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-E)

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

ERRATA

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

MAY 2023



2024 General Rate Case - REVISED

ERRATA

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

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek

Description
Non-Shared Services
Shared Services
Total

In 2021 \$ (000) Incurred Costs							
Adjusted-Recorded		Adjusted-Forecast					
2021	2022	2023	2024				
110,831	130,526	137,094	130,961				
0	0	0	0				
110,831	130,526	137,094	130,961				

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek

Summary of Non-Shared Services Workpapers:

	1	
	Adjusted- Recorded	
Description	2021	
	0	
A. Reliability and Capacity	2,313	
B. Construction Management	4,056	
C. Electric System Operations	31,073	
D. Kearny Operations Services	2,235	
E. ET&D: Substation C&O	10,362	
F. Distribution Design and Project Management	820	
G. Electric Regional Operations	35,359	
H. Skills & Compliance Training	2,839	
I. Service Order Team (SOT)	4,061	
J. Electric Engineering	2,084	
K. Troubleshooting	9,634	
L. Portfolio & Project Management	487	
M. Compliance Management	3,061	
N. Officer	1,287	
O. Regional Public Affairs	1,160	
Total	110,831	
Total	110,831	

In 2021 \$ (000) Incurred Costs							
Adjusted- Recorded	Adjusted-Forecast						
2021	2022 2023 2024						
0	0	0	0				
2,313	2,180	2,341	2,461				
4,056	4,043	4,043	4,043				
31,073	38,913	43,761	41,948				
2,235	2,132	2,179	2,179				
10,362	9,039	9,370	9,517				
820	1,239	1,305	1,305				
35,359	36,579	37,862	39,666				
2,839	3,483	3,483	3,483				
4,061	4,069	4,069	4,069				
2,084	2,163	2,187	2,195				
9,634	9,634	9,634	9,634				
487	491	503	512				
3,061	13,886	13,682	7,274				
1,287	1,287	1,287	1,287				
1,160	1,388	1,388	1,388				
110,831	130,526	137,094	130,961				

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek

Category: A. Reliability and Capacity

Workpaper: 1ED001.000

FTE

Summary for Category: A. Reliability and Capacity

Adjusted-Recorded

13.5

	2021	2022	2023	2024
Labor	1,405	1,442	1,603	1,723
Non-Labor	907	738	738	738
NSE	0	0	0	0
Total	2,312	2,180	2,341	2,461
FTE	13.5	13.7	15.3	16.5
Workpapers belonging	to this Category:			
1ED001.000 Reliabilit	y and Capacity			
Labor	1,405	1,442	1,603	1,723
Non-Labor	907	738	738	738
NSE	0	0	0	0
Total	2,312	2,180	2,341	2,461

13.7

In 2021\$ (000) Incurred Costs

Adjusted-Forecast

15.3

16.5

Beginning of Workpaper
1ED001.000 - Reliability and Capacity

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

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:

	In 2021\$ (000) Incurred Costs							
		Adju	ısted-Recor	Ad	justed-Fore	cast		
Years	2017	2018	2019	2020	2021	2022	2023	2024
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
Total	990	725	1,707	2,083	2,313	2,180	2,341	2,461
FTE	5.5	2.2	11.4	12.2	13.5	13.7	15.3	16.5

ELECTRIC DISTRIBUTION Area:

Witness: Tyson J. Swetek

A. Reliability and Capacity Category: Category-Sub: 1. Reliability and Capacity

Workpaper: 1ED001.000 - Reliability and Capacity

Summary of Adjustments to Forecast:

