RAMP:**

General changes to risk scores or RSE values are primarily due to changes in the MAVF and RSE methodology as discussed in the RAMP to GRC integration testimony of R. Scott Pearson and Gregory S. Flores (Ex. SCG-03/SDG&E-03, Chapter 2).

San Diego Gas & Electric Company  
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Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: B. Construction Management  
 Category-Sub: 1. Construction Management  
 Workpaper: 1ED002.000 - Construction Management

**RAMP Item # 2**

**RAMP Activity**

RAMP Chapter: SDG&E-Risk-8 Incident Involving an Employee  
 RAMP Line Item ID: C10  
 RAMP Line Item Name: Personal Protective Equipment  
 Tranche(/s): Tranche1: N/A

**GRC Forecast Cost Estimates (\$000)**

	2021 Historical Embedded Cost (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2024 RAMP Range (2020 Incurred \$)	
					Low	High
Tranche 1 Cost Estimate	6	8	8	8	1,689	2,045

**Cost Estimate Changes from RAMP:**

Construction Mgmt 3-year RAMP base totals \$8k.

**GRC Work Unit/Activity Level Estimates**

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2024 RAMP Range Activities	
					Low	High
Tranche 1 # of employees	81.00	81.00	81.00	81.00	4,600.00	4,800.00

**Work Unit Changes from RAMP:**

Construction Mgmt portion of RAMP item.

**Risk Spend Efficiency (RSE)**

	GRC RSE	RAMP RSE
Tranche 1	0.000	0.000

**RSE Changes from RAMP:**

General changes to risk scores or RSE values are primarily due to changes in the MAVF and RSE methodology as discussed in the RAMP to GRC integration testimony of R. Scott Pearson and Gregory S. Flores (Ex. SCG-03/SDG&E-03, Chapter 2).

San Diego Gas & Electric Company  
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Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek  
Category: C. Electric System Operations  
Workpaper: VARIOUS

**Summary for Category: C. Electric System Operations**

	In 2021\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	3,957	4,300	4,719	4,719
Non-Labor	27,116	34,613	39,042	37,229
NSE	0	0	0	0
<b>Total</b>	<b>31,073</b>	<b>38,913</b>	<b>43,761</b>	<b>41,948</b>
FTE	34.0	37.4	41.6	41.6

**Workpapers belonging to this Category:**

**1ED003.000 Electric System Operations**

Labor	3,042	3,385	3,804	3,804
Non-Labor	27,109	34,606	39,035	37,222
NSE	0	0	0	0
<b>Total</b>	<b>30,151</b>	<b>37,991</b>	<b>42,839</b>	<b>41,026</b>
FTE	21.1	24.5	28.7	28.7

**1ED003.001 Electric System Operations (TNG - GISS)**

Labor	915	915	915	915
Non-Labor	7	7	7	7
NSE	0	0	0	0
<b>Total</b>	<b>922</b>	<b>922</b>	<b>922</b>	<b>922</b>
FTE	12.9	12.9	12.9	12.9

*Note: Totals may include rounding differences.*

**Beginning of Workpaper**  
**1ED003.000 - Electric System Operations**

San Diego Gas & Electric Company  
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Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek  
Category: C. Electric System Operations  
Category-Sub: 1. Electric System Operations  
Workpaper: 1ED003.000 - Electric System Operations

**Activity Description:**

Electric System Operations provides oversight of all activities on the electric system and is required to ensure the safety of both the public and field workers making enhancements and repairs to the electric system. The activities involve planned and unplanned outages, along with managing emergency events related to wildfire safety and system stresses. Being the source provider on situational awareness and workflow management technology to key stakeholders, the Mission Control Center houses several workgroups within Electric Grid Operations and Electric Distribution Operations. One of the essential workgroups for both departments are the operators who are responsible to monitor and maintain the reliability of SDG&E's service territory on a 24/7/365 basis. This workpaper also includes upward pressures that support electric operations, such as operator training, maintenance of SCADA and Advanced Distribution Management systems, Distributed Energy resource enablement and storeroom material and logistics support for construction activities. The data systems that support SDG&E's daily operational workforce are continuously advancing to sustain the integrity of the electric system that is growing through technology and new energy resources. The upsurge trend of Supervisory Control and Data Acquisition (SCADA) technology is continuing to grow in use for wildfire mitigations, visibility into the electric system, and customer energy electrification and the use of distributed energy resources. Training on the new features of technologies and tools is also needed. These cost drivers are detailed in this workpaper. A single work unit was not possible to identify due to disparate activities in this workpaper such as switching volumes, costs that scale with capital, and costs related to managing technology.

**Forecast Explanations:**

**Labor - Base YR Rec**

With the continued high industry demand for Distribution System Operator (DSOs), there has been close to a 40% attrition over the last four years, and further DSO attrition is expected as the position feeds several other critical programs including SDG&E's transmission system operators. The Base year methodology reflects the additional labor needed to maintain a healthy development pipeline to maintain proper DSO workforce resources.

**Non-Labor - Base YR Rec**

Base year forecasting represents costs associated with the increasing quality of the DSO qualification program, as well as supporting both the existing DSO skill maintenance programs and business process changes needed to for emergency response and to operate in a high DER environment.

**NSE - Base YR Rec**

N/A

*Note: Totals may include rounding differences.*



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Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: C. Electric System Operations  
 Category-Sub: 1. Electric System Operations  
 Workpaper: 1ED003.000 - Electric System Operations

**Summary of Results:**

		<b>In 2021\$ (000) Incurred Costs</b>								
		<b>Adjusted-Recorded</b>					<b>Adjusted-Forecast</b>			
<b>Years</b>		<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	
Labor		3,727	3,532	3,502	3,683	3,042	3,385	3,804	3,804	
Non-Labor		14,336	15,474	17,382	24,212	27,109	34,605	39,034	37,221	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>18,063</b>	<b>19,006</b>	<b>20,884</b>	<b>27,895</b>	<b>30,151</b>	<b>37,990</b>	<b>42,838</b>	<b>41,025</b>	
FTE		26.8	26.2	25.8	28.3	21.1	24.5	28.7	28.7	

*Note: Totals may include rounding differences.*

San Diego Gas & Electric Company  
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Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: C. Electric System Operations  
 Category-Sub: 1. Electric System Operations  
 Workpaper: 1ED003.000 - Electric System Operations

**Summary of Adjustments to Forecast:**

In 2021 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	Base YR Rec	3,042	3,042	3,042	343	762	762	3,385	3,804	3,804
Non-Labor	Base YR Rec	27,109	27,109	27,109	7,497	11,926	10,113	34,606	39,035	37,222
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>30,151</b>	<b>30,151</b>	<b>30,151</b>	<b>7,840</b>	<b>12,688</b>	<b>10,875</b>	<b>37,991</b>	<b>42,839</b>	<b>41,026</b>
FTE	Base YR Rec	21.1	21.1	21.1	3.4	7.6	7.6	24.5	28.7	28.7

**Forecast Adjustment Details:**

Year	Labor	NLbr	NSE	Total	FTE	Adj Type
2022	343	0	0	343	3.4	1-Sided Adj
<b>Explanation:</b>	Please see supplemental workpapers for detailed explanation.					
2022	0	189	0	189	0.0	1-Sided Adj
<b>Explanation:</b>	Additional licensing costs related to annual fees for the Transmission Emergency Management System.					
2022	0	75	0	75	0.0	1-Sided Adj
<b>Explanation:</b>	IP Conversion costs related to the SCADA System Enhancements phase 2. Refer to capital project in order to understand justifications.					
2022	0	6,905	0	6,905	0.0	1-Sided Adj
<b>Explanation:</b>	Forecasted Storeroom Increase - these costs increase with total electric capital spend. Multiply 2.5% by the total requested capital. Please see supplemental workpapers for detailed explanation.					
2022	0	328	0	328	0.0	1-Sided Adj
<b>Explanation:</b>	These costs include incremental licensing fees for the Distribution SCADA system.					
<b>2022 Total</b>	<b>343</b>	<b>7,497</b>	<b>0</b>	<b>7,840</b>	<b>3.4</b>	
2023	762	0	0	762	7.6	1-Sided Adj
<b>Explanation:</b>	Please see supplemental workpapers for detailed explanation.					
2023	0	189	0	189	0.0	1-Sided Adj
<b>Explanation:</b>	Additional licensing costs related to annual fees for the Transmission Emergency Management System.					
2023	0	75	0	75	0.0	1-Sided Adj
<b>Explanation:</b>	IP Conversion costs related to the SCADA System Enhancements phase 2. Refer to capital project in order to understand justifications.					
2023	0	11,334	0	11,334	0.0	1-Sided Adj
<b>Explanation:</b>	Forecasted Storeroom Increase - these costs increase with total electric capital spend. Multiply 2.5% by the total requested capital. Please see supplemental workpapers for detailed explanation.					
2023	0	328	0	328	0.0	1-Sided Adj

Note: Totals may include rounding differences.

SDG&E/ELECTRIC DISTRIBUTION/Exh No:SDG&E-12-WP-R/Witness: T. Swetek

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Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: C. Electric System Operations  
 Category-Sub: 1. Electric System Operations  
 Workpaper: 1ED003.000 - Electric System Operations

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj_Type</u>
<b>Explanation:</b>	These costs include incremental licensing fees for the Distribution SCADA system.					
<b>2023 Total</b>	<b>762</b>	<b>11,926</b>	<b>0</b>	<b>12,688</b>	<b>7.6</b>	
2024	762	0	0	762	7.6	1-Sided Adj
<b>Explanation:</b>	Please see supplemental workpapers for detailed explanation.					
2024	0	189	0	189	0.0	1-Sided Adj
<b>Explanation:</b>	Additional licensing costs related to annual fees for the Transmission Emergency Management System.					
2024	0	75	0	75	0.0	1-Sided Adj
<b>Explanation:</b>	IP Conversion costs related to the SCADA System Enhancements phase 2. Refer to capital project in order to understand justifications.					
2024	0	9,521	0	9,521	0.0	1-Sided Adj
<b>Explanation:</b>	Forecasted Storeroom Increase - these costs increase with total electric capital spend. Multiply 2.5% by the total requested capital. Please see supplemental workpapers for detailed explanation.					
2024	0	328	0	328	0.0	1-Sided Adj
<b>Explanation:</b>	These costs include incremental licensing fees for the Distribution SCADA system.					
<b>2024 Total</b>	<b>762</b>	<b>10,113</b>	<b>0</b>	<b>10,875</b>	<b>7.6</b>	

Note: Totals may include rounding differences.

SDG&E/ELECTRIC DISTRIBUTION/Exh No:SDG&E-12-WP-R/Witness: T. Swetek

San Diego Gas & Electric Company  
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Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek  
Category: C. Electric System Operations  
Category-Sub: 1. Electric System Operations  
Workpaper: 1ED003.000 - Electric System Operations

**Determination of Adjusted-Recorded (Incurred Costs):**

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	3,799	3,396	3,393	3,708	2,790
Non-Labor	12,395	14,181	16,060	25,349	27,779
NSE	0	0	0	0	0
<b>Total</b>	<b>16,193</b>	<b>17,577</b>	<b>19,453</b>	<b>29,057</b>	<b>30,570</b>
FTE	37.8	33.3	32.1	34.0	25.0
<b>Adjustments (Nominal \$) **</b>					
Labor	-891	-572	-498	-583	-145
Non-Labor	135	-197	36	-2,967	-670
NSE	0	0	0	0	0
<b>Total</b>	<b>-756</b>	<b>-769</b>	<b>-462</b>	<b>-3,550</b>	<b>-816</b>
FTE	-14.8	-10.9	-9.8	-9.6	-6.9
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	2,908	2,824	2,895	3,125	2,645
Non-Labor	12,529	13,984	16,096	22,382	27,109
NSE	0	0	0	0	0
<b>Total</b>	<b>15,437</b>	<b>16,808</b>	<b>18,991</b>	<b>25,507</b>	<b>29,754</b>
FTE	22.9	22.4	22.3	24.4	18.0
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	432	428	415	443	397
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>432</b>	<b>428</b>	<b>415</b>	<b>443</b>	<b>397</b>
FTE	3.9	3.8	3.5	3.9	3.1
<b>Escalation to 2021\$</b>					
Labor	388	280	193	114	0
Non-Labor	1,806	1,490	1,286	1,830	0
NSE	0	0	0	0	0
<b>Total</b>	<b>2,194</b>	<b>1,770</b>	<b>1,479</b>	<b>1,945</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2021\$)</b>					
Labor	3,727	3,532	3,502	3,683	3,042
Non-Labor	14,336	15,474	17,382	24,212	27,109
NSE	0	0	0	0	0
<b>Total</b>	<b>18,063</b>	<b>19,006</b>	<b>20,884</b>	<b>27,895</b>	<b>30,151</b>
FTE	26.8	26.2	25.8	28.3	21.1

\* After company-wide exclusions of Non-GRC costs

\*\* Refer to "Detail of Adjustments to Recorded" page for line item adjustments

Note: Totals may include rounding differences.

San Diego Gas & Electric Company  
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Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: C. Electric System Operations  
 Category-Sub: 1. Electric System Operations  
 Workpaper: 1ED003.000 - Electric System Operations

**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs					
Years	2017	2018	2019	2020	2021
Labor	-891	-572	-498	-583	-145
Non-Labor	135	-197	36	-2,967	-670
NSE	0	0	0	0	0
<b>Total</b>	<b>-756</b>	<b>-769</b>	<b>-462</b>	<b>-3,550</b>	<b>-816</b>
FTE	-14.8	-10.9	-9.8	-9.6	-6.9

**Detail of Adjustments to Recorded:**

Year	Labor	NLbr	NSE	FTE	Adj Type
2017	171	147	0	1.3	CCTR Transf From 2100-3981.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3981 in workpaper 1ED003.001 to CC 2100-0228 in workpaper 1ED003.000 Electric System Operations to align Records Management RAMP related costs within workpaper 1ED003.001.				
2017	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	-79	-2	0	-0.3	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	-215	-2	0	-3.5	CCTR Transf To 2100-4141.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3558 in workpaper 1ED003.000 to CC 2100-4141 in workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001.				
2017	-258	-3	0	-4.3	CCTR Transf To 2100-4141.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3559 in workpaper 1ED003.000 to CC 2100-4141 in workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001.				
2017	-244	-1	0	-4.1	CCTR Transf To 2100-4141.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3560 in workpaper 1ED003.000 to CC 2100-4141 in workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001.				
2017	-266	-2	0	-3.9	CCTR Transf To 2100-4141.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3561 in workpaper 1ED003.000 to CC 2100-4141 in workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001.				

*Note: Totals may include rounding differences.*

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek  
Category: C. Electric System Operations  
Category-Sub: 1. Electric System Operations  
Workpaper: 1ED003.000 - Electric System Operations

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
2017	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment to exclude \$744 related to Events and Tickets.				
<b>2017 Total</b>	<b>-891</b>	<b>135</b>	<b>0</b>	<b>-14.8</b>	
2018	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	189	5	0	1.5	CCTR Transf From 2100-3981.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3981 in workpaper 1ED003.001 to CC 2100-0228 in workpaper 1ED003.000 Electric System Operations to align Records Management RAMP related costs within workpaper 1ED003.001.				
2018	58	1	0	0.2	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	0	-183	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	-149	-2	0	-2.5	CCTR Transf To 2100-4141.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3558 in workpaper 1ED003.000 to CC 2100-4141 in workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001.				
2018	-214	-9	0	-3.5	CCTR Transf To 2100-4141.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3559 in workpaper 1ED003.000 to CC 2100-4141 in workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001.				
2018	-218	-2	0	-3.4	CCTR Transf To 2100-4141.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3560 in workpaper 1ED003.000 to CC 2100-4141 in workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001.				
2018	-238	-7	0	-3.2	CCTR Transf To 2100-4141.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3561 in workpaper 1ED003.000 to CC 2100-4141 in workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001.				
2018	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment to exclude \$770 related to Events and Tickets.				
<b>2018 Total</b>	<b>-572</b>	<b>-197</b>	<b>0</b>	<b>-10.9</b>	
2019	288	55	0	2.1	CCTR Transf From 2100-3981.000

Note: Totals may include rounding differences.

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: C. Electric System Operations  
 Category-Sub: 1. Electric System Operations  
 Workpaper: 1ED003.000 - Electric System Operations

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3981 in workpaper 1ED003.001 to CC 2100-0228 in workpaper 1ED003.000 Electric System Operations to align Records Management RAMP related costs within workpaper 1ED003.001.				
2019	-181	-4	0	-2.8	CCTR Transf To 2100-4141.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3558 in workpaper 1ED003.000 to CC 2100-4141 in workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001.				
2019	-204	-5	0	-3.1	CCTR Transf To 2100-4141.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3559 in workpaper 1ED003.000 to CC 2100-4141 in workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001.				
2019	-194	-4	0	-3.0	CCTR Transf To 2100-4141.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3560 in workpaper 1ED003.000 to CC 2100-4141 in workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001.				
2019	-207	-5	0	-3.0	CCTR Transf To 2100-4141.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3561 in workpaper 1ED003.000 to CC 2100-4141 in workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001.				
2019	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment to exclude \$595 related to Events and Tickets.				
<b>2019 Total</b>	<b>-498</b>	<b>36</b>	<b>0</b>	<b>-9.8</b>	
2020	0	-2	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-49	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	241	86	0	1.7	CCTR Transf From 2100-3981.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3981 in workpaper 1ED003.001 to CC 2100-0228 in workpaper 1ED003.000 Electric System Operations to align Records Management RAMP related costs within workpaper 1ED003.001.				
2020	0	-5	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-984	0	0.0	1-Sided Adj

Note: Totals may include rounding differences.

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: C. Electric System Operations  
 Category-Sub: 1. Electric System Operations  
 Workpaper: 1ED003.000 - Electric System Operations

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-3	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-7	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-1,441	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-37	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-3	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-4	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-3	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-4	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-2	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-5	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-37	0	0	-0.1	1-Sided Adj

Note: Totals may include rounding differences.



San Diego Gas & Electric Company  
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Area: ELECTRIC DISTRIBUTION  
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Category: C. Electric System Operations  
Category-Sub: 1. Electric System Operations  
Workpaper: 1ED003.000 - Electric System Operations

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-407	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-77	0	0.0	1-Sided Adj
<b>Explanation:</b>	Remoev one-time expense to enhance EGISS training room.				
2020	-156	-1	0	-2.3	CCTR Transf To 2100-4141.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3558 in workpaper 1ED003.000 to CC 2100-4141 in workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001.				
2020	-207	-2	0	-2.9	CCTR Transf To 2100-4141.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3559 in workpaper 1ED003.000 to CC 2100-4141 in workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001.				
2020	-189	-13	0	-2.8	CCTR Transf To 2100-4141.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3560 in workpaper 1ED003.000 to CC 2100-4141 in workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001.				
2020	-235	-2	0	-3.2	CCTR Transf To 2100-4141.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3561 in workpaper 1ED003.000 to CC 2100-4141 in workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001.				
2020	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment to exclude \$209 related to Events and Tickets.				
<b>2020 Total</b>	<b>-583</b>	<b>-2,967</b>	<b>0</b>	<b>-9.6</b>	
2021	0	6	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	253	95	0	1.5	CCTR Transf From 2100-3981.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3981 in workpaper 1ED003.001 to CC 2100-0228 in workpaper 1ED003.000 Electric System Operations to align Records Management RAMP related costs within workpaper 1ED003.001.				
2021	397	0	0	2.6	CCTR Transf From 2100-4141.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-4141 in workpaper 1ED003.001 to CC 2100-0228 in workpaper 1ED003.000 Electric System Operations to align Records Management RAMP related costs within workpaper 1ED003.001.				

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San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: C. Electric System Operations  
 Category-Sub: 1. Electric System Operations  
 Workpaper: 1ED003.000 - Electric System Operations

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
2021	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-2	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-690	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-3	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-7	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-20	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-28	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-2	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-3	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-3	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				

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San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: C. Electric System Operations  
 Category-Sub: 1. Electric System Operations  
 Workpaper: 1ED003.000 - Electric System Operations

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
2021	0	-3	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	-145	-1	0	-2.1	CCTR Transf To 2100-4141.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3558 in workpaper 1ED003.000 to CC 2100-4141 in workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001.				
2021	-226	-2	0	-3.1	CCTR Transf To 2100-4141.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3559 in workpaper 1ED003.000 to CC 2100-4141 in workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001.				
2021	-195	-3	0	-2.8	CCTR Transf To 2100-4141.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3560 in workpaper 1ED003.000 to CC 2100-4141 in workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001.				
2021	-230	-1	0	-3.0	CCTR Transf To 2100-4141.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3561 in workpaper 1ED003.000 to CC 2100-4141 in workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001.				
<b>2021 Total</b>	<b>-145</b>	<b>-670</b>	<b>0</b>	<b>-6.9</b>	

*Note: Totals may include rounding differences.*

**Supplemental Workpapers for Workpaper 1ED003.000**

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

San Diego Gas & Electric Company  
2022 GRC – APP  
Non-Shared Service Workpapers

**Storeroom:**

	Historical					Forecasted		
	2017	2018	2019	2020	2021	2022	2023	2024
<b>Base Elec</b>	\$481.0M	\$448.7M	\$380.8M	\$434.5M	\$465.6M	\$472.4M	\$573.0M	\$482.3M
<b>Wildfire</b>	\$113.9M	\$98.5M	\$235.0M	\$391.0M	\$385.5M	\$642.2M	\$722.3M	\$735.5M
<b>Gas</b>	\$105.4M	\$97.1M	\$71.6M	\$104.4M	\$131.0M	\$137.7M	\$130.4M	\$136.9M
<b>Total</b>	\$700.3M	\$644.4M	\$687.5M	\$930.0M	\$982.1M	\$1.3B	\$1.4B	\$1.4B
<b>Exempt Mat'l Electric I/O</b>	\$7.6M	\$8.5M	\$8.7M	\$12.3M	\$13.9M			
<b>Exempt Mat'l Gas I/O</b>	\$1.5M	\$2.1M	\$2.2M	\$2.3M	\$3.4M			
<b>Freight Charges I/O</b>	\$2.7M	\$3.6M	\$5.1M	\$7.5M	\$7.8M			
<b>Total</b>	\$11.8M	\$14.1M	\$16.0M	\$22.1M	\$25.1M	\$32.0M	\$36.4M	\$34.6M
<b>Precent Increase</b>	1.69%	2.20%	2.33%	2.38%	2.56%	2.56%	2.56%	2.56%
<b>Increase Over 2021 Costs</b>						\$6.9M	\$11.3M	\$9.5M

San Diego Gas & Electric Company  
2024 GRC - REVISED  
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TY2024 GRC FORECAST - DETAILS

Initiative/Description	Labor/ Non-Labor	RAMP/ Non-RAMP	Unit Metric	Position Title	O&M/Capital Split	2022			2023			2024			Total Cost	Explanation
						# of units	Cost per unit	Total cost	# of units	Cost per unit	Total cost	# of units	Cost per unit	Total cost		
EGO Trainer FTE	Labor	Non-RAMP	FTE	Dist Syst Operator Trainer	60%	1	\$ 135,000	\$ 54,000	1	\$ 135,000	\$ 81,000	1	\$ 135,000	\$ 81,000	\$ 216,000	Adjusting costs to account for the replacement of a DSO trainer. This position was vacated by an employee in 2020 and not backfilled in order reduce DSO attrition, as DSO's were at critical staffing levels. 1 FTE (60% of 135k salary). Assumes May 2022 (8/12 months) hiring date.
ADMS/DERMS Engineering	Labor	Non-RAMP	FTE	ADMS Engineer	30%	2	\$ 120,000	\$ 48,000	2	\$ 120,000	\$ 72,000	2	\$ 120,000	\$ 72,000	\$ 192,000	Upward pressure in order to hire two engineers to support advanced ADMS modeling and implementation of a DERMS system in support of advancing DER capabilities. The positions charge 30% of time to O&M and are estimated to have base labor of \$120k. Assumes May 2022 (8/12 months) hiring date.
SCADA Technology Support	Labor	Non-RAMP	FTE	Operations Technologist	30%	1	\$ 100,000	\$ 20,000	3	\$ 100,000	\$ 90,000	3	\$ 100,000	\$ 90,000	\$ 200,000	Adjust costs to account for the loss of two Operations Technologists. Each technologist charges 30% of their time to O&M and their base salary is assumed to be \$100k. These positions support hardware and server technology related to the Distribution SCADA system. Assumes May 2022 (8/12 months) hiring date.
SCADA Systems Support	Labor	Non-RAMP	FTE	Operations Technology Analyst	30%	2	\$ 120,000	\$ 48,000	3	\$ 120,000	\$ 108,000	3	\$ 120,000	\$ 108,000	\$ 264,000	Upward pressure to account for three new positions in support of managing the SCADA head-end system due to the increase in automation and proliferation of SCADA field devices on SDG&E's electric Distribution system. These positions charge 30% of time to O&M and are estimated to have base labor of \$120k. Assumes May 2022 (8/12 months) hiring date.
Advanced Distribution Mgmt System Support	Labor	Non-RAMP	FTE	Distribution Management Systems Analyst	70%	2	\$ 120,000	\$ 112,000	2	\$ 120,000	\$ 168,000	2	\$ 120,000	\$ 168,000	\$ 448,000	Upward pressure in analysts and project staff needed in order to provide ongoing desktop and software development support for new modules and features developed to enhance wildfire safety, customer communication, and DER capabilities within the Advanced Distribution Management System (NMS). Assume 70% charging to O&M for \$120k base salaries. Assumes May 2022 (8/12 months) hiring date.
Electric Distribution Operators	Labor	Non-RAMP	FTE	Electric Distribution System Operator	30%	6	\$ 135,000	\$ 60,750	6	\$ 135,000	\$ 243,000	6	\$ 135,000	\$ 243,000	\$ 546,750	Upward pressure to hire 6 more Distribution System Operator Trainees to account for long-term staffing needs due to forecasted attrition. Assume 30% O&M charging for a base salary of \$135k. Assumes October 2022 (3/12 months) hiring date.
	<b>Total Labor</b>							\$ 342,750			\$ 762,000			\$ 762,000	\$ 1,866,750	

**Beginning of Workpaper**  
**1ED003.001 - Electric System Operations (TNG - GISS)**

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: C. Electric System Operations  
 Category-Sub: 2. Electric System Operations (GIS)  
 Workpaper: 1ED003.001 - Electric System Operations (TNG - GISS)

**Activity Description:**

Enterprise GIS Services (EGISS) is the section of Electric Distribution Operations that creates and maintains all electric distribution, transmission, telecommunications, and substation data in SDG&E's enterprise GIS system. EGISS digitizes the data in a preliminary state, energizes the data in real-time, reconciles and converts design work orders into construction order as-builts, scans them to a central repository, records details in the GIS system, and identifies these assets for tax and franchise fee calculations and reports. SDG&E's enterprise GIS is a direct input of information into many operational and planning tools used by engineering and operations. Accurate and timely data stored in the GIS database is essential for the safety and reliability of electric operations throughout the Company. If the information was not captured precisely, it could impact work activities for employees and public safety. All costs for this workpaper are RAMP related. Please see RAMP costs for appropriate work units.

**Forecast Explanations:**

**Labor - Base YR Rec**

The Base year forecast methodology represents recent backfilling of vacant staff positions to historical levels appropriate to document the volume of changes to the electric transmission and distribution GIS model. This allows for the safe and reliable operation of the electric system.

**Non-Labor - Base YR Rec**

The Base year forecast methodology represents non-labor costs associated with the staffing levels mentioned above.

**NSE - Base YR Rec**

N/A

**Summary of Results:**

		In 2021\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2017	2018	2019	2020	2021	2022	2023	2024	
Labor		1,259	1,025	951	927	915	915	915	915	
Non-Labor		10	22	19	19	7	7	7	7	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>1,269</b>	<b>1,047</b>	<b>970</b>	<b>946</b>	<b>922</b>	<b>922</b>	<b>922</b>	<b>922</b>	
FTE		18.4	14.6	13.9	13.1	12.9	12.9	12.9	12.9	

*Note: Totals may include rounding differences.*



San Diego Gas & Electric Company  
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Area: ELECTRIC DISTRIBUTION  
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 Workpaper: 1ED003.001 - Electric System Operations (TNG - GISS)

**Summary of Adjustments to Forecast:**

In 2021 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	Base YR Rec	915	915	915	0	0	0	915	915	915
Non-Labor	Base YR Rec	7	7	7	0	0	0	7	7	7
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>922</b>	<b>922</b>	<b>922</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>922</b>	<b>922</b>	<b>922</b>
FTE	Base YR Rec	12.9	12.9	12.9	0.0	0.0	0.0	12.9	12.9	12.9

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj Type</u>
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*Note: Totals may include rounding differences.*

San Diego Gas & Electric Company  
2024 GRC - REVISED  
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 Workpaper: 1ED003.001 - Electric System Operations (TNG - GISS)

**Determination of Adjusted-Recorded (Incurred Costs):**

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	171	189	288	241	650
Non-Labor	147	5	55	87	97
NSE	0	0	0	0	0
<b>Total</b>	<b>317</b>	<b>194</b>	<b>342</b>	<b>328</b>	<b>747</b>
FTE	1.3	1.5	2.1	1.7	4.1
<b>Adjustments (Nominal \$) **</b>					
Labor	812	630	498	546	145
Non-Labor	-138	15	-37	-69	-91
NSE	0	0	0	0	0
<b>Total</b>	<b>674</b>	<b>645</b>	<b>461</b>	<b>476</b>	<b>55</b>
FTE	14.5	11.1	9.8	9.5	6.9
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	982	820	786	787	796
Non-Labor	9	20	18	18	7
NSE	0	0	0	0	0
<b>Total</b>	<b>991</b>	<b>840</b>	<b>804</b>	<b>804</b>	<b>802</b>
FTE	15.8	12.6	11.9	11.2	11.0
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	146	124	113	112	119
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>146</b>	<b>124</b>	<b>113</b>	<b>112</b>	<b>119</b>
FTE	2.6	2.0	2.0	1.9	1.9
<b>Escalation to 2021\$</b>					
Labor	131	81	52	29	0
Non-Labor	1	2	1	1	0
NSE	0	0	0	0	0
<b>Total</b>	<b>132</b>	<b>83</b>	<b>54</b>	<b>30</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2021\$)</b>					
Labor	1,259	1,025	951	927	915
Non-Labor	10	22	19	19	7
NSE	0	0	0	0	0
<b>Total</b>	<b>1,269</b>	<b>1,047</b>	<b>970</b>	<b>946</b>	<b>922</b>
FTE	18.4	14.6	13.9	13.1	12.9

\* After company-wide exclusions of Non-GRC costs

\*\* Refer to "Detail of Adjustments to Recorded" page for line item adjustments

Note: Totals may include rounding differences.

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Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: C. Electric System Operations  
 Category-Sub: 2. Electric System Operations (GIS)  
 Workpaper: 1ED003.001 - Electric System Operations (TNG - GISS)

**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs					
Years	2017	2018	2019	2020	2021
Labor	812	630	498	546	145
Non-Labor	-138	15	-37	-69	-91
NSE	0	0	0	0	0
<b>Total</b>	<b>674</b>	<b>645</b>	<b>461</b>	<b>476</b>	<b>55</b>
FTE	14.5	11.1	9.8	9.5	6.9

**Detail of Adjustments to Recorded:**

Year	Labor	NLbr	NSE	FTE	Adj Type
2017	-171	-147	0	-1.3	CCTR Transf To 2100-0228.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3981 in workpaper 1ED003.001 to CC 2100-0228 in workpaper 1ED003.000 Electric System Operations to align Records Management RAMP related costs within workpaper 1ED003.001.				
2017	215	2	0	3.5	CCTR Transf From 2100-3558.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3558 in workpaper 1ED003.000 to CC 2100-4141 in workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001.				
2017	258	3	0	4.3	CCTR Transf From 2100-3559.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3559 in workpaper 1ED003.000 to CC 2100-4141 in workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001.				
2017	244	1	0	4.1	CCTR Transf From 2100-3560.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3560 in workpaper 1ED003.000 to CC 2100-4141 in workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001.				
2017	266	2	0	3.9	CCTR Transf From 2100-3561.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3561 in workpaper 1ED003.000 to CC 2100-4141 in workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001.				
<b>2017 Total</b>	<b>812</b>	<b>-138</b>	<b>0</b>	<b>14.5</b>	
2018	-189	-5	0	-1.5	CCTR Transf To 2100-0228.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3981 in workpaper 1ED003.001 to CC 2100-0228 in workpaper 1ED003.000 Electric System Operations to align Records Management RAMP related costs within workpaper 1ED003.001.				
2018	149	2	0	2.5	CCTR Transf From 2100-3558.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3558 in workpaper 1ED003.000 to CC 2100-4141 in workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001.				
2018	214	9	0	3.5	CCTR Transf From 2100-3559.000

Note: Totals may include rounding differences.

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<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3559 in workpaper 1ED003.000 to CC 2100-4141 in workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001.				
2018	218	2	0	3.4	CCTR Transf From 2100-3560.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3560 in workpaper 1ED003.000 to CC 2100-4141 in workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001.				
2018	238	7	0	3.2	CCTR Transf From 2100-3561.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3561 in workpaper 1ED003.000 to CC 2100-4141 in workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001.				
<b>2018 Total</b>	<b>630</b>	<b>15</b>	<b>0</b>	<b>11.1</b>	
2019	-288	-55	0	-2.1	CCTR Transf To 2100-0228.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3981 in workpaper 1ED003.001 to CC 2100-0228 in workpaper 1ED003.000 Electric System Operations to align Records Management RAMP related costs within workpaper 1ED003.001.				
2019	181	4	0	2.8	CCTR Transf From 2100-3558.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3558 in workpaper 1ED003.000 to CC 2100-4141 in workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001.				
2019	204	5	0	3.1	CCTR Transf From 2100-3559.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3559 in workpaper 1ED003.000 to CC 2100-4141 in workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001.				
2019	194	4	0	3.0	CCTR Transf From 2100-3560.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3560 in workpaper 1ED003.000 to CC 2100-4141 in workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001.				
2019	207	5	0	3.0	CCTR Transf From 2100-3561.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3561 in workpaper 1ED003.000 to CC 2100-4141 in workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001.				
<b>2019 Total</b>	<b>498</b>	<b>-37</b>	<b>0</b>	<b>9.8</b>	
2020	0	-2	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-241	-86	0	-1.7	CCTR Transf To 2100-0228.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3981 in workpaper 1ED003.001 to CC 2100-0228 in workpaper 1ED003.000 Electric System Operations to align Records Management RAMP related costs within workpaper 1ED003.001.				
2020	156	1	0	2.3	CCTR Transf From 2100-3558.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3558 in workpaper 1ED003.000 to CC 2100-4141 in workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001.				

Note: Totals may include rounding differences.