In 2021 \$(000) Incurred Costs										
Forecast	t Method	Bas	se Foreca	st	Forecast Adjustments			Adjusted-Forecast		
Years	3	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
Tota	ı	2,034	2,034	2,034	146	307	427	2,180	2,341	2,461
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:									
<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	Adj Type			
2022	0	10	0	10	0.0	1-Sided Adj			
Explanation:	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			
Explanation:	Engineering salary marke employees due to marke	•	•	•	•	~			
2022	126	0	0	126	1.3	1-Sided Adj			
Evolopotion	Please see supplemental workpapers for detailed explanation.								
Explanation:	Please see supplementa	i workpapers	for detailed ex	kplanation.					
2022 Total		10	for detailed ex	cplanation.	1.4				
•					1.4 0.0	1-Sided Adj			
2022 Total	136	10 10 The Synergi e new engine g to utilize Sy nlimited numb the software. training. It p	0 software that ers and assorted as a such as er of seats to The cost of the seats SDG8	146 10 we utilize implicates joining SPACE and the attend and whis annual tra	0.0 olements new rour team every the districts that ill cover all of to aining is reflect	evisions and features y year. There are also at will need training. he existing and future ive of just sending 2 to			
2022 Total 2023	136 O Annual Synergi training - every year. We also hav new BU's that are starting This training allows an ur features and revisions of 3 individuals to in person	10 10 The Synergi e new engine g to utilize Sy nlimited numb the software. training. It p	0 software that ers and assorted as a such as er of seats to The cost of the seats SDG8	146 10 we utilize implicates joining SPACE and the attend and whis annual tra	0.0 olements new rour team every the districts that ill cover all of to aining is reflect	evisions and features y year. There are also at will need training. he existing and future ive of just sending 2 to			
2022 Total 2023 Explanation:	0 Annual Synergi training - every year. We also have new BU's that are starting. This training allows an ural features and revisions of 3 individuals to in person staff is fully trained on the	10 10 The Synergi e new engine g to utilize Sy nlimited numb the software. training. It p e Synergi soft 0 et adjustment	0 software that ers and assor nergi such as er of seats to The cost of the resents SDG8 ware. 0 triggered by of	146 10 we utilize impointed in the property of	0.0 blements new rour team every the districts that ill cover all of the aining is reflect cant cost savir 0.1 taining and attr	evisions and features by year. There are also at will need training. he existing and future ive of just sending 2 to ngs while ensuring our 1-Sided Adj racting skilled			
2022 Total 2023 Explanation:	0 Annual Synergi training - every year. We also have new BU's that are starting. This training allows an urfeatures and revisions of 3 individuals to in person staff is fully trained on the 10 Engineering salary market	10 10 The Synergi e new engine g to utilize Sy nlimited numb the software. training. It p e Synergi soft 0 et adjustment	0 software that ers and assor nergi such as er of seats to The cost of the resents SDG8 ware. 0 triggered by of	146 10 we utilize impointed in the property of	0.0 blements new rour team every the districts that ill cover all of the aining is reflect cant cost savir 0.1 taining and attr	evisions and features by year. There are also at will need training. he existing and future ive of just sending 2 to ngs while ensuring our 1-Sided Adj racting skilled			
2022 Total 2023 Explanation: 2023 Explanation:	Annual Synergi training - every year. We also have new BU's that are starting. This training allows an urfeatures and revisions of 3 individuals to in person staff is fully trained on the 10 Engineering salary marke employees due to marke	10 The Synergi e new engine g to utilize Synlimited numb the software. training. It per Synergi soft 0 et adjustment twide resource 0	0 software that ers and assorted as er of seats to The cost of tresents SDG8 ware. 0 triggered by one shortages are	146 10 we utilize implicates joining SPACE and with annual track with signification and with the signification and demand for the signification and the signification and sig	0.0 blements new rour team every the districts that ill cover all of the aining is reflect cant cost savir 0.1 taining and attri for skilled work	evisions and features y year. There are also at will need training. he existing and future ive of just sending 2 to ngs while ensuring our 1-Sided Adj racting skilled ers.			

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>	Adj_Type		
2024	0	10	0	10	0.0	1-Sided Adj		
Explanation:	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		
Explanation:	Engineering salary mark employees due to marke	•	,	J	Ū	•		
2024	407	0	0	407	4.1	1-Sided Adj		
Explanation:	Please see supplementa	l workpapers	for detailed ex	planation.				
2024 Total	417	10	0	427	4.2			

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):

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

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					
	Total	-22	-26	-131	-304	-22					
FTE		-0.2	-0.2	-0.9	-0.9	0.0					

Detail of Adjustments to Recorded:

<u>Year</u>	<u>Lab</u>	<u>or</u> <u>N</u>	<u>Lbr</u> N	<u>SE</u>	<u>FTE</u>	<u>Adj Type</u>			
2017	-2	22	0	0	-0.2	CCTR Transf To 2100-4111.000			
Explanation:	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.								
2017 Total	-2	22	0	0	-0.2				
2018	-2	21	0	0	-0.2	CCTR Transf To 2100-4111.000			
Explanation:)-4111 in workpa	per group 1N0			per group 1ED001 Reliability grams and Business Services to			
2018		0	-3	0	0.0	CCTR Transf To 2100-0076.000			
Explanation:		6 in workpaper				kpaper 1ED001 Reliability and tions to align costs with where			
2018		0	0	0	0.0	1-Sided Adj			
Explanation:	One-sided adjustment to	exclude \$86 rela	ated to Events	and Ticke	ets.				
2018		0	-1	0	0.0	1-Sided Adj			
Explanation:	One-sided adjustment ex	cluding Special	Billable costs	entirely or	partially bille	d to third parties.			
2018 Total	-2	21	-5	0	-0.2				
2019	-11	4	0	0	-0.9	CCTR Transf To 2100-4111.000			
Explanation:	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			