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<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
2020	207	2	0	2.9	CCTR Transf From 2100-3559.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3559 in workpaper 1ED003.000 to CC 2100-4141 in workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001.				
2020	189	13	0	2.8	CCTR Transf From 2100-3560.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3560 in workpaper 1ED003.000 to CC 2100-4141 in workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001.				
2020	235	2	0	3.2	CCTR Transf From 2100-3561.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3561 in workpaper 1ED003.000 to CC 2100-4141 in workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001.				
<b>2020 Total</b>	<b>546</b>	<b>-69</b>	<b>0</b>	<b>9.5</b>	
2021	0	-2	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	-253	-95	0	-1.5	CCTR Transf To 2100-0228.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3981 in workpaper 1ED003.001 to CC 2100-0228 in workpaper 1ED003.000 Electric System Operations to align Records Management RAMP related costs within workpaper 1ED003.001.				
2021	-397	0	0	-2.6	CCTR Transf To 2100-0228.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-4141 in workpaper 1ED003.001 to CC 2100-0228 in workpaper 1ED003.000 Electric System Operations to align Records Management RAMP related costs within workpaper 1ED003.001.				
2021	145	1	0	2.1	CCTR Transf From 2100-3558.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3558 in workpaper 1ED003.000 to CC 2100-4141 in workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001.				
2021	226	2	0	3.1	CCTR Transf From 2100-3559.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3559 in workpaper 1ED003.000 to CC 2100-4141 in workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001.				
2021	195	3	0	2.8	CCTR Transf From 2100-3560.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3560 in workpaper 1ED003.000 to CC 2100-4141 in workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001.				
2021	230	1	0	3.0	CCTR Transf From 2100-3561.000
<b>Explanation:</b>	Transfer Labor, FTE's and Non-Labor for CC 2100-3561 in workpaper 1ED003.000 to CC 2100-4141 in workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001.				
<b>2021 Total</b>	<b>145</b>	<b>-91</b>	<b>0</b>	<b>6.9</b>	

Note: Totals may include rounding differences.

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**RAMP Item # 1**

**RAMP Activity**

RAMP Chapter: SDG&E-CFF-6 Records Management

RAMP Line Item ID: New01

RAMP Line Item Name: GIS Jobs Processed

Tranche(/s): Tranche1: NA

**GRC Forecast Cost Estimates (\$000)**

	2021 Historical Embedded Cost (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2024 RAMP Range (2020 Incurred \$)	
					Low	High
Tranche 1 Cost Estimate	921	921	921	921	0	0

**Cost Estimate Changes from RAMP:**

This activity captures all documentation in the GIS system to ensure accurate representation of changes made by field construction activities. Incomplete documentation can lead to immediate hazards to field personnel due to potential for improper isolation from electrical hazards and inaccurate system authorizations being issued by the electric control center. It can also lead to inaccuracies and inefficiencies in the design process and potential unnecessary electric outages to customers.

**GRC Work Unit/Activity Level Estimates**

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2024 RAMP Range Activities	
					Low	High
Tranche 1 # employees	47.00	57.00	57.00	57.00	0.00	0.00

**Work Unit Changes from RAMP:**

This activity captures all documentation in the GIS system to ensure accurate representation of changes made by field construction activities. Incomplete documentation can lead to immediate hazards to field personnel due to potential for improper isolation from electrical hazards and inaccurate system authorizations being issued by the electric control center. It can also lead to inaccuracies and inefficiencies in the design process and potential unnecessary electric outages to customers.

**Risk Spend Efficiency (RSE)**

	GRC RSE	RAMP RSE
Tranche 1	0.000	0.000

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**RSE Changes from RAMP:**

General changes to risk scores or RSE values are primarily due to changes in the MAVF and RSE methodology as discussed in the RAMP to GRC integration testimony of R. Scott Pearson and Gregory S. Flores (Ex. SCG-03/SDG&E-03, Chapter 2).

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Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek  
Category: D. Kearny Operations Services  
Workpaper: 1ED005.000

**Summary for Category: D. Kearny Operations Services**

	In 2021\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	1,827	1,756	1,803	1,803
Non-Labor	408	376	376	376
NSE	0	0	0	0
<b>Total</b>	<b>2,235</b>	<b>2,132</b>	<b>2,179</b>	<b>2,179</b>
FTE	14.7	15.0	15.5	15.5

**Workpapers belonging to this Category:**

**1ED005.000 ET&D: Operations Services**

Labor	1,827	1,756	1,803	1,803
Non-Labor	408	376	376	376
NSE	0	0	0	0
<b>Total</b>	<b>2,235</b>	<b>2,132</b>	<b>2,179</b>	<b>2,179</b>
FTE	14.7	15.0	15.5	15.5

*Note: Totals may include rounding differences.*



**Beginning of Workpaper**  
**1ED005.000 - ET&D: Operations Services**

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Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: D. Kearny Operations Services  
 Category-Sub: 1. Kearny Operations Services  
 Workpaper: 1ED005.000 - ET&D: Operations Services

**Activity Description:**

Electric Transmission and Distribution: Operations Services (ET&D: Operations Services) performs a variety of support functions centered around Safety and Service. The group is responsible for the maintenance, repair, fabrication, and acquisition of new tooling to support various other groups performing work on the electric distribution system. ET&D Operations Services conducts salvage work on line equipment removed from service, and also operates a high voltage test station to perform tests and confirm the condition of electric distribution equipment and tools. The group inventories, inspects, and tests rubber goods and live line tools used for worker protection by multiple other groups working on the electric distribution system. Work units for this workpaper are the number of tests, inspections, and repairs of rubber goods, tools, and equipment.

**Forecast Explanations:**

**Labor - 3-YR Average**

The labor costs in this workpaper utilize a Three-Year Average forecast methodology. The workload for this group is driven by factors that vary from year-to-year, such as the quantity of equipment removed from service that can be tested and repaired versus safely disposed of. In addition, tools and rubber goods are inspected and tested based upon time-based cycles, so although the quantity and associated costs can vary year-to-year, an average provides the best forecast for a typical year.

**Non-Labor - 3-YR Average**

The non-labor costs in this workpaper utilize a Three-Year Average forecast methodology. The workload for this group is driven by factors that vary from year-to-year, such as the quantity of equipment removed from service that can be tested and repaired versus safely disposed of. In addition, tools and rubber goods are inspected and tested based upon time-based cycles, so although the quantity and associated costs can vary year-to-year, an average provides the best forecast for a typical year.

**NSE - 3-YR Average**

N/A

**Summary of Results:**

		In 2021\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2017	2018	2019	2020	2021	2022	2023	2024	
Labor		1,457	1,582	1,691	1,471	1,827	1,757	1,804	1,804	
Non-Labor		355	198	373	345	408	375	375	375	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>1,812</b>	<b>1,780</b>	<b>2,064</b>	<b>1,817</b>	<b>2,235</b>	<b>2,132</b>	<b>2,179</b>	<b>2,179</b>	
FTE		12.9	14.6	15.1	12.8	14.7	15.0	15.5	15.5	

*Note: Totals may include rounding differences.*

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**Summary of Adjustments to Forecast:**

In 2021 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	3-YR Average	1,663	1,663	1,663	93	140	140	1,756	1,803	1,803
Non-Labor	3-YR Average	376	376	376	0	0	0	376	376	376
NSE	3-YR Average	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>2,039</b>	<b>2,039</b>	<b>2,039</b>	<b>93</b>	<b>140</b>	<b>140</b>	<b>2,132</b>	<b>2,179</b>	<b>2,179</b>
FTE	3-YR Average	14.2	14.2	14.2	0.8	1.3	1.3	15.0	15.5	15.5

**Forecast Adjustment Details:**

Year	Labor	NLbr	NSE	Total	FTE	Adj Type
2022	33	0	0	33	0.3	1-Sided Adj
<b>Explanation:</b>	Addition of one (1) Training Specialist in 2022 assuming May hire date (1 FTE * \$100K * 8/12 months * 50% O&M), to support and assist substation training instructors. This position will also coordinate substation entry training, examinations, and substation entry authorization.					
2022	17	0	0	17	0.2	1-Sided Adj
<b>Explanation:</b>	Addition of one (1) Project Controls Analyst in 2022 assuming May hire date (1 FTE * \$100K * 8/12 months * 25% O&M) to support the Operation Services project controls team and be responsible for ensuring correct invoice charging, interfacing with supply management for setting up new vendors and ordering material, and preparing monthly budget reports.					
2022	43	0	0	43	0.3	1-Sided Adj
<b>Explanation:</b>	RAMP Risk 8 C08; Addition of one (1) VPP Project Manager in 2022 assuming May hire date (1 FTE * \$130K * 8/12 months * 50% O&M) to run the ET&D Operations Services and ET&D Substation C&O OSHA Voluntary Protection Program, including efforts for initial certification and recertification.					
<b>2022 Total</b>	<b>93</b>	<b>0</b>	<b>0</b>	<b>93</b>	<b>0.8</b>	
2023	50	0	0	50	0.5	1-Sided Adj
<b>Explanation:</b>	Addition of one (1) Training Specialist (1 FTE * \$100K * 50% O&M), to support and assist substation training instructors. This position will also coordinate substation entry training, examinations, and substation entry authorization.					
2023	25	0	0	25	0.3	1-Sided Adj
<b>Explanation:</b>	Addition of one (1) Project Controls Analyst (1 FTE * \$100K * 25% O&M) to support the Operation Services project controls team and be responsible for ensuring correct invoice charging, interfacing with supply management for setting up new vendors and ordering material, and preparing monthly budget reports.					
2023	65	0	0	65	0.5	1-Sided Adj
<b>Explanation:</b>	Addition of one (1) VPP Project Manager (1 FTE * \$130K * 50% O&M) to run the ET&D Operations Services and ET&D Substation C&O OSHA Voluntary Protection Program, including efforts for initial certification and recertification.					
<b>2023 Total</b>	<b>140</b>	<b>0</b>	<b>0</b>	<b>140</b>	<b>1.3</b>	

Note: Totals may include rounding differences.

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 Workpaper: 1ED005.000 - ET&D: Operations Services

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj_Type</u>
2024	50	0	0	50	0.5	1-Sided Adj
<b>Explanation:</b>	Addition of one (1) Training Specialist (1 FTE * \$100K * 50% O&M), to support and assist substation training instructors. This position will also coordinate substation entry training, examinations, and substation entry authorization.					
2024	25	0	0	25	0.3	1-Sided Adj
<b>Explanation:</b>	Addition of one (1) Project Controls Analyst (1 FTE * \$100K * 25% O&M) to support the Operation Services project controls team and be responsible for ensuring correct invoice charging, interfacing with supply management for setting up new vendors and ordering material, and preparing monthly budget reports.					
2024	65	0	0	65	0.5	1-Sided Adj
<b>Explanation:</b>	Addition of one (1) VPP Project Manager (1 FTE * \$130K * 50% O&M) to run the ET&D Operations Services and ET&D Substation C&O OSHA Voluntary Protection Program, including efforts for initial certification and recertification.					
<b>2024 Total</b>	<b>140</b>	<b>0</b>	<b>0</b>	<b>140</b>	<b>1.3</b>	

Note: Totals may include rounding differences.

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Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek  
Category: D. Kearny Operations Services  
Category-Sub: 1. Kearny Operations Services  
Workpaper: 1ED005.000 - ET&D: Operations Services

**Determination of Adjusted-Recorded (Incurred Costs):**

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	1,137	1,265	1,398	1,249	1,588
Non-Labor	310	179	345	330	411
NSE	0	0	0	0	0
<b>Total</b>	<b>1,447</b>	<b>1,444</b>	<b>1,743</b>	<b>1,579</b>	<b>2,000</b>
FTE	11.1	12.5	13.0	11.1	12.5
<b>Adjustments (Nominal \$) **</b>					
Labor	0	0	0	0	0
Non-Labor	0	0	0	-11	-3
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>-12</b>	<b>-3</b>
FTE	0.0	0.0	0.0	-0.1	0.0
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	1,137	1,265	1,398	1,249	1,588
Non-Labor	310	179	345	319	408
NSE	0	0	0	0	0
<b>Total</b>	<b>1,447</b>	<b>1,444</b>	<b>1,743</b>	<b>1,568</b>	<b>1,996</b>
FTE	11.1	12.5	13.0	11.0	12.5
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	169	192	200	177	239
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>169</b>	<b>192</b>	<b>200</b>	<b>177</b>	<b>239</b>
FTE	1.8	2.1	2.1	1.8	2.2
<b>Escalation to 2021\$</b>					
Labor	152	125	93	46	0
Non-Labor	45	19	28	26	0
NSE	0	0	0	0	0
<b>Total</b>	<b>196</b>	<b>144</b>	<b>121</b>	<b>72</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2021\$)</b>					
Labor	1,457	1,582	1,691	1,471	1,827
Non-Labor	355	198	373	345	408
NSE	0	0	0	0	0
<b>Total</b>	<b>1,812</b>	<b>1,780</b>	<b>2,064</b>	<b>1,817</b>	<b>2,235</b>
FTE	12.9	14.6	15.1	12.8	14.7

\* After company-wide exclusions of Non-GRC costs

\*\* Refer to "Detail of Adjustments to Recorded" page for line item adjustments

Note: Totals may include rounding differences.

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Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: D. Kearny Operations Services  
 Category-Sub: 1. Kearny Operations Services  
 Workpaper: 1ED005.000 - ET&D: Operations Services

**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs					
Years	2017	2018	2019	2020	2021
Labor	0	0	0	-0.422	0
Non-Labor	-0.043	0	0	-11	-3
NSE	0	0	0	0	0
<b>Total</b>	<b>-0.043</b>	<b>0</b>	<b>0</b>	<b>-12</b>	<b>-3</b>
FTE	0.0	0.0	0.0	-0.1	0.0

**Detail of Adjustments to Recorded:**

Year	Labor	NLbr	NSE	FTE	Adj Type
2017	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b> One-sided adjustment to exclude \$43 related to Events and Tickets.					
<b>2017 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
<b>2018 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
<b>2019 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
2020	0	-1	0	-0.1	1-Sided Adj
<b>Explanation:</b> Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).					
2020	0	-9	0	0.0	1-Sided Adj
<b>Explanation:</b> Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).					
2020	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b> Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).					
<b>2020 Total</b>	<b>0</b>	<b>-11</b>	<b>0</b>	<b>-0.1</b>	
2021	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b> Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).					
2021	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b> Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).					
2021	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b> Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).					

*Note: Totals may include rounding differences.*

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Area: ELECTRIC DISTRIBUTION  
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<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
2021	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment to exclude \$394 related to Events and Tickets.				
<b>2021 Total</b>	<b>0</b>	<b>-3</b>	<b>0</b>	<b>0.0</b>	

*Note: Totals may include rounding differences.*

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Area: ELECTRIC DISTRIBUTION  
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 Category-Sub: 1. Kearny Operations Services  
 Workpaper: 1ED005.000 - ET&D: Operations Services

**RAMP Item # 1**

**RAMP Activity**

RAMP Chapter: SDG&E-Risk-8 Incident Involving an Employee

RAMP Line Item ID: C08

RAMP Line Item Name: OSHA Voluntary Protection Program

Tranche(/s): Tranche1: N/A

**GRC Forecast Cost Estimates (\$000)**

	2021 Historical Embedded Cost (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2024 RAMP Range (2020 Incurred \$)	
					Low	High
Tranche 1 Cost Estimate	9	47	69	69	475	575

**Cost Estimate Changes from RAMP:**

ET&D Operations 3-year average portion of RAMP Base totals \$4k, plus incremental adjustments. ET&D Operations addition of one VPP Project Manager in 2022 to run the ET&D Operations Services and ET&D Substation C&O OSHA Voluntary Protection Program.

**GRC Work Unit/Activity Level Estimates**

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2024 RAMP Range Activities	
					Low	High
Tranche 1 # of VPP Locations	1.00	1.00	1.00	1.00	3.00	5.00

**Work Unit Changes from RAMP:**

ET&D Operations portion, 1 location Kearny.

**Risk Spend Efficiency (RSE)**

	GRC RSE	RAMP RSE
Tranche 1	196.000	14.000

**RSE Changes from RAMP:**

General changes to risks scores or RSE values are primarily due to changes in the MAVF and RSE methodology, as discussed in the RAMP to GRC Integration testimony of R. Scott Pearson and Gregory S. Flores (Ex. SCG-03/SDG&E-03, Chapter 2)



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Area: ELECTRIC DISTRIBUTION  
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 Category: D. Kearny Operations Services  
 Category-Sub: 1. Kearny Operations Services  
 Workpaper: 1ED005.000 - ET&D: Operations Services

**RAMP Item # 2**

**RAMP Activity**

RAMP Chapter: SDG&E-Risk-8 Incident Involving an Employee  
 RAMP Line Item ID: C10  
 RAMP Line Item Name: Personal Protective Equipment  
 Tranche(/s): Tranche1: None

**GRC Forecast Cost Estimates (\$000)**

	2021 Historical Embedded Cost (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2024 RAMP Range (2020 Incurred \$)	
					Low	High
Tranche 1 Cost Estimate	980	730	730	730	1,689	2,045

**Cost Estimate Changes from RAMP:**  
 ET&D Operations 3-year average RAMP Base totals \$730k.

**GRC Work Unit/Activity Level Estimates**

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2024 RAMP Range Activities	
					Low	High
Tranche 1 # of employees	22.00	22.00	22.00	22.00	4,600.00	4,800.00

**Work Unit Changes from RAMP:**  
 ET&D Operations portion of RAMP item.

**Risk Spend Efficiency (RSE)**

	GRC RSE	RAMP RSE
Tranche 1	0.000	0.000

**RSE Changes from RAMP:**  
 General changes to risks scores or RSE values are primarily due to changes in the MAVF and RSE methodology ,  
 as discussed in the RAMP to GRC Integration testimony of R. Scott Pearson and Gregory S. Flores (Ex.  
 SCG-03/SDG&E-03, Chapter 2)

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Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek  
Category: E. ET&D: Substation C&O  
Workpaper: VARIOUS

**Summary for Category: E. ET&D: Substation C&O**

	In 2021\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	6,871	6,012	6,343	6,490
Non-Labor	3,491	3,026	3,026	3,026
NSE	0	0	0	0
<b>Total</b>	<b>10,362</b>	<b>9,038</b>	<b>9,369</b>	<b>9,516</b>
FTE	49.6	45.1	48.2	49.6

**Workpapers belonging to this Category:**

**1ED006.000 ET&D: Substation C&O**

Labor	4,219	3,454	3,539	3,562
Non-Labor	2,566	2,246	2,246	2,246
NSE	0	0	0	0
<b>Total</b>	<b>6,785</b>	<b>5,700</b>	<b>5,785</b>	<b>5,808</b>
FTE	31.0	26.3	27.2	27.5

**1ED006.002 ET&D: Substation C&O (RELAY & SCADA)**

Labor	2,652	2,558	2,804	2,928
Non-Labor	925	780	780	780
NSE	0	0	0	0
<b>Total</b>	<b>3,577</b>	<b>3,338</b>	<b>3,584</b>	<b>3,708</b>
FTE	18.6	18.8	21.0	22.1

*Note: Totals may include rounding differences.*

**Beginning of Workpaper**  
**1ED006.000 - ET&D: Substation C&O**

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Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek  
Category: E. ET&D: Substation C&O  
Category-Sub: 1. ET&D: Substation C&O  
Workpaper: 1ED006.000 - ET&D: Substation C&O

**Activity Description:**

Electric Transmission & Distribution: Substation Construction and Operations (ET&D: Substation C&O) and associated support organizations are responsible for the installation, inspection, and maintenance of approximately 135 distribution substations on the SDG&E system. Substation equipment maintained includes approximately 298 distribution power transformers and their associated load tap changers or voltage regulators, and approximately 1550 circuit breakers including oil, air, and vacuum classifications, and their associated line and bus disconnect switches. It also includes inspection and maintenance for all substation equipment including batteries, buses, support structures, capacitor banks, reactors, grounding systems, fire suppression systems, and perimeter fences and gates. The substation inspection and resulting corrective maintenance program managed by this group is established in compliance with GO 174, CAISO maintenance requirements, and SDG&E's maintenance standards. This program is critical to the safe operation and reliability of all electric distribution substation facilities. Work units for this workpaper are the number of maintenance orders.

**Forecast Explanations:**

**Labor - 3-YR Average**

The labor costs in this workpaper utilize a Three-Year Average forecast methodology. Distribution substation maintenance activities with associated labor charges are determined by time-based cycles, with the amount of scheduled maintenance therefore varying from year to year. In addition, the amount of unscheduled maintenance, including that which results from the substation inspection program, is also variable from year to year. A three-year average of historical costs smooths out the variability of these maintenance activities and provides a good forecast of the typical annual maintenance costs, while also reflecting a recent increase in labor costs that were not present in years prior to the most recent three years.

**Non-Labor - 3-YR Average**

The non-labor costs in this workpaper utilize a Three-Year Average forecast methodology. Distribution substation maintenance activities with associated non-labor charges are determined by time-based cycles, with the amount of scheduled maintenance therefore varying from year to year. In addition, the amount of unscheduled maintenance, including that which results from the substation inspection program, is also variable from year to year. A three-year average of historical costs smooths out the variability of these maintenance activities and provides a good forecast of the typical annual maintenance costs, while also reflecting recent higher cost levels that were not present in years prior to the most recent three years.

**NSE - 3-YR Average**

N/A

*Note: Totals may include rounding differences.*

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**Summary of Results:**

		<b>In 2021\$ (000) Incurred Costs</b>								
		<b>Adjusted-Recorded</b>					<b>Adjusted-Forecast</b>			
<b>Years</b>		<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	
Labor		2,668	1,940	2,389	3,443	4,219	3,455	3,540	3,563	
Non-Labor		1,076	1,169	1,522	2,554	2,566	2,247	2,247	2,247	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>3,744</b>	<b>3,109</b>	<b>3,912</b>	<b>5,997</b>	<b>6,786</b>	<b>5,702</b>	<b>5,787</b>	<b>5,810</b>	
FTE		21.3	15.7	19.0	25.6	31.0	26.3	27.2	27.5	

*Note: Totals may include rounding differences.*

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 Category: E. ET&D: Substation C&O  
 Category-Sub: 1. ET&D: Substation C&O  
 Workpaper: 1ED006.000 - ET&D: Substation C&O

**Summary of Adjustments to Forecast:**

In 2021 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	3-YR Average	3,350	3,350	3,350	104	189	212	3,454	3,539	3,562
Non-Labor	3-YR Average	2,214	2,214	2,214	32	32	32	2,246	2,246	2,246
NSE	3-YR Average	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>5,565</b>	<b>5,565</b>	<b>5,565</b>	<b>136</b>	<b>221</b>	<b>244</b>	<b>5,701</b>	<b>5,786</b>	<b>5,809</b>
FTE	3-YR Average	25.2	25.2	25.2	1.1	2.0	2.3	26.3	27.2	27.5

**Forecast Adjustment Details:**

Year	Labor	NLbr	NSE	Total	FTE	Adj Type
2022	34	0	0	34	0.3	1-Sided Adj
<b>Explanation:</b>	Addition of one (1) Engineer II in 2022 assuming May hire date (1 FTE * \$85K * 8/12 months * 60% O&M) to support the Condition Based Maintenance program, addressing aging assets and performing condition assessments to address asset health and lifecycle strategies.					
2022	0	32	0	32	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs associated with Medeco electronic key and cylinder repairs. The Medeco system was rolled out in 2016 and after heavy use units are starting to fail. Medeco locks and the associated keys secure substations & other critical facilities Estimated 64 units (keys and or cylinders) get repaired each year.					
2022	25	0	0	25	0.3	1-Sided Adj
<b>Explanation:</b>	Infrared (IR) inspections of the electric distribution system in the Non-HFTD. Performed with a 2-man crew via ground or helicopter to identify hotspots on the overhead distribution system. Inspection of 10 non-HFTD circuits per year, starting in 2022. Each circuit to take approximately 2 working days at 8 hrs/day to complete with a 2-man ground-based crew at \$125/hr per crew. Addition of \$5,000 spread across 10 circuits for short helicopter flights to cover any areas inaccessible by ground.					
2022	45	0	0	45	0.5	1-Sided Adj
<b>Explanation:</b>	Electrician Apprentice Program: New Electrician Assistant class in 2022 to eventually enter the Electrician apprentice program. Assist Journeyman in completing field work operating and maintaining the Company's electric distribution system by operating tools and equipment necessary to accomplish this work. Employees progress from Electrician Assistant to Apprentice Electrician to Journeyman Electrician in approximately 4 years. Note: Start class of 10 EA's, but expect 9 retirement/transfers from Electricians, so net of one additional headcount for the department: assuming May hire date (1FTE * \$68K * 8/12 months * 100% O&M).					
<b>2022 Total</b>	<b>104</b>	<b>32</b>	<b>0</b>	<b>136</b>	<b>1.1</b>	
2023	51	0	0	51	0.6	1-Sided Adj
<b>Explanation:</b>	Addition of one (1) Engineer II in 2023 (1 FTE * \$85K * 60% O&M) to support the Condition Based Maintenance program, addressing aging assets and performing condition assessments to address asset health and lifecycle strategies.					

Note: Totals may include rounding differences.

SDG&E/ELECTRIC DISTRIBUTION/Exh No:SDG&E-12-WP-R/Witness: T. Swetek

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 Category-Sub: 1. ET&D: Substation C&O  
 Workpaper: 1ED006.000 - ET&D: Substation C&O

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj Type</u>
2023	0	32	0	32	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs associated with Medeco electronic key and cylinder repairs. The Medeco system was rolled out in 2016 and after heavy use units are starting to fail. Medeco locks and the associated keys secure substations & other critical facilities Estimated 64 units (keys and or cylinders) get repaired each year.					
2023	25	0	0	25	0.3	1-Sided Adj
<b>Explanation:</b>	Infrared (IR) inspections of the electric distribution system in the Non-HFTD. Performed with a 2-man crew via ground or helicopter to identify hotspots on the overhead distribution system. Inspection of 10 non-HFTD circuits per year, starting in 2022. Each circuit to take approximately 2 working days at 8 hrs/day to complete with a 2-man ground-based crew at \$125/hr per crew. Addition of \$5,000 spread across 10 circuits for short helicopter flights to cover any areas inaccessible by ground.					
2023	113	0	0	113	1.1	1-Sided Adj
<b>Explanation:</b>	Electrician Apprentice Program: New Electrician Assistant class in 2023 to eventually enter the Electrician apprentice program. Assist Journeyman in completing field work operating and maintaining the Company's electric distribution system by operating tools and equipment necessary to accomplish this work. Employees progress from Electrician Assistant to Apprentice Electrician to Journeyman Electrician in approximately 4 years. Note: Start class of 10 EA's, but expect 9 retirement/transfers from Electricians, so net of one additional headcount for the department: assuming May 2023 hire date (1FTE * \$68K * 8/12 months * 100% O&M). In addition, additional FTE hired in May 2022 is reflected in this adjustment (1 FTE * \$68K * 100% O&M).					
<b>2023 Total</b>	<b>189</b>	<b>32</b>	<b>0</b>	<b>221</b>	<b>2.0</b>	
2024	51	0	0	51	0.6	1-Sided Adj
<b>Explanation:</b>	Addition of one (1) Engineer II in 2024 (1 FTE * \$85K * 60% O&M) to support the Condition Based Maintenance program, addressing aging assets and performing condition assessments to address asset health and lifecycle strategies.					
2024	0	32	0	32	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs associated with Medeco electronic key and cylinder repairs. The Medeco system was rolled out in 2016 and after heavy use units are starting to fail. Medeco locks and the associated keys secure substations & other critical facilities Estimated 64 units (keys and or cylinders) get repaired each year.					
2024	25	0	0	25	0.3	1-Sided Adj
<b>Explanation:</b>	Infrared (IR) inspections of the electric distribution system in the Non-HFTD. Performed with a 2-man crew via ground or helicopter to identify hotspots on the overhead distribution system. Inspection of 10 non-HFTD circuits per year, starting in 2022. Each circuit to take approximately 2 working days at 8 hrs/day to complete with a 2-man ground-based crew at \$125/hr per crew. Addition of \$5,000 spread across 10 circuits for short helicopter flights to cover any areas inaccessible by ground.					
2024	136	0	0	136	1.4	1-Sided Adj

Note: Totals may include rounding differences.

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<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj_Type</u>
<b>Explanation:</b>	Electrician Apprentice Program: New Electrician Assistant classes in 2022 and 2023 to eventually enter the Electrician apprentice program. Assist Journeyman in completing field work operating and maintaining the Company's electric distribution system by operating tools and equipment necessary to accomplish this work. Employees progress from Electrician Assistant to Apprentice Electrician to Journeyman Electrician in approximately 4 years. Note: Start class of 10 EA's per year, but expect 9 retirement/transfers from Electricians, so net of one additional headcount for the department per class year. (2 FTEs * \$68K * 100% O&M).					
<b>2024 Total</b>	<b>212</b>	<b>32</b>	<b>0</b>	<b>244</b>	<b>2.3</b>	

*Note: Totals may include rounding differences.*



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Category-Sub: 1. ET&D: Substation C&O  
Workpaper: 1ED006.000 - ET&D: Substation C&O

**Determination of Adjusted-Recorded (Incurred Costs):**

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	2,056	1,546	1,955	3,083	3,681
Non-Labor	938	1,054	1,409	2,823	3,358
NSE	0	0	0	0	0
<b>Total</b>	<b>2,994</b>	<b>2,600</b>	<b>3,363</b>	<b>5,906</b>	<b>7,040</b>
FTE	18.2	13.2	16.2	22.9	26.6
<b>Adjustments (Nominal \$) **</b>					
Labor	25	5	20	-162	-13
Non-Labor	3	3	1	-462	-792
NSE	0	0	0	0	0
<b>Total</b>	<b>28</b>	<b>8</b>	<b>21</b>	<b>-624</b>	<b>-805</b>
FTE	0.1	0.2	0.2	-1.0	-0.1
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	2,082	1,551	1,975	2,922	3,668
Non-Labor	941	1,057	1,410	2,361	2,566
NSE	0	0	0	0	0
<b>Total</b>	<b>3,022</b>	<b>2,608</b>	<b>3,385</b>	<b>5,282</b>	<b>6,235</b>
FTE	18.3	13.4	16.4	21.9	26.4
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	309	235	283	414	551
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>309</b>	<b>235</b>	<b>283</b>	<b>414</b>	<b>551</b>
FTE	3.0	2.3	2.6	3.7	4.6
<b>Escalation to 2021\$</b>					
Labor	278	154	131	107	0
Non-Labor	136	113	113	193	0
NSE	0	0	0	0	0
<b>Total</b>	<b>413</b>	<b>266</b>	<b>244</b>	<b>300</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2021\$)</b>					
Labor	2,668	1,940	2,389	3,443	4,219
Non-Labor	1,076	1,169	1,522	2,554	2,566
NSE	0	0	0	0	0
<b>Total</b>	<b>3,744</b>	<b>3,109</b>	<b>3,912</b>	<b>5,997</b>	<b>6,786</b>
FTE	21.3	15.7	19.0	25.6	31.0

\* After company-wide exclusions of Non-GRC costs

\*\* Refer to "Detail of Adjustments to Recorded" page for line item adjustments

Note: Totals may include rounding differences.

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Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: E. ET&D: Substation C&O  
 Category-Sub: 1. ET&D: Substation C&O  
 Workpaper: 1ED006.000 - ET&D: Substation C&O

**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs					
Years	2017	2018	2019	2020	2021
Labor	25	5	20	-162	-13
Non-Labor	3	3	0.906	-462	-792
NSE	0	0	0	0	0
<b>Total</b>	<b>28</b>	<b>8</b>	<b>21</b>	<b>-624</b>	<b>-805</b>
FTE	0.1	0.2	0.2	-1.0	-0.1

**Detail of Adjustments to Recorded:**

Year	Labor	NLbr	NSE	FTE	Adj Type
2017	-6	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	31	3	0	0.2	CCTR Transf From 2100-3989.000
<b>Explanation:</b>	Transfer labor, non-labor, and FTE's associated with Forecasting, Compliance & Analytics from cost center 2100-3989 in workpaper 1ED006.001 to cost center 2100-0235 in primary workpaper 1ED006.000 to align costs with where roles reside and are forecasted.				
<b>2017 Total</b>	<b>25</b>	<b>3</b>	<b>0</b>	<b>0.1</b>	
2018	3	0	0	0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	33	3	0	0.3	CCTR Transf From 2100-3989.000
<b>Explanation:</b>	Transfer labor, non-labor, and FTE's associated with Forecasting, Compliance & Analytics from cost center 2100-3989 in workpaper 1ED006.001 to cost center 2100-0235 in primary workpaper 1ED006.000 to align costs with where roles reside and are forecasted.				
2018	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment to exclude \$151 related to Events and Tickets.				
2018	-31	0	0	-0.2	CCTR Transf To 2100-0737.000
<b>Explanation:</b>	Transfer labor costs for work performed by Substation on behalf of Generation on Generation equipment in CC 2100-0235 in workpaper 1ED006.000 to cost center 2100-0737 to align costs with where roles reside and are forecasted.				
<b>2018 Total</b>	<b>5</b>	<b>3</b>	<b>0</b>	<b>0.2</b>	
2019	20	1	0	0.2	CCTR Transf From 2100-3989.000

*Note: Totals may include rounding differences.*

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<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Transfer labor, non-labor, and FTE's associated with Forecasting, Compliance & Analytics from cost center 2100-3989 in workpaper 1ED006.001 to cost center 2100-0235 in primary workpaper 1ED006.000 to align costs with where roles reside and are forecasted.				
<b>2019 Total</b>	<b>20</b>	<b>1</b>	<b>0</b>	<b>0.2</b>	
2020	-1	0	0	-0.1	CCTR Transf From 2100-3989.000
<b>Explanation:</b>	Transfer labor, non-labor, and FTE's associated with Forecasting, Compliance & Analytics from cost center 2100-3989 in workpaper 1ED006.001 to cost center 2100-0235 in primary workpaper 1ED006.000 to align costs with where roles reside and are forecasted.				
2020	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-49	-418	0	-0.2	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-5	-19	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-9	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-48	-12	0	-0.2	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-59	0	0	-0.3	CCTR Transf To 2100-0737.000

Note: Totals may include rounding differences.

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<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Transfer labor costs for work performed by Substation on behalf of Generation on Generation equipment in CC 2100-0235 in workpaper 1ED006.000 to cost center 2100-0737 to align costs with where roles reside and are forecasted.				
<b>2020 Total</b>	<b>-162</b>	<b>-462</b>	<b>0</b>	<b>-1.0</b>	
2021	0	-2	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	-13	-685	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-4	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-53	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-7	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-40	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment to exclude \$219 related to Events and Tickets.				
<b>2021 Total</b>	<b>-13</b>	<b>-792</b>	<b>0</b>	<b>-0.1</b>	

Note: Totals may include rounding differences.

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**RAMP Item # 1**

**RAMP Activity**

RAMP Chapter: SDG&E-Risk-8 Incident Involving an Employee  
 RAMP Line Item ID: C10  
 RAMP Line Item Name: Personal Protective Equipment  
 Tranche(/s): Tranche1: None

**GRC Forecast Cost Estimates (\$000)**

	2021 Historical Embedded Cost (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2024 RAMP Range (2020 Incurred \$)	
					Low	High
Tranche 1 Cost Estimate	132	143	143	143	1,689	2,045

**Cost Estimate Changes from RAMP:**

ET&D Substation 3-year average RAMP Base totals \$143k.

**GRC Work Unit/Activity Level Estimates**

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2024 RAMP Range Activities	
					Low	High
Tranche 1 # of employees	242.00	242.00	242.00	242.00	4,600.00	4,800.00

**Work Unit Changes from RAMP:**

Within RAMP range.

**Risk Spend Efficiency (RSE)**

	GRC RSE	RAMP RSE
Tranche 1	0.000	0.000

**RSE Changes from RAMP:**

General changes to risk scores or RSE values are primarily due to changes in the MAVF and RSE methodology as discussed in the RAMP to GRC integration testimony of R. Scott Pearson and Gregory S. Flores (Ex. SCG-03/SDG&E-03, Chapter 2).

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**RAMP Item # 2**

**RAMP Activity**

RAMP Chapter: SDG&E-Risk-2 Electric Infrastructure Integrity  
 RAMP Line Item ID: C25  
 RAMP Line Item Name: Substation Inspections & Repairs GO-174  
 Tranche(/s): Tranche1: Inspections & Repairs

**GRC Forecast Cost Estimates (\$000)**

	2021 Historical Embedded Cost (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2024 RAMP Range (2020 Incurred \$)	
					Low	High
Tranche 1 Cost Estimate	1,289	1,192	1,192	1,192	1,458	1,801

**Cost Estimate Changes from RAMP:**

3-year average RAMP Base totals \$1,192. Lower than RAMP range primarily due to lower than expected actuals in 3-year average totals from 2019-2021.

**GRC Work Unit/Activity Level Estimates**

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2024 RAMP Range Activities	
					Low	High
Tranche 1 # Inspections & Repairs	1,956.00	1,743.00	1,743.00	1,743.00	1,500.00	1,853.00

**Work Unit Changes from RAMP:**

Within RAMP range.

**Risk Spend Efficiency (RSE)**

	GRC RSE	RAMP RSE
Tranche 1	0.000	0.000

**RSE Changes from RAMP:**

General changes to risk scores or RSE values are primarily due to changes in the MAVF and RSE methodology as discussed in the RAMP to GRC integration testimony of R. Scott Pearson and Gregory S. Flores (Ex. SCG-03/SDG&E-03, Chapter 2).

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 Workpaper: 1ED006.000 - ET&D: Substation C&O

**RAMP Item # 3**

**RAMP Activity**

RAMP Chapter: SDG&E-Risk-8 Incident Involving an Employee  
 RAMP Line Item ID: C08  
 RAMP Line Item Name: OSHA Voluntary Protection Program  
 Tranche(/s): Tranche1: N/A

**GRC Forecast Cost Estimates (\$000)**

	2021 Historical Embedded Cost (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2024 RAMP Range (2020 Incurred \$)	
					Low	High
Tranche 1 Cost Estimate	228	145	145	145	475	575

**Cost Estimate Changes from RAMP:**

ET&D Substation 3-year average RAMP Base totals \$145k.

**GRC Work Unit/Activity Level Estimates**

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2024 RAMP Range Activities	
					Low	High
Tranche 1 # of VPP Locations	0.00	0.00	0.00	0.00	3.00	5.00

**Work Unit Changes from RAMP:**

ET&D Substation portion of RAMP item, 1 location at Kearny reflected in workpaper 1ED005.

**Risk Spend Efficiency (RSE)**

	GRC RSE	RAMP RSE
Tranche 1	196.000	14.000

**RSE Changes from RAMP:**

General changes to risk scores or RSE values are primarily due to changes in the MAVF and RSE methodology as discussed in the RAMP to GRC integration testimony of R. Scott Pearson and Gregory S. Flores (Ex. SCG-03/SDG&E-03, Chapter 2).

**Beginning of Workpaper**  
**1ED006.002 - ET&D: Substation C&O (RELAY & SCADA)**



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Category-Sub: 2. ET&D: Substation C&O (RELAY/SCADA)  
Workpaper: 1ED006.002 - ET&D: Substation C&O (RELAY & SCADA)

**Activity Description:**

The Distribution System Control & Protection group, within the Substation Construction and Operations group, performs maintenance of protective relays and control systems installed in both substations and electric distribution field devices. The organization performs routine preventive maintenance at fixed time-based intervals to maintain reliable operation of protective relays and relay controls. They also perform timely corrective maintenance, which is troubleshooting and repairing systems that alarm or fail to function properly, to enable 24/7 operation of these devices. Lastly, the group downloads events captured during system outages and system emergencies to better investigate the cause of failures. This sometimes requires around the clock staffing during major events, as well as during system emergencies, for example, unscheduled load shedding and earthquakes. As SDG&E's SCADA system has expanded, the scope and scale of maintenance and installation required has also expanded. It now includes distribution voltage regulators, capacitors, distribution reclosers, weather stations, other distribution SCADA controlled equipment and switchgear, and aircraft warning lights. Work units for this workpaper are the number of maintenance orders.

**Forecast Explanations:**

**Labor - 3-YR Average**

The labor costs in this workpaper utilize a Three-Year Average forecast methodology. System protection maintenance activities with associated labor charges are determined by time-based cycles, with the amount of scheduled maintenance therefore varying from year to year. In addition, the amount of unscheduled corrective maintenance is also variable from year to year. A three-year average of historical costs smooths out the variability of these maintenance activities and provides a good forecast of the typical annual maintenance costs, while also reflecting recent higher cost levels that were not present in years prior to the most recent three years.

**Non-Labor - 3-YR Average**

The non-labor costs in this workpaper utilize a Three-Year Average forecast methodology. System protection maintenance activities with associated non-labor charges are determined by time-based cycles, with the amount of scheduled maintenance therefore varying from year to year. In addition, the amount of unscheduled corrective maintenance is also variable from year to year. A three-year average of historical costs smooths out the variability of these maintenance activities and provides a good forecast of the typical annual maintenance costs, while also reflecting recent higher cost levels that were not present in years prior to the most recent three years.

**NSE - 3-YR Average**

N/A

*Note: Totals may include rounding differences.*

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 Workpaper: 1ED006.002 - ET&D: Substation C&O (RELAY & SCADA)

**Summary of Results:**

		<b>In 2021\$ (000) Incurred Costs</b>								
		<b>Adjusted-Recorded</b>					<b>Adjusted-Forecast</b>			
<b>Years</b>		<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	
Labor		1,084	1,227	1,823	2,534	2,652	2,558	2,804	2,928	
Non-Labor		462	580	639	777	925	781	781	781	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>1,547</b>	<b>1,807</b>	<b>2,462</b>	<b>3,312</b>	<b>3,576</b>	<b>3,339</b>	<b>3,585</b>	<b>3,709</b>	
FTE		8.0	8.4	13.0	18.2	18.6	18.8	21.0	22.1	

*Note: Totals may include rounding differences.*

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**Summary of Adjustments to Forecast:**

In 2021 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	3-YR Average	2,336	2,336	2,336	222	468	592	2,558	2,804	2,928
Non-Labor	3-YR Average	780	780	780	0	0	0	780	780	780
NSE	3-YR Average	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>3,116</b>	<b>3,116</b>	<b>3,116</b>	<b>222</b>	<b>468</b>	<b>592</b>	<b>3,338</b>	<b>3,584</b>	<b>3,708</b>
FTE	3-YR Average	16.6	16.6	16.6	2.2	4.4	5.5	18.8	21.0	22.1

**Forecast Adjustment Details:**

Year	Labor	NLbr	NSE	Total	FTE	Adj Type
2022	31	0	0	31	0.3	1-Sided Adj
<b>Explanation:</b>	Addition of one (1) relay tech in 2022 assuming April hire date (1 FTE * \$125K * 9/12 months * 33% O&M) to perform construction and maintenance of Substation Relay and Control Systems; testing and calibration of Relay and Control Systems; repairs of Electro-Mechanical, Solid-State & Microprocessor Relays as well as Control Systems and Components.					
2022	48	0	0	48	0.5	1-Sided Adj
<b>Explanation:</b>	Addition of two (2) relay techs in 2022 assuming June hire date (2 FTEs * \$125K * 7/12 months * 33% O&M) to perform construction and maintenance of Substation Relay and Control Systems; testing and calibration of Relay and Control Systems; repairs of Electro-Mechanical, Solid-State & Microprocessor Relays as well as Control Systems and Components.					
2022	93	0	0	93	0.9	1-Sided Adj
<b>Explanation:</b>	Addition of two (2) SCADA techs in 2022 assuming April hire date (2 FTEs * \$124K * 9/12 months * 50% O&M) to install, operate, maintain, and test distribution circuit equipment including but not limited to power circuit breakers, service restorers, regulators, transformers, relays, motors, batteries, battery chargers and distribution SCADA controls.					
2022	50	0	0	50	0.5	1-Sided Adj
<b>Explanation:</b>	Addition of two (2) RTU Techs in 2022 assuming May hire date (2 FTEs * \$126K * 8/12 months * 30% O&M) to perform construction and maintenance of substation and field metering and control equipment.					
<b>2022 Total</b>	<b>222</b>	<b>0</b>	<b>0</b>	<b>222</b>	<b>2.2</b>	
2023	206	0	0	206	1.7	1-Sided Adj
<b>Explanation:</b>	Addition of five (5) relay techs in 2023 (5 FTEs * \$125K * 33% O&M) to perform construction and maintenance of Substation Relay and Control Systems; testing and calibration of Relay and Control Systems; repairs of Electro-Mechanical, Solid-State & Microprocessor Relays as well as Control Systems and Components.					
2023	186	0	0	186	1.9	1-Sided Adj

Note: Totals may include rounding differences.

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<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Addition of three (3) SCADA techs in 2023 (3 FTEs * \$124K * 50% O&M) to install, operate, maintain, and test distribution circuit equipment including but not limited to power circuit breakers, service restorers, regulators, transformers, relays, motors, batteries, battery chargers and distribution SCADA controls.					
2023	76	0	0	76	0.8	1-Sided Adj
<b>Explanation:</b>	Addition of two (2) RTU Techs in 2023 (2 FTEs * \$126K * 30% O&M) to perform construction and maintenance of substation and field metering and control equipment.					
<b>2023 Total</b>	<b>468</b>	<b>0</b>	<b>0</b>	<b>468</b>	<b>4.4</b>	
2024	206	0	0	206	1.7	1-Sided Adj
<b>Explanation:</b>	Addition of five (5) relay techs in 2024 (5 FTEs * \$125K * 33% O&M) to perform construction and maintenance of Substation Relay and Control Systems; testing and calibration of Relay and Control Systems; repairs of Electro-Mechanical, Solid-State & Microprocessor Relays as well as Control Systems and Components.					
2024	310	0	0	310	3.0	1-Sided Adj
<b>Explanation:</b>	Addition of five (5) SCADA techs in 2024 (5 FTEs * \$124K * 50% O&M) to install, operate, maintain, and test distribution circuit equipment including but not limited to power circuit breakers, service restorers, regulators, transformers, relays, motors, batteries, battery chargers and distribution SCADA controls.					
2024	76	0	0	76	0.8	1-Sided Adj
<b>Explanation:</b>	Addition of two (2) RTU Techs in 2024 (2 FTEs * \$126K * 30% O&M) to perform construction and maintenance of substation and field metering and control equipment.					
<b>2024 Total</b>	<b>592</b>	<b>0</b>	<b>0</b>	<b>592</b>	<b>5.5</b>	

Note: Totals may include rounding differences.

SDG&E/ELECTRIC DISTRIBUTION/Exh No:SDG&E-12-WP-R/Witness: T. Swetek

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek  
Category: E. ET&D: Substation C&O  
Category-Sub: 2. ET&D: Substation C&O (RELAY/SCADA)  
Workpaper: 1ED006.002 - ET&D: Substation C&O (RELAY & SCADA)

**Determination of Adjusted-Recorded (Incurred Costs):**

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	921	920	1,436	1,792	1,909
Non-Labor	414	514	590	710	890
NSE	0	0	0	0	0
<b>Total</b>	<b>1,335</b>	<b>1,434</b>	<b>2,027</b>	<b>2,502</b>	<b>2,800</b>
FTE	7.1	6.9	10.7	12.8	12.9
<b>Adjustments (Nominal \$) **</b>					
Labor	-75	61	71	359	396
Non-Labor	-10	10	1	9	34
NSE	0	0	0	0	0
<b>Total</b>	<b>-85</b>	<b>71</b>	<b>72</b>	<b>368</b>	<b>430</b>
FTE	-0.3	0.3	0.5	2.8	3.0
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	846	981	1,507	2,151	2,305
Non-Labor	404	524	592	718	925
NSE	0	0	0	0	0
<b>Total</b>	<b>1,250</b>	<b>1,505</b>	<b>2,098</b>	<b>2,869</b>	<b>3,230</b>
FTE	6.8	7.2	11.2	15.6	15.9
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	126	149	216	305	346
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>126</b>	<b>149</b>	<b>216</b>	<b>305</b>	<b>346</b>
FTE	1.2	1.2	1.8	2.6	2.7
<b>Escalation to 2021\$</b>					
Labor	113	97	100	79	0
Non-Labor	58	56	47	59	0
NSE	0	0	0	0	0
<b>Total</b>	<b>171</b>	<b>153</b>	<b>148</b>	<b>137</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2021\$)</b>					
Labor	1,084	1,227	1,823	2,534	2,652
Non-Labor	462	580	639	777	925
NSE	0	0	0	0	0
<b>Total</b>	<b>1,547</b>	<b>1,807</b>	<b>2,462</b>	<b>3,312</b>	<b>3,576</b>
FTE	8.0	8.4	13.0	18.2	18.6

\* After company-wide exclusions of Non-GRC costs

\*\* Refer to "Detail of Adjustments to Recorded" page for line item adjustments

Note: Totals may include rounding differences.

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 Workpaper: 1ED006.002 - ET&D: Substation C&O (RELAY & SCADA)

**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs					
Years	2017	2018	2019	2020	2021
Labor	-75	61	71	359	396
Non-Labor	-10	10	1	9	34
NSE	0	0	0	0	0
<b>Total</b>	<b>-85</b>	<b>71</b>	<b>72</b>	<b>368</b>	<b>430</b>
FTE	-0.3	0.3	0.5	2.8	3.0

**Detail of Adjustments to Recorded:**

Year	Labor	NLbr	NSE	FTE	Adj Type
2017	-75	-10	0	-0.3	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
<b>2017 Total</b>	<b>-75</b>	<b>-10</b>	<b>0</b>	<b>-0.3</b>	
2018	61	10	0	0.3	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
<b>2018 Total</b>	<b>61</b>	<b>10</b>	<b>0</b>	<b>0.3</b>	
2019	71	1	0	0.5	CCTR Transf From 2100-4100.000
<b>Explanation:</b>	Transfer labor, non-labor, and FTE's associated with Electronic Control System Techs (SCADA) from cost center 2100-4100 in workpaper 1ED006.003 to cost center 2100-0234 in RELAY & SCADA sub-workpaper 1ED006.002 to align costs with where roles reside and are forecasted.				
<b>2019 Total</b>	<b>71</b>	<b>1</b>	<b>0</b>	<b>0.5</b>	
2020	-4	-8	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-29	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	392	16	0	3.0	CCTR Transf From 2100-4100.000
<b>Explanation:</b>	Transfer labor, non-labor, and FTE's associated with Electronic Control System Techs (SCADA) from cost center 2100-4100 in workpaper 1ED006.003 to cost center 2100-0234 in RELAY & SCADA sub-workpaper 1ED006.002 to align costs with where roles reside and are forecasted.				
<b>2020 Total</b>	<b>359</b>	<b>9</b>	<b>0</b>	<b>2.8</b>	

Note: Totals may include rounding differences.

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<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
2021	0	-34	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	396	68	0	3.0	CCTR Transf From 2100-4100.000
<b>Explanation:</b>	Transfer labor, non-labor, and FTE's associated with Electronic Control System Techs (SCADA) from cost center 2100-4100 in workpaper 1ED006.003 to cost center 2100-0234 in RELAY & SCADA sub-workpaper 1ED006.002 to align costs with where roles reside and are forecasted.				
<b>2021 Total</b>	<b>396</b>	<b>34</b>	<b>0</b>	<b>3.0</b>	

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**RAMP Item # 1**

**RAMP Activity**

RAMP Chapter: SDG&E-Risk-8 Incident Involving an Employee

RAMP Line Item ID: C10

RAMP Line Item Name: Personal Protective Equipment

Tranche(/s): Tranche1: None

**GRC Forecast Cost Estimates (\$000)**

	2021 Historical Embedded Cost (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2024 RAMP Range (2020 Incurred \$)	
					Low	High
Tranche 1 Cost Estimate	22	27	27	27	1,689	2,045

**Cost Estimate Changes from RAMP:**

ET&D Substation (RELAY & SCADA) 3-year average RAMP Base totals \$27k.

**GRC Work Unit/Activity Level Estimates**

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2024 RAMP Range Activities	
					Low	High
Tranche 1 # of employees	43.00	43.00	43.00	43.00	4,600.00	4,800.00

**Work Unit Changes from RAMP:**

ET&D Substation (RELAY & SCADA) portion of RAMP item.

**Risk Spend Efficiency (RSE)**

	GRC RSE	RAMP RSE
Tranche 1	0.000	0.000

**RSE Changes from RAMP:**

General changes to risk scores or RSE values are primarily due to changes in the MAVF and RSE methodology as discussed in the RAMP to GRC integration testimony of R. Scott Pearson and Gregory S. Flores (Ex. SCG-03/SDG&E-03, Chapter 2).



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Area: ELECTRIC DISTRIBUTION  
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Category: F. Distribution Design and Project Management  
Workpaper: 1ED007.000

**Summary for Category: F. Distribution Design and Project Management**

	In 2021\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	277	282	299	299
Non-Labor	543	957	1,006	1,006
NSE	0	0	0	0
<b>Total</b>	<b>820</b>	<b>1,239</b>	<b>1,305</b>	<b>1,305</b>
FTE	3.1	3.2	3.3	3.3

**Workpapers belonging to this Category:**

**1ED007.000 Distribution Design and Project Management**

Labor	277	282	299	299
Non-Labor	543	957	1,006	1,006
NSE	0	0	0	0
<b>Total</b>	<b>820</b>	<b>1,239</b>	<b>1,305</b>	<b>1,305</b>
FTE	3.1	3.2	3.3	3.3

*Note: Totals may include rounding differences.*

**Beginning of Workpaper**  
**1ED007.000 - Distribution Design and Project Management**

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Category: F. Distribution Design and Project Management  
Category-Sub: 1. Distribution Design and Project Management  
Workpaper: 1ED007.000 - Distribution Design and Project Management

**Activity Description:**

Project Management's responsibilities vary widely, but all relate to the preparation of construction orders. Department performs the design and engineering necessary to develop construction orders, from which additions and modifications to electric distribution systems are constructed. These range from simple services for individual customers to large complex distribution systems.. Also included are construction orders for programs converting electric overhead lines to underground and relocating existing facilities for both private party requestors and governmental agencies. The construction order development process includes meeting with customers, governmental agencies and other utilities in planning and coordinating additions and modifications to the electric distribution system. Department performs engineering calculations, analytical assessments, secure contracts and special agreements, which is then assembled into job packages for distribution to customers, contractors, other utilities, and all participating departments within SDG&E.

The construction orders developed by Project Management represent capital work. However, many capital projects include a small component of O&M. There are also some small construction orders for which the work is considered O&M because of its limited scope. As such, Project Management's time is generally split between Capital and O&M, with 98% charged to Capital and 2% charged to O&M. The relatively small O&M component of Project Management is addressed here. A single work unit is not possible to identify due to multiple activities in this workpaper such as planner and designer development/training, design/development of training materials, design application and software, etc.

**Forecast Explanations:**

**Labor - Base YR Rec**

The forecast method developed for this cost category is Base Year Recorded . This method is appropriate because it most closely represents the annual O&M expense that is roughly 2% of Project Management's total budget. The base year recorded was used as opposed to averages to specifically account for an increased FTEs count in 2021 needed to support increased workload due to increased meter sets for new business, more aggressive undergrounding, and additional response for improvements for municipal customers.

**Non-Labor - Base YR Rec**

The forecast method developed for this cost category is Base Year Recorded . This method is appropriate because it most closely represents the annual O&M expense that is roughly 2% of Project Management's total budget. The base year recorded was used as opposed to averages to specifically account for an increased FTEs count in 2021 needed to support increased workload due to increased meter sets for new business, more aggressive undergrounding, and additional response for improvements for municipal customers.

**NSE - Base YR Rec**

N/A

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 Workpaper: 1ED007.000 - Distribution Design and Project Management

**Summary of Results:**

		<b>In 2021\$ (000) Incurred Costs</b>								
		<b>Adjusted-Recorded</b>					<b>Adjusted-Forecast</b>			
<b>Years</b>		<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	
Labor		464	708	509	206	277	282	299	299	
Non-Labor		-71	198	368	469	543	956	1,005	1,005	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>393</b>	<b>906</b>	<b>876</b>	<b>675</b>	<b>820</b>	<b>1,238</b>	<b>1,304</b>	<b>1,304</b>	
FTE		4.9	8.4	5.8	2.1	3.1	3.2	3.3	3.3	

*Note: Totals may include rounding differences.*

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**Summary of Adjustments to Forecast:**

In 2021 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	Base YR Rec	277	277	277	5	22	22	282	299	299
Non-Labor	Base YR Rec	543	543	543	414	463	463	957	1,006	1,006
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>820</b>	<b>820</b>	<b>820</b>	<b>419</b>	<b>485</b>	<b>485</b>	<b>1,239</b>	<b>1,305</b>	<b>1,305</b>
FTE	Base YR Rec	3.1	3.1	3.1	0.1	0.2	0.2	3.2	3.3	3.3

**Forecast Adjustment Details:**

Year	Labor	NLbr	NSE	Total	FTE	Adj Type
2022	0	15	0	15	0.0	1-Sided Adj
<b>Explanation:</b>	Automated Utility Design (IT capital project) annual software maintenance & support service costs					
2022	0	250	0	250	0.0	1-Sided Adj
<b>Explanation:</b>	Builder services portal major system enhancement (IT capital project) - annual O&M costs.					
2022	0	100	0	100	0.0	1-Sided Adj
<b>Explanation:</b>	Customer service improvement initiative - Contractor to create process mapping, template reviews, change management (Procore/SAP integration), videos, tool creations. Streamlining communication and template tools, driving process efficiencies to improve customer feedback and reviews - annual O&M costs.					
2022	0	35	0	35	0.0	1-Sided Adj
<b>Explanation:</b>	Planner and Designer training consulting services. After the workforce plan was approved, DPM added 14% of workforce in 2021 and due to the high attrition rate of 15% (average 7%), as well as 6% internal transfers and promotions, there is an increased cost to provide sufficient learning and development support for the increased headcount and new employees.					
2022	0	7	0	7	0.0	1-Sided Adj
<b>Explanation:</b>	Bluebeam Maintenance & Support Cost.					
2022	0	7	0	7	0.0	1-Sided Adj
<b>Explanation:</b>	Bluebeam Perpetual License - 20 units @ \$325/unit.					
2022	5	0	0	5	0.1	1-Sided Adj
<b>Explanation:</b>	Please see supplemental workpapers for detailed explanation.					
<b>2022 Total</b>	<b>5</b>	<b>414</b>	<b>0</b>	<b>419</b>	<b>0.1</b>	
2023	0	15	0	15	0.0	1-Sided Adj
<b>Explanation:</b>	Automated Utility Design (IT capital project) annual software maintenance & support service costs					
2023	0	250	0	250	0.0	1-Sided Adj
<b>Explanation:</b>	Builder services portal major system enhancement (IT capital project) - annual O&M costs.					
2023	0	100	0	100	0.0	1-Sided Adj

Note: Totals may include rounding differences.

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 Workpaper: 1ED007.000 - Distribution Design and Project Management

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj_Type</u>
<b>Explanation:</b>	Customer service improvement initiative - Contractor to create process mapping, template reviews, change management (Procore/SAP integration), videos, tool creations. Streamlining communication and template tools, driving process efficiencies to improve customer feedback and reviews - annual O&M costs.					
2023	0	35	0	35	0.0	1-Sided Adj
<b>Explanation:</b>	Planner and Designer training consulting services. After the workforce plan was approved, DPM added 14% of workforce in 2021 and due to the high attrition rate of 15% (average 7%), as well as 6% internal transfers and promotions, there is an increased cost to provide sufficient learning and development support for the increased headcount and new employees.					
2023	0	49	0	49	0.0	1-Sided Adj
<b>Explanation:</b>	Autodesk (AutoCAD) Licenses - 80 units @ \$608/unit. 3 Year subscription to be paid in 2023 but will be amortized in three years.					
2023	0	7	0	7	0.0	1-Sided Adj
<b>Explanation:</b>	Bluebeam Maintenance & Support Cost.					
2023	0	7	0	7	0.0	1-Sided Adj
<b>Explanation:</b>	Bluebeam Perpetual License - 20 units @ \$325/unit.					
2023	22	0	0	22	0.2	1-Sided Adj
<b>Explanation:</b>	Please see supplemental workpapers for detailed explanation.					
<b>2023 Total</b>	<b>22</b>	<b>463</b>	<b>0</b>	<b>485</b>	<b>0.2</b>	
2024	0	15	0	15	0.0	1-Sided Adj
<b>Explanation:</b>	Automated Utility Design (IT capital project) annual software maintenance & support service costs.					
2024	0	250	0	250	0.0	1-Sided Adj
<b>Explanation:</b>	Builder services portal major system enhancement (IT capital project) - annual O&M costs.					
2024	0	100	0	100	0.0	1-Sided Adj
<b>Explanation:</b>	Customer service improvement initiative - Contractor to create process mapping, template reviews, change management (Procore/SAP integration), videos, tool creations. Streamlining communication and template tools, driving process efficiencies to improve customer feedback and reviews - annual O&M costs.					
2024	0	35	0	35	0.0	1-Sided Adj
<b>Explanation:</b>	Planner and Designer training consulting services. After the workforce plan was approved, DPM added 14% of workforce in 2021 and due to the high attrition rate of 15% (average 7%), as well as 6% internal transfers and promotions, there is an increased cost to provide sufficient learning and development support for the increased headcount and new employees.					
2024	0	49	0	49	0.0	1-Sided Adj
<b>Explanation:</b>	Autodesk (AutoCAD) Licenses - 80 units @ \$608/unit. 3 Year subscription to be paid in 2023 but will be amortized in three years.					
2024	0	7	0	7	0.0	1-Sided Adj
<b>Explanation:</b>	Bluebeam Maintenance & Support Cost.					

Note: Totals may include rounding differences.

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<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj_Type</u>
2024	0	7	0	7	0.0	1-Sided Adj
<b>Explanation:</b>	Bluebeam Perpetual License - 20 units @ \$325/unit.					
2024	22	0	0	22	0.2	1-Sided Adj
<b>Explanation:</b>	Please see supplemental workpapers for detailed explanation.					
<b>2024 Total</b>	<b>22</b>	<b>463</b>	<b>0</b>	<b>485</b>	<b>0.2</b>	

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**Determination of Adjusted-Recorded (Incurred Costs):**

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	497	506	560	582	171
Non-Labor	271	328	1,588	1,300	529
NSE	0	0	0	0	0
<b>Total</b>	<b>768</b>	<b>834</b>	<b>2,148</b>	<b>1,883</b>	<b>700</b>
FTE	6.3	6.6	6.3	5.7	1.7
<b>Adjustments (Nominal \$) **</b>					
Labor	-135	60	-140	-407	70
Non-Labor	-333	-149	-1,247	-867	14
NSE	0	0	0	0	0
<b>Total</b>	<b>-468</b>	<b>-89</b>	<b>-1,387</b>	<b>-1,274</b>	<b>84</b>
FTE	-2.0	0.6	-1.4	-4.0	0.9
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	362	566	420	175	241
Non-Labor	-62	179	341	433	543
NSE	0	0	0	0	0
<b>Total</b>	<b>300</b>	<b>745</b>	<b>761</b>	<b>608</b>	<b>784</b>
FTE	4.2	7.2	4.9	1.8	2.7
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	54	86	60	25	36
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>54</b>	<b>86</b>	<b>60</b>	<b>25</b>	<b>36</b>
FTE	0.7	1.2	0.9	0.3	0.4
<b>Escalation to 2021\$</b>					
Labor	48	56	28	6	0
Non-Labor	-9	19	27	35	0
NSE	0	0	0	0	0
<b>Total</b>	<b>39</b>	<b>75</b>	<b>55</b>	<b>42</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2021\$)</b>					
Labor	464	708	509	206	277
Non-Labor	-71	198	368	469	543
NSE	0	0	0	0	0
<b>Total</b>	<b>393</b>	<b>906</b>	<b>876</b>	<b>675</b>	<b>820</b>
FTE	4.9	8.4	5.8	2.1	3.1

\* After company-wide exclusions of Non-GRC costs

\*\* Refer to "Detail of Adjustments to Recorded" page for line item adjustments

Note: Totals may include rounding differences.



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**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs					
Years	2017	2018	2019	2020	2021
Labor	-135	60	-140	-407	70
Non-Labor	-333	-149	-1,247	-867	14
NSE	0	0	0	0	0
<b>Total</b>	<b>-468</b>	<b>-89</b>	<b>-1,387</b>	<b>-1,274</b>	<b>84</b>
FTE	-2.0	0.6	-1.4	-4.0	0.9

**Detail of Adjustments to Recorded:**

Year	Labor	NLbr	NSE	FTE	Adj Type
2017	0	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	0	2	0	0.1	CCTR Transf From 2100-0703.000
<b>Explanation:</b>	Transfer labor, FTEs and Non-Labor for Continuous Improvement & Permitting department costs from cost center 2100-0703 in workpaper 1ED002 Construction Management to cost center 2100-4096 in workpaper 1ED007 Distribution Design and Project Management (DPM) to align costs with where roles reside and are forecated.				
2017	39	2	0	0.3	CCTR Transf From 2100-3986.000
<b>Explanation:</b>	Transfer labor, FTEs and Non-Labor for Continuous Improvement & Permitting department costs from cost center 2100-3986 in workpaper 1ED002 Construction Management to cost center 2100-4096 in workpaper 1ED007 Distribution Design and Project Management (DPM) to align costs with where roles reside and are forecated.				
2017	-68	-24	0	-0.9	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving labor and non-labor costs associated with Training from cost center 2100-0132 in work group 1ED0007 Distribution Design & PM to the Training Capital Pool to align activity where costs reside.				
2017	-42	-38	0	-0.5	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving labor and non-labor costs associated with Training from cost center 2100-0134 in work group 1ED0007 Distribution Design & PM to the Training Capital Pool to align activity where costs reside.				
2017	-64	-22	0	-0.8	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving labor and non-labor costs associated with Training from cost center 2100-0136 in work group 1ED0007 Distribution Design & PM to the Training Capital Pool to align activity where costs reside.				
2017	0	-13	0	0.0	1-Sided Adj

*Note: Totals may include rounding differences.*

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 Witness: Tyson J. Swetek  
 Category: F. Distribution Design and Project Management  
 Category-Sub: 1. Distribution Design and Project Management  
 Workpaper: 1ED007.000 - Distribution Design and Project Management

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	One-sided adjustment moving non-labor costs associated with Training from cost center 2100-0138 in work group 1ED007 Distribution Design & PM to the Training Capital Pool to align activity where costs reside.				
2017	0	-14	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2017	0	-119	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2017	0	-2	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2017	0	-107	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2017	0	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Exclude labor expenses associated with lobbying activities (FERC 426.4). This adjustment is in addition to other costs that have already been excluded based other specific accounting attributes.				
<b>2017 Total</b>	<b>-135</b>	<b>-333</b>	<b>0</b>	<b>-2.0</b>	
2018	0	0	0	0.1	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving labor and non-labor costs associated with Training from cost center 2100-0132 in work group 1ED0007 Distribution Design & PM to the Training Capital Pool to align activity where costs reside.				
2018	0	3	0	0.1	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving labor and non-labor costs associated with Training from cost center 2100-0134 in work group 1ED0007 Distribution Design & PM to the Training Capital Pool to align activity where costs reside.				
2018	4	8	0	0.1	CCTR Transf From 2100-0703.000
<b>Explanation:</b>	Transfer labor, FTEs and Non-Labor for Continuous Improvement & Permitting department costs from cost center 2100-0703 in workpaper 1ED002 Construction Management to cost center 2100-4096 in workpaper 1ED007 Distribution Design and Project Management (DPM) to align costs with where roles reside and are forecated.				
2018	-1	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving labor and non-labor costs associated with Training from cost center 2100-0136 in work group 1ED0007 Distribution Design & PM to the Training Capital Pool to align activity where costs reside.				
2018	57	6	0	0.5	CCTR Transf From 2100-3986.000
<b>Explanation:</b>	Transfer labor, FTEs and Non-Labor for Continuous Improvement & Permitting department costs from cost center 2100-3986 in workpaper 1ED002 Construction Management to cost center 2100-4096 in workpaper 1ED007 Distribution Design and Project Management (DPM) to align costs with where roles reside and are forecated.				

Note: Totals may include rounding differences.

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 Workpaper: 1ED007.000 - Distribution Design and Project Management

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
2018	0	-8	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving non-labor costs associated with Training from cost center 2100-0138 in work group 1ED0007 Distribution Design & PM to the Training Capital Pool to align activity where costs reside.				
2018	0	-22	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2018	0	-70	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2018	0	-19	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2018	0	-46	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2018	0	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Exclude labor expenses associated with lobbying activities (FERC 426.4). This adjustment is in addition to other costs that have already been excluded based other specific accounting attributes.				
<b>2018 Total</b>	<b>60</b>	<b>-149</b>	<b>0</b>	<b>0.6</b>	
2019	1	3	0	0.1	CCTR Transf From 2100-0703.000
<b>Explanation:</b>	Transfer labor, FTEs and Non-Labor for Continuous Improvement & Permitting department costs from cost center 2100-0703 in workpaper 1ED002 Construction Management to cost center 2100-4096 in workpaper 1ED007 Distribution Design and Project Management (DPM) to align costs with where roles reside and are forecated.				
2019	12	7	0	0.1	CCTR Transf From 2100-3986.000
<b>Explanation:</b>	Transfer labor, FTEs and Non-Labor for Continuous Improvement & Permitting department costs from cost center 2100-3986 in workpaper 1ED002 Construction Management to cost center 2100-4096 in workpaper 1ED007 Distribution Design and Project Management (DPM) to align costs with where roles reside and are forecated.				
2019	29	27	0	0.4	CCTR Transf From 2100-4091.000
<b>Explanation:</b>	Transfer labor, FTEs and Non-Labor for Policies & Compliance and Project Support costs from cost center 2100-4091 in workpaper 1ED0014 Major Projects to cost center 2100-0138 in workpaper 1ED007 Distribution Design and Project Management (DPM) to align costs with where roles reside and are forecated.				
2019	2	2	0	0.1	CCTR Transf From 2100-4092.000
<b>Explanation:</b>	Transfer labor, FTEs and Non-Labor for Policies & Compliance and Project Support costs from cost center 2100-4092 in workpaper 1ED0014 Major Projects to cost center 2100-0138 in workpaper 1ED007 Distribution Design and Project Management (DPM) to align costs with where roles reside and are forecated.				
2019	-51	-1,012	0	-0.4	1-Sided Adj

Note: Totals may include rounding differences.