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>	Adj Type
Explanation:		orkpaper 1ED008.			workpaper 1ED001 Reliability and erations to align costs with where
2019	0	-1	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment to exclud	e \$1154 related to	Events and	Tickets.	
2019 Total	-114	-17	0	-0.9	
2020	0	-10	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-related cos Catastrophic Event Memorandu	•		quested for r	ecovery through a non-GRC
2020	0	-3	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-related cos Catastrophic Event Memorandu	•		quested for re	ecovery through a non-GRC
2020	0	-9	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-related cos Catastrophic Event Memorandu	•		quested for re	ecovery through a non-GRC
2020	0	-2	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-related cos Catastrophic Event Memorandu	•		quested for re	ecovery through a non-GRC
2020	-113	0	0	-0.9	CCTR Transf To 2100-4111.000
Explanation:		in workpaper grou _l	o 1N002.000		Rpaper group 1ED001 Reliability Programs and Business Services to
2020	0	-155	0	0.0	CCTR Transf To 2100-0076.000
Explanation:		orkpaper 1ED008.			workpaper 1ED001 Reliability and erations to align costs with where
2020	0	-11	0	0.0	1-Sided Adj
Explanation:	One-sided transfer for Non-Labo Reliability and Capacity to the D			_	C 2100-0122 in workpaper 1ED001 re costs reside.
2020 Total	-113	-191	0	-0.9	
2021	0	-9	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-related cos Catastrophic Event Memorandu			quested for re	ecovery through a non-GRC
2021	0	-4	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-related cos Catastrophic Event Memorandu			quested for re	ecovery through a non-GRC

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>	FTE	Adj Type	
2021	0	-8	0	0.0	1-Sided Adj	
Explanation:	Incremental COVID-related of Catastrophic Event Memorar		-	requested f	or recovery through a no	n-GRC
2021	0	-1	0	0.0	1-Sided Adj	
Explanation:	Incremental COVID-related of Catastrophic Event Memorar		•	requested f	or recovery through a no	n-GRC
2021 Total	0	-22	0	0.0		

Supplemental Workpapers for Workpaper 1ED001.000

San Diego Gas & Electric Company

TY2024 GRC FORECAST - DETAILS 024 GRC - REVISED ERRATA

		2024 0100		1	1	2022			2023			2024			
Initiative/Description	Lab Non-l	oNon-Shared	(ea./ft./mile)	VVQV/KIPAPE Split		Cost per unit	Total cost	# of units	Cost per unit	Total cost	# of units	Cost per unit	Total cost	Total Cost	Explanation
DER Interconnection Workload Demands and Compliance Projects - Engr II	Labor	Non-Ramp	FTE	1%	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	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 moths * 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	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	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 * 5128K * 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 * S128K * 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	i 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 * 5128K * 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		\$ 128,000	\$ 120,320		. \$ 128.000	\$ 120,320	\$ 220,990,000	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	Lahor	Non-Ramp	FTE	94%		1 2 125,000	\$ -		\$ 128,000			\$ 128,000			Adds Customer Generation Project Manager in 2023 assuming October hire date (1 FTE * \$128K * \$/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	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		Non-Ramp	FTE				,			,					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
	Labor			100%			\$ -			\$ -		\$ 99,000	\$ 24,750 \$ 406,502		stakeholder forums.
	_0001						+ 123,703			- 207,132			+ 400,302	7 015,410	

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek

Category: B. Construction Management

Workpaper: 1ED002.000

Summary for Category: B. Construction Management

Adjusted-Recorded

	2021	2022	2023	2024
Labor	151	206	206	206
Non-Labor	3,905	3,837	3,837	3,837
NSE	0	0	0	0
Total	4,056	4,043	4,043	4,043
FTE	1.5	1.9	1.9	1.9
Workpapers belonging	to this Category:			
1ED002.000 Construc	tion Management			
Labor	151	206	206	206
Non-Labor	3,905	3,837	3,837	3,837
NSE	0	0	0	0
Total	4,056	4,043	4,043	4,043
FTE	1.5	1.9	1.9	1.9

In 2021\$ (000) Incurred Costs

Adjusted-Forecast

Beginning of Workpaper
1ED002.000 - Construction Management

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:

			I	ln 2021\$ (00	0) Incurred (Costs			
		Adju	ısted-Recor	ded		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	
Total	4,657	4,590	3,826	4,247	4,056	4,045	4,045	4,045	
FTE	3.6	3.0	2.1	2.2	1.5	1.9	1.9	1.9	

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 202	1 \$(000) Ir	ncurred Co	sts				
Forecas	t Method	Bas	se Foreca	st	Forec	ast Adjust	ments	Adjusted-Forecast		
Years	s	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
Tota	al	4,043	4,043	4,043	0	0	0	4,043	4,043	4,043
FTE	3-YR Average	1.9	1.9	1.9	0.0	0.0	0.0	1.9	1.9	1.9

<u>Year Labor NLbr NSE Total FTE</u>	Adj Type	
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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

Determination of Adjusted-Recorded (Incurred Costs):

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

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					
	Total	104	80	114	-589	89					
FTE		1.8	1.9	1.6	1.8	1.0					

Detail of Adjustments to Recorded:

-	tments to Record					
<u>Year</u>		<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	FTE	Adj Type
2017		-1	0	0	-0.1	1-Sided Adj
Explanation:	Incremental cost Memorandum Ac	•	ated to be reques	sted for reco	very through	n a non-GRC Catastrophic Event
2017		0	-2	0	-0.1	CCTR Transf To 2100-4096.000
Explanation:	center 2100-070	3 in workpaper 1	ED002 Construct	tion Manage	ment to cost	tting department costs from cost t center 2100-4096 in workpaper s with where roles reside and are
2017		-39	-2	0	-0.3	CCTR Transf To 2100-4096.000
Explanation:	center 2100-3980	6 in workpaper 1	ED002 Construct	tion Manage	ment to cost	tting department costs from cost t center 2100-4096 in workpaper s with where roles reside and are
2017		148	0	0	2.3	CCTR Transf From 2100-0009.000
Explanation:		o cost center 210	0-0137 in workp	•		er 2100-0009 in workpaper group struction Management to align
2017 Total		108	-4	0	1.8	
2018		0	0	0	0.1	1-Sided Adj
Explanation:	Incremental cost Memorandum Ac		ated to be reques	sted for reco	very through	n a non-GRC Catastrophic Event
2018		0	1	0	0.0	1-Sided Adj
20.0				U		,
Explanation:	Incremental costs Memorandum Ac		ated to be reques	-	overy through	n a non-GRC Catastrophic Event

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>	Adj Type
Explanation:	center 2100-0703 in workpa	aper 1ED002 Constru	ıction Manage	ment to cost	ing department costs from cost center 2100-4096 in workpaper with where roles reside and are
2018	155	0	0	2.4	CCTR Transf From 2100-0009.000
Explanation:		er 2100-0137 in work	paper group 1		r 2100-0009 in workpaper group truction Management to align
2018	-57	-6	0	-0.5	CCTR Transf To 2100-4096.000
Explanation:	center 2100-3986 in workpa	aper 1ED002 Constru	ıction Manage	ment to cost	ing department costs from cost center 2100-4096 in workpaper with where roles reside and are
2018	0	-2	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment exclu	ıding Special Billable	costs entirely	or partially bi	lled to third parties.
2018 Total	94	-15	0	1.9	
2019	-1	-3	0	-0.1	CCTR Transf To 2100-4096.000
Explanation:	center 2100-0703 in workpa	aper 1ED002 Constru	ıction Manage	ment to cost	ing department costs from cost center 2100-4096 in workpaper with where roles reside and are
2019	-12	-7	0	-0.1	CCTR Transf To 2100-4096.000
Explanation:	center 2100-3986 in workpa	aper 1ED002 Constru	ıction Manage	ment to cost	ing department costs from cost center 2100-4096 in workpaper with where roles reside and are
2019	119	17	0	1.8	CCTR Transf From 2100-0009.000
Explanation:	Transfer labor, non-labor ar workpaper group 100000 E Management to align costs	Billing to cost center 2	2100-0137 in v	vorkpaper gro	
2019 Total	106	7	0	1.6	
2020	0	-1	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-related Catastrophic Event Memora			uested for re	covery through a non-GRC
2020	0	0	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-related Catastrophic Event Memora			uested for re	covery through a non-GRC

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek

Category: B. Construction Management Category-Sub: 1. Construction Management

Workpaper: 1ED002.000 - Construction Management

v				W05		
<u>Year</u>	<u>Li</u>	<u>abor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	Adj Type
2020		0	-3	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-re Catastrophic Event M		•		uested for re	covery through a non-GRC
2020		-3	-1	0	-0.1	1-Sided Adj
Explanation:	Incremental COVID-re Catastrophic Event M		-	-	uested for re	covery through a non-GRC
2020		0	-4	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-re Catastrophic Event M		-	-	uested for re	covery through a non-GRC
2020		158	32	0	2.2	CCTR Transf From 2100-0009.000
Explanation:		0000 Billing to co	st center 210	0-0137 in w	orkpaper gro	cost center 2100-0009 in oup 1ED002 Construction
2020		-4	0	0	-0.1	1-Sided Adj
Explanation:	Incremental costs that Memorandum Accour	•	to be request	ed for recov	ery through	a non-GRC Catastrophic Event
2020		0	-13	0	0.0	1-Sided Adj
Explanation:	Incremental costs that Memorandum Accour	•	to be request	ed for recov	ery through	a non-GRC Catastrophic Event
2020		0	-27	0	0.0	1-Sided Adj
Explanation:	Incremental costs that Memorandum Accourt		to be request	ed for recov	ery through	a non-GRC Catastrophic Event
2020		-3	-673	0	-0.1	1-Sided Adj
Explanation:	Incremental costs that Memorandum Accourt		to be request	ed for recov	ery through	a non-GRC Catastrophic Event
2020		0	-24	0	0.0	CCTR Transf To 2100-4096.000
Explanation:		Construction Ma	anagement to	cost center	2100-4096	costs from cost center 2100-0703 in workpaper 1ED007 Distribution de and are forecated.
2020		-6	-16	0	-0.1	CCTR Transf To 2100-4096.000
Explanation:	center 2100-3986 in v	vorkpaper 1ED00	02 Construction	on Manager	ment to cost	ing department costs from cost center 2100-4096 in workpaper with where roles reside and are
2020 Total		142	-731	0	1.8	

Note: Totals may include rounding differences.