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 Workpaper: 1ED007.000 - Distribution Design and Project Management

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	One-sided adjustment moving labor and non-labor costs associated with Training from cost center 2100-0131 in work group 1ED0007 Distribution Design & PM to the Training Capital Pool to align activity where costs reside.				
2019	-69	-3	0	-0.8	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving labor and non-labor costs associated with Training from cost center 2100-0132 in work group 1ED0007 Distribution Design & PM to the Training Capital Pool to align activity where costs reside.				
2019	-43	-5	0	-0.4	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving labor and non-labor costs associated with Training from cost center 2100-0134 in work group 1ED0007 Distribution Design & PM to the Training Capital Pool to align activity where costs reside.				
2019	-14	-4	0	-0.2	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving labor and non-labor costs associated with Training from cost center 2100-0136 in work group 1ED0007 Distribution Design & PM to the Training Capital Pool to align activity where costs reside.				
2019	-2	-2	0	-0.1	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving labor and non-labor costs associated with Training from cost center 2100-0138 in work group 1ED0007 Distribution Design & PM to the Training Capital Pool to align activity where costs reside.				
2019	-3	-187	0	-0.1	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving labor and non-labor costs associated with Training from cost center 2100-4096 in work group 1ED0007 Distribution Design & PM to the Training Capital Pool to align activity where costs reside.				
2019	0	-19	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2019	0	-45	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2019	0	-6	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2019	0	-3	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2019	0	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Exclude labor expenses associated with lobbying activities (FERC 426.4). This adjustment is in addition to other costs that have already been excluded based other specific accounting attributes.				
<b>2019 Total</b>	<b>-140</b>	<b>-1,247</b>	<b>0</b>	<b>-1.4</b>	
2020	0	-7	0	0.0	1-Sided Adj

Note: Totals may include rounding differences.

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 Workpaper: 1ED007.000 - Distribution Design and Project Management

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-15	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-11	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-14	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-5	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	Removal of capital settlement portion to accurately reflect O&M and capital balances for 2020 Department Overhead.				
2020	-293	-900	0	-2.4	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving labor and non-labor costs associated with Training from cost center 2100-0131 in work group 1ED0007 Distribution Design & PM to the Training Capital Pool to align activity where costs reside.				
2020	0	24	0	0.0	CCTR Transf From 2100-0703.000
<b>Explanation:</b>	Transfer Non-Labor for Continuous Improvement & Permitting department costs from cost center 2100-0703 in workpaper 1ED002 Construction Management to cost center 2100-4096 in workpaper 1ED007 Distribution Design and Project Management (DPM) to align costs with where roles reside and are forecated.				
2020	6	16	0	0.1	CCTR Transf From 2100-3986.000
<b>Explanation:</b>	Transfer labor, FTEs and Non-Labor for Continuous Improvement & Permitting department costs from cost center 2100-3986 in workpaper 1ED002 Construction Management to cost center 2100-4096 in workpaper 1ED007 Distribution Design and Project Management (DPM) to align costs with where roles reside and are forecated.				
2020	39	65	0	0.6	CCTR Transf From 2100-4091.000

Note: Totals may include rounding differences.

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<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Transfer labor, FTEs and Non-Labor for Policies & Compliance and Project Support costs from cost center 2100-4091 in workpaper 1ED0014 Major Projects to cost center 2100-0138 in workpaper 1ED007 Distribution Design and Project Management (DPM) to align costs with where roles reside and are forecasted.				
2020	4	20	0	0.1	CCTR Transf From 2100-4092.000
<b>Explanation:</b>	Transfer labor, FTEs and Non-Labor for Policies & Compliance and Project Support costs from cost center 2100-4092 in workpaper 1ED0014 Major Projects to cost center 2100-0138 in workpaper 1ED007 Distribution Design and Project Management (DPM) to align costs with where roles reside and are forecasted.				
2020	-3	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving labor costs associated with Training from cost center 2100-0112 in work group 1ED0007 Distribution Design & PM to the Training Capital Pool to align activity where costs reside.				
2020	-86	-11	0	-1.1	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving labor and non-labor costs associated with Training from cost center 2100-0132 in work group 1ED0007 Distribution Design & PM to the Training Capital Pool to align activity where costs reside.				
2020	-24	-1	0	-0.3	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving labor and non-labor costs associated with Training from cost center 2100-0134 in work group 1ED0007 Distribution Design & PM to the Training Capital Pool to align activity where costs reside.				
2020	-49	-2	0	-0.7	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving labor and non-labor costs associated with Training from cost center 2100-0136 in work group 1ED0007 Distribution Design & PM to the Training Capital Pool to align activity where costs reside.				
2020	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving non-labor costs associated with Training from cost center 2100-0138 in work group 1ED0007 Distribution Design & PM to the Training Capital Pool to align activity where costs reside.				
2020	-2	-6	0	-0.1	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving labor and non-labor costs associated with Training from cost center 2100-4096 in work group 1ED0007 Distribution Design & PM to the Training Capital Pool to align activity where costs reside.				
2020	0	-2	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2020	0	-6	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2020	0	-9	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				

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<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
2020	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2020	0	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Exclude labor expenses associated with lobbying activities (FERC 426.4). This adjustment is in addition to other costs that have already been excluded based other specific accounting attributes.				
<b>2020 Total</b>	<b>-407</b>	<b>-867</b>	<b>0</b>	<b>-4.0</b>	
2021	0	-4	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-19	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-13	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-16	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	0	0	0.1	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving labor costs associated with Training from cost center 2100-0131 in work group 1ED0007 Distribution Design & PM to the Training Capital Pool to align activity where costs reside.				
2021	12	41	0	0.1	CCTR Transf From 2100-0703.000
<b>Explanation:</b>	Transfer labor, FTEs and Non-Labor for Continuous Improvement & Permitting department costs from cost center 2100-0703 in workpaper 1ED002 Construction Management to cost center 2100-4096 in workpaper 1ED007 Distribution Design and Project Management (DPM) to align costs with where roles reside and are forecated.				
2021	12	21	0	0.1	CCTR Transf From 2100-3986.000

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<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Transfer labor, FTEs and Non-Labor for Continuous Improvement & Permitting department costs from cost center 2100-3986 in workpaper 1ED002 Construction Management to cost center 2100-4096 in workpaper 1ED007 Distribution Design and Project Management (DPM) to align costs with where roles reside and are forecasted.				
2021	43	27	0	0.7	CCTR Transf From 2100-4091.000
<b>Explanation:</b>	Transfer labor, FTEs and Non-Labor for Policies & Compliance and Project Support costs from cost center 2100-4091 in workpaper 1ED0014 Major Projects to cost center 2100-0138 in workpaper 1ED007 Distribution Design and Project Management (DPM) to align costs with where roles reside and are forecasted.				
2021	4	3	0	0.1	CCTR Transf From 2100-4092.000
<b>Explanation:</b>	Transfer labor, FTEs and Non-Labor for Policies & Compliance and Project Support costs from cost center 2100-4092 in workpaper 1ED0014 Major Projects to cost center 2100-0138 in workpaper 1ED007 Distribution Design and Project Management (DPM) to align costs with where roles reside and are forecasted.				
2021	0	-10	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving non-labor costs associated with Training from cost center 2100-0132 in work group 1ED0007 Distribution Design & PM to the Training Capital Pool to align activity where costs reside .				
2021	0	-9	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving non-labor costs associated with Training from cost center 2100-0134 in work group 1ED0007 Distribution Design & PM to the Training Capital Pool to align activity where costs reside .				
2021	-1	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving labor and non-labor costs associated with Training from cost center 2100-0136 in work group 1ED0007 Distribution Design & PM to the Training Capital Pool to align activity where costs reside.				
2021	0	-3	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2021	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2021	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2021	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2021	0	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Exclude labor expenses associated with lobbying activities (FERC 426.4). This adjustment is in addition to other costs that have already been excluded based other specific accounting attributes.				
<b>2021 Total</b>	<b>70</b>	<b>14</b>	<b>0</b>	<b>0.9</b>	

Note: Totals may include rounding differences.



**Supplemental Workpapers for Workpaper 1ED007.000**

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**TY2024 GRC FORECAST - DETAILS**

Initiative/ Description	Labor/ Non-Labor	RAMP/ Non-RAMP	Unit Description	O&M/Capital Split	2022			2023			2024			Total Cost	Explanation
					# of units	Cost per unit	Total cost	# of units	Cost per unit	Total cost	# of units	Cost per unit	Total cost		
WFP	Labor	Non-RAMP	FTEs	2%	4	\$ 85,000	\$ 1,700	4	\$ 85,000	\$ 6,800	4	\$ 85,000	\$ 6,800	\$ 15,300	Adds 4 Planners for implementation of Rule 45 and the imposed timelines by CPUC regulatory requirements, increase in bi-directional power flow generators, service requests associated with Rule 21 V2G, increase in low income housing, and backlog of projects in entitlement phase to address the housing crisis. 2022 additions assuming October hire date (3/12 months).
WFP	Labor	Non-RAMP	FTEs	2%	4	\$ 110,000	\$ 2,200	4	\$ 110,000	\$ 8,800	4	\$ 110,000	\$ 8,800	\$ 19,800	Adds 4 Project Managers for implementation of Rule 45 and the imposed timelines by CPUC regulatory requirements, increase in bi-directional power flow generators, service requests associated with Rule 21 V2G, increase in low income housing, and backlog of projects in entitlement phase to address the housing crisis. 2022 additions assuming October hire date (3/12 months).
WFP	Labor	Non-RAMP	FTEs	2%	2	\$ 85,000	\$ 850	4	\$ 85,000	\$ 6,800	4	\$ 85,000	\$ 6,800	\$ 14,450	Adds 2 Project Support Coordinators for implementation of Rule 45 and the imposed timelines by CPUC regulatory requirements, increase in bi-directional power flow generators, service requests associated with Rule 21 V2G, increase in low income housing, and backlog of projects in entitlement phase to address the housing crisis. 2022 additions assuming October hire date (3/12 months).
<b>Total</b>							\$ 4,750			\$ 22,400			\$ 22,400	\$ 49,550	

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Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek  
Category: G. Electric Regional Operations  
Workpaper: 1ED008.000

**Summary for Category: G. Electric Regional Operations**

	In 2021\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	23,984	24,840	26,217	28,823
Non-Labor	11,375	11,739	11,904	11,944
NSE	0	0	0	0
<b>Total</b>	<b>35,359</b>	<b>36,579</b>	<b>38,121</b>	<b>40,767</b>
FTE	159.2	167.8	181.5	207.6

**Workpapers belonging to this Category:**

**1ED008.000 Electric Regional Operations**

Labor	23,984	24,840	26,217	28,823
Non-Labor	11,375	11,739	11,904	11,944
NSE	0	0	0	0
<b>Total</b>	<b>35,359</b>	<b>36,579</b>	<b>38,121</b>	<b>40,767</b>
FTE	159.2	167.8	181.5	207.6

*Note: Totals may include rounding differences.*

**Beginning of Workpaper**  
**1ED008.000 - Electric Regional Operations**

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Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: G. Electric Regional Operations  
 Category-Sub: 1. Electric Regional Operations  
 Workpaper: 1ED008.000 - Electric Regional Operations

**Activity Description:**

The Electric Regional Operations organization consists of the electric distribution crews within six districts, two satellite districts and other operating centers. These crews provide coverage for all of SDG&E's electric distribution system throughout its service territory. The ERO group consists of electric linemen, apprentices, line assistants, schedulers, office support personnel, and management supervision. Their primary job functions are to maintain reliability of the electric distribution system, construct new electric infrastructure, schedule and forecast to drive efficient work practices, restore service due to outages, and fix service problems and other customer issues. A single work unit is not possible to identify due to multiple activities in this workpaper such as facilities inspected, jobs completed, and employees' hours in safety meetings.

**Forecast Explanations:**

**Labor - Base YR Rec**

The forecast method developed for this cost category is Base Year Recorded. For labor, the base year provides an appropriate baseline in comparison to future targets for the organization due to the increased number of FTEs in 2021 to meet company safety and compliance targets. The increase in cost for skilled labor also included in the base year provides a more accurate representation of future years as opposed to an average or trend methodologies.

**Non-Labor - Base YR Rec**

The forecast method developed for this cost category is Base Year Recorded. For non-labor, the base year provides an appropriate baseline in comparison to future targets for the organization as opposed to average or trend methodologies. Incremental non-labor increases from the base year are requested in order to complete additional initiatives to meet company safety and compliance targets.

**NSE - Base YR Rec**

N/A

**Summary of Results:**

		In 2021\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2017	2018	2019	2020	2021	2022	2023	2024	
Labor		21,799	22,719	23,191	28,636	23,984	24,841	26,218	28,824	
Non-Labor		10,165	9,899	8,867	11,945	11,375	11,739	11,904	11,944	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>31,964</b>	<b>32,618</b>	<b>32,058</b>	<b>40,580</b>	<b>35,359</b>	<b>36,580</b>	<b>38,122</b>	<b>40,768</b>	
FTE		160.9	159.7	166.6	191.1	159.2	167.8	181.5	207.6	

*Note: Totals may include rounding differences.*

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 Category-Sub: 1. Electric Regional Operations  
 Workpaper: 1ED008.000 - Electric Regional Operations

**Summary of Adjustments to Forecast:**

In 2021 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	Base YR Rec	23,984	23,984	23,984	856	2,233	4,839	24,840	26,217	28,823
Non-Labor	Base YR Rec	11,375	11,375	11,375	364	529	569	11,739	11,904	11,944
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>35,359</b>	<b>35,359</b>	<b>35,359</b>	<b>1,220</b>	<b>2,762</b>	<b>5,408</b>	<b>36,579</b>	<b>38,121</b>	<b>40,767</b>
FTE	Base YR Rec	159.2	159.2	159.2	8.6	22.3	48.4	167.8	181.5	207.6

**Forecast Adjustment Details:**

Year	Labor	NLbr	NSE	Total	FTE	Adj Type
2022	856	364	0	1,220	8.6	1-Sided Adj
<b>Explanation:</b>	Please see supplemental workpapers for detailed explanation.					
<b>2022 Total</b>	<b>856</b>	<b>364</b>	<b>0</b>	<b>1,220</b>	<b>8.6</b>	
2023	2,233	529	0	2,762	22.3	1-Sided Adj
<b>Explanation:</b>	Please see supplemental workpapers for detailed explanation.					
<b>2023 Total</b>	<b>2,233</b>	<b>529</b>	<b>0</b>	<b>2,762</b>	<b>22.3</b>	
2024	4,839	569	0	5,408	48.4	1-Sided Adj
<b>Explanation:</b>	Please see supplemental workpapers for detailed explanation.					
<b>2024 Total</b>	<b>4,839</b>	<b>569</b>	<b>0</b>	<b>5,408</b>	<b>48.4</b>	

Note: Totals may include rounding differences.

SDG&E/ELECTRIC DISTRIBUTION/Exh No:SDG&E-12-WP-R/Witness: T. Swetek

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Workpaper: 1ED008.000 - Electric Regional Operations

**Determination of Adjusted-Recorded (Incurred Costs):**

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	18,447	17,229	19,171	27,792	20,858
Non-Labor	9,007	9,360	9,205	14,429	22,159
NSE	0	0	0	0	0
<b>Total</b>	<b>27,454</b>	<b>26,589</b>	<b>28,376</b>	<b>42,221</b>	<b>43,017</b>
FTE	144.9	132.1	143.5	179.4	136.5
<b>Adjustments (Nominal \$) **</b>					
Labor	-1,441	938	0	-3,490	-6
Non-Labor	-123	-414	-995	-3,388	-10,783
NSE	0	0	0	0	0
<b>Total</b>	<b>-1,564</b>	<b>524</b>	<b>-995</b>	<b>-6,877</b>	<b>-10,789</b>
FTE	-7.1	4.6	0.0	-15.2	-0.5
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	17,006	18,167	19,171	24,302	20,852
Non-Labor	8,884	8,946	8,211	11,042	11,375
NSE	0	0	0	0	0
<b>Total</b>	<b>25,890</b>	<b>27,113</b>	<b>27,381</b>	<b>35,344</b>	<b>32,227</b>
FTE	137.8	136.8	143.5	164.2	135.9
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	2,524	2,752	2,745	3,446	3,132
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>2,524</b>	<b>2,752</b>	<b>2,745</b>	<b>3,446</b>	<b>3,132</b>
FTE	23.1	22.9	23.1	26.9	23.3
<b>Escalation to 2021\$</b>					
Labor	2,269	1,799	1,276	888	0
Non-Labor	1,281	953	656	903	0
NSE	0	0	0	0	0
<b>Total</b>	<b>3,550</b>	<b>2,753</b>	<b>1,932</b>	<b>1,791</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2021\$)</b>					
Labor	21,799	22,719	23,191	28,636	23,984
Non-Labor	10,165	9,899	8,867	11,945	11,375
NSE	0	0	0	0	0
<b>Total</b>	<b>31,964</b>	<b>32,618</b>	<b>32,058</b>	<b>40,580</b>	<b>35,359</b>
FTE	160.9	159.7	166.6	191.1	159.2

\* After company-wide exclusions of Non-GRC costs

\*\* Refer to "Detail of Adjustments to Recorded" page for line item adjustments

Note: Totals may include rounding differences.

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**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs						
	Years	2017	2018	2019	2020	2021
Labor		-1,441	938	0.007	-3,490	-6
Non-Labor		-123	-414	-995	-3,388	-10,783
NSE		0	0	0	0	0
	<b>Total</b>	<b>-1,564</b>	<b>524</b>	<b>-995</b>	<b>-6,877</b>	<b>-10,789</b>
FTE		-7.1	4.6	0.0	-15.2	-0.5

**Detail of Adjustments to Recorded:**

Year	Labor	NLbr	NSE	FTE	Adj Type
2017	0	-6	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	0	41	0	0.0	CCTR Transf From 2100-3595.000
<b>Explanation:</b>	Electric Distribution costs that were erroneously mapped to TIMP due to remapping rules.				
2017	-28	-7	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	-3	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	0	-5	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	-37	-10	0	-0.2	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	0	-9	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	-728	-13	0	-3.3	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	-227	-1	0	-1.0	1-Sided Adj

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<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	0	-2	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	-37	-6	0	-0.2	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	0	-2	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	-108	-5	0	-0.5	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	-234	-2	0	-1.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	-5	-9	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	0	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	-2	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	-30	-6	0	-0.2	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	0	-4	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment to exclude \$3523 related to Events and Tickets.				
2017	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2017	0	-14	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2017	0	-9	0	0.0	1-Sided Adj

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<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2017	0	-14	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2017	0	-3	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2017	0	-25	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2017	0	-10	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2017	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2017	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
<b>2017 Total</b>	<b>-1,441</b>	<b>-123</b>	<b>0</b>	<b>-7.1</b>	
2018	5	-19	0	0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	22	2	0	0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	0	3	0	0.0	CCTR Transf From 2100-0122.000
<b>Explanation:</b>	Transfer Non-Labor associated with contract lineman for CC 2100-0122 in workpaper 1ED001 Reliability and Capacity to CC 2100-0076 in workpaper 1ED008.000 Electric Regional Operations to align costs with where roles reside and are forecasted.				
2018	414	-9	0	1.9	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	207	-3	0	1.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	19	0	0	0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	0	0	0	-0.1	1-Sided Adj

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<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	50	1	0	0.2	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	202	-3	0	1.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	2	2	0	0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	0	-3	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	17	6	0	0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment to exclude \$294 related to Events and Tickets.				
2018	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2018	0	-90	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2018	0	-69	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2018	0	-57	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2018	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2018	0	-128	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2018	0	-41	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2018	0	-2	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				

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<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
2018	0	-3	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
<b>2018 Total</b>	<b>938</b>	<b>-414</b>	<b>0</b>	<b>4.6</b>	
2019	0	19	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2019	0	2	0	0.0	CCTR Transf From 2100-3595.000
<b>Explanation:</b>	Electric Distribution costs that were erroneously mapped to TIMP due to remapping rules.				
2019	0	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2019	0	16	0	0.0	CCTR Transf From 2100-0122.000
<b>Explanation:</b>	Transfer Non-Labor associated with contract lineman for CC 2100-0122 in workpaper 1ED001 Reliability and Capacity to CC 2100-0076 in workpaper 1ED008.000 Electric Regional Operations to align costs with where roles reside and are forecasted.				
2019	0	0	0	0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2019	0	0	0	0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2019	0	-4	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2019	0	-274	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2019	0	-274	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2019	0	-87	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2019	0	-5	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2019	0	-249	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2019	0	-128	0	0.0	1-Sided Adj

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<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2019	0	-6	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2019	0	-3	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
<b>2019 Total</b>	<b>0</b>	<b>-995</b>	<b>0</b>	<b>0.0</b>	
2020	-60	0	0	-0.3	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-184	-648	0	-0.8	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-4	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-570	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-475	-57	0	-2.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	155	0	0.0	CCTR Transf From 2100-0122.000
<b>Explanation:</b>	Transfer Non-Labor associated with contract lineman for CC 2100-0122 in workpaper 1ED001 Reliability and Capacity to CC 2100-0076 in workpaper 1ED008.000 Electric Regional Operations to align costs with where roles reside and are forecasted.				
2020	-26	-380	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-220	-17	0	-1.0	1-Sided Adj

Note: Totals may include rounding differences.

San Diego Gas & Electric Company  
2024 GRC - REVISED  
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Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: G. Electric Regional Operations  
 Category-Sub: 1. Electric Regional Operations  
 Workpaper: 1ED008.000 - Electric Regional Operations

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-386	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-319	-116	0	-1.3	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-52	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-196	-91	0	-0.9	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-162	-12	0	-0.7	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-515	-13	0	-2.2	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-2	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-4	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-20	-1	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-59	0	0.0	1-Sided Adj

Note: Totals may include rounding differences.

San Diego Gas & Electric Company  
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Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: G. Electric Regional Operations  
 Category-Sub: 1. Electric Regional Operations  
 Workpaper: 1ED008.000 - Electric Regional Operations

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-2	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-49	-19	0	-0.2	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-178	0	0	-0.7	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-219	-6	0	-0.9	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-160	-4	0	-0.6	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-156	-6	0	-0.6	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-302	-151	0	-1.3	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-150	-71	0	-0.6	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-63	-3	0	-0.3	1-Sided Adj

Note: Totals may include rounding differences.

San Diego Gas & Electric Company  
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Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: G. Electric Regional Operations  
 Category-Sub: 1. Electric Regional Operations  
 Workpaper: 1ED008.000 - Electric Regional Operations

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-12	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-23	-9	0	-0.2	CCTR Transf To 2100-4089.002
<b>Explanation:</b>	Transfer wildfire related to Asset Management & Inspections from Workpaper 1ED012 Electric Engineering to Workpaper 1WM004 Asset Management & Inspections in cost center 2100-4089.002 to align costs where they are reflected in the Wildfire Mitigation Plan (WMP) Initiative Categories.				
2020	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment to exclude \$154 related to Events and Tickets.				
2020	0	-5	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2020	0	-181	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2020	0	-205	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2020	0	-111	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2020	0	-270	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2020	0	-77	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2020	0	-3	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2020	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
<b>2020 Total</b>	<b>-3,490</b>	<b>-3,388</b>	<b>0</b>	<b>-15.2</b>	

Note: Totals may include rounding differences.



San Diego Gas & Electric Company  
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Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: G. Electric Regional Operations  
 Category-Sub: 1. Electric Regional Operations  
 Workpaper: 1ED008.000 - Electric Regional Operations

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
2021	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	-1	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-19	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-764	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-5	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-716	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	-2	-1	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-367	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-4	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-36	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				

Note: Totals may include rounding differences.

San Diego Gas & Electric Company  
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Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: G. Electric Regional Operations  
 Category-Sub: 1. Electric Regional Operations  
 Workpaper: 1ED008.000 - Electric Regional Operations

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
2021	0	-731	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-89	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-37	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	-2	-417	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-9	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-7	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-3	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-3	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-13	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				

Note: Totals may include rounding differences.

San Diego Gas & Electric Company  
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Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: G. Electric Regional Operations  
 Category-Sub: 1. Electric Regional Operations  
 Workpaper: 1ED008.000 - Electric Regional Operations

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
2021	0	-23	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment to exclude \$280 related to Events and Tickets.				
2021	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment to exclude \$800 related to Events and Tickets.				
2021	0	-299	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2021	0	-188	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2021	0	-150	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2021	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2021	0	-350	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2021	0	-64	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2021	0	-2	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2021	0	-69	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2021	0	-5,564	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment to remove non-labor associated with Capital related undergrounding costs.				
2021	0	-846	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment to remove non-labor associated with Capital related undergrounding costs.				
<b>2021 Total</b>	<b>-6</b>	<b>-10,783</b>	<b>0</b>	<b>-0.5</b>	

Note: Totals may include rounding differences.

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: G. Electric Regional Operations  
 Category-Sub: 1. Electric Regional Operations  
 Workpaper: 1ED008.000 - Electric Regional Operations

**RAMP Item # 1**

**RAMP Activity**

RAMP Chapter: SDG&E-Risk-8 Incident Involving an Employee

RAMP Line Item ID: C01

RAMP Line Item Name: Mandatory Employee Health and Safety Training Programs and Standardized Policies

Tranche(/s): Tranche1: None

**GRC Forecast Cost Estimates (\$000)**

	2021 Historical Embedded Cost (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2024 RAMP Range (2020 Incurred \$)	
					Low	High
Tranche 1 Cost Estimate	165	165	165	165	776	940

**Cost Estimate Changes from RAMP:**

Electric Regional Operations (ERO) portion of costs, within RAMP range.

**GRC Work Unit/Activity Level Estimates**

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2024 RAMP Range Activities	
					Low	High
Tranche 1 # of employees	499.00	499.00	499.00	499.00	4,400.00	4,800.00

**Work Unit Changes from RAMP:**

Electric Regional Operations (ERO) portion of costs, within RAMP range.

**Risk Spend Efficiency (RSE)**

	GRC RSE	RAMP RSE
Tranche 1	0.000	0.000

**RSE Changes from RAMP:**

General changes to risk scores or RSE values are primarily due to changes in the MAVF and RSE methodology as discussed in the RAMP to GRC integration testimony of R. Scott Pearson and Gregory S. Flores (Ex. SCG-03/SDG&E-03, Chapter 2).

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: G. Electric Regional Operations  
 Category-Sub: 1. Electric Regional Operations  
 Workpaper: 1ED008.000 - Electric Regional Operations

**RAMP Item # 2**

**RAMP Activity**

RAMP Chapter: SDG&E-Risk-8 Incident Involving an Employee

RAMP Line Item ID: C10

RAMP Line Item Name: Personal Protective Equipment

Tranche(/s): Tranche1: None

**GRC Forecast Cost Estimates (\$000)**

	2021 Historical Embedded Cost (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2024 RAMP Range (2020 Incurred \$)	
					Low	High
Tranche 1 Cost Estimate	532	532	532	532	1,689	2,045

**Cost Estimate Changes from RAMP:**

Electric Regional Operations (ERO) portion of RAMP item.

**GRC Work Unit/Activity Level Estimates**

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2024 RAMP Range Activities	
					Low	High
Tranche 1 # of employees	499.00	499.00	499.00	499.00	4,600.00	4,800.00

**Work Unit Changes from RAMP:**

Electric Regional Operations (ERO) portion of RAMP item.

**Risk Spend Efficiency (RSE)**

	GRC RSE	RAMP RSE
Tranche 1	0.000	0.000

**RSE Changes from RAMP:**

General changes to risk scores or RSE values are primarily due to changes in the MAVF and RSE methodology as discussed in the RAMP to GRC integration testimony of R. Scott Pearson and Gregory S. Flores (Ex. SCG-03/SDG&E-03, Chapter 2).

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: G. Electric Regional Operations  
 Category-Sub: 1. Electric Regional Operations  
 Workpaper: 1ED008.000 - Electric Regional Operations

**RAMP Item # 3**

**RAMP Activity**

RAMP Chapter: SDG&E-Risk-8 Incident Involving an Employee

RAMP Line Item ID: C04

RAMP Line Item Name: Employee Accidental Behavior Program

Tranche(/s): Tranche1: None

**GRC Forecast Cost Estimates (\$000)**

	2021 Historical Embedded Cost (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2024 RAMP Range (2020 Incurred \$)	
					Low	High
Tranche 1 Cost Estimate	71	71	71	71	818	990

**Cost Estimate Changes from RAMP:**

Electric Regional Operations (ERO) portion of RAMP item, within RAMP range.

**GRC Work Unit/Activity Level Estimates**

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2024 RAMP Range Activities	
					Low	High
Tranche 1 # of employees	499.00	499.00	499.00	499.00	4,400.00	4,800.00

**Work Unit Changes from RAMP:**

Electric Regional Operations (ERO) portion of RAMP item, within RAMP range.

**Risk Spend Efficiency (RSE)**

	GRC RSE	RAMP RSE
Tranche 1	123.000	12.000

**RSE Changes from RAMP:**

General changes to risk scores or RSE values are primarily due to changes in the MAVF and RSE methodology as discussed in the RAMP to GRC integration testimony of R. Scott Pearson and Gregory S. Flores (Ex. SCG-03/SDG&E-03, Chapter 2).

**Supplemental Workpapers for Workpaper 1ED008.000**

San Diego Gas & Electric Company  
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Non-Shared Service Workpapers

San Diego Gas & Electric Company  
2022 GRC - APP  
ED008 - Electric Regional Operations Supplemental Workpaper

Initiative/Description	Labor/Non-Labor	Unit Metric (ea./ft./mile)	O&M/Capital Split	2022			2023			2024			Total Cost	Explanation
				# of units	Cost per unit	Total cost	# of units	Cost per unit	Total cost	# of units	Cost per unit	Total cost		
GRC - ERO Non-Lineman (2022-2024)	Labor	FTEs	30%	16	\$ 100,000	\$ 280,000	25	\$ 100,000	\$ 750,000	34	\$ 100,000	\$ 1,020,000	\$ 2,050,000	Assumes department overhead 70% Capital/30% O&M. 2022 additions assuming May hire date (7/12 months).
GRC - ERO 2021 Line Assistants (April 2021)	Labor	FTEs	30%	16	\$ 68,640	\$ 219,648	16	\$ 68,640	\$ 219,648	16	\$ 68,640	\$ 219,648	\$ 658,944	Assumes department overhead 70% Capital/30% O&M. \$33hr for Lineman Assistant salary. 2021 Line Assistant class of 16 started April 2021 (8/12 months).
GRC - ERO 2022 Lineman (Jan)	Labor	FTEs	30%	2	\$ 145,600	\$ 104,832	4	\$ 145,600	\$ 174,720	4	\$ 145,600	\$ 174,720	\$ 454,272	Assumes \$70hr for Lineman salary, attrition rate of 40% in 2022.
GRC - ERO 2022 Lineman (Mar)	Labor	FTEs	30%	2	\$ 145,600	\$ 78,624	4	\$ 145,600	\$ 174,720	4	\$ 145,600	\$ 174,720	\$ 428,064	Assumes beginning March (9/12 months), attrition rate of 40% in 2022.
GRC - ERO Line Assistant Class (May 2022)	Labor	FTEs	30%	14	\$ 68,640	\$ 172,973	44	\$ 68,640	\$ 914,285	74	\$ 145,600	\$ 3,249,792	\$ 4,337,050	Assumes \$33hr for Lineman Assistant salary, increases to \$70hr 2024. Assumes beginning May (7/12 months). Attrition rate of 40% in 2022.
	<b>Labor</b>					\$ 856,077			\$ 2,233,373			\$ 4,838,880	\$ 7,928,330	
GRC - ERO Headcount Non-Labor	Non-Labor	FTEs	100%	16	\$ 5,000	\$ 80,000	-	\$ -	\$ -	-	\$ -	\$ -	\$ 80,000	Increased labor & non-labor primarily related to additional lineman. Assumes department overhead 70% Capital/30% O&M at 100k per FTE + \$5k non-labor per FTE.
Corrosion Zone Enhancements (Bi-metal)	Non-Labor	ea.	100%	20	\$ 10,000	\$ 200,000	20	\$ 10,000	\$ 200,000	20	\$ 10,000	\$ 200,000	\$ 600,000	The goal of the corrosion zone enhancement program is to address the ongoing safety concerns of the increased rate of equipment failures, specifically caused by coastal climate contamination resulting in corrosion.
ERO IIP Cloud Consumption	Non-Labor	mo.	100%	-	\$ -	\$ -	12	\$ 2,500	\$ 30,000	24	\$ 2,500	\$ 60,000	\$ 90,000	AWS Cloud Services monthly consumption costs for running AI and Machine Learning (ML) models for asset and damage detection.
ERO IIP QA Review and Processing	Non-Labor	hr	100%	930	\$ 90	\$ 83,700	2,790	\$ 93	\$ 259,470	2,790	\$ 96	\$ 267,840	\$ 611,010	Incremental contractors for review and processing related to Intelligent Image Processing asset and damage model predictions. Assumes contractor rate of \$90/hr with 3% increase year over year.
ERO IIP Fleet Image Data Acquisition	Non-Labor	hr	100%	-	\$ -	\$ -	500	\$ 80	\$ 40,000	500	\$ 82	\$ 41,000	\$ 81,000	Incremental contractors for driving related to Intelligent Image Processing fleet image capture. Assumes contract rate of \$80/hr with 3% increase year over year.
	<b>Non-Labor</b>					\$ 363,700			\$ 529,470			\$ 568,840	\$ 1,462,010	
	<b>Total</b>					\$ 1,219,777			\$ 2,762,843			\$ 5,407,720	\$ 9,390,340	



San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek  
Category: H. Skills & Compliance Training  
Workpaper: VARIOUS

**Summary for Category: H. Skills & Compliance Training**

	In 2021\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	1,064	1,064	1,064	1,064
Non-Labor	1,775	2,765	2,765	2,765
NSE	0	0	0	0
<b>Total</b>	<b>2,839</b>	<b>3,829</b>	<b>3,829</b>	<b>3,829</b>
FTE	8.0	8.0	8.0	8.0

**Workpapers belonging to this Category:**

**1ED009.000 Skills & Compliance Training**

Labor	798	798	798	798
Non-Labor	1,100	2,090	2,090	2,090
NSE	0	0	0	0
<b>Total</b>	<b>1,898</b>	<b>2,888</b>	<b>2,888</b>	<b>2,888</b>
FTE	5.4	5.4	5.4	5.4

**1ED009.001 Skills & Compliance Training (TNG)**

Labor	266	266	266	266
Non-Labor	675	675	675	675
NSE	0	0	0	0
<b>Total</b>	<b>941</b>	<b>941</b>	<b>941</b>	<b>941</b>
FTE	2.6	2.6	2.6	2.6

*Note: Totals may include rounding differences.*

**Beginning of Workpaper**  
**1ED009.000 - Skills & Compliance Training**

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: H. Skills & Compliance Training  
 Category-Sub: 1. Skills & Compliance Training  
 Workpaper: 1ED009.000 - Skills & Compliance Training

**Activity Description:**

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. Within skills & compliance training, is the Electric Safety Center, which is a group designed to improve the readiness of our field personnel through enhanced oversight of operations, focused communication, field-based training, data analysis and field safety inspections. The work unit that best describe the activities in this workpaper are FTE and number of classes.

**Forecast Explanations:**

**Labor - Base YR Rec**

The forecast method developed for this cost category is base year recorded. For labor, the base year method, along with including incremental adjustments provides an appropriate baseline for recent organization growth due to the increased cost of instructors necessary to develop skilled labor. Base year will provide a more accurate representation of business needs as opposed to trend or average methodologies.

**Non-Labor - Base YR Rec**

The forecast method developed for this cost category is Base Year Recorded. For non-labor, the base year provides an appropriate baseline in comparison to future targets for the organization as opposed to average or trend methodologies. Non labor costs proportionately support the labor costs within this workpaper.

**NSE - Base YR Rec**

N/A

**Summary of Results:**

		In 2021\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2017	2018	2019	2020	2021	2022	2023	2024	
Labor		773	642	809	983	798	798	798	798	
Non-Labor		223	209	551	459	1,100	2,090	2,090	2,090	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>995</b>	<b>851</b>	<b>1,359</b>	<b>1,442</b>	<b>1,898</b>	<b>2,888</b>	<b>2,888</b>	<b>2,888</b>	
FTE		6.2	4.9	6.3	6.9	5.4	5.4	5.4	5.4	

*Note: Totals may include rounding differences.*

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: H. Skills & Compliance Training  
 Category-Sub: 1. Skills & Compliance Training  
 Workpaper: 1ED009.000 - Skills & Compliance Training

**Summary of Adjustments to Forecast:**

In 2021 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	Base YR Rec	798	798	798	0	0	0	798	798	798
Non-Labor	Base YR Rec	1,100	1,100	1,100	990	990	990	2,090	2,090	2,090
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>1,898</b>	<b>1,898</b>	<b>1,898</b>	<b>990</b>	<b>990</b>	<b>990</b>	<b>2,888</b>	<b>2,888</b>	<b>2,888</b>
FTE	Base YR Rec	5.4	5.4	5.4	0.0	0.0	0.0	5.4	5.4	5.4

**Forecast Adjustment Details:**

Year	Labor	NLbr	NSE	Total	FTE	Adj Type
2022	0	495	0	495	0.0	1-Sided Adj
<b>Explanation:</b>	The increase in non labor for Industrial Athletic Program is to support the on-boarding of three contracts @ \$165K/contract for industrial athletic trainers to support SDG&E's vision of "Building a Better Lineman" by extending the Skills training program to include the entire workforce within Electric Distribution Operations.					
2022	0	495	0	495	0.0	1-Sided Adj
<b>Explanation:</b>	The increase in non labor for Electrical Hazard Awareness in Municipalities is to support the on-boarding of three contracted qualified electrical worker instructors to support public safety outreach in an effort to educate our first responders, public workers, and general public around electrical hazard awareness. The cost is \$165K/contract.					
<b>2022 Total</b>		<b>0</b>	<b>990</b>	<b>0</b>	<b>990</b>	<b>0.0</b>
2023	0	495	0	495	0.0	1-Sided Adj
<b>Explanation:</b>	The increase in non labor for Industrial Athletic Program is to support the on-boarding of three contracts @ \$165K/contract for industrial athletic trainers to support SDG&E's vision of "Building a Better Lineman" by extending the Skills training program to include the entire workforce within Electric Distribution Operations.					
2023	0	495	0	495	0.0	1-Sided Adj
<b>Explanation:</b>	The increase in non labor for Electrical Hazard Awareness in Municipalities is to support the on-boarding of three contracted qualified electrical worker instructors to support public safety outreach in an effort to educate our first responders, public workers, and general public around electrical hazard awareness. The cost is \$165K/contract.					
<b>2023 Total</b>		<b>0</b>	<b>990</b>	<b>0</b>	<b>990</b>	<b>0.0</b>
2024	0	495	0	495	0.0	1-Sided Adj
<b>Explanation:</b>	The increase in non labor for Industrial Athletic Program is to support the on-boarding of three contracts @ \$165K/contract for industrial athletic trainers to support SDG&E's vision of "Building a Better Lineman" by extending the Skills training program to include the entire workforce within Electric Distribution Operations.					
2024	0	495	0	495	0.0	1-Sided Adj

Note: Totals may include rounding differences.

SDG&E/ELECTRIC DISTRIBUTION/Exh No:SDG&E-12-WP-R/Witness: T. Swetek

San Diego Gas & Electric Company  
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 Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: H. Skills & Compliance Training  
 Category-Sub: 1. Skills & Compliance Training  
 Workpaper: 1ED009.000 - Skills & Compliance Training

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj_Type</u>
<b>Explanation:</b>	The increase in non labor for Electrical Hazard Awareness in Municipalities is to support the on-boarding of three contracted qualified electrical worker instructors to support public safety outreach in an effort to educate our first responders, public workers, and general public around electrical hazard awareness. The cost is \$165K/contract.					
<b>2024 Total</b>	<b>0</b>	<b>990</b>	<b>0</b>	<b>990</b>	<b>0.0</b>	

*Note: Totals may include rounding differences.*

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
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Category-Sub: 1. Skills & Compliance Training  
Workpaper: 1ED009.000 - Skills & Compliance Training

**Determination of Adjusted-Recorded (Incurred Costs):**

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	1,692	1,537	2,056	2,719	693
Non-Labor	417	405	932	1,253	1,106
NSE	0	0	0	0	0
<b>Total</b>	<b>2,109</b>	<b>1,942</b>	<b>2,988</b>	<b>3,972</b>	<b>1,799</b>
FTE	14.3	12.4	16.3	19.6	4.6
<b>Adjustments (Nominal \$) **</b>					
Labor	-1,089	-1,024	-1,387	-1,885	0
Non-Labor	-223	-216	-423	-828	-6
NSE	0	0	0	0	0
<b>Total</b>	<b>-1,312</b>	<b>-1,239</b>	<b>-1,810</b>	<b>-2,713</b>	<b>-6</b>
FTE	-9.0	-8.1	-10.9	-13.6	0.0
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	603	513	668	834	693
Non-Labor	195	189	510	424	1,100
NSE	0	0	0	0	0
<b>Total</b>	<b>797</b>	<b>702</b>	<b>1,178</b>	<b>1,259</b>	<b>1,793</b>
FTE	5.3	4.3	5.4	5.9	4.6
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	89	78	96	118	104
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>89</b>	<b>78</b>	<b>96</b>	<b>118</b>	<b>104</b>
FTE	0.9	0.6	0.9	1.0	0.8
<b>Escalation to 2021\$</b>					
Labor	80	51	44	30	0
Non-Labor	28	20	41	35	0
NSE	0	0	0	0	0
<b>Total</b>	<b>109</b>	<b>71</b>	<b>85</b>	<b>65</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2021\$)</b>					
Labor	773	642	809	983	798
Non-Labor	223	209	551	459	1,100
NSE	0	0	0	0	0
<b>Total</b>	<b>995</b>	<b>851</b>	<b>1,359</b>	<b>1,442</b>	<b>1,898</b>
FTE	6.2	4.9	6.3	6.9	5.4

\* After company-wide exclusions of Non-GRC costs

\*\* Refer to "Detail of Adjustments to Recorded" page for line item adjustments

Note: Totals may include rounding differences.

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: H. Skills & Compliance Training  
 Category-Sub: 1. Skills & Compliance Training  
 Workpaper: 1ED009.000 - Skills & Compliance Training

**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs						
	Years	2017	2018	2019	2020	2021
Labor		-1,089	-1,024	-1,387	-1,885	0
Non-Labor		-223	-216	-423	-828	-6
NSE		0	0	0	0	0
	<b>Total</b>	<b>-1,312</b>	<b>-1,239</b>	<b>-1,810</b>	<b>-2,713</b>	<b>-6</b>
FTE		-9.0	-8.1	-10.9	-13.6	0.0

**Detail of Adjustments to Recorded:**

Year	Labor	NLbr	NSE	FTE	Adj Type
2017	-483	-87	0	-3.6	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving 70% of labor and non-labor costs associated with Training from cost center 2100-0043 in work group 1ED0009 Skills and Compliance Tng to the Training Capital Pool to align activity where costs reside. In 2021, Skills Training charges moved to the training capital pool assuming 70% Capital/30% O&M.				
2017	-100	-5	0	-1.1	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving 70% of labor and non-labor costs associated with Training from cost center 2100-0205 in work group 1ED0009 Skills and Compliance Tng to the Training Capital Pool to align activity where costs reside. In 2021, Skills Training charges moved to the training capital pool assuming 70% Capital/30% O&M.				
2017	-286	-10	0	-2.1	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving 70% of labor and non-labor costs associated with Training from cost center 2100-3643 in work group 1ED0009 Skills and Compliance Tng to the Training Capital Pool to align activity where costs reside. In 2021, Skills Training charges moved to the training capital pool assuming 70% Capital/30% O&M.				
2017	-220	-121	0	-2.2	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving 70% of labor and non-labor costs associated with Training from cost center 2100-3850 in work group 1ED0009 Skills and Compliance Tng to the Training Capital Pool to align activity where costs reside. In 2021, Skills Training charges moved to the training capital pool assuming 70% Capital/30% O&M.				
<b>2017 Total</b>	<b>-1,089</b>	<b>-223</b>	<b>0</b>	<b>-9.0</b>	
2018	-543	-134	0	-3.9	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving 70% of labor and non-labor costs associated with Training from cost center 2100-0043 in work group 1ED0009 Skills and Compliance Tng to the Training Capital Pool to align activity where costs reside. In 2021, Skills Training charges moved to the training capital pool assuming 70% Capital/30% O&M.				

*Note: Totals may include rounding differences.*

San Diego Gas & Electric Company  
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 Workpaper: 1ED009.000 - Skills & Compliance Training

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
2018	-31	-1	0	-0.3	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving 70% of labor and non-labor costs associated with Training from cost center 2100-0205 in work group 1ED0009 Skills and Compliance Tng to the Training Capital Pool to align activity where costs reside. In 2021, Skills Training charges moved to the training capital pool assuming 70% Capital/30% O&M.				
2018	-223	-38	0	-1.6	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving 70% of labor and non-labor costs associated with Training from cost center 2100-3643 in work group 1ED0009 Skills and Compliance Tng to the Training Capital Pool to align activity where costs reside. In 2021, Skills Training charges moved to the training capital pool assuming 70% Capital/30% O&M.				
2018	-227	-43	0	-2.3	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving 70% of labor and non-labor costs associated with Training from cost center 2100-3850 in work group 1ED0009 Skills and Compliance Tng to the Training Capital Pool to align activity where costs reside. In 2021, Skills Training charges moved to the training capital pool assuming 70% Capital/30% O&M.				
<b>2018 Total</b>	<b>-1,024</b>	<b>-216</b>	<b>0</b>	<b>-8.1</b>	
2019	-1,143	-376	0	-8.7	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving 70% of labor and non-labor costs associated with Training from cost center 2100-0043 in work group 1ED0009 Skills and Compliance Tng to the Training Capital Pool to align activity where costs reside. In 2021, Skills Training charges moved to the training capital pool assuming 70% Capital/30% O&M.				
2019	-55	-1	0	-0.4	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving 70% of labor and non-labor costs associated with Training from cost center 2100-3643 in work group 1ED0009 Skills and Compliance Tng to the Training Capital Pool to align activity where costs reside. In 2021, Skills Training charges moved to the training capital pool assuming 70% Capital/30% O&M.				
2019	-190	-46	0	-1.8	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving 70% of labor and non-labor costs associated with Training from cost center 2100-3850 in work group 1ED0009 Skills and Compliance Tng to the Training Capital Pool to align activity where costs reside. In 2021, Skills Training charges moved to the training capital pool assuming 70% Capital/30% O&M.				
<b>2019 Total</b>	<b>-1,387</b>	<b>-423</b>	<b>0</b>	<b>-10.9</b>	
2020	-65	-294	0	-0.3	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				

Note: Totals may include rounding differences.



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Area: ELECTRIC DISTRIBUTION  
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 Category-Sub: 1. Skills & Compliance Training  
 Workpaper: 1ED009.000 - Skills & Compliance Training

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
2020	0	-19	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-1	0	0	-0.3	1-Sided Adj
<b>Explanation:</b>	Removal of capital settlement portion to accurately reflect O&M and capital balances for 2020 Department Overhead.				
2020	-1,475	-449	0	-9.8	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving 70% of labor and non-labor costs associated with Training from cost center 2100-0043 in work group 1ED0009 Skills and Compliance Tng to the Training Capital Pool to align activity where costs reside. In 2021, Skills Training charges moved to the training capital pool assuming 70% Capital/30% O&M.				
2020	-143	-1	0	-1.5	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving 70% of labor and non-labor costs associated with Training from cost center 2100-0205 in work group 1ED0009 Skills and Compliance Tng to the Training Capital Pool to align activity where costs reside. In 2021, Skills Training charges moved to the training capital pool assuming 70% Capital/30% O&M.				
2020	-200	-66	0	-1.7	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving 70% of labor and non-labor costs associated with Training from cost center 2100-3850 in work group 1ED0009 Skills and Compliance Tng to the Training Capital Pool to align activity where costs reside. In 2021, Skills Training charges moved to the training capital pool assuming 70% Capital/30% O&M.				
<b>2020 Total</b>	<b>-1,885</b>	<b>-828</b>	<b>0</b>	<b>-13.6</b>	
2021	0	-3	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-3	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
<b>2021 Total</b>	<b>0</b>	<b>-6</b>	<b>0</b>	<b>0.0</b>	

Note: Totals may include rounding differences.

San Diego Gas & Electric Company  
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Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
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 Category-Sub: 1. Skills & Compliance Training  
 Workpaper: 1ED009.000 - Skills & Compliance Training

**RAMP Item # 1**

**RAMP Activity**

RAMP Chapter: SDG&E-Risk-8 Incident Involving an Employee

RAMP Line Item ID: New01

RAMP Line Item Name: Industrial Athletic Trainer

Tranche(/s): Tranche1: N/A

**GRC Forecast Cost Estimates (\$000)**

	2021 Historical Embedded Cost (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2024 RAMP Range (2020 Incurred \$)	
					Low	High
Tranche 1 Cost Estimate	0	495	495	495	0	0

**Cost Estimate Changes from RAMP:**

New item not identified in original RAMP report related to the Industrial Athletic Program supporting SDG &E's vision of "Building Better Lineman".

**GRC Work Unit/Activity Level Estimates**

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2024 RAMP Range Activities	
					Low	High
Tranche 1 # of contract employees	0.00	3.00	3.00	3.00	0.00	0.00

**Work Unit Changes from RAMP:**

New item not identified in original RAMP report related to the Industrial Athletic Program supporting SDG &E's vision of "Building Better Lineman".

**Risk Spend Efficiency (RSE)**

	GRC RSE	RAMP RSE
Tranche 1	19.000	0.000

**RSE Changes from RAMP:**

General changes to risk scores or RSE values are primarily due to changes in the MAVF and RSE methodology as discussed in the RAMP to GRC integration testimony of R. Scott Pearson and Gregory S. Flores (Ex. SCG-03/SDG&E-03, Chapter 2).

San Diego Gas & Electric Company  
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 Category-Sub: 1. Skills & Compliance Training  
 Workpaper: 1ED009.000 - Skills & Compliance Training

**RAMP Item # 2**

**RAMP Activity**

RAMP Chapter: SDG&E-Risk-8 Incident Involving an Employee

RAMP Line Item ID: C10

RAMP Line Item Name: Personal Protective Equipment

Tranche(/s): Tranche1: N/A

**GRC Forecast Cost Estimates (\$000)**

	2021 Historical Embedded Cost (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2024 RAMP Range (2020 Incurred \$)	
					Low	High
Tranche 1 Cost Estimate	113	113	113	113	1,689	2,045

**Cost Estimate Changes from RAMP:**

Skills portion of RAMP item.

**GRC Work Unit/Activity Level Estimates**

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2024 RAMP Range Activities	
					Low	High
Tranche 1 # of employees	12.00	12.00	12.00	12.00	4,600.00	4,800.00

**Work Unit Changes from RAMP:**

Skills portion of RAMP item.

**Risk Spend Efficiency (RSE)**

	GRC RSE	RAMP RSE
Tranche 1	0.000	0.000

**RSE Changes from RAMP:**

General changes to risk scores or RSE values are primarily due to changes in the MAVF and RSE methodology as discussed in the RAMP to GRC integration testimony of R. Scott Pearson and Gregory S. Flores (Ex. SCG-03/SDG&E-03, Chapter 2).

**Beginning of Workpaper**  
**1ED009.001 - Skills & Compliance Training (TNG)**

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: H. Skills & Compliance Training  
 Category-Sub: 1. Skills & Compliance Training  
 Workpaper: 1ED009.001 - Skills & Compliance Training (TNG)

**Activity Description:**

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. Within skills & compliance training, is the Electric Safety Center, which is a group designed to improve the readiness of our field personnel through enhanced oversight of operations, focused communication, field-based training, data analysis and field safety inspections. The work unit that best describe the activities in this workpaper are FTE and number of classes.

**Forecast Explanations:**

**Labor - Base YR Rec**

This follows the 1ED009.000 Skills & Compliance workpaper forecast method. Please refer to workpaper 1ED009.000.

**Non-Labor - Base YR Rec**

This follows the 1ED009.000 Skills & Compliance workpaper forecast method. Please refer to workpaper 1ED009.000.

**NSE - Base YR Rec**

N/A

**Summary of Results:**

		In 2021\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2017	2018	2019	2020	2021	2022	2023	2024	
Labor		139	182	217	250	266	266	266	266	
Non-Labor		79	73	113	120	675	675	675	675	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>218</b>	<b>255</b>	<b>330</b>	<b>370</b>	<b>941</b>	<b>941</b>	<b>941</b>	<b>941</b>	
FTE		1.1	1.4	1.8	2.0	2.6	2.6	2.6	2.6	

*Note: Totals may include rounding differences.*

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: H. Skills & Compliance Training  
 Category-Sub: 1. Skills & Compliance Training  
 Workpaper: 1ED009.001 - Skills & Compliance Training (TNG)

**Summary of Adjustments to Forecast:**

In 2021 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	Base YR Rec	266	266	266	0	0	0	266	266	266
Non-Labor	Base YR Rec	675	675	675	0	0	0	675	675	675
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>941</b>	<b>941</b>	<b>941</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>941</b>	<b>941</b>	<b>941</b>
FTE	Base YR Rec	2.6	2.6	2.6	0.0	0.0	0.0	2.6	2.6	2.6

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj Type</u>
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*Note: Totals may include rounding differences.*

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek  
Category: H. Skills & Compliance Training  
Category-Sub: 1. Skills & Compliance Training  
Workpaper: 1ED009.001 - Skills & Compliance Training (TNG)

**Determination of Adjusted-Recorded (Incurred Costs):**

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	174	199	306	309	231
Non-Labor	92	85	130	135	685
NSE	0	0	0	0	0
<b>Total</b>	<b>266</b>	<b>285</b>	<b>436</b>	<b>445</b>	<b>917</b>
FTE	1.5	1.8	2.9	2.9	2.2
<b>Adjustments (Nominal \$) **</b>					
Labor	-66	-53	-127	-98	0
Non-Labor	-24	-20	-25	-24	-10
NSE	0	0	0	0	0
<b>Total</b>	<b>-89</b>	<b>-73</b>	<b>-152</b>	<b>-122</b>	<b>-10</b>
FTE	-0.5	-0.6	-1.4	-1.2	0.0
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	108	146	180	212	231
Non-Labor	69	66	105	111	675
NSE	0	0	0	0	0
<b>Total</b>	<b>177</b>	<b>211</b>	<b>284</b>	<b>323</b>	<b>906</b>
FTE	1.0	1.2	1.5	1.7	2.2
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	16	22	26	30	35
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>16</b>	<b>22</b>	<b>26</b>	<b>30</b>	<b>35</b>
FTE	0.1	0.2	0.3	0.3	0.4
<b>Escalation to 2021\$</b>					
Labor	14	14	12	8	0
Non-Labor	10	7	8	9	0
NSE	0	0	0	0	0
<b>Total</b>	<b>24</b>	<b>21</b>	<b>20</b>	<b>17</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2021\$)</b>					
Labor	139	182	217	250	266
Non-Labor	79	73	113	120	675
NSE	0	0	0	0	0
<b>Total</b>	<b>218</b>	<b>255</b>	<b>330</b>	<b>370</b>	<b>941</b>
FTE	1.1	1.4	1.8	2.0	2.6

\* After company-wide exclusions of Non-GRC costs

\*\* Refer to "Detail of Adjustments to Recorded" page for line item adjustments

Note: Totals may include rounding differences.

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: H. Skills & Compliance Training  
 Category-Sub: 1. Skills & Compliance Training  
 Workpaper: 1ED009.001 - Skills & Compliance Training (TNG)

**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs					
Years	2017	2018	2019	2020	2021
Labor	-66	-53	-127	-98	0
Non-Labor	-24	-20	-25	-24	-10
NSE	0	0	0	0	0
<b>Total</b>	<b>-89</b>	<b>-73</b>	<b>-152</b>	<b>-122</b>	<b>-10</b>
FTE	-0.5	-0.6	-1.4	-1.2	0.0

**Detail of Adjustments to Recorded:**

Year	Labor	NLbr	NSE	FTE	Adj Type
2017	-66	-24	0	-0.5	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving 70% of labor and non-labor costs associated with Training from cost center 2100-3604 in work group 1ED0009 Skills and Compliance Tng to the Training Capital Pool to align activity where costs reside. In 2021, Skills Training charges moved to the training capital pool assuming 70% Capital/30% O&M.				
<b>2017 Total</b>	<b>-66</b>	<b>-24</b>	<b>0</b>	<b>-0.5</b>	
2018	-53	-20	0	-0.6	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving 70% of labor and non-labor costs associated with Training from cost center 2100-3604 in work group 1ED0009 Skills and Compliance Tng to the Training Capital Pool to align activity where costs reside. In 2021, Skills Training charges moved to the training capital pool assuming 70% Capital/30% O&M.				
<b>2018 Total</b>	<b>-53</b>	<b>-20</b>	<b>0</b>	<b>-0.6</b>	
2019	-127	-25	0	-1.4	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving 70% of labor and non-labor costs associated with Training from cost center 2100-3604 in work group 1ED0009 Skills and Compliance Tng to the Training Capital Pool to align activity where costs reside. In 2021, Skills Training charges moved to the training capital pool assuming 70% Capital/30% O&M.				
<b>2019 Total</b>	<b>-127</b>	<b>-25</b>	<b>0</b>	<b>-1.4</b>	
2020	-4	-3	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-24	-7	0	-0.2	1-Sided Adj
<b>Explanation:</b>	Removal of capital settlement portion to accurately reflect O&M and capital balances for 2020 Department Overhead.				
2020	-69	-14	0	-0.9	1-Sided Adj

Note: Totals may include rounding differences.



San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: H. Skills & Compliance Training  
 Category-Sub: 1. Skills & Compliance Training  
 Workpaper: 1ED009.001 - Skills & Compliance Training (TNG)

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	One-sided adjustment moving 70% of labor and non-labor costs associated with Training from cost center 2100-3604 in work group 1ED0009 Skills and Compliance Tng to the Training Capital Pool to align activity where costs reside. In 2021, Skills Training charges moved to the training capital pool assuming 70% Capital/30% O&M.				
<b>2020 Total</b>	<b>-98</b>	<b>-24</b>	<b>0</b>	<b>-1.2</b>	
2021	0	-10	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment to exclude \$199 related to Events and Tickets.				
<b>2021 Total</b>	<b>0</b>	<b>-10</b>	<b>0</b>	<b>0.0</b>	

*Note: Totals may include rounding differences.*

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: H. Skills & Compliance Training  
 Category-Sub: 1. Skills & Compliance Training  
 Workpaper: 1ED009.001 - Skills & Compliance Training (TNG)

**RAMP Item # 1**

**RAMP Activity**

RAMP Chapter: SDG&E-Risk-8 Incident Involving an Employee

RAMP Line Item ID: C10

RAMP Line Item Name: Personal Protective Equipment

Tranche(/s): Tranche1: None

**GRC Forecast Cost Estimates (\$000)**

	2021 Historical Embedded Cost (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2024 RAMP Range (2020 Incurred \$)	
					Low	High
Tranche 1 Cost Estimate	107	107	107	107	1,689	2,045

**Cost Estimate Changes from RAMP:**

Skills (TNG) portion of RAMP item.

**GRC Work Unit/Activity Level Estimates**

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2024 RAMP Range Activities	
					Low	High
Tranche 1 # of employees	12.00	12.00	12.00	12.00	4,600.00	4,800.00

**Work Unit Changes from RAMP:**

Skills (TNG) portion of RAMP item.

**Risk Spend Efficiency (RSE)**

	GRC RSE	RAMP RSE
Tranche 1	0.000	0.000

**RSE Changes from RAMP:**

General changes to risk scores or RSE values are primarily due to changes in the MAVF and RSE methodology as discussed in the RAMP to GRC integration testimony of R. Scott Pearson and Gregory S. Flores (Ex. SCG-03/SDG&E-03, Chapter 2).

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: I. Service Order Team (SOT)  
 Workpaper: 1ED010.000

**Summary for Category: I. Service Order Team (SOT)**

	In 2021\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	881	889	889	889
Non-Labor	3,180	3,180	3,180	3,180
NSE	0	0	0	0
<b>Total</b>	<b>4,061</b>	<b>4,069</b>	<b>4,069</b>	<b>4,069</b>
FTE	11.3	11.4	11.4	11.4

**Workpapers belonging to this Category:**

**1ED010.000 Service Order Team (SOT)**

Labor	881	889	889	889
Non-Labor	3,180	3,180	3,180	3,180
NSE	0	0	0	0
<b>Total</b>	<b>4,061</b>	<b>4,069</b>	<b>4,069</b>	<b>4,069</b>
FTE	11.3	11.4	11.4	11.4

*Note: Totals may include rounding differences.*

**Beginning of Workpaper**  
**1ED010.000 - Service Order Team (SOT)**

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: I. Service Order Team (SOT)  
 Category-Sub: 1. Service Order Team (SOT)  
 Workpaper: 1ED010.000 - Service Order Team (SOT)

**Activity Description:**

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, acting in the capacity of the SDG&E customer representative for these projects. The O&M costs associated with this team are for its employee training, support of disconnect/reconnect work associated with residential solar, support of utility upgrades related to home remodeling, construction operations for storm recovery, coordinating Communication Infrastructure Providers (CIP) 5G network attachments to utility infrastructure, and support of other replacement of non-capital electrical equipment. The unit that best describes the activities in this workpaper are service orders completed.

**Forecast Explanations:**

**Labor - Base YR Rec**

The forecast method developed for this cost category is base year. For labor, the base year method provides the best outlook moving forward as it captures the increase in FTEs required to respond to and manage the approximately 31 percent increase in completed service order requests (in comparison to in 2018). 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 in 2021 which will be maintained moving forward.

**Non-Labor - Base YR Rec**

The forecast method developed for this cost category is base year. For non-labor, the base year method provides the best outlook moving forward as it captures the increase in FTEs and contract support required to respond to and manage the approximate 31 percent increase in completed service order requests (in comparison to in 2018). 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 in 2021 which will be maintained moving forward.

**NSE - Base YR Rec**

N/A

**Summary of Results:**

		In 2021\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2017	2018	2019	2020	2021	2022	2023	2024	
Labor		25	151	28	66	881	889	889	889	
Non-Labor		1,535	1,944	1,796	2,032	3,180	3,180	3,180	3,180	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>1,559</b>	<b>2,095</b>	<b>1,823</b>	<b>2,098</b>	<b>4,061</b>	<b>4,069</b>	<b>4,069</b>	<b>4,069</b>	
FTE		-0.2	2.1	0.2	0.7	11.3	11.4	11.4	11.4	

*Note: Totals may include rounding differences.*

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: I. Service Order Team (SOT)  
 Category-Sub: 1. Service Order Team (SOT)  
 Workpaper: 1ED010.000 - Service Order Team (SOT)

**Summary of Adjustments to Forecast:**

In 2021 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	Base YR Rec	881	881	881	8	8	8	889	889	889
Non-Labor	Base YR Rec	3,180	3,180	3,180	0	0	0	3,180	3,180	3,180
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>4,061</b>	<b>4,061</b>	<b>4,061</b>	<b>8</b>	<b>8</b>	<b>8</b>	<b>4,069</b>	<b>4,069</b>	<b>4,069</b>
FTE	Base YR Rec	11.3	11.3	11.3	0.1	0.1	0.1	11.4	11.4	11.4

**Forecast Adjustment Details:**

Year	Labor	NLbr	NSE	Total	FTE	Adj Type
2022	8	0	0	8	0.1	1-Sided Adj
<b>Explanation:</b>	Increased labor related to increased Service Coordinator FTE's, added to address increase in unmetered services CIPS 5G network, solar installations, remodeling of homes resulting in increased upgraded installs. 98% Capital/2% O&M, 65k assumed.					
<b>2022 Total</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>0.1</b>	
2023	8	0	0	8	0.1	1-Sided Adj
<b>Explanation:</b>	Increased labor related to increased Service Coordinator FTE's, added to address increase in unmetered services CIPS 5G network, solar installations, remodeling of homes resulting in increased upgraded installs. 98% Capital/2% O&M, 65k assumed.					
<b>2023 Total</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>0.1</b>	
2024	8	0	0	8	0.1	1-Sided Adj
<b>Explanation:</b>	Increased labor related to increased Service Coordinator FTE's, added to address increase in unmetered services CIPS 5G network, solar installations, remodeling of homes resulting in increased upgraded installs. 98% Capital/2% O&M, 65k assumed.					
<b>2024 Total</b>	<b>8</b>	<b>0</b>	<b>0</b>	<b>8</b>	<b>0.1</b>	

Note: Totals may include rounding differences.

SDG&E/ELECTRIC DISTRIBUTION/Exh No:SDG&E-12-WP-R/Witness: T. Swetek

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek  
Category: I. Service Order Team (SOT)  
Category-Sub: 1. Service Order Team (SOT)  
Workpaper: 1ED010.000 - Service Order Team (SOT)

**Determination of Adjusted-Recorded (Incurred Costs):**

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	24	119	23	57	766
Non-Labor	1,354	1,842	1,851	2,066	3,356
NSE	0	0	0	0	0
<b>Total</b>	<b>1,378</b>	<b>1,961</b>	<b>1,873</b>	<b>2,122</b>	<b>4,123</b>
FTE	0.3	1.6	0.2	0.8	9.5
<b>Adjustments (Nominal \$) **</b>					
Labor	-5	1	0	-1	0
Non-Labor	-13	-85	-188	-187	-176
NSE	0	0	0	0	0
<b>Total</b>	<b>-18</b>	<b>-84</b>	<b>-188</b>	<b>-188</b>	<b>-176</b>
FTE	-0.5	0.2	0.0	-0.2	0.0
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	19	120	23	56	766
Non-Labor	1,341	1,757	1,663	1,879	3,180
NSE	0	0	0	0	0
<b>Total</b>	<b>1,361</b>	<b>1,877</b>	<b>1,686</b>	<b>1,935</b>	<b>3,946</b>
FTE	-0.2	1.8	0.2	0.6	9.6
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	3	18	3	8	115
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>3</b>	<b>18</b>	<b>3</b>	<b>8</b>	<b>115</b>
FTE	0.0	0.3	0.0	0.1	1.7
<b>Escalation to 2021\$</b>					
Labor	3	12	2	2	0
Non-Labor	193	187	133	154	0
NSE	0	0	0	0	0
<b>Total</b>	<b>196</b>	<b>199</b>	<b>134</b>	<b>156</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2021\$)</b>					
Labor	25	151	28	66	881
Non-Labor	1,535	1,944	1,796	2,032	3,180
NSE	0	0	0	0	0
<b>Total</b>	<b>1,559</b>	<b>2,095</b>	<b>1,823</b>	<b>2,098</b>	<b>4,061</b>
FTE	-0.2	2.1	0.2	0.7	11.3

\* After company-wide exclusions of Non-GRC costs

\*\* Refer to "Detail of Adjustments to Recorded" page for line item adjustments

Note: Totals may include rounding differences.

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: I. Service Order Team (SOT)  
 Category-Sub: 1. Service Order Team (SOT)  
 Workpaper: 1ED010.000 - Service Order Team (SOT)

**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs					
Years	2017	2018	2019	2020	2021
Labor	-5	1	0	-0.775	0
Non-Labor	-13	-85	-188	-187	-176
NSE	0	0	0	0	0
<b>Total</b>	<b>-18</b>	<b>-84</b>	<b>-188</b>	<b>-188</b>	<b>-176</b>
FTE	-0.5	0.2	0.0	-0.2	0.0

**Detail of Adjustments to Recorded:**

Year	Labor	NLbr	NSE	FTE	Adj Type
2017	-1	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	-1	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	0	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	-2	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	-1	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2017	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2017	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2017	0	-6	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2017	0	-4	0	0.0	1-Sided Adj

*Note: Totals may include rounding differences.*



San Diego Gas & Electric Company  
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Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: I. Service Order Team (SOT)  
 Category-Sub: 1. Service Order Team (SOT)  
 Workpaper: 1ED010.000 - Service Order Team (SOT)

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
<b>2017 Total</b>	<b>-5</b>	<b>-13</b>	<b>0</b>	<b>-0.5</b>	
2018	1	0	0	0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	1	0	0	0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	0	-17	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2018	0	-7	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2018	0	-6	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2018	0	-25	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2018	0	-30	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
<b>2018 Total</b>	<b>1</b>	<b>-85</b>	<b>0</b>	<b>0.2</b>	
2019	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment to exclude \$3 related to Events and Tickets.				
2019	0	-24	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2019	0	-20	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2019	0	-18	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2019	0	-52	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2019	0	-74	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
<b>2019 Total</b>	<b>0</b>	<b>-188</b>	<b>0</b>	<b>0.0</b>	
2020	0	-3	0	0.0	1-Sided Adj

Note: Totals may include rounding differences.