2021

0.0

1-Sided Adj

-15

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek

Category: B. Construction Management Category-Sub: 1. Construction Management

Workpaper: 1ED002.000 - Construction Management

workpaper.	12D002.000 - Constitution Management			
<u>Year</u>	<u> Labor</u> <u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	Adj Type
Explanation:	Incremental costs that are anticipated to be req Memorandum Account (CEMA).	uested for recove	ry through a no	n-GRC Catastrophic Event
2021	0 0	0	0.0 1	-Sided Adj
Explanation:	Incremental costs that are anticipated to be req Memorandum Account (CEMA).	uested for recove	ry through a no	n-GRC Catastrophic Event
2021	0 27	0	0.0 1	-Sided Adj
Explanation:	Incremental costs that are anticipated to be req Memorandum Account (CEMA).	uested for recove	ry through a no	n-GRC Catastrophic Event
2021	0 -3	0	0.0 1	-Sided Adj
Explanation:	Incremental COVID-related costs that are antic Catastrophic Event Memorandum Account (CE	•	ested for recove	ry through a non-GRC
2021	0 -1	0	0.0 1	-Sided Adj
Explanation:	Incremental COVID-related costs that are antic Catastrophic Event Memorandum Account (CE		ested for recove	ry through a non-GRC
2021	96 79	0	1.2 C	CCTR Transf From 2100-0009.000
Explanation:	Transfer labor, non-labor and FTE associated workpaper group 100000 Billing to cost center Management to align costs with where roles re-	2100-0137 in wo	rkpaper group 1	
2021	0 -4	0	0.0 1	-Sided Adj
Explanation:	Incremental COVID-related costs that are antic Catastrophic Event Memorandum Account (CE	•	ested for recove	ry through a non-GRC
2021	0 -1	0	0.0 1	-Sided Adj
Explanation:	Incremental COVID-related costs that are antic Catastrophic Event Memorandum Account (CE	•	ested for recove	ry through a non-GRC
2021	0 -4	0	0.0 1	-Sided Adj
Explanation:	Incremental COVID-related costs that are antic Catastrophic Event Memorandum Account (CE		ested for recove	ry through a non-GRC
2021	-12 -41	0	-0.1 C	CCTR Transf To 2100-4096.000
Explanation:	Transfer labor, FTEs and Non-Labor for Contin center 2100-0703 in workpaper 1ED002 Construction Design and Project Manage forecated.	ruction Managem	ent to cost cente	er 2100-4096 in workpaper
2021	-12 -21	0	-0.1 C	CCTR Transf To 2100-4096.000
Explanation:	Transfer labor, FTEs and Non-Labor for Contin center 2100-3986 in workpaper 1ED002 Constite 1ED007 Distribution Design and Project Managforecated.	ruction Managem	ent to cost cente	er 2100-4096 in workpaper

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>	Adj Type	
2021 Total	72	16	0	1.0		

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 F	orecast	t Cost	<u>Estimat</u>	<u>es (\$00</u>	<u>U)</u>

					2024	4
	2021 Historical	2022	2023	2024	RAMP R	ange
	Embedded Cost	Forecast	Forecast	Forecast	(2020 Incurred \$)	
	(2021 \$)	(2021 \$)	(2021 \$)	(2021 \$)	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 W	Vork U	nit/Activity	Level	Estimates
-------	--------	--------------	-------	------------------

Unit of	2021 Historical Embedded	2022 Forecast	2023 Forecast	2024 Forecast	2024 R Range A	
Measure	Activities	Activities	Activities	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).

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

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

Tranche(/s): Tranche1: N/A

GRC Forecast Cost Estima	<u>ites (\$000)</u>					
	2021 Historical Embedded Cost (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2024 RAMP R (2020 Inc Low	ange
Tranche 1 Cost Estimate	6	8	8	8	1,689	2,045
Cost Estimate Changes fro	om RAMP:					

GRC Work Unit/Activity Leve	el Estimates					
Unit of	2021 Historical Embedded	2022 Forecast	2023 Forecast	2024 Forecast	2024 F Range A	
Measure	Activities	Activities	Activities	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 RA	MP:					

$\label{thm:construction} \mbox{ Construction Mgmt portion of RAMP item.}$

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).