San Diego Gas & Electric Company  
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Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: I. Service Order Team (SOT)  
 Category-Sub: 1. Service Order Team (SOT)  
 Workpaper: 1ED010.000 - Service Order Team (SOT)

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-3	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-2	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-14	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-1	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-2	0	0.0	1-Sided Adj
<b>Explanation:</b>	Removal of capital settlement portion to accurately reflect O&M and capital balances for 2020 Department Overhead.				
2020	0	-28	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2020	0	-14	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2020	0	-29	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2020	0	-44	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2020	0	-49	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
<b>2020 Total</b>	<b>-1</b>	<b>-187</b>	<b>0</b>	<b>-0.2</b>	
2021	0	-2	0	0.0	1-Sided Adj

Note: Totals may include rounding differences.

San Diego Gas & Electric Company  
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Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: I. Service Order Team (SOT)  
 Category-Sub: 1. Service Order Team (SOT)  
 Workpaper: 1ED010.000 - Service Order Team (SOT)

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-5	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-3	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-4	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-26	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2021	0	-15	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2021	0	-21	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2021	0	-63	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
2021	0	-36	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
<b>2021 Total</b>	<b>0</b>	<b>-176</b>	<b>0</b>	<b>0.0</b>	

Note: Totals may include rounding differences.

San Diego Gas & Electric Company  
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Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek  
Category: J. Electric Engineering  
Workpaper: VARIOUS

**Summary for Category: J. Electric Engineering**

	In 2021\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	540	866	900	909
Non-Labor	1,545	1,595	1,595	1,595
NSE	0	0	0	0
<b>Total</b>	<b>2,085</b>	<b>2,461</b>	<b>2,495</b>	<b>2,504</b>
FTE	4.7	7.9	8.3	8.4

**Workpapers belonging to this Category:**

**1ED012.000 Electric Engineering**

Labor	521	847	881	890
Non-Labor	1,497	1,547	1,547	1,547
NSE	0	0	0	0
<b>Total</b>	<b>2,018</b>	<b>2,394</b>	<b>2,428</b>	<b>2,437</b>
FTE	4.5	7.7	8.1	8.2

**1ED012.001 Electric Engineering (TNG)**

Labor	19	19	19	19
Non-Labor	48	48	48	48
NSE	0	0	0	0
<b>Total</b>	<b>67</b>	<b>67</b>	<b>67</b>	<b>67</b>
FTE	0.2	0.2	0.2	0.2

*Note: Totals may include rounding differences.*

**Beginning of Workpaper**  
**1ED012.000 - Electric Engineering**

San Diego Gas & Electric Company  
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Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek  
Category: J. Electric Engineering  
Category-Sub: 1. Electric Engineering  
Workpaper: 1ED012.000 - Electric Engineering

**Activity Description:**

The Electric Distribution and Engineering group is responsible for developing and maintaining overhead and underground equipment specifications, risk analysis and mitigation, and construction standards to enable safe and reliable customer service throughout the 4kV and 12kV electric distribution system. The group also develops and maintains electric standard practices to establish uniform and safe work methods, procedures and inspection requirements and enable 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. This group also provides real-time support for operations and construction teams. A single work unit is not possible to identify due to multiple activities in this workpaper such as FTE allocated to developing and maintaining construction standards, performing equipment failure and risk analysis, and costs that scale with capital programs.

**Forecast Explanations:**

**Labor - Base YR Rec**

The forecast method developed for this cost category is base year 2021 recorded data. This forecast method is the most representative forecast due to recent workload increases. Starting in 2020, additional O&M costs were realized in order to deliver an increased volume of engineering and design needed for SDG&E's electric system hardening program. Electric Engineering supports these primarily capital projects, which increased significantly in 2020 and 2021, and will continue at the higher level for the foreseeable future. These projects have associated O&M expenditure. When factoring this in, base year 2021 recorded data with incremental adjustments is the most appropriate forecasting methodology for this workpaper. Workpaper SDG&E-12-WP 1EDO12.001 follows the forecast method of the main workpaper SDG&E-12-WP 1ED012.

**Non-Labor - Base YR Rec**

The forecast method developed for this cost category is base year 2021 recorded data. This forecast method is the most representative forecast due to recent workload increases. Starting in 2020, additional O&M costs were realized in order to deliver an increased volume of engineering and design needed for SDG&E's electric system hardening program. Electric Engineering supports these primarily capital projects, which increased significantly in 2020 and 2021, and will continue at the higher level for the foreseeable future. These projects have associated O&M expenditure. When factoring this in, base year 2021 recorded data with incremental adjustments is the most appropriate forecasting methodology for this workpaper. Workpaper SDG&E-12-WP 1EDO12.001 follows the forecast method of the main workpaper SDG&E-12-WP 1ED012.

**NSE - Base YR Rec**

N/A

*Note: Totals may include rounding differences.*

San Diego Gas & Electric Company  
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Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: J. Electric Engineering  
 Category-Sub: 1. Electric Engineering  
 Workpaper: 1ED012.000 - Electric Engineering

**Summary of Results:**

		<b>In 2021\$ (000) Incurred Costs</b>								
		<b>Adjusted-Recorded</b>					<b>Adjusted-Forecast</b>			
<b>Years</b>		<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	
Labor		665	628	520	561	521	847	881	890	
Non-Labor		1,054	950	443	1,281	1,497	1,547	1,547	1,547	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>1,719</b>	<b>1,577</b>	<b>964</b>	<b>1,842</b>	<b>2,017</b>	<b>2,394</b>	<b>2,428</b>	<b>2,437</b>	
FTE		5.6	5.4	4.7	4.5	4.5	7.7	8.1	8.2	

*Note: Totals may include rounding differences.*

San Diego Gas & Electric Company  
2024 GRC - REVISED  
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Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek  
Category: J. Electric Engineering  
Category-Sub: 1. Electric Engineering  
Workpaper: 1ED012.000 - Electric Engineering

**Summary of Adjustments to Forecast:**

In 2021 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	Base YR Rec	521	521	521	326	360	369	847	881	890
Non-Labor	Base YR Rec	1,497	1,497	1,497	50	50	50	1,547	1,547	1,547
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>2,017</b>	<b>2,017</b>	<b>2,017</b>	<b>376</b>	<b>410</b>	<b>419</b>	<b>2,393</b>	<b>2,427</b>	<b>2,436</b>
FTE	Base YR Rec	4.5	4.5	4.5	3.2	3.6	3.7	7.7	8.1	8.2

**Forecast Adjustment Details:**

Year	Labor	NLbr	NSE	Total	FTE	Adj Type
2022	326	50	0	376	3.2	1-Sided Adj
<b>Explanation:</b>	Please see supplemental workpapers for detailed explanation.					
<b>2022 Total</b>	<b>326</b>	<b>50</b>	<b>0</b>	<b>376</b>	<b>3.2</b>	
2023	357	50	0	407	3.5	1-Sided Adj
<b>Explanation:</b>	Please see supplemental workpapers for detailed explanation.					
2023	3	0	0	3	0.1	1-Sided Adj
<b>Explanation:</b>	RAMP CFF-1 Asset Management, ID: 1 AIM (Gov, Strat, AIP)					
<b>2023 Total</b>	<b>360</b>	<b>50</b>	<b>0</b>	<b>410</b>	<b>3.6</b>	
2024	363	50	0	413	3.6	1-Sided Adj
<b>Explanation:</b>	Please see supplemental workpapers for detailed explanation.					
2024	6	0	0	6	0.1	1-Sided Adj
<b>Explanation:</b>	RAMP CFF-1 Asset Management, ID: 1 AIM (Gov, Strat, AIP)					
<b>2024 Total</b>	<b>369</b>	<b>50</b>	<b>0</b>	<b>419</b>	<b>3.7</b>	

Note: Totals may include rounding differences.



San Diego Gas & Electric Company  
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Category: J. Electric Engineering  
Category-Sub: 1. Electric Engineering  
Workpaper: 1ED012.000 - Electric Engineering

**Determination of Adjusted-Recorded (Incurred Costs):**

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	519	502	436	476	453
Non-Labor	1,135	2,010	413	1,550	1,857
NSE	0	0	0	0	0
<b>Total</b>	<b>1,654</b>	<b>2,512</b>	<b>849</b>	<b>2,026</b>	<b>2,310</b>
FTE	5.0	4.8	4.2	4.0	3.7
<b>Adjustments (Nominal \$) **</b>					
Labor	0	0	-6	0	0
Non-Labor	-214	-1,152	-3	-366	-360
NSE	0	0	0	0	0
<b>Total</b>	<b>-214</b>	<b>-1,152</b>	<b>-8</b>	<b>-366</b>	<b>-360</b>
FTE	-0.2	-0.2	-0.1	-0.1	0.0
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	519	502	430	476	453
Non-Labor	921	858	411	1,184	1,497
NSE	0	0	0	0	0
<b>Total</b>	<b>1,440</b>	<b>1,360</b>	<b>841</b>	<b>1,660</b>	<b>1,949</b>
FTE	4.8	4.6	4.1	3.9	3.8
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	77	76	62	67	68
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>77</b>	<b>76</b>	<b>62</b>	<b>67</b>	<b>68</b>
FTE	0.8	0.8	0.6	0.6	0.7
<b>Escalation to 2021\$</b>					
Labor	69	50	29	17	0
Non-Labor	133	91	33	97	0
NSE	0	0	0	0	0
<b>Total</b>	<b>202</b>	<b>141</b>	<b>61</b>	<b>114</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2021\$)</b>					
Labor	665	628	520	561	521
Non-Labor	1,054	950	443	1,281	1,497
NSE	0	0	0	0	0
<b>Total</b>	<b>1,719</b>	<b>1,577</b>	<b>964</b>	<b>1,842</b>	<b>2,017</b>
FTE	5.6	5.4	4.7	4.5	4.5

\* After company-wide exclusions of Non-GRC costs

\*\* Refer to "Detail of Adjustments to Recorded" page for line item adjustments

Note: Totals may include rounding differences.

San Diego Gas & Electric Company  
2024 GRC - REVISED  
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Area: ELECTRIC DISTRIBUTION  
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 Category: J. Electric Engineering  
 Category-Sub: 1. Electric Engineering  
 Workpaper: 1ED012.000 - Electric Engineering

**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs					
Years	2017	2018	2019	2020	2021
Labor	-0.133	-0.092	-6	-0.349	0
Non-Labor	-214	-1,152	-3	-366	-360
NSE	0	0	0	0	0
<b>Total</b>	<b>-214</b>	<b>-1,152</b>	<b>-8</b>	<b>-366</b>	<b>-360</b>
FTE	-0.2	-0.2	-0.1	-0.1	0.0

**Detail of Adjustments to Recorded:**

Year	Labor	NLbr	NSE	FTE	Adj Type
2017	0	-10	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	0	3	0	0.0	1-Sided Adj
<b>Explanation:</b>	Electric Operations travel expenses that were erroneously mapped to gas capital overhead pool due to remapping rules.				
2017	0	-6	0	0.0	CCTR Transf To 2100-3932.000
<b>Explanation:</b>	Transfer wildfire related O&M associated with System Hardening from Workpaper 1ED012 Electric Engineering to Workpaper 1WM003 Grid Design & System Hardening in cost center 2100-3932 to align costs where they are reflected in the Wildfire Mitigation Plan (WMP) Initiative Categories.				
2017	0	0	0	-0.1	CCTR Transf To 2100-3932.000
<b>Explanation:</b>	Transfer wildfire related O&M associated with System Hardening from Workpaper 1ED012 Electric Engineering to Workpaper 1WM003 Grid Design & System Hardening in cost center 2100-3932 to align costs where they are reflected in the Wildfire Mitigation Plan (WMP) Initiative Categories.				
2017	0	-199	0	-0.1	CCTR Transf To 2100-3932.000
<b>Explanation:</b>	Transfer wildfire related O&M associated with System Hardening from Workpaper 1ED012 Electric Engineering to Workpaper 1WM003 Grid Design & System Hardening in cost center 2100-3932 to align costs where they are reflected in the Wildfire Mitigation Plan (WMP) Initiative Categories.				
2017	0	-2	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment to exclude \$2010 related to Events and Tickets.				
<b>2017 Total</b>	<b>0</b>	<b>-214</b>	<b>0</b>	<b>-0.2</b>	
2018	0	10	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	0	0	0	0.0	1-Sided Adj

Note: Totals may include rounding differences.

San Diego Gas & Electric Company  
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Category: J. Electric Engineering  
Category-Sub: 1. Electric Engineering  
Workpaper: 1ED012.000 - Electric Engineering

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Electric Operations travel expenses that were erroneously mapped to gas capital overhead pool due to remapping rules.				
2018	0	-31	0	0.0	CCTR Transf To 2100-3932.000
<b>Explanation:</b>	Transfer wildfire related O&M associated with System Hardening from Workpaper 1ED012 Electric Engineering to Workpaper 1WM003 Grid Design & System Hardening in cost center 2100-3932 to align costs where they are reflected in the Wildfire Mitigation Plan (WMP) Initiative Categories.				
2018	0	0	0	-0.1	CCTR Transf To 2100-3932.000
<b>Explanation:</b>	Transfer wildfire related O&M associated with System Hardening from Workpaper 1ED012 Electric Engineering to Workpaper 1WM003 Grid Design & System Hardening in cost center 2100-3932 to align costs where they are reflected in the Wildfire Mitigation Plan (WMP) Initiative Categories.				
2018	0	-15	0	0.0	CCTR Transf To 2100-3932.000
<b>Explanation:</b>	Transfer wildfire related O&M associated with System Hardening from Workpaper 1ED012 Electric Engineering to Workpaper 1WM003 Grid Design & System Hardening in cost center 2100-3932 to align costs where they are reflected in the Wildfire Mitigation Plan (WMP) Initiative Categories.				
2018	0	-1,108	0	-0.1	CCTR Transf To 2100-3932.000
<b>Explanation:</b>	Transfer wildfire related O&M associated with System Hardening from Workpaper 1ED012 Electric Engineering to Workpaper 1WM003 Grid Design & System Hardening in cost center 2100-3932 to align costs where they are reflected in the Wildfire Mitigation Plan (WMP) Initiative Categories.				
2018	0	-8	0	0.0	CCTR Transf To 2100-4089.002
<b>Explanation:</b>	Transfer wildfire related to Asset Management & Inspections from Workpaper 1ED012 Electric Engineering to Workpaper 1WM004 Asset Management & Inspections in cost center 2100-4089.002 to align costs where they are reflected in the Wildfire Mitigation Plan (WMP) Initiative Categories.				
<b>2018 Total</b>	<b>0</b>	<b>-1,152</b>	<b>0</b>	<b>-0.2</b>	
2019	0	0	0	0.0	CCTR Transf To 2100-3932.000
<b>Explanation:</b>	Transfer wildfire related O&M associated with System Hardening from Workpaper 1ED012 Electric Engineering to Workpaper 1WM003 Grid Design & System Hardening in cost center 2100-3932 to align costs where they are reflected in the Wildfire Mitigation Plan (WMP) Initiative Categories.				
2019	0	29	0	0.0	CCTR Transf To 2100-3932.000
<b>Explanation:</b>	Transfer wildfire related O&M associated with System Hardening from Workpaper 1ED012 Electric Engineering to Workpaper 1WM003 Grid Design & System Hardening in cost center 2100-3932 to align costs where they are reflected in the Wildfire Mitigation Plan (WMP) Initiative Categories.				
2019	-6	-31	0	-0.1	CCTR Transf To 2100-4089.002
<b>Explanation:</b>	Transfer wildfire related to Asset Management & Inspections from Workpaper 1ED012 Electric Engineering to Workpaper 1WM004 Asset Management & Inspections in cost center 2100-4089.002 to align costs where they are reflected in the Wildfire Mitigation Plan (WMP) Initiative Categories.				
2019	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment to exclude \$150 related to Events and Tickets.				

Note: Totals may include rounding differences.

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: J. Electric Engineering  
 Category-Sub: 1. Electric Engineering  
 Workpaper: 1ED012.000 - Electric Engineering

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>2019 Total</b>	<b>-6</b>	<b>-3</b>	<b>0</b>	<b>-0.1</b>	
2020	0	-67	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-4	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-13	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-12	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-9	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-9	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-4	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-11	0	0.0	CCTR Transf To 2100-3932.000
<b>Explanation:</b>	Transfer wildfire related O&M associated with System Hardening from Workpaper 1ED012 Electric Engineering to Workpaper 1WM003 Grid Design & System Hardening in cost center 2100-3932 to align costs where they are reflected in the Wildfire Mitigation Plan (WMP) Initiative Categories.				
2020	0	-5	0	0.0	CCTR Transf To 2100-3932.000
<b>Explanation:</b>	Transfer wildfire related O&M associated with System Hardening from Workpaper 1ED012 Electric Engineering to Workpaper 1WM003 Grid Design & System Hardening in cost center 2100-3932 to align costs where they are reflected in the Wildfire Mitigation Plan (WMP) Initiative Categories.				
2020	0	-53	0	0.0	CCTR Transf To 2100-4089.002

Note: Totals may include rounding differences.

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
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 Workpaper: 1ED012.000 - Electric Engineering

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Transfer wildfire related to Asset Management & Inspections from Workpaper 1ED012 Electric Engineering to Workpaper 1WM004 Asset Management & Inspections in cost center 2100-4089.002 to align costs where they are reflected in the Wildfire Mitigation Plan (WMP) Initiative Categories.				
2020	0	-179	0	0.0	CCTR Transf To 2100-4089.002
<b>Explanation:</b>	Transfer wildfire related to Asset Management & Inspections from Workpaper 1ED012 Electric Engineering to Workpaper 1WM004 Asset Management & Inspections in cost center 2100-4089.002 to align costs where they are reflected in the Wildfire Mitigation Plan (WMP) Initiative Categories.				
2020	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment to exclude \$5 related to Events and Tickets.				
<b>2020 Total</b>	<b>0</b>	<b>-366</b>	<b>0</b>	<b>-0.1</b>	
2021	0	-133	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-17	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-9	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-10	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-12	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-6	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-6	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-4	0	0.0	1-Sided Adj

Note: Totals may include rounding differences.

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: J. Electric Engineering  
 Category-Sub: 1. Electric Engineering  
 Workpaper: 1ED012.000 - Electric Engineering

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment to exclude \$469 related to Events and Tickets.				
2021	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment to exclude \$115 related to Events and Tickets.				
2021	0	-7	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving capital related non-labor costs associated with removal of 5 poles/wires/transformers from cost center 2100-0222 in work group 1ED012 Electrical Engineering to capital Budget Code 205 - Electric Street & Highway Relocations.				
2021	0	-154	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving non-labor costs associated with the Keeler substation that should have been charged to a capital removal order from cost center 2100-0225 in work group 1ED0012 Electrical Engineering to the Capital Pool.				
<b>2021 Total</b>	<b>0</b>	<b>-360</b>	<b>0</b>	<b>0.0</b>	

*Note: Totals may include rounding differences.*

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 Workpaper: 1ED012.000 - Electric Engineering

**RAMP Item # 1**

**RAMP Activity**

RAMP Chapter: SDG&E-Risk-8 Incident Involving an Employee  
 RAMP Line Item ID: C10  
 RAMP Line Item Name: Personal Protective Equipment  
 Tranche(/s): Tranche1: N/A

**GRC Forecast Cost Estimates (\$000)**

	2021 Historical Embedded Cost (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2024 RAMP Range (2020 Incurred \$)	
					Low	High
Tranche 1 Cost Estimate	20	20	20	20	1,689	2,045

**Cost Estimate Changes from RAMP:**  
 Electric Engineering portion of RAMP item.

**GRC Work Unit/Activity Level Estimates**

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2024 RAMP Range Activities	
					Low	High
Tranche 1 # of employees	165.00	165.00	165.00	165.00	4,600.00	4,800.00

**Work Unit Changes from RAMP:**  
 Electric Engineering portion of RAMP item.

**Risk Spend Efficiency (RSE)**

	GRC RSE	RAMP RSE
Tranche 1	0.000	0.000

**RSE Changes from RAMP:**  
 General changes to risk scores or RSE values are primarily due to changes in the MAVF and RSE methodology as discussed in the RAMP to GRC integration testimony of R. Scott Pearson and Gregory S. Flores (Ex. SCG-03/SDG&E-03, Chapter 2).

San Diego Gas & Electric Company  
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Area: ELECTRIC DISTRIBUTION  
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 Category-Sub: 1. Electric Engineering  
 Workpaper: 1ED012.000 - Electric Engineering

**RAMP Item # 2**

**RAMP Activity**

RAMP Chapter: SDG&E-CFF-1 Asset Management

RAMP Line Item ID: 01

RAMP Line Item Name: AIM (Gov, Strat, AIP)

Tranche(/s): Tranche1: N/A

**GRC Forecast Cost Estimates (\$000)**

	2021 Historical Embedded Cost (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2024 RAMP Range (2020 Incurred \$)	
					Low	High
Tranche 1 Cost Estimate	0	0	3	6	1,200	1,500

**Cost Estimate Changes from RAMP:**

Electric Engineering portion of Asset Management risk item related to AIM (Gov, Strat, AIP).

**GRC Work Unit/Activity Level Estimates**

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2024 RAMP Range Activities	
					Low	High
Tranche 1 Asset management system processes and asset management plans (per asset class)	0.00	0.00	1.00	1.00	9.00	12.00

**Work Unit Changes from RAMP:**

Electric Engineering portion of Asset Management risk item related to AIM (Gov, Strat, AIP).

**Risk Spend Efficiency (RSE)**

	GRC RSE	RAMP RSE
Tranche 1	0.000	0.000

**RSE Changes from RAMP:**

General changes to risks scores or RSE values are primarily due to changes in the MAVF and RSE methodology , as discussed in the RAMP to GRC Integration testimony of R. Scott Pearson and Gregory S. Flores (Ex. SCG-03/SDG&E-03, Chapter 2)



**Supplemental Workpapers for Workpaper 1ED012.000**

2024 GRC - REVISED					2022			2023			2024			Total Cost	Explanation	
Initiative/Description	Labor/ Non-Labor	RAMP/ Non-RAMP	Unit Description	O&M/Capital Split	# of units	Cost per unit	Total cost	# of units	Cost per unit	Total cost	# of units	Cost per unit	Total cost			
Non-Shared Service Workpapers																
Asset Management Cross Functional Support	Labor	Ramp	FTE		3%	-	\$ -	\$ -	1	\$ 100,000	\$ 3,000	2	\$ 100,000	\$ 6,000	\$ 9,000	Business Advisors added for Asset Management cross functional support.
Design Unit Update Initiative (DUUI)	Labor	Non-Ramp	FTE		100%	3	\$ 102,000	\$ 306,000	3	\$ 102,000	\$ 306,000	3	\$ 102,000	\$ 306,000	\$ 918,000	Project objective is to perform comprehensive update to design units to enhance project estimates and allocation of resources.
Engineering Capabilities	Labor	Non-Ramp	FTE		100%	1	\$ 10,000	\$ 10,000	1	\$ 10,000	\$ 10,000	1	\$ 10,000	\$ 10,000	\$ 30,000	Engineering salary market adjustment triggered by challenges retaining and attracting skilled employees due to market wide resource shortages and demand for skilled workers.
Engineering Capabilities	Labor	Non-Ramp	FTE		3%	1	\$ 129,000	\$ 968	1	\$ 129,000	\$ 3,870	1	\$ 129,000	\$ 3,870	\$ 8,708	Need internal resources to manage large number of consultants needed to execute capital plan, support wildfire mitigation, and support sustainability goals. 2022 addition assumes an October hire date.
Engineering Capabilities	Labor	Non-Ramp	FTE		3%	-	\$ -	\$ -	1	\$ 129,000	\$ 3,225	1	\$ 129,000	\$ 3,870	\$ 7,095	Need internal resources to manage large number of consultants needed to execute capital plan, support wildfire mitigation, and support sustainability goals. 2023 addition assumes a March hire date.
Engineering Capabilities	Labor	Non-Ramp	FTE		3%	1	\$ 129,000	\$ 968	1	\$ 129,000	\$ 3,870	1	\$ 129,000	\$ 3,870	\$ 8,708	Need internal resources to manage large number of consultants needed to execute capital plan, support wildfire mitigation, and support sustainability goals. 2022 addition assumes an October hire date.
Engineering Capabilities	Labor	Non-Ramp	FTE		3%	-	\$ -	\$ -	1	\$ 114,000	\$ 1,995	1	\$ 114,000	\$ 3,420	\$ 5,415	Need internal resources to manage large number of consultants needed to execute capital plan, support wildfire mitigation, and support sustainability goals. 2023 addition assumes a June hire date.
Engineering Capabilities	Labor	Non-Ramp	FTE		3%	-	\$ -	\$ -	1	\$ 129,000	\$ 2,258	1	\$ 129,000	\$ 3,870	\$ 6,128	Need internal resources to manage large number of consultants needed to execute capital plan, support wildfire mitigation, and support sustainability goals. 2023 addition assumes a June hire date.
Engineering Capabilities	Labor	Non-Ramp	FTE		3%	1	\$ 114,000	\$ 855	1	\$ 114,000	\$ 3,420	1	\$ 114,000	\$ 3,420	\$ 7,695	Need internal resources to manage large number of consultants needed to execute capital plan, support wildfire mitigation, and support sustainability goals. 2022 addition assumes an October hire date.
Engineering Capabilities	Labor	Non-Ramp	FTE		3%	1	\$ 129,000	\$ 968	1	\$ 129,000	\$ 3,870	1	\$ 129,000	\$ 3,870	\$ 8,708	Need internal resources to manage large number of consultants needed to execute capital plan, support wildfire mitigation, and support sustainability goals. 2022 addition assumes an October hire date.
Engineering Capabilities	Labor	Non-Ramp	FTE		3%	-	\$ -	\$ -	1	\$ 114,000	\$ 1,995	1	\$ 114,000	\$ 3,420	\$ 5,415	Need internal resources to manage large number of consultants needed to execute capital plan, support wildfire mitigation, and support sustainability goals. 2023 addition assumes a June hire date.
Engineering Capabilities	Labor	Non-Ramp	FTE		3%	1	\$ 99,000	\$ 2,723	1	\$ 99,000	\$ 2,970	1	\$ 99,000	\$ 2,970	\$ 8,663	Need internal resources to manage large number of consultants needed to execute capital plan, support wildfire mitigation, and support sustainability goals. 2022 addition is calculated with a February hire date.
Engineering Capabilities	Labor	Non-Ramp	FTE		3%	1	\$ 129,000	\$ 1,613	1	\$ 129,000	\$ 3,870	1	\$ 129,000	\$ 3,870	\$ 9,353	Need internal resources to manage large number of consultants needed to execute capital plan, support wildfire mitigation, and support sustainability goals. 2022 addition assumes an August hire date.
Engineering Capabilities	Labor	Non-Ramp	FTE		3%	1	\$ 129,000	\$ 968	1	\$ 129,000	\$ 3,870	1	\$ 129,000	\$ 3,870	\$ 8,708	Need internal resources to manage large number of consultants needed to execute capital plan, support wildfire mitigation, and support sustainability goals. 2022 addition assumes an October hire date.
Engineering Capabilities	Labor	Non-Ramp	FTE		3%	1	\$ 114,000	\$ 1,425	1	\$ 114,000	\$ 3,420	1	\$ 114,000	\$ 3,420	\$ 8,265	Need internal resources to manage large number of consultants needed to execute capital plan, support wildfire mitigation, and support sustainability goals. 2022 addition assumes an August hire date.
Engineering Capabilities	Labor	Non-Ramp	FTE		3%	-	\$ -	\$ -	1	\$ 114,000	\$ 2,280	1	\$ 114,000	\$ 3,420	\$ 5,700	Need internal resources to manage large number of consultants needed to execute capital plan, support wildfire mitigation, and support sustainability goals. 2023 addition assumes a May hire date.
	Labor						\$ 326,485			\$ 359,913			\$ 369,160	\$ 1,055,558		
Failed Equipment Root Cause	Non-Labor	Non-RAMP	Contractors			1	\$ 50,000	\$ 50,000	1	\$ 50,000	\$ 50,000	1	\$ 50,000	\$ 50,000	\$ 150,000	Testing and root cause analysis of failed equipment to understand the failure mechanism of the equipment and improve new distribution equipment acquisitions.
	Non-Labor						\$ 50,000			\$ 50,000			\$ 50,000	\$ 150,000		
	Total						\$ 376,485			\$ 409,913			\$ 419,160	\$ 1,205,558		

**Beginning of Workpaper**  
**1ED012.001 - Electric Engineering (TNG)**

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
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 Category-Sub: 1. Electric Engineering  
 Workpaper: 1ED012.001 - Electric Engineering (TNG)

**Activity Description:**

Within Electric Engineering, there is an Associate Engineer program. The Associate Engineer program is an ongoing training program that is a key component of the effort to develop and maintain engineers in SDG&E's workforce.

**Forecast Explanations:**

**Labor - Base YR Rec**

This follows the 1ED012.000 Electric Engineering workpaper forecast method. Please refer to workpaper 1ED012.000.

**Non-Labor - Base YR Rec**

This follows the 1ED012.000 Electric Engineering workpaper forecast method. Please refer to workpaper 1ED012.000.

**NSE - Base YR Rec**

N/A

**Summary of Results:**

		In 2021\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2017	2018	2019	2020	2021	2022	2023	2024	
Labor		10	13	14	17	19	19	19	19	
Non-Labor		43	42	55	49	48	48	48	48	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>53</b>	<b>56</b>	<b>69</b>	<b>65</b>	<b>67</b>	<b>67</b>	<b>67</b>	<b>67</b>	
FTE		1.1	0.4	0.2	1.0	0.2	0.2	0.2	0.2	

*Note: Totals may include rounding differences.*

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**Summary of Adjustments to Forecast:**

In 2021 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	Base YR Rec	19	19	19	0	0	0	19	19	19
Non-Labor	Base YR Rec	48	48	48	0	0	0	48	48	48
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>67</b>	<b>67</b>	<b>67</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>67</b>	<b>67</b>	<b>67</b>
FTE	Base YR Rec	0.2	0.2	0.2	0.0	0.0	0.0	0.2	0.2	0.2

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj Type</u>
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*Note: Totals may include rounding differences.*

San Diego Gas & Electric Company  
2024 GRC - REVISED  
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Workpaper: 1ED012.001 - Electric Engineering (TNG)

**Determination of Adjusted-Recorded (Incurred Costs):**

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	214	120	301	296	17
Non-Labor	38	41	51	54	54
NSE	0	0	0	0	0
<b>Total</b>	<b>252</b>	<b>160</b>	<b>352</b>	<b>350</b>	<b>71</b>
FTE	3.1	1.5	3.1	3.7	0.2
<b>Adjustments (Nominal \$) **</b>					
Labor	-206	-109	-289	-282	0
Non-Labor	0	-2	0	-9	-6
NSE	0	0	0	0	0
<b>Total</b>	<b>-206</b>	<b>-111</b>	<b>-289</b>	<b>-291</b>	<b>-6</b>
FTE	-2.2	-1.2	-2.9	-2.8	0.0
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	8	11	12	14	17
Non-Labor	38	38	51	45	48
NSE	0	0	0	0	0
<b>Total</b>	<b>46</b>	<b>49</b>	<b>62</b>	<b>59</b>	<b>65</b>
FTE	0.9	0.3	0.2	0.9	0.2
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	1	2	2	2	2
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>
FTE	0.2	0.1	0.0	0.1	0.0
<b>Escalation to 2021\$</b>					
Labor	1	1	1	1	0
Non-Labor	5	4	4	4	0
NSE	0	0	0	0	0
<b>Total</b>	<b>6</b>	<b>5</b>	<b>5</b>	<b>4</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2021\$)</b>					
Labor	10	13	14	17	19
Non-Labor	43	42	55	49	48
NSE	0	0	0	0	0
<b>Total</b>	<b>53</b>	<b>56</b>	<b>69</b>	<b>65</b>	<b>67</b>
FTE	1.1	0.4	0.2	1.0	0.2

\* After company-wide exclusions of Non-GRC costs

\*\* Refer to "Detail of Adjustments to Recorded" page for line item adjustments

Note: Totals may include rounding differences.

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
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Category: J. Electric Engineering  
Category-Sub: 1. Electric Engineering  
Workpaper: 1ED012.001 - Electric Engineering (TNG)

**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs					
Years	2017	2018	2019	2020	2021
Labor	-206	-109	-289	-282	0
Non-Labor	-0.019	-2	-0.376	-9	-6
NSE	0	0	0	0	0
<b>Total</b>	<b>-206</b>	<b>-111</b>	<b>-289</b>	<b>-291</b>	<b>-6</b>
FTE	-2.2	-1.2	-2.9	-2.8	0.0

**Detail of Adjustments to Recorded:**

Year	Labor	NLbr	NSE	FTE	Adj Type
2017	-1	0	0	-0.1	CCTR Transf To 2100-3932.000
<b>Explanation:</b>	Transfer wildfire related O&M associated with System Hardening from Workpaper 1ED012 Electric Engineering to Workpaper 1WM003 Grid Design & System Hardening in cost center 2100-3932 to align costs where they are reflected in the Wildfire Mitigation Plan (WMP) Initiative Categories.				
2017	-205	0	0	-2.1	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving 99% of labor costs associated with Associate Engineers training from cost center 2100-0119 in work group 1ED0012 Electrical Engineering to the Training Capital Pool, based on accounting change that started in 2021.				
<b>2017 Total</b>	<b>-206</b>	<b>0</b>	<b>0</b>	<b>-2.2</b>	
2018	0	0	0	-0.1	CCTR Transf To 2100-3932.000
<b>Explanation:</b>	Transfer wildfire related O&M associated with System Hardening from Workpaper 1ED012 Electric Engineering to Workpaper 1WM003 Grid Design & System Hardening in cost center 2100-3932 to align costs where they are reflected in the Wildfire Mitigation Plan (WMP) Initiative Categories.				
2018	0	-2	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment to exclude \$2165 related to Events and Tickets.				
2018	-109	0	0	-1.1	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving 99% of labor costs associated with Associate Engineers training from cost center 2100-0119 in work group 1ED0012 Electrical Engineering to the Training Capital Pool, based on accounting change that started in 2021.				
<b>2018 Total</b>	<b>-109</b>	<b>-2</b>	<b>0</b>	<b>-1.2</b>	
2019	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment to exclude \$376 related to Events and Tickets.				
2019	-289	0	0	-2.9	1-Sided Adj

Note: Totals may include rounding differences.

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: J. Electric Engineering  
 Category-Sub: 1. Electric Engineering  
 Workpaper: 1ED012.001 - Electric Engineering (TNG)

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	One-sided adjustment moving 99% of labor costs associated with Associate Engineers training from cost center 2100-0119 in work group 1ED0012 Electrical Engineering to the Training Capital Pool, based on accounting change that started in 2021.				
<b>2019 Total</b>	<b>-289</b>	<b>0</b>	<b>0</b>	<b>-2.9</b>	
2020	0	-9	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-282	0	0	-2.8	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment moving 99% of labor costs associated with Associate Engineers training from cost center 2100-0119 in work group 1ED0012 Electrical Engineering to the Training Capital Pool, based on accounting change that started in 2021.				
<b>2020 Total</b>	<b>-282</b>	<b>-9</b>	<b>0</b>	<b>-2.8</b>	
2021	0	-6	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
<b>2021 Total</b>	<b>0</b>	<b>-6</b>	<b>0</b>	<b>0.0</b>	

*Note: Totals may include rounding differences.*



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Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek  
Category: K. Troubleshooting  
Workpaper: 1ED013.000

**Summary for Category: K. Troubleshooting**

	In 2021\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	8,773	8,773	8,773	8,773
Non-Labor	861	861	861	861
NSE	0	0	0	0
<b>Total</b>	<b>9,634</b>	<b>9,634</b>	<b>9,634</b>	<b>9,634</b>
FTE	48.4	48.4	48.4	48.4

**Workpapers belonging to this Category:**

**1ED013.000 Troubleshooting**

Labor	8,773	8,773	8,773	8,773
Non-Labor	861	861	861	861
NSE	0	0	0	0
<b>Total</b>	<b>9,634</b>	<b>9,634</b>	<b>9,634</b>	<b>9,634</b>
FTE	48.4	48.4	48.4	48.4

*Note: Totals may include rounding differences.*

**Beginning of Workpaper**  
**1ED013.000 - Troubleshooting**

San Diego Gas & Electric Company  
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Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: K. Troubleshooting  
 Category-Sub: 1. Troubleshooting  
 Workpaper: 1ED013.000 - Troubleshooting

**Activity Description:**

The Troubleshooting organization is responsible for ensuring safe and reliable electric service to SDG &E's customers. The group covers six districts and two satellite locations within the service territory. The six operational districts have electric troubleshooters, engineers, technical assistants, and management supervision. The troubleshooters are the primary contact with customers who are experiencing service problems, and work closely with emergency response agencies to protect the public and SDG&E employees from potentially hazardous conditions. The units that best represent troubleshooting are the number of orders dispatched.

**Forecast Explanations:**

**Labor - Base YR Rec**

The forecast method developed for this cost category is base year. For labor, the base year method provides an appropriate baseline in comparison to future targets for the organization due to an increase in cost of skilled labor.

**Non-Labor - Base YR Rec**

The forecast method developed for this cost category is Base Year Recorded. For non-labor, the base year method provides an appropriate baseline in comparison to future targets for the organization due to an increase in cost of material.

**NSE - Base YR Rec**

N/A

**Summary of Results:**

		In 2021\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2017	2018	2019	2020	2021	2022	2023	2024	
Labor		8,082	8,275	8,059	9,393	8,773	8,773	8,773	8,773	
Non-Labor		606	536	536	714	861	860	860	860	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>8,687</b>	<b>8,811</b>	<b>8,595</b>	<b>10,107</b>	<b>9,634</b>	<b>9,633</b>	<b>9,633</b>	<b>9,633</b>	
FTE		49.8	49.9	47.7	51.4	48.4	48.4	48.4	48.4	

*Note: Totals may include rounding differences.*

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Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: K. Troubleshooting  
 Category-Sub: 1. Troubleshooting  
 Workpaper: 1ED013.000 - Troubleshooting

**Summary of Adjustments to Forecast:**

In 2021 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	Base YR Rec	8,773	8,773	8,773	0	0	0	8,773	8,773	8,773
Non-Labor	Base YR Rec	861	861	861	0	0	0	861	861	861
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>9,634</b>	<b>9,634</b>	<b>9,634</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9,634</b>	<b>9,634</b>	<b>9,634</b>
FTE	Base YR Rec	48.4	48.4	48.4	0.0	0.0	0.0	48.4	48.4	48.4

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj Type</u>
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*Note: Totals may include rounding differences.*

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek  
Category: K. Troubleshooting  
Category-Sub: 1. Troubleshooting  
Workpaper: 1ED013.000 - Troubleshooting

**Determination of Adjusted-Recorded (Incurred Costs):**

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	6,506	6,503	6,662	8,334	7,630
Non-Labor	529	485	497	759	870
NSE	0	0	0	0	0
<b>Total</b>	<b>7,035</b>	<b>6,987</b>	<b>7,158</b>	<b>9,093</b>	<b>8,500</b>
FTE	43.5	42.3	41.0	47.0	41.3
<b>Adjustments (Nominal \$) **</b>					
Labor	-201	114	0	-363	-2
Non-Labor	0	0	0	-99	-10
NSE	0	0	0	0	0
<b>Total</b>	<b>-201</b>	<b>114</b>	<b>0</b>	<b>-462</b>	<b>-12</b>
FTE	-1.0	0.5	0.0	-3.2	-0.1
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	6,305	6,617	6,662	7,971	7,628
Non-Labor	529	485	496	660	861
NSE	0	0	0	0	0
<b>Total</b>	<b>6,834</b>	<b>7,102</b>	<b>7,158</b>	<b>8,632</b>	<b>8,488</b>
FTE	42.5	42.8	41.0	43.8	41.3
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	936	1,002	954	1,130	1,146
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>936</b>	<b>1,002</b>	<b>954</b>	<b>1,130</b>	<b>1,146</b>
FTE	7.3	7.1	6.7	7.6	7.1
<b>Escalation to 2021\$</b>					
Labor	841	655	443	291	0
Non-Labor	76	52	40	54	0
NSE	0	0	0	0	0
<b>Total</b>	<b>918</b>	<b>707</b>	<b>483</b>	<b>345</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2021\$)</b>					
Labor	8,082	8,275	8,059	9,393	8,773
Non-Labor	606	536	536	714	861
NSE	0	0	0	0	0
<b>Total</b>	<b>8,687</b>	<b>8,811</b>	<b>8,595</b>	<b>10,107</b>	<b>9,634</b>
FTE	49.8	49.9	47.7	51.4	48.4

\* After company-wide exclusions of Non-GRC costs

\*\* Refer to "Detail of Adjustments to Recorded" page for line item adjustments

Note: Totals may include rounding differences.

San Diego Gas & Electric Company  
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Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek  
Category: K. Troubleshooting  
Category-Sub: 1. Troubleshooting  
Workpaper: 1ED013.000 - Troubleshooting

**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs					
Years	2017	2018	2019	2020	2021
Labor	-201	114	0	-363	-2
Non-Labor	-0.039	0	-0.116	-99	-10
NSE	0	0	0	0	0
<b>Total</b>	<b>-201</b>	<b>114</b>	<b>-0.116</b>	<b>-462</b>	<b>-12</b>
FTE	-1.0	0.5	0.0	-3.2	-0.1

**Detail of Adjustments to Recorded:**

Year	Labor	NLbr	NSE	FTE	Adj Type
2017	-1	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	-7	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	-31	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	-73	0	0	-0.3	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	-6	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	-77	0	0	-0.2	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	-6	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
<b>2017 Total</b>	<b>-201</b>	<b>0</b>	<b>0</b>	<b>-1.0</b>	
2018	25	0	0	0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				

*Note: Totals may include rounding differences.*

San Diego Gas & Electric Company  
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 Category: K. Troubleshooting  
 Category-Sub: 1. Troubleshooting  
 Workpaper: 1ED013.000 - Troubleshooting

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
2018	49	0	0	0.2	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	1	0	0	0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	-1	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	40	0	0	0.2	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
<b>2018 Total</b>	<b>114</b>	<b>0</b>	<b>0</b>	<b>0.5</b>	
2019	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment to exclude \$116 related to Events and Tickets.				
<b>2019 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
2020	0	-3	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-10	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-5	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-6	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-3	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-3	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-4	0	0.0	1-Sided Adj

Note: Totals may include rounding differences.

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Workpaper: 1ED013.000 - Troubleshooting

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-5	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-8	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-37	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-23	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-8	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-10	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-52	0	0	-0.2	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-1	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-9	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-3	-5	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-87	-30	0	-0.3	1-Sided Adj

Note: Totals may include rounding differences.



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Category-Sub: 1. Troubleshooting  
Workpaper: 1ED013.000 - Troubleshooting

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-6	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-101	-40	0	-1.5	1-Sided Adj
<b>Explanation:</b>	Removal of capital settlement portion to accurately reflect O&M and capital balances for 2020 Department Overhead.				
<b>2020 Total</b>	<b>-363</b>	<b>-99</b>	<b>0</b>	<b>-3.2</b>	
2021	-2	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-2	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-2	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-2	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-3	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
<b>2021 Total</b>	<b>-2</b>	<b>-10</b>	<b>0</b>	<b>-0.1</b>	

Note: Totals may include rounding differences.

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 Category-Sub: 1. Troubleshooting  
 Workpaper: 1ED013.000 - Troubleshooting

**RAMP Item # 1**

**RAMP Activity**

RAMP Chapter: SDG&E-Risk-8 Incident Involving an Employee

RAMP Line Item ID: C01

RAMP Line Item Name: Mandatory Employee Health and Safety Training Programs and Standardized Policies

Tranche(/s): Tranche1: None

**GRC Forecast Cost Estimates (\$000)**

	2021 Historical Embedded Cost (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2024 RAMP Range (2020 Incurred \$)	
					Low	High
Tranche 1 Cost Estimate	27	27	27	27	776	940

**Cost Estimate Changes from RAMP:**

Electric Troubleshooting portion of RAMP costs, within RAMP range.

**GRC Work Unit/Activity Level Estimates**

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2024 RAMP Range Activities	
					Low	High
Tranche 1 # of employees	76.00	76.00	76.00	76.00	4,400.00	4,800.00

**Work Unit Changes from RAMP:**

Electric Troubleshooting portion of RAMP costs, within RAMP range.

**Risk Spend Efficiency (RSE)**

	GRC RSE	RAMP RSE
Tranche 1	0.000	0.000

**RSE Changes from RAMP:**

General changes to risk scores or RSE values are primarily due to changes in the MAVF and RSE methodology as discussed in the RAMP to GRC integration testimony of R. Scott Pearson and Gregory S. Flores (Ex. SCG-03/SDG&E-03, Chapter 2).

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 Category-Sub: 1. Troubleshooting  
 Workpaper: 1ED013.000 - Troubleshooting

**RAMP Item # 2**

**RAMP Activity**

RAMP Chapter: SDG&E-Risk-8 Incident Involving an Employee

RAMP Line Item ID: C10

RAMP Line Item Name: Personal Protective Equipment

Tranche(/s): Tranche1: None

**GRC Forecast Cost Estimates (\$000)**

	2021 Historical Embedded Cost (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2024 RAMP Range (2020 Incurred \$)	
					Low	High
Tranche 1 Cost Estimate	33	33	33	33	1,689	2,045

**Cost Estimate Changes from RAMP:**

Electric Troubleshooting portion of RAMP item.

**GRC Work Unit/Activity Level Estimates**

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2024 RAMP Range Activities	
					Low	High
Tranche 1 # of employees	76.00	76.00	76.00	76.00	4,600.00	4,800.00

**Work Unit Changes from RAMP:**

Electric Troubleshooting portion of RAMP item.

**Risk Spend Efficiency (RSE)**

	GRC RSE	RAMP RSE
Tranche 1	0.000	0.000

**RSE Changes from RAMP:**

General changes to risk scores or RSE values are primarily due to changes in the MAVF and RSE methodology as discussed in the RAMP to GRC integration testimony of R. Scott Pearson and Gregory S. Flores (Ex. SCG-03/SDG&E-03, Chapter 2).

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek  
Category: L. Portfolio & Project Management  
Workpaper: 1ED014.000

**Summary for Category: L. Portfolio & Project Management**

	In 2021\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	64	68	80	89
Non-Labor	423	423	423	423
NSE	0	0	0	0
<b>Total</b>	<b>487</b>	<b>491</b>	<b>503</b>	<b>512</b>
FTE	0.5	0.6	0.7	0.8

**Workpapers belonging to this Category:**

**1ED014.000 Portfolio & Project Management**

Labor	64	68	80	89
Non-Labor	423	423	423	423
NSE	0	0	0	0
<b>Total</b>	<b>487</b>	<b>491</b>	<b>503</b>	<b>512</b>
FTE	0.5	0.6	0.7	0.8

*Note: Totals may include rounding differences.*

**Beginning of Workpaper**  
**1ED014.000 - Portfolio & Project Management**

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: L. Portfolio & Project Management  
 Category-Sub: 1. Portfolio & Project Management  
 Workpaper: 1ED014.000 - Portfolio & Project Management

**Activity Description:**

Portfolio & Project Management is responsible for project management, document control management, project scheduling, quality assurance, and quality control for transmission, distribution, substation, energy storage, system hardening, and system interconnection projects. This group manages projects from preliminary design through energization, ensuring consistent project management responsibility throughout the life of the project. QA/QC support is provided to ensure that all work is built to SDG&E Design and Safety Standards and is in accordance with GO 95 and GO 128 design and construction specifications. Document control and project scheduling helps maintain project timelines and meet schedule goals while ensuring that all documents for projects are labeled and safely stored for the required document retention timeline. A single work unit is no possible to identify due to multiple activities involved with the process improvement and support including QA/QC, document control, project scheduling, portfolio management, and project management.

**Forecast Explanations:**

**Labor - Base YR Rec**

The forecast method developed for this cost category is base year. This method, along with including incremental adjustments, was selected as current staffing and activity levels are most representative of the costs moving forward, as they include the addition of the portfolio management functional roles and the expansion of the quality assurance/quality control team. These roles support efficient processing of work to enable greater, more streamlined capacity and reduce cycle times for all electric system projects and validate quality in design, construction, and manufacturer fabrication.

**Non-Labor - Base YR Rec**

The forecast method developed for this cost category is base year. This method, along with including incremental adjustments, was selected as current staffing and activity levels are most representative of the costs moving forward, as they include the addition of the portfolio management functional roles and the expansion of the quality assurance/quality control team. These roles support efficient processing of work to enable greater, more streamlined capacity and reduce cycle times for all electric system projects and validate quality in design, construction, and manufacturer fabrication.

**NSE - Base YR Rec**

N/A

**Summary of Results:**

		In 2021\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2017	2018	2019	2020	2021	2022	2023	2024	
Labor		291	115	49	108	64	68	80	89	
Non-Labor		510	415	268	539	423	423	423	423	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>801</b>	<b>530</b>	<b>317</b>	<b>647</b>	<b>487</b>	<b>491</b>	<b>503</b>	<b>512</b>	
FTE		2.3	0.8	0.3	0.6	0.5	0.6	0.7	0.8	

*Note: Totals may include rounding differences.*

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: L. Portfolio & Project Management  
 Category-Sub: 1. Portfolio & Project Management  
 Workpaper: 1ED014.000 - Portfolio & Project Management

**Summary of Adjustments to Forecast:**

In 2021 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	Base YR Rec	64	64	64	4	16	25	68	80	89
Non-Labor	Base YR Rec	423	423	423	0	0	0	423	423	423
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>487</b>	<b>487</b>	<b>487</b>	<b>4</b>	<b>16</b>	<b>25</b>	<b>491</b>	<b>503</b>	<b>512</b>
FTE	Base YR Rec	0.5	0.5	0.5	0.1	0.2	0.3	0.6	0.7	0.8

**Forecast Adjustment Details:**

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj Type</u>
2022	4	0	0	4	0.1	1-Sided Adj
<b>Explanation:</b>	Please see supplemental workpapers for detailed explanation.					
<b>2022 Total</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0.1</b>	
2023	16	0	0	16	0.2	1-Sided Adj
<b>Explanation:</b>	Please see supplemental workpapers for detailed explanation.					
<b>2023 Total</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>16</b>	<b>0.2</b>	
2024	25	0	0	25	0.3	1-Sided Adj
<b>Explanation:</b>	Please see supplemental workpapers for detailed explanation.					
<b>2024 Total</b>	<b>25</b>	<b>0</b>	<b>0</b>	<b>25</b>	<b>0.3</b>	

Note: Totals may include rounding differences.

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek  
Category: L. Portfolio & Project Management  
Category-Sub: 1. Portfolio & Project Management  
Workpaper: 1ED014.000 - Portfolio & Project Management

**Determination of Adjusted-Recorded (Incurred Costs):**

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	227	92	71	138	103
Non-Labor	446	376	276	695	518
NSE	0	0	0	0	0
<b>Total</b>	<b>673</b>	<b>468</b>	<b>347</b>	<b>833</b>	<b>620</b>
FTE	1.9	0.7	0.7	1.4	1.2
<b>Adjustments (Nominal \$) **</b>					
Labor	0	0	-31	-47	-47
Non-Labor	0	-1	-28	-197	-94
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>-1</b>	<b>-59</b>	<b>-244</b>	<b>-141</b>
FTE	0.0	0.0	-0.5	-0.9	-0.8
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	227	92	40	91	56
Non-Labor	446	375	248	498	423
NSE	0	0	0	0	0
<b>Total</b>	<b>673</b>	<b>467</b>	<b>288</b>	<b>590</b>	<b>479</b>
FTE	2.0	0.7	0.2	0.5	0.4
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	34	14	6	13	8
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>34</b>	<b>14</b>	<b>6</b>	<b>13</b>	<b>8</b>
FTE	0.3	0.1	0.1	0.1	0.1
<b>Escalation to 2021\$</b>					
Labor	30	9	3	3	0
Non-Labor	64	40	20	41	0
NSE	0	0	0	0	0
<b>Total</b>	<b>95</b>	<b>49</b>	<b>23</b>	<b>44</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2021\$)</b>					
Labor	291	115	49	108	64
Non-Labor	510	415	268	539	423
NSE	0	0	0	0	0
<b>Total</b>	<b>801</b>	<b>530</b>	<b>317</b>	<b>647</b>	<b>487</b>
FTE	2.3	0.8	0.3	0.6	0.5

\* After company-wide exclusions of Non-GRC costs

\*\* Refer to "Detail of Adjustments to Recorded" page for line item adjustments

Note: Totals may include rounding differences.



San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek  
Category: L. Portfolio & Project Management  
Category-Sub: 1. Portfolio & Project Management  
Workpaper: 1ED014.000 - Portfolio & Project Management

**Summary of Adjustments to Recorded:**

		In Nominal \$ (000) Incurred Costs				
Years	2017	2018	2019	2020	2021	
Labor	0	0	-31	-47	-47	
Non-Labor	-0.015	-0.937	-28	-197	-94	
NSE	0	0	0	0	0	
<b>Total</b>	<b>-0.015</b>	<b>-0.937</b>	<b>-59</b>	<b>-244</b>	<b>-141</b>	
FTE	0.0	0.0	-0.5	-0.9	-0.8	

**Detail of Adjustments to Recorded:**

Year	Labor	NLbr	NSE	FTE	Adj Type
2017	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment to exclude \$15 related to Events and Tickets.				
<b>2017 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
2018	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment to exclude \$425 related to Events and Tickets.				
<b>2018 Total</b>	<b>0</b>	<b>-1</b>	<b>0</b>	<b>0.0</b>	
2019	0	1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2019	-29	-27	0	-0.4	CCTR Transf To 2100-0138.000
<b>Explanation:</b>	Transfer labor, FTEs and Non-Labor for Policies & Compliance and Project Support costs from cost center 2100-4091 in workpaper 1ED0014 Major Projects to cost center 2100-0138 in workpaper 1ED007 Distribution Design and Project Management (DPM) to align costs with where roles reside and are forecated.				
2019	-2	-2	0	-0.1	CCTR Transf To 2100-0138.000
<b>Explanation:</b>	Transfer labor, FTEs and Non-Labor for Policies & Compliance and Project Support costs from cost center 2100-4092 in workpaper 1ED0014 Major Projects to cost center 2100-0138 in workpaper 1ED007 Distribution Design and Project Management (DPM) to align costs with where roles reside and are forecated.				
<b>2019 Total</b>	<b>-31</b>	<b>-28</b>	<b>0</b>	<b>-0.5</b>	
2020	0	-50	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				

*Note: Totals may include rounding differences.*

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
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 Category: L. Portfolio & Project Management  
 Category-Sub: 1. Portfolio & Project Management  
 Workpaper: 1ED014.000 - Portfolio & Project Management

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
2020	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-2	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-3	-2	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-1	-30	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-4	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-19	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-2	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-39	-65	0	-0.6	CCTR Transf To 2100-0138.000
<b>Explanation:</b>	Transfer labor, FTEs and Non-Labor for Policies & Compliance and Project Support costs from cost center 2100-4091 in workpaper 1ED0014 Major Projects to cost center 2100-0138 in workpaper 1ED007 Distribution Design and Project Management (DPM) to align costs with where roles reside and are forecasted.				
2020	-4	-20	0	-0.1	CCTR Transf To 2100-0138.000
<b>Explanation:</b>	Transfer labor, FTEs and Non-Labor for Policies & Compliance and Project Support costs from cost center 2100-4092 in workpaper 1ED0014 Major Projects to cost center 2100-0138 in workpaper 1ED007 Distribution Design and Project Management (DPM) to align costs with where roles reside and are forecasted.				

Note: Totals may include rounding differences.

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: L. Portfolio & Project Management  
 Category-Sub: 1. Portfolio & Project Management  
 Workpaper: 1ED014.000 - Portfolio & Project Management

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>2020 Total</b>	<b>-47</b>	<b>-197</b>	<b>0</b>	<b>-0.9</b>	
2021	0	-31	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-3	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-2	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-11	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-3	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-10	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	-43	-27	0	-0.7	CCTR Transf To 2100-0138.000
<b>Explanation:</b>	Transfer labor, FTEs and Non-Labor for Policies & Compliance and Project Support costs from cost center 2100-4091 in workpaper 1ED0014 Major Projects to cost center 2100-0138 in workpaper 1ED007 Distribution Design and Project Management (DPM) to align costs with where roles reside and are forecasted.				

Note: Totals may include rounding differences.

San Diego Gas & Electric Company  
 2024 GRC - REVISED  
 Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: L. Portfolio & Project Management  
 Category-Sub: 1. Portfolio & Project Management  
 Workpaper: 1ED014.000 - Portfolio & Project Management

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
2021	-4	-3	0	-0.1	CCTR Transf To 2100-0138.000
<b>Explanation:</b>	Transfer labor, FTEs and Non-Labor for Policies & Compliance and Project Support costs from cost center 2100-4092 in workpaper 1ED0014 Major Projects to cost center 2100-0138 in workpaper 1ED007 Distribution Design and Project Management (DPM) to align costs with where roles reside and are forecasted.				
<b>2021 Total</b>	<b>-47</b>	<b>-94</b>	<b>0</b>	<b>-0.8</b>	

*Note: Totals may include rounding differences.*

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

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 Witness: Tyson J. Swetek  
 Category: L. Portfolio & Project Management  
 Category-Sub: 1. Portfolio & Project Management  
 Workpaper: 1ED014.000 - Portfolio & Project Management

**RAMP Item # 1**

**RAMP Activity**

RAMP Chapter: SDG&E-Risk-4 Incident Involving a Contractor

RAMP Line Item ID: C02

RAMP Line Item Name: Field Safety Oversight

Tranche(/s): Tranche1: None

**GRC Forecast Cost Estimates (\$000)**

	2021 Historical Embedded Cost (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2024 RAMP Range (2020 Incurred \$)	
					Low	High
Tranche 1 Cost Estimate	0	0	0	0	500	605

**Cost Estimate Changes from RAMP:**

\$0 O&M actuals, costs are primarily capital.

**GRC Work Unit/Activity Level Estimates**

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2024 RAMP Range Activities	
					Low	High
Tranche 1 3rd Party Contractors	0.00	0.00	0.00	0.00	3.00	4.00

**Work Unit Changes from RAMP:**

N/A

**Risk Spend Efficiency (RSE)**

	GRC RSE	RAMP RSE
Tranche 1	0.000	0.000

**RSE Changes from RAMP:**

General changes to risk scores or RSE values are primarily due to changes in the MAVF and RSE methodology as discussed in the RAMP to GRC integration testimony of R. Scott Pearson and Gregory S. Flores (Ex. SCG-03/SDG&E-03, Chapter 2).

**Supplemental Workpapers for Workpaper 1ED014.000**

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

TY2024 GRC FORECAST - DETAILS

Initiative/Description	Labor/ Non-Labor	RAMP/ Non-RAMP	Unit Metric	O&M/Capital Split	2022			2023			2024			Total Cost	Explanation
					# of units	Cost per unit	Total cost	# of units	Cost per unit	Total cost	# of units	Cost per unit	Total cost		
Enterprise Project Management Standardization	Labor	Non-Ramp	FTE	2%	2	\$ 100,000	\$ 2,000	2	\$ 100,000	\$ 4,000	2	\$ 100,000	\$ 4,000	\$ 10,000	New project managers to support new battery storage projects and electric system hardening projects. 2022 additions assume July hire date.
Enterprise Project Management Standardization	Labor	Non-Ramp	FTE	2%			\$ -	2	\$ 100,000	\$ 2,000	2	\$ 100,000	\$ 4,000	\$ 6,000	New project managers to support new battery storage projects and electric system hardening projects. 2023 additions assume July hire date.
Enterprise Project Management Standardization	Labor	Non-Ramp	FTE	2%	1	\$ 100,000	\$ 1,000	1	\$ 100,000	\$ 2,000	1	\$ 100,000	\$ 2,000	\$ 5,000	New project specialist to support new battery storage projects and electric system hardening projects. 2022 addition assumes July hire date.
Enterprise Project Management Standardization	Labor	Non-Ramp	FTE	2%			\$ -	1	\$ 100,000	\$ 1,000	1	\$ 100,000	\$ 2,000	\$ 3,000	New project specialist to support new battery storage projects and electric system hardening projects. 2023 addition assumes July hire date.
Enterprise Project Management Standardization	Labor	Non-Ramp	FTE	2%			\$ -	1	\$ 100,000	\$ 1,000	1	\$ 100,000	\$ 2,000	\$ 3,000	New personnel to provide supervision and coordination with business units regarding document control/management policies per company standards and to provide P6 technical support to scheduling team. 2023 addition assumes July hire date.
Enterprise Project Management Standardization	Labor	Non-Ramp	FTE	2%			\$ -			\$ -	1	\$ 100,000	\$ 1,000	\$ 1,000	New personnel to provide supervision and coordination with business units regarding document control/management policies per company standards and to provide P6 technical support to scheduling team. 2024 addition assumes July hire date.
Enterprise Project Management Standardization	Labor	Non-Ramp	FTE	2%	1	\$ 100,000	\$ 1,000	1	\$ 100,000	\$ 2,000	1	\$ 100,000	\$ 2,000	\$ 5,000	New advisor to assist with increased QA/QC work including work in clean transportation, Electric Distribution Planning, Electric System Hardening and Electric Regional Operations work. 2022 addition assumes July hire date.
Enterprise Project Management Standardization	Labor	Non-Ramp	FTE	2%				1	\$ 100,000	\$ 1,000	1	\$ 100,000	\$ 2,000	\$ 3,000	New advisor to assist with increased QA/QC work including work in clean transportation, Electric Distribution Planning, Electric System Hardening and Electric Regional Operations work. 2023 addition assumes July hire date.
Enterprise Project Management Standardization	Labor	Non-Ramp	FTE	2%			\$ -	3	\$ 100,000	\$ 3,000	3	\$ 100,000	\$ 6,000	\$ 9,000	New personnel to provide supervision and coordination with business units regarding document control/management policies per company standards and to provide P6 technical support to scheduling team. 2023 additions assume July hire date.
<b>Total</b>							\$ 4,000			\$ 16,000			\$ 25,000	\$ 45,000	

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek  
Category: M. Compliance Management  
Workpaper: 1ED015.000

**Summary for Category: M. Compliance Management**

	In 2021\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	875	875	875	875
Non-Labor	2,186	13,011	12,807	6,399
NSE	0	0	0	0
<b>Total</b>	<b>3,061</b>	<b>13,886</b>	<b>13,682</b>	<b>7,274</b>
FTE	8.2	8.2	8.2	8.2

**Workpapers belonging to this Category:**

**1ED015.000 Compliance Management**

Labor	875	875	875	875
Non-Labor	2,186	13,011	12,807	6,399
NSE	0	0	0	0
<b>Total</b>	<b>3,061</b>	<b>13,886</b>	<b>13,682</b>	<b>7,274</b>
FTE	8.2	8.2	8.2	8.2

*Note: Totals may include rounding differences.*



**Beginning of Workpaper**  
**1ED015.000 - Compliance Management**

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: M. Compliance Management  
 Category-Sub: 1. Compliance Management  
 Workpaper: 1ED015.000 - Compliance Management

**Activity Description:**

The compliance and asset management workgroups are focused on ensuring 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 and efficient manner. The main subsections that comprise the compliance and asset management workgroup are the compliance management group and the program management group. The unit that best represent the work in this activity are FTE.

**Forecast Explanations:**

**Labor - Base YR Rec**

The forecast method developed for this cost category is base year. This methodology best represents workload forecasts due to corrective maintenance program cycles and structures which fall outside of the HFTD, which vary over a 10-year cycle making a 3 or 5 year average ineffective. The base year best represents expected costs during this GRC cycle.

**Non-Labor - Base YR Rec**

The forecast method developed for this cost category is base year. This methodology best represents workload forecasts due to corrective maintenance program cycles and structures which fall outside of the HFTD, which vary over a 10-year cycle making a 3 or 5 year average ineffective. The base year best represents expected costs during this GRC cycle.

**NSE - Base YR Rec**

N/A

**Summary of Results:**

		In 2021\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2017	2018	2019	2020	2021	2022	2023	2024	
Labor		1,019	878	936	955	875	875	875	875	
Non-Labor		2,052	2,290	-619	1,196	2,186	13,011	12,807	6,399	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>3,071</b>	<b>3,168</b>	<b>317</b>	<b>2,151</b>	<b>3,061</b>	<b>13,886</b>	<b>13,682</b>	<b>7,274</b>	
FTE		9.4	8.3	8.4	8.4	8.2	8.2	8.2	8.2	

*Note: Totals may include rounding differences.*

San Diego Gas & Electric Company  
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Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek  
Category: M. Compliance Management  
Category-Sub: 1. Compliance Management  
Workpaper: 1ED015.000 - Compliance Management

**Summary of Adjustments to Forecast:**

In 2021 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	Base YR Rec	875	875	875	0	0	0	875	875	875
Non-Labor	Base YR Rec	2,186	2,186	2,186	10,825	10,621	4,213	13,011	12,807	6,399
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>3,061</b>	<b>3,061</b>	<b>3,061</b>	<b>10,825</b>	<b>10,621</b>	<b>4,213</b>	<b>13,886</b>	<b>13,682</b>	<b>7,274</b>
FTE	Base YR Rec	8.2	8.2	8.2	0.0	0.0	0.0	8.2	8.2	8.2

**Forecast Adjustment Details:**

Year	Labor	NLbr	NSE	Total	FTE	Adj Type
2022	0	350	0	350	0.0	1-Sided Adj
<b>Explanation:</b>	Non-labor charge to review/validate joint use attachments. One-time cost, to be offset with Misc Revenue.					
2022	0	150	0	150	0.0	1-Sided Adj
<b>Explanation:</b>	QA/QC increased cost pressures due to high volume and contract rate increases. 2022-2024 increase of \$25k per month less 6 months for July to December 2021, which already reflects the increased costs.					
2022	0	432	0	432	0.0	1-Sided Adj
<b>Explanation:</b>	Wood Pole Intrusive Non-HFTD forecast includes 20,256 poles inspected less 13,392 completed in 2021 * \$63 per inspection.					
2022	0	858	0	858	0.0	1-Sided Adj
<b>Explanation:</b>	Special/CIP Wood Pole Intrusive estimating 10,500 special/CIP inspections for 2022 increasing 10% each year at \$109 each. 2022 O&M estimate at 75%, 2023 80%, 2024 85% due to expected completion of most HFTD no longer requiring POIN inspections for pole loading calculations.					
2022	0	9,035	0	9,035	0.0	1-Sided Adj
<b>Explanation:</b>	Pole Attachment Data Fielding : the CPUC s Track 2 Decision Adding Attachment Data to Pole Owner Databases Ordered in Decision 20-07-004 issued October 25, 2021 requires pole owners to provide 20 data points such as asset information on attachments, the status of attachment requests, attachment design information, and structural loading information. The data will be managed through a database to be developed and operated by the pole owners.					
<b>2022 Total</b>	<b>0</b>	<b>10,825</b>	<b>0</b>	<b>10,825</b>	<b>0.0</b>	
2023	0	150	0	150	0.0	1-Sided Adj
<b>Explanation:</b>	QA/QC increased cost pressures due to high volume and contract rate increases. 2022-2024 increase of \$25k per month less 6 months for July to December 2021, which already reflects the increased costs.					
2023	0	429	0	429	0.0	1-Sided Adj
<b>Explanation:</b>	Wood Pole Intrusive Non-HFTD forecast includes 20,204 poles inspected less 13,392 completed in 2021 * \$63 per inspection.					

Note: Totals may include rounding differences.