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				
Total	31,073	38,913	43,761	41,948				
FTE	34.0	37.4	41.6	41.6				
Workpapers belonging	to this Category:							
1ED003.000 Electric S	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				
Total	30,151	37,991	42,839	41,026				
FTE	21.1	24.5	28.7	28.7				
1ED003.001 Electric S	System Operations (TNG - GIS	S)						
Labor	915	915	915	915				
Non-Labor	7	7	7	7				
NSE	0	0	0	0				
Total	922	922	922	922				
FTE	12.9	12.9	12.9	12.9				

Beginning of Workpaper
1ED003.000 - Electric System Operations

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

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:

	In 2021\$ (000) Incurred Costs								
		Adju	sted-Recor	ded		Adjusted-Forecast			
Years	2017	2018	2019	2020	2021	2022	2023	2024	
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	
Total	18,063	19,006	20,884	27,895	30,151	37,990	42,838	41,025	
FTE	26.8	26.2	25.8	28.3	21.1	24.5	28.7	28.7	

ELECTRIC DISTRIBUTION Area:

Witness: Tyson J. Swetek

C. Electric System Operations Category: Category-Sub: 1. Electric System Operations

Workpaper: 1ED003.000 - Electric System Operations

Summary of Adjustments to Forecast:

			In 202	1 \$(000) I	ncurred Co	sts				
Forecas	t Method	Bas	se Foreca	st	Forec	ast Adjust	ments	Adjus	ted-Forec	ast
Years	S	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
Tota	ı	30,151	30,151	30,151	7,840	12,688	10,875	37,991	42,839	41,026
FTE	Base YR Rec	21.1	21.1	21.1	3.4	7.6	7.6	24.5	28.7	28.7

Forecast Adjusti	ment Details:								
<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	Adj Type			
2022	343	0	0	343	3.4	1-Sided Adj			
Explanation:	Please see supplemental workpapers for detailed explanation.								
2022	0	189	0	189	0.0	1-Sided Adj			
Explanation:	Additional licensing cos System.	ts related to ar	nnual fees for	the Transmiss	sion Emergenc	y Management			
2022	0	75	0	75	0.0	1-Sided Adj			
Explanation:	IP Conversion costs rel order to understand jus		ADA System I	Enhancement	s phase 2. Re	fer to capital project in			
2022	0	6,905	0	6,905	0.0	1-Sided Adj			
Explanation:	Forecasted Storeroom by the total requested of				•				
2022	0	328	0	328	0.0	1-Sided Adj			
Explanation:	These costs include inc	remental licen	sing fees for t	he Distributior	n SCADA syste	m.			
2022 Total	343	7,497	0	7,840	3.4				
2023	762	0	0	762	7.6	1-Sided Adj			
Explanation:	Please see supplement	tal workpapers	for detailed e	xplanation.					
2023	0	189	0	189	0.0	1-Sided Adj			
Explanation:	Additional licensing cos System.	its related to ar	nnual fees for	the Transmiss	sion Emergenc	y Management			
2023	0	75	0	75	0.0	1-Sided Adj			
Explanation:	IP Conversion costs rel order to understand jus		ADA System I	Enhancement	s phase 2. Re	fer to capital project in			
2023	0	11,334	0	11,334	0.0	1-Sided Adj			
Explanation:	Forecasted Storeroom by the total requested of				•				
2023	0	328	0	328	0.0	1-Sided Adj			

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>	NSE	<u>Total</u>	<u>FTE</u>	Adj_Type		
Explanation:	These costs include in	cremental licens	ing fees for th	ne Distributior	SCADA syste	m.		
2023 Total	762	11,926	0	12,688	7.6			
2024	762	0	0	762	7.6	1-Sided Adj		
Explanation:	Please see supplemen	ital workpapers t	for detailed ex	xplanation.				
2024	0	189	0	189	0.0	1-Sided Adj		
Explanation:	Explanation: Additional licensing costs related to annual fees for the Transmission Emergency Management System.							
2024	0	75	0	75	0.0	1-Sided Adj		
Explanation:	IP Conversion costs re order to understand just		ADA System E	Enhancement	s phase 2. Re	fer to capital project in		
2024	0	9,521	0	9,521	0.0	1-Sided Adj		
Explanation:	Forecasted Storeroom by the total requested				•	' '		
2024	0	328	0	328	0.0	1-Sided Adj		
Explanation:	These costs include in	cremental licens	ing fees for th	ne Distributior	n SCADA syste	m.		
2024 Total	762	10,113	0	10,875	7.6			

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):

eriiiiiation of Aujusteu	i-Recorded (incurred Cos 2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
corded (Nominal \$)*					,
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
Total	16,193	17,577	19,453	29,057	30,570
FTE	37.8	33.3	32.1	34.0	25.0
justments (Nominal \$) **	•				
Labor	-891	-572	-498	-583	-145
Non-Labor	135	-197	36	-2,967	-670
NSE	0	0	0	0	0
Total	-756	-769	-462	-3,550	-816
FTE	-14.8	-10.9	-9.8	-9.6	-6.9
corded-Adjusted (Nomin	nal \$)				
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
Total	15,437	16,808	18,991	25,507	29,754
FTE	22.9	22.4	22.3	24.4	18.0
cation & Sick (Nominal \$	5)				
Labor	432	428	415	443	397
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	432	428	415	443	397
FTE	3.9	3.8	3.5	3.9	3.1
calation to 2021\$					
Labor	388	280	193	114	0
Non-Labor	1,806	1,490	1,286	1,830	0
NSE	0	0	0	0	0
Total	2,194	1,770	1,479	1,945	0
FTE	0.0	0.0	0.0	0.0	0.0
corded-Adjusted (Consta	ant 2021\$)				
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
Total	18,063	19,006	20,884	27,895	30,151
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

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							
	Total	-756	-769	-462	-3,550	-816							
FTE		-14.8	-10.9	-9.8	-9.6	-6.9							

Detail of Adjustments to Recorded:

<u>Year</u>	<u> Labor</u> <u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	Adj Type
2017	171 147	0	1.3	CCTR Transf From 2100-3981.000
Explanation:	Transfer Labor, FTE's and Non-Labor for CC 21 workpaper 1ED003.000 Electric System Operat within workpaper 1ED003.001.			
2017	0 0	0	0.0	1-Sided Adj
Explanation:	Incremental costs that are anticipated to be required Memorandum Account (CEMA).	uested for reco	very through	a non-GRC Catastrophic Event
2017	-79 -2	0	-0.3	1-Sided Adj
Explanation:	Incremental costs that are anticipated to be required Memorandum Account (CEMA).	uested for reco	very through	a non-GRC Catastrophic Event
2017	0 0	0	0.0	1-Sided Adj
Explanation:	Incremental costs that are anticipated to be required Memorandum Account (CEMA).	uested for reco	very through	a non-GRC Catastrophic Event
2017	-215 -2	0	-3.5	CCTR Transf To 2100-4141.000
Explanation:	Transfer Labor, FTE's and Non-Labor for CC 21 workpaper 1ED003.001 to align Records Mana			
2017	-258 -3	0	-4.3	CCTR Transf To 2100-4141.000
Explanation:	Transfer Labor, FTE's and Non-Labor for CC 21 workpaper 1ED003.001 to align Records Management			
2017	-244 -1	0	-4.1	CCTR Transf To 2100-4141.000
Explanation:	Transfer Labor, FTE's and Non-Labor for CC 21 workpaper 1ED003.001 to align Records Management			
2017	-266 -2	0	-3.9	CCTR Transf To 2100-4141.000
Explanation:	Transfer Labor, FTE's and Non-Labor for CC 21 workpaper 1ED003.001 to align Records Mana			

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek

Category: C. Electric System Operations
Category-Sub: 1. Electric System Operations

Workpaper: 1ED003.000 - Electric System Operations

vvorkpaper:	TED003.00	iu - Electric Syst	em Operations			
<u>Year</u>		<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	Adj Type
2017		0	-1	0	0.0	1-Sided Adj
Explanation:	One-sided adjust	ment to exclude	\$744 related to E	ents and ⊓	Γickets.	
2017 Total		-891	135	0	-14.8	
2018		0	0	0	0.0	1-Sided Adj
Explanation:	Incremental costs Memorandum Ac		ated to be reques	ted for reco	very through	a non-GRC Catastrophic Event
2018		189	5	0	1.5	CCTR Transf From 2100-3981.000
Explanation:		03.000 Electric S				0003.001 to CC 2100-0228 in agement RAMP related costs
2018		58	1	0	0.2	1-Sided Adj
Explanation:	Incremental costs Memorandum Ac	•	ated to be reques	ted for reco	very through	a non-GRC Catastrophic Event
2018		0	0	0	0.0	1-Sided Adj
Explanation:	Incremental costs Memorandum Ac	•	ated to be reques	ted for reco	very through	a non-GRC Catastrophic Event
2018		0	-183	0	0.0	1-Sided Adj
Explanation:	Incremental costs Memorandum Ac	-	ated to be reques	ted for reco	very through	a non-GRC Catastrophic Event
2018		-149	-2	0	-2.5	CCTR Transf To 2100-4141.000
Explanation:						003.000 to CC 2100-4141 in s within workpaper 1ED003.001.
2018		-214	-9	0	-3.5	CCTR Transf To 2100-4141.000
Explanation:						003.000 to CC 2100-4141 in s within workpaper 1ED003.001.
2018		-218	-2	0	-3.4	CCTR Transf To 2100-4141.000
Explanation:						003.000 to CC 2100-4141 in s within workpaper 1ED003.001.
2018		-238	-7	0	-3.2	CCTR Transf To 2100-4141.000
Explanation:	·					003.000 to CC 2100-4141 in s within workpaper 1ED003.001.
2018		0	-1	0	0.0	1-Sided Adj
Explanation:	One-sided adjust	ment to exclude	\$770 related to E	events and T	Tickets.	
2018 Total		-572	-197	0	·10.9	
2019		288	55	0	2.1	CCTR Transf From 2100-3981.000

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek

Category: C. Electric System Operations
Category-Sub: 1. Electric System Operations