SDG&E/ELECTRIC DISTRIBUTION/Exh No:SDG&E-12-WP-R/Witness: T. Swetek

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: M. Compliance Management  
 Category-Sub: 1. Compliance Management  
 Workpaper: 1ED015.000 - Compliance Management

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj Type</u>
2023	0	1,007	0	1,007	0.0	1-Sided Adj
<b>Explanation:</b>	Special/CIP Wood Pole Intrusive estimating 10,500 special/CIP inspections for 2022 increasing 10% each year at \$109 each. 2022 O&M estimate at 75%, 2023 80%, 2024 85% due to expected completion of most HFTD no longer requiring POIN inspections for pole loading calculations.					
2023	0	9,035	0	9,035	0.0	1-Sided Adj
<b>Explanation:</b>	Pole Attachment Data Fielding : the CPUC s Track 2 Decision Adding Attachment Data to Pole Owner Databases Ordered in Decision 20-07-004 issued October 25, 2021 requires pole owners to provide 20 data points such as asset information on attachments, the status of attachment requests, attachment design information, and structural loading information. The data will be managed through a database to be developed and operated by the pole owners.					
<b>2023 Total</b>	<b>0</b>	<b>10,621</b>	<b>0</b>	<b>10,621</b>	<b>0.0</b>	
2024	0	150	0	150	0.0	1-Sided Adj
<b>Explanation:</b>	QA/QC increased cost pressures due to high volume and contract rate increases. 2022-2024 increase of \$25k per month less 6 months for July to December 2021, which already reflects the increased costs.					
2024	0	427	0	427	0.0	1-Sided Adj
<b>Explanation:</b>	Wood Pole Intrusive Non-HFTD forecast includes 20,175 poles inspected less 13,392 completed in 2021 * \$63 per inspection."					
2024	0	1,177	0	1,177	0.0	1-Sided Adj
<b>Explanation:</b>	Special/CIP Wood Pole Intrusive estimating 10,500 special/CIP inspections for 2022 increasing 10% each year at \$109 each. 2022 O&M estimate at 75%, 2023 80%, 2024 85% due to expected completion of most HFTD no longer requiring POIN inspections for pole loading calculations.					
2024	0	2,459	0	2,459	0.0	1-Sided Adj
<b>Explanation:</b>	Pole Attachment Data Fielding : the CPUC s Track 2 Decision Adding Attachment Data to Pole Owner Databases Ordered in Decision 20-07-004 issued October 25, 2021 requires pole owners to provide 20 data points such as asset information on attachments, the status of attachment requests, attachment design information, and structural loading information. The data will be managed through a database to be developed and operated by the pole owners. The 2024 total cost was updated to spread the \$9,034,564 cost of the program over the 4 years 2024-2027 +\$200,000 adjustment to accommodate Licensing fee's and general QA necessary to maintain the program once it has been established.					
<b>2024 Total</b>	<b>0</b>	<b>4,213</b>	<b>0</b>	<b>4,213</b>	<b>0.0</b>	

Note: Totals may include rounding differences.

SDG&E/ELECTRIC DISTRIBUTION/Exh No:SDG&E-12-WP-R/Witness: T. Swetek

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek  
Category: M. Compliance Management  
Category-Sub: 1. Compliance Management  
Workpaper: 1ED015.000 - Compliance Management

**Determination of Adjusted-Recorded (Incurred Costs):**

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	795	702	774	817	761
Non-Labor	1,793	2,069	755	1,940	2,191
NSE	0	0	0	0	0
<b>Total</b>	<b>2,588</b>	<b>2,772</b>	<b>1,529</b>	<b>2,757</b>	<b>2,951</b>
FTE	8.1	7.1	7.3	7.4	7.0
<b>Adjustments (Nominal \$) **</b>					
Labor	0	0	0	-7	0
Non-Labor	0	0	-1,328	-834	-5
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>-1,328</b>	<b>-841</b>	<b>-5</b>
FTE	0.0	0.0	0.0	-0.3	0.0
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	795	702	774	811	761
Non-Labor	1,793	2,069	-573	1,105	2,186
NSE	0	0	0	0	0
<b>Total</b>	<b>2,588</b>	<b>2,772</b>	<b>201</b>	<b>1,916</b>	<b>2,947</b>
FTE	8.1	7.1	7.3	7.2	7.0
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	118	106	111	115	114
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>118</b>	<b>106</b>	<b>111</b>	<b>115</b>	<b>114</b>
FTE	1.3	1.2	1.1	1.2	1.2
<b>Escalation to 2021\$</b>					
Labor	106	70	51	30	0
Non-Labor	259	221	-46	90	0
NSE	0	0	0	0	0
<b>Total</b>	<b>365</b>	<b>290</b>	<b>6</b>	<b>120</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2021\$)</b>					
Labor	1,019	878	936	955	875
Non-Labor	2,052	2,290	-619	1,196	2,186
NSE	0	0	0	0	0
<b>Total</b>	<b>3,071</b>	<b>3,168</b>	<b>317</b>	<b>2,151</b>	<b>3,061</b>
FTE	9.4	8.3	8.4	8.4	8.2

\* After company-wide exclusions of Non-GRC costs

\*\* Refer to "Detail of Adjustments to Recorded" page for line item adjustments

Note: Totals may include rounding differences.

San Diego Gas & Electric Company  
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Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek  
Category: M. Compliance Management  
Category-Sub: 1. Compliance Management  
Workpaper: 1ED015.000 - Compliance Management

**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs					
Years	2017	2018	2019	2020	2021
Labor	0	0	0	-7	0
Non-Labor	0	0	-1,328	-834	-5
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>-1,328</b>	<b>-841</b>	<b>-5</b>
FTE	0.0	0.0	0.0	-0.3	0.0

**Detail of Adjustments to Recorded:**

Year	Labor	NLbr	NSE	FTE	Adj Type
<b>2017 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
<b>2018 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
2019	0	-1,328	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
<b>2019 Total</b>	<b>0</b>	<b>-1,328</b>	<b>0</b>	<b>0.0</b>	
2020	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-2	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-3	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-7	0	0	-0.3	1-Sided Adj
<b>Explanation:</b>	Removal of capital settlement portion to accurately reflect O&M and capital balances for 2020 Department Overhead.				
2020	0	-828	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.				
<b>2020 Total</b>	<b>-7</b>	<b>-834</b>	<b>0</b>	<b>-0.3</b>	
2021	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				

*Note: Totals may include rounding differences.*

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: M. Compliance Management  
 Category-Sub: 1. Compliance Management  
 Workpaper: 1ED015.000 - Compliance Management

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
2021	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-3	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
<b>2021 Total</b>	<b>0</b>	<b>-5</b>	<b>0</b>	<b>0.0</b>	

*Note: Totals may include rounding differences.*

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek  
Category: N. Officer  
Workpaper: 1ED016.000

**Summary for Category: N. Officer**

	In 2021\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	1,165	1,165	1,165	1,165
Non-Labor	121	121	121	121
NSE	0	0	0	0
<b>Total</b>	<b>1,286</b>	<b>1,286</b>	<b>1,286</b>	<b>1,286</b>
FTE	5.5	5.5	5.5	5.5

**Workpapers belonging to this Category:**

**1ED016.000 Officer**

Labor	1,165	1,165	1,165	1,165
Non-Labor	121	121	121	121
NSE	0	0	0	0
<b>Total</b>	<b>1,286</b>	<b>1,286</b>	<b>1,286</b>	<b>1,286</b>
FTE	5.5	5.5	5.5	5.5

*Note: Totals may include rounding differences.*



**Beginning of Workpaper**  
**1ED016.000 - Officer**

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: N. Officer  
 Category-Sub: 1. Officer  
 Workpaper: 1ED016.000 - Officer

**Activity Description:**

This workgroup includes the costs for officers and administrative assistants in support of electric distribution. The total salaries are a direct labor charge and crossover amounts allocated to electric transmission are excluded from this account as an indirect charge and not included in the requested expenses. Typical activities included in this account include officer activities in support of electric distribution.

**Forecast Explanations:**

**Labor - Base YR Rec**

The forecast method developed for this cost category is base year. This method is most appropriate because the base year reflects the same officer and administrative assistant structure going forward .

**Non-Labor - Base YR Rec**

The forecast method developed for this cost category is base year. This method is most appropriate because the base year reflects the same officer and administrative assistant structure going forward .

**NSE - Base YR Rec**

N/A

**Summary of Results:**

		In 2021\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2017	2018	2019	2020	2021	2022	2023	2024	
Labor		1,447	1,395	1,315	1,178	1,165	1,166	1,166	1,166	
Non-Labor		254	656	861	147	121	122	122	122	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>1,702</b>	<b>2,051</b>	<b>2,176</b>	<b>1,325</b>	<b>1,287</b>	<b>1,288</b>	<b>1,288</b>	<b>1,288</b>	
FTE		5.6	6.7	5.8	5.3	5.5	5.5	5.5	5.5	

*Note: Totals may include rounding differences.*

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: N. Officer  
 Category-Sub: 1. Officer  
 Workpaper: 1ED016.000 - Officer

**Summary of Adjustments to Forecast:**

In 2021 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	Base YR Rec	1,165	1,165	1,165	0	0	0	1,165	1,165	1,165
Non-Labor	Base YR Rec	121	121	121	0	0	0	121	121	121
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>1,287</b>	<b>1,287</b>	<b>1,287</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1,287</b>	<b>1,287</b>	<b>1,287</b>
FTE	Base YR Rec	5.5	5.5	5.5	0.0	0.0	0.0	5.5	5.5	5.5

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj Type</u>
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Note: Totals may include rounding differences.

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek  
Category: N. Officer  
Category-Sub: 1. Officer  
Workpaper: 1ED016.000 - Officer

**Determination of Adjusted-Recorded (Incurred Costs):**

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	1,131	1,115	1,087	1,000	1,013
Non-Labor	223	593	797	138	123
NSE	0	0	0	0	0
<b>Total</b>	<b>1,354</b>	<b>1,708</b>	<b>1,884</b>	<b>1,138</b>	<b>1,136</b>
FTE	5.0	5.6	5.0	4.6	4.7
<b>Adjustments (Nominal \$) **</b>					
Labor	-2	1	0	0	0
Non-Labor	-1	0	0	-2	-2
NSE	0	0	0	0	0
<b>Total</b>	<b>-3</b>	<b>1</b>	<b>0</b>	<b>-2</b>	<b>-2</b>
FTE	-0.2	0.2	0.0	0.0	0.0
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	1,129	1,116	1,087	1,000	1,013
Non-Labor	222	593	797	136	121
NSE	0	0	0	0	0
<b>Total</b>	<b>1,351</b>	<b>1,709</b>	<b>1,884</b>	<b>1,136</b>	<b>1,134</b>
FTE	4.8	5.8	5.0	4.6	4.7
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	168	169	156	142	152
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>168</b>	<b>169</b>	<b>156</b>	<b>142</b>	<b>152</b>
FTE	0.8	0.9	0.8	0.7	0.8
<b>Escalation to 2021\$</b>					
Labor	151	111	72	37	0
Non-Labor	32	63	64	11	0
NSE	0	0	0	0	0
<b>Total</b>	<b>183</b>	<b>174</b>	<b>136</b>	<b>48</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2021\$)</b>					
Labor	1,447	1,395	1,315	1,178	1,165
Non-Labor	254	656	861	147	121
NSE	0	0	0	0	0
<b>Total</b>	<b>1,702</b>	<b>2,051</b>	<b>2,176</b>	<b>1,325</b>	<b>1,287</b>
FTE	5.6	6.7	5.8	5.3	5.5

\* After company-wide exclusions of Non-GRC costs

\*\* Refer to "Detail of Adjustments to Recorded" page for line item adjustments

Note: Totals may include rounding differences.

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek  
Category: N. Officer  
Category-Sub: 1. Officer  
Workpaper: 1ED016.000 - Officer

**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs					
Years	2017	2018	2019	2020	2021
Labor	-2	1	0	0	0
Non-Labor	-0.715	0	0	-2	-2
NSE	0	0	0	0	0
<b>Total</b>	<b>-3</b>	<b>1</b>	<b>0</b>	<b>-2</b>	<b>-2</b>
FTE	-0.2	0.2	0.0	0.0	0.0

**Detail of Adjustments to Recorded:**

Year	Labor	NLbr	NSE	FTE	Adj Type
2017	-1	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	-1	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-sided adjustment to exclude \$715 related to Events and Tickets.				
<b>2017 Total</b>	<b>-2</b>	<b>-1</b>	<b>0</b>	<b>-0.2</b>	
2018	1	0	0	0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	1	0	0	0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
<b>2018 Total</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0.2</b>	
<b>2019 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
2020	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-1	0	0.0	1-Sided Adj

Note: Totals may include rounding differences.

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: N. Officer  
 Category-Sub: 1. Officer  
 Workpaper: 1ED016.000 - Officer

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
<b>2020 Total</b>	<b>0</b>	<b>-2</b>	<b>0</b>	<b>0.0</b>	
2021	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
<b>2021 Total</b>	<b>0</b>	<b>-2</b>	<b>0</b>	<b>0.0</b>	

*Note: Totals may include rounding differences.*

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: O. Regional Public Affairs  
 Workpaper: 1ED022.000

**Summary for Category: O. Regional Public Affairs**

	In 2021\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	1,079	1,292	1,292	1,292
Non-Labor	81	96	96	96
NSE	0	0	0	0
<b>Total</b>	<b>1,160</b>	<b>1,388</b>	<b>1,388</b>	<b>1,388</b>
FTE	8.9	11.0	11.0	11.0

**Workpapers belonging to this Category:**

**1ED022.000 Regional Public Affairs**

Labor	1,079	1,292	1,292	1,292
Non-Labor	81	96	96	96
NSE	0	0	0	0
<b>Total</b>	<b>1,160</b>	<b>1,388</b>	<b>1,388</b>	<b>1,388</b>
FTE	8.9	11.0	11.0	11.0

*Note: Totals may include rounding differences.*

**Beginning of Workpaper**  
**1ED022.000 - Regional Public Affairs**



San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: O. Regional Public Affairs  
 Category-Sub: 1. Regional Public Affairs  
 Workpaper: 1ED022.000 - Regional Public Affairs

**Activity Description:**

SDG&E's Regional Public Affairs group primarily supports electric and gas distribution operations through its work with and local governments and regional agencies on issues regarding proposed regulations, permitting, emergency preparation and response. Regional Public Affairs also educates officials at the county, agency and city levels about energy infrastructure issues that could impact customers, while also working closely with community choice aggregation agencies. In addition to communicating with governments, Regional Public Affairs serves as the point of contact for the 27 cities and 2 counties that SDG&E serves, educating stakeholders about utility operational activities, programs and services, responding to stakeholder inquiries, resolving customer complaints, and working with communities of concern.

**Forecast Explanations:**

**Labor - Base YR Rec**

Labor forecasts for Regional Public Affairs are based on the base year 2021 recorded data. The base year methodology was selected specifically to address the increase in FTEs driven by City of San Diego franchise commitments and best represents future years.

**Non-Labor - Base YR Rec**

Non-labor forecasts for Regional Public Affairs are based on the base year 2021 recorded data. The base year methodology best represents future year targets as non-labor costs generally trend with FTE.

**NSE - Base YR Rec**

N/A

**Summary of Results:**

		In 2021\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2017	2018	2019	2020	2021	2022	2023	2024	
Labor		568	582	781	938	1,079	1,292	1,292	1,292	
Non-Labor		392	223	200	136	81	96	96	96	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>960</b>	<b>805</b>	<b>981</b>	<b>1,075</b>	<b>1,160</b>	<b>1,388</b>	<b>1,388</b>	<b>1,388</b>	
FTE		4.7	4.7	5.7	7.5	8.9	11.0	11.0	11.0	

*Note: Totals may include rounding differences.*

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: O. Regional Public Affairs  
 Category-Sub: 1. Regional Public Affairs  
 Workpaper: 1ED022.000 - Regional Public Affairs

**Summary of Adjustments to Forecast:**

In 2021 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	Base YR Rec	1,079	1,079	1,079	213	213	213	1,292	1,292	1,292
Non-Labor	Base YR Rec	81	81	81	15	15	15	96	96	96
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>1,160</b>	<b>1,160</b>	<b>1,160</b>	<b>228</b>	<b>228</b>	<b>228</b>	<b>1,388</b>	<b>1,388</b>	<b>1,388</b>
FTE	Base YR Rec	8.9	8.9	8.9	2.1	2.1	2.1	11.0	11.0	11.0

**Forecast Adjustment Details:**

Year	Labor	NLbr	NSE	Total	FTE	Adj Type
2022	213	15	0	228	2.1	1-Sided Adj
<b>Explanation:</b>	Adding incremental labor costs for three FTEs, hired in 2021, for Franchise commitments to the City of San Diego plus \$5k non-labor per employee for employee related expenses. 100% above-the-line implementing and ensuring compliance with the terms of existing franchises as it directly relates to the utility's existing or proposed operations.					
<b>2022 Total</b>	<b>213</b>	<b>15</b>	<b>0</b>	<b>228</b>	<b>2.1</b>	
2023	213	15	0	228	2.1	1-Sided Adj
<b>Explanation:</b>	Adding incremental labor costs for three FTEs, hired in 2021, for Franchise commitments to the City of San Diego plus \$5k non-labor per employee for employee related expenses. 100% above-the-line implementing and ensuring compliance with the terms of existing franchises as it directly relates to the utility's existing or proposed operations.					
<b>2023 Total</b>	<b>213</b>	<b>15</b>	<b>0</b>	<b>228</b>	<b>2.1</b>	
2024	213	15	0	228	2.1	1-Sided Adj
<b>Explanation:</b>	Adding incremental labor costs for three FTEs, hired in 2021, for Franchise commitments to the City of San Diego plus \$5k non-labor per employee for employee related expenses. 100% above-the-line implementing and ensuring compliance with the terms of existing franchises as it directly relates to the utility's existing or proposed operations.					
<b>2024 Total</b>	<b>213</b>	<b>15</b>	<b>0</b>	<b>228</b>	<b>2.1</b>	

Note: Totals may include rounding differences.

SDG&E/ELECTRIC DISTRIBUTION/Exh No:SDG&E-12-WP-R/Witness: T. Swetek

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek  
Category: O. Regional Public Affairs  
Category-Sub: 1. Regional Public Affairs  
Workpaper: 1ED022.000 - Regional Public Affairs

**Determination of Adjusted-Recorded (Incurred Costs):**

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	487	512	774	981	876
Non-Labor	406	256	183	-103	82
NSE	0	0	0	0	0
<b>Total</b>	<b>892</b>	<b>768</b>	<b>957</b>	<b>878</b>	<b>958</b>
FTE	4.3	4.2	5.8	8.0	7.1
<b>Adjustments (Nominal \$) **</b>					
Labor	-44	-47	-129	-185	62
Non-Labor	-63	-55	2	229	-1
NSE	0	0	0	0	0
<b>Total</b>	<b>-107</b>	<b>-101</b>	<b>-126</b>	<b>44</b>	<b>61</b>
FTE	-0.2	-0.2	-0.9	-1.6	0.5
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	443	465	645	796	938
Non-Labor	343	202	185	126	81
NSE	0	0	0	0	0
<b>Total</b>	<b>785</b>	<b>667</b>	<b>831</b>	<b>922</b>	<b>1,019</b>
FTE	4.1	4.0	4.9	6.4	7.6
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	66	70	92	113	141
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>66</b>	<b>70</b>	<b>92</b>	<b>113</b>	<b>141</b>
FTE	0.6	0.7	0.8	1.1	1.3
<b>Escalation to 2021\$</b>					
Labor	59	46	43	29	0
Non-Labor	49	21	15	10	0
NSE	0	0	0	0	0
<b>Total</b>	<b>108</b>	<b>67</b>	<b>58</b>	<b>39</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2021\$)</b>					
Labor	568	582	781	938	1,079
Non-Labor	392	223	200	136	81
NSE	0	0	0	0	0
<b>Total</b>	<b>960</b>	<b>805</b>	<b>981</b>	<b>1,075</b>	<b>1,160</b>
FTE	4.7	4.7	5.7	7.5	8.9

\* After company-wide exclusions of Non-GRC costs

\*\* Refer to "Detail of Adjustments to Recorded" page for line item adjustments

Note: Totals may include rounding differences.

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: O. Regional Public Affairs  
 Category-Sub: 1. Regional Public Affairs  
 Workpaper: 1ED022.000 - Regional Public Affairs

**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs					
Years	2017	2018	2019	2020	2021
Labor	-44	-47	-129	-185	62
Non-Labor	-63	-55	2	229	-0.825
NSE	0	0	0	0	0
<b>Total</b>	<b>-107</b>	<b>-101</b>	<b>-126</b>	<b>44</b>	<b>61</b>
FTE	-0.2	-0.2	-0.9	-1.6	0.5

**Detail of Adjustments to Recorded:**

Year	Labor	NLbr	NSE	FTE	Adj Type
2017	78	95	0	0.9	CCTR Transf From 2100-3592.000
<b>Explanation:</b>	Transfer costs in cost center 2100-3592 workpaper group 1AG012 to cost center 2100-3463 work paper group 1ED022 where function resides.				
2017	-122	-129	0	-1.1	1-Sided Adj
<b>Explanation:</b>	One-Sided transfer for Labor, FTEs and Non-Labor for CC 2100-3463 attributable below-the-line (BTL) activities and excluded from GRC costs.				
2017	0	-30	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-Sided transfer Non-Labor for CC 2100-3592 attributable below-the-line (BTL) activities and excluded from GRC costs.				
<b>2017 Total</b>	<b>-44</b>	<b>-63</b>	<b>0</b>	<b>-0.2</b>	
2018	81	-15	0	0.9	CCTR Transf From 2100-3592.000
<b>Explanation:</b>	Transfer costs in cost center 2100-3592 workpaper group 1AG012 to cost center 2100-3463 work paper group 1ED022 where function resides.				
2018	-128	-69	0	-1.1	1-Sided Adj
<b>Explanation:</b>	One-Sided transfer for Labor, FTEs and Non-Labor for CC 2100-3463 attributable below-the-line (BTL) activities and excluded from GRC costs.				
2018	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-Sided transfer Non-Labor for CC 2100-3592 attributable below-the-line (BTL) activities and excluded from GRC costs.				
2018	0	29	0	0.0	CCTR Transf From 2100-3592.000
<b>Explanation:</b>	Transfer costs in cost center 2100-3592 workpaper group 1AG012 to cost center 2100-3463 work paper group 1ED022 where function resides.				
<b>2018 Total</b>	<b>-47</b>	<b>-55</b>	<b>0</b>	<b>-0.2</b>	
2019	65	-23	0	0.5	CCTR Transf From 2100-3592.000

*Note: Totals may include rounding differences.*

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
 Witness: Tyson J. Swetek  
 Category: O. Regional Public Affairs  
 Category-Sub: 1. Regional Public Affairs  
 Workpaper: 1ED022.000 - Regional Public Affairs

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Transfer costs in cost center 2100-3592 workpaper group 1AG012 to cost center 2100-3463 work paper group 1ED022 where function resides.				
2019	-193	-21	0	-1.4	1-Sided Adj
<b>Explanation:</b>	One-Sided transfer for Labor, FTEs and Non-Labor for CC 2100-3463 attributable below-the-line (BTL) activities and excluded from GRC costs.				
2019	0	46	0	0.0	CCTR Transf From 2100-3592.000
<b>Explanation:</b>	Transfer costs in cost center 2100-3592 workpaper group 1AG012 to cost center 2100-3463 work paper group 1ED022 where function resides.				
<b>2019 Total</b>	<b>-129</b>	<b>2</b>	<b>0</b>	<b>-0.9</b>	
2020	0	-4	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-245	232	0	-2.0	1-Sided Adj
<b>Explanation:</b>	One-Sided transfer for Labor, FTEs and Non-Labor for CC 2100-3463 attributable below-the-line (BTL) activities and excluded from GRC costs.				
2020	61	-112	0	0.4	CCTR Transf From 2100-3592.000
<b>Explanation:</b>	Transfer costs in cost center 2100-3592 workpaper group 1AG012 to cost center 2100-3463 work paper group 1ED022 where function resides.				
2020	0	113	0	0.0	1-Sided Adj
<b>Explanation:</b>	One-Sided transfer Non-Labor for CC 2100-3592 attributable below-the-line (BTL) activities and excluded from GRC costs.				
<b>2020 Total</b>	<b>-185</b>	<b>229</b>	<b>0</b>	<b>-1.6</b>	
2021	0	-4	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	62	3	0	0.5	CCTR Transf From 2100-3592.000
<b>Explanation:</b>	Transfer costs in cost center 2100-3592 workpaper group 1AG012 to cost center 2100-3463 work paper group 1ED022 where function resides.				
<b>2021 Total</b>	<b>62</b>	<b>-1</b>	<b>0</b>	<b>0.5</b>	

Note: Totals may include rounding differences.

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek

**Appendix A: List of Non-Shared Cost Centers**

<b>Cost Center</b>	<b>Sub</b>	<b>Description</b>
2100-0043	000	C&O CENTER TRAINING - OH TRAINERS
2100-0076	000	METRO CONSTRUCTION & OPER MANAGER
2100-0077	000	METRO C&O-ELECTRIC OH
2100-0080	000	METRO C&O-INSP/PROJ COORD
2100-0082	000	METRO C&O-EQUIPMENT ORDERS
2100-0083	000	METRO C&O-ENGR
2100-0084	000	METRO C&O-TROUBLEMEN
2100-0085	000	NORTH COAST CONST & OPER MANAGER
2100-0086	000	NORTH COAST C&O CENTER - ELEC
2100-0088	000	NORTH COAST C&O-ENG & OPS
2100-0089	000	NORTH COAST C&O-TROUBLEMEN
2100-0090	000	NORTHEAST CONSTRUCTION & OPER MANAGER
2100-0091	000	NORTHEAST C&O-ELECT OH
2100-0095	000	NORTHEAST C&O-EQUIPMENT OPER
2100-0096	000	NORTHEAST C&O-INSP/PROJ COORD
2100-0097	000	NORTHEAST C&O-ENG & OPS
2100-0098	000	NORTHEAST C&O-TROUBLEMEN
2100-0099	000	NORTHEAST C&O-RAMONA SATELLITE
2100-0100	000	BEACH CITIES CONST & OPER MANAGER
2100-0101	000	BEACH CITIES C&O CENTER-ELEC
2100-0103	000	BEACH CITIES C&O-ENG & OPS
2100-0104	000	BEACH CITIES C&O-TROUBLEMEN
2100-0105	000	EASTERN CONST & OPS MANAGER
2100-0106	000	EASTERN C&O CENTER-ELEC
2100-0108	000	C&O SERVICES-MTN EMPIRE
2100-0109	000	EASTERN C&O-ENG & OPS
2100-0110	000	EASTERN C&O-TROUBLEMEN
2100-0111	000	ORANGE COUNTY CONST & OPER MANAGER
2100-0112	000	PROJECT MGMT ORANGE COUNTY
2100-0113	000	ORANGE CO CONST & OPERATIONS MANAGER
2100-0114	000	ORANGE CO CONST & OPS-ELEC
2100-0115	000	ORANGE CO C&O-GAS
2100-0116	000	ORANGE CO C&O-ENG & OPS
2100-0117	000	ORANGE CO C&O-TROUBLEMEN
2100-0119	000	ASSOCIATE ENGINEERS
2100-0120	000	DISTRIB STANDARDS & COST MGMT
2100-0122	000	ELE DIST PLANNING
2100-0124	000	DISTRIB PROJECTS & PROG
2100-0126	000	ENERGY MGMT & SERVICE STANDARDS
2100-0127	000	ELE DIST OPERATIONS DIR
2100-0128	000	DIST SWITCHING
2100-0130	000	ELE GEOGRAPHIC INFO MGMT
2100-0131	000	PROJECT MGMT TRAINING
2100-0132	000	PROJECT MGMT METRO A
2100-0133	000	METRO C&O SOT ORDER TEAM

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek

**Appendix A: List of Non-Shared Cost Centers**

<b>Cost Center</b>	<b>Sub</b>	<b>Description</b>
2100-0134	000	PROJECT MGMT METRO B
2100-0135	000	NORTHEAST C&O SORT ORDER TEAM
2100-0136	000	PROJECT MGMT NORTHERN
2100-0137	000	CS PROJ CONTRACT ADMIN
2100-0138	000	PROJECT MANAGEMENT POLICY & PROCEDURES
2100-0150	000	CONSTRUCTION SERVICES DIRECTOR
2100-0152	000	PROJ CONTR METRO ELECTRIC
2100-0153	000	PROJ CONTR - BEACH CITIES ELE
2100-0154	000	PROJ CONTR NORTHEAST ELE
2100-0155	000	PROJ CONTR EASTERN ELE
2100-0156	000	PROJ CONTR NORTH COAST ELE
2100-0157	000	PROJ CONTR ORANGE COUNTY ELE
2100-0158	000	PROJ CONTR-NON-DISTRICT ELE
2100-0159	000	PROJ CONTR METRO GAS
2100-0160	000	PROJ CONTR BEACH CITIES GAS
2100-0161	000	PROJ CONTR - NORTHEAST GAS
2100-0162	000	PROJ CONTR - EASTERN GAS
2100-0163	000	PROJ CONTR NORTH COAST GAS
2100-0164	000	PROJ CONTR ORANGE COUNTY GAS
2100-0165	000	PROJ CONTR NON-DISTRICT GAS
2100-0175	000	MATERIALS ANALYSIS LAB
2100-0189	000	FLEET EQUIPMENT OPERATIONS
2100-0205	000	EQUIPMENT TRAINING & OPERATIONS SERVICES
2100-0221	000	ELE TRANS & DIST ENGINEERING DIR
2100-0222	000	TRANS ENGINEERING
2100-0223	000	SUBSTATION ENG & DESIGN
2100-0224	000	SYSTEM PROTECTION ENGINEERING
2100-0225	000	CIVIL/STRUCTURAL ENGINEERING
2100-0226	000	ELE TRANS PLANNING
2100-0228	000	ELECTRIC GRID OPERATIONS DIRECTOR
2100-0229	000	ELECTRIC GRID CONTROL
2100-0230	000	ELECTRIC GRID OPERATIONS
2100-0231	000	ENERGY MGMT SYSTEMS OPERATIONS
2100-0232	000	GRID CONTRACT SERVICES
2100-0233	000	KEARNY MAINT & OPS DIRECTOR
2100-0234	000	SYSTEM PROTECTION MAINTENANCE
2100-0235	000	SUBSTATION CONST & MAINTENANCE
2100-0236	000	TRANSMISSION CONSTRUCTION & MAINTENANCE
2100-0237	000	TRANSMISSION MAINTENANCE & OPERATIONS
2100-0238	000	MAINTENANCE SHOPS
2100-0535	000	MATERIALS & SUPPLIES
2100-0560	000	ELECT RELIAB REPORTING
2100-0703	000	CONTRACT SUPPORT
2100-0720	000	ELE DIST OPS SYSTEM SERVICE
2100-0721	000	EASTERN C&O SORT ORDER TEAM

San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek

**Appendix A: List of Non-Shared Cost Centers**

<b>Cost Center</b>	<b>Sub</b>	<b>Description</b>
2100-0725	000	ELE TRANS & DIST VP
2100-3403	000	ELECTRIC REGIONAL OPERATIONS DIRECTOR
2100-3404	000	NORTH COAST C&O SORT ORDER TEAM
2100-3463	000	REGIONAL PUBLIC AFFAIRS SAN DIEGO
2100-3540	000	ELE TRANS & DIST PROJECT MGMT
2100-3543	000	CONSTRUCTION OPERATIONS SUPPORT
2100-3557	000	EGIM STRATEGY
2100-3558	000	EGIM DISTRICT OPERATIONS
2100-3559	000	EGIM LAND
2100-3560	000	EGIM REGIONAL SUPPORT
2100-3561	000	EGIM - GIS MANAGEMENT
2100-3566	000	Capital Projects Outreach
2100-3604	000	SKILLS COMPLIANCE & TRAINING
2100-3616	000	ELECTIC DISTRIBUTION OPS TECH SUPPORT
2100-3643	000	C&O CENTER TRAINING - UG TRAINERS & ETS
2100-3652	000	ASSET & INVEST STRGY
2100-3654	000	TECHNICAL ANALYSIS
2100-3655	000	PROGRAM MGMT
2100-3656	000	COMPLIANCE MGMT
2100-3660	000	SPRVSR ENABLEMENT
2100-3707	000	DISTRIBUTED GENERATION PROGRAMS
2100-3737	000	DIRECTOR SRPL GM CONST & ENGINEERING
2100-3738	000	MGR SRPL ENG PROCUREMENT & CONST SVCS
2100-3739	000	SRPL 230KV OVERHEAD PROJECT MANAGER
2100-3740	000	SRPL 230KV UNDERGROUND PROJECT MANAGER
2100-3741	000	SUNCREST SUBSTATION PROJECT MANAGER
2100-3742	000	SRPL 500KV OVERHEAD SD PROJECT MANAGER
2100-3743	000	SRPL 500KV OVERHEAD IV PROJECT MANAGER
2100-3744	000	Financial and Business Planning
2100-3745	000	SRPL SAFETY MANAGER
2100-3752	000	SUNRISE POWERLINK IV OFFICE
2100-3788	000	Major Projects - Subsation
2100-3794	000	AREA RESOURCE SCHEDULING ORG - SOUTH
2100-3850	000	OPERATIONS & PROJECT MANAGEMENT TRAINING
2100-3853	000	Elec T&D - Kearny Maint & Ops
2100-3860	000	Elec T&D - Construction Ops
2100-3872	000	BUSINESS SOLUTIONS & TRAINING
2100-3874	000	Elec T&D - Major Projects
2100-3875	000	SAFETY & PROJECT COMPLIANCE MANAGER
2100-3879	000	MAJOR PROJECT OUTREACH
2100-3881	000	MAJOR PROJECTS - TRANSMISSION
2100-3882	000	MAJOR PROJECTS - SUPPORT SERVICES
2100-3883	000	Elec T&D - T&D Tech Assessment
2100-3892	000	OPERATIONS ENGINEERING
2100-3894	000	BEACH CITIES C&O SORT ORDER TEAM



San Diego Gas & Electric Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: ELECTRIC DISTRIBUTION  
Witness: Tyson J. Swetek

**Appendix A: List of Non-Shared Cost Centers**

<b>Cost Center</b>	<b>Sub</b>	<b>Description</b>
2100-3908	000	MAJOR PROJECTS SUBST CONST MGMT
2100-3925	000	APS/SRP PARTICIPATION AGREEMENT
2100-3931	000	MAJOR PROJECTS
2100-3937	000	VP ELECTRIC DISTRIBUTION OPERATIONS
2100-3939	000	ERO CONSTRUCTION
2100-3940	000	PROTECTIVE EQUIPMENT TESTING
2100-3941	000	MATERIALS MANAGEMENT
2100-3964	000	DISTRIBUTION OPERATIONS SERVICES
2100-3972	000	OPERATIONS TECHNOLOGY INTEGRATION
2100-3974	000	ET&DE PROJECT MANAGEMENT OPERATIONS
2100-3981	000	MISSION CONTROL TRAINING SECTION
2100-3986	000	Construction Services Business Controls
2100-3988	000	FUELING OUR FUTURE PMO ELECTRIC DISTRO
2100-4029	000	ELEC TRANS & DISTR PROJECT MANAGEMENT
2100-4034	000	SVP ELECTRIC OPERATIONS
2100-4035	000	SVP ASSET MANAGEMENT
2100-4036	000	Fuel our Future 151 Team
2100-4053	000	CAPITAL PRFTLIO MGMT
2100-4091	000	PROJECT SUPPORT
2100-4092	000	POLICY & COMPLIANCE
2100-4096	000	DESIGN PLANNING & PROJECT MANAGEMENT
2100-4114	000	ELECTRIC SYSTEM HARDENING - ENG & DSGN
2100-4120	000	SUBSTATION EQUIPMENT OPERATIONS
2100-4141	000	DIST OPS TNG
2100-4172	000	KEARNY BUSINESS CONTROLS