Workpaper: 1ED003.000 - Electric System Operations

workpaper 1ED003.000 Electric System Operations to align Records Management RAMP related costs within workpaper 1ED003.001. 2019	/vorkpaper:	TED003.00	U - Electric Syste	em Operations			
workpaper 1ED003.000 Electric System Operations to align Records Management RAMP related costs within workpaper 1ED003.001. 2019	<u>Year</u>		<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	Adj Type
Explanation: 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	Explanation:	workpaper 1ED00	03.000 Electric S				
workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001. 2019	2019		-181	-4	0	-2.8	CCTR Transf To 2100-4141.000
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	Explanation:						
workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001. 2019	2019		-204	-5	0	-3.1	CCTR Transf To 2100-4141.000
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 ixplanation: 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 Explanation: One-sided adjustment to exclude \$595 related to Events and Tickets. 2019 Total -498 36 0 -9.8 2020 0 -2 0 0.0 1-Sided Adj 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 Explanation: 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 Explanation: 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 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 Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).	Explanation:						
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 Explanation: 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 One-sided adjustment to exclude \$595 related to Events and Tickets. 2019 10 -2 0 0 -3 0 1-Sided Adj 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 -1 Sided Adj Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA). 2020 204 86 0 1.7 CCTR Transf From 2100-3981.000 Explanation: 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 0 0.0 1-Sided Adj 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 0 0.0 1-Sided Adj 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 0 0.0 1-Sided Adj 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 0 0.0 1-Sided Adj Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).	2019		-194	-4	0	-3.0	CCTR Transf To 2100-4141.000
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 Explanation: One-sided adjustment to exclude \$595 related to Events and Tickets. 2019 Total -498 36 0 -9.8 2020 0 -2 0 0.0 1-Sided Adj Explanation: 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 Explanation: 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 Explanation: Transfer Labor, FTE's and Non-Labor for CC 2100-3981 in workpaper 1ED003.001 to CC 2100-0228 in workpaper 1ED003.000.001. 2020 0 -5 0 0.0 1-Sided Adj Explanation: 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 Explanation: 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 Explanation: 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 Explanation: Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).	Explanation:						
workpaper 1ED003.001 to align Records Management RAMP related costs within workpaper 1ED003.001. 2019 0 -1 0 0.0 1-Sided Adj Explanation: One-sided adjustment to exclude \$595 related to Events and Tickets. 2019 Total -498 36 0 -9.8 2020 0 -2 0 0.0 1-Sided Adj Explanation: 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 Explanation: 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 Explanation: 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 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 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 Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).	2019		-207	-5	0	-3.0	CCTR Transf To 2100-4141.000
One-sided adjustment to exclude \$595 related to Events and Tickets. 2019 Total -498 36 0 -9.8 2020 0 -2 0 0.0 1-Sided Adj 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 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 Explanation: 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 -5 0 0 1-Sided Adj 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 1-Sided Adj Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA). 2020 1 1 1 1 1 1 1 1 1 1 1 1 1	Explanation:					• •	
2019 Total 2020 0 -2 0 0.0 1-Sided Adj 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 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 Explanation: 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 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 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 Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).	2019		0	-1	0	0.0	1-Sided Adj
2020 0 -49 0 0.0 1-Sided Adj Explanation: 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 Explanation: 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 Explanation: 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 Explanation: 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 Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA). Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).	Explanation:	One-sided adjust	ment to exclude	\$595 related to E	Events and T	Tickets.	
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 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 Explanation: 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 Explanation: 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 Explanation: 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 Explanation: Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).	2019 Total		-498	36	0	-9.8	
Catastrophic Event Memorandum Account (CEMA). 2020 0 -49 0 0.0 1-Sided Adj 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 Explanation: 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 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 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
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 Explanation: 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 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 1-Sided Adj Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).	Explanation:					quested for re	ecovery through a non-GRC
Catastrophic Event Memorandum Account (CEMA). 2020 241 86 0 1.7 CCTR Transf From 2100-3981.000 Explanation: 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 Explanation: 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 Explanation: 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
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 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 Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).	Explanation:			•		quested for re	ecovery through a non-GRC
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 Explanation: 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 Explanation: 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
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 Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).	Explanation:	workpaper 1ED00	03.000 Electric S				
Catastrophic Event Memorandum Account (CEMA). 2020 0 -1 0 0.0 1-Sided Adj Explanation: 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
Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).	Explanation:			•		quested for re	ecovery through a non-GRC
Catastrophic Event Memorandum Account (CEMA).	2020		0	-1	0	0.0	1-Sided Adj
2020 0 -984 0 0.0 1-Sided Adj	Explanation:			•		quested for re	ecovery through a non-GRC
	2020		0	-984	0	0.0	1-Sided Adj

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek

Category: C. Electric System Operations
Category-Sub: 1. Electric System Operations

Workpaper: 1ED003.000 - Electric System Operations

vvorkpaper:	TED003.000 - Electric Syste	on Operations				
<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	Adj Type	
Explanation:	Incremental COVID-related costs Catastrophic Event Memorandum	•		uested for re	ecovery through a non-GRC	
2020	0	-3	0	0.0	1-Sided Adj	
Explanation:	Incremental COVID-related costs Catastrophic Event Memorandum	•		uested for re	ecovery through a non-GRC	
2020	0	-7	0	0.0	1-Sided Adj	
Explanation:	Incremental COVID-related costs Catastrophic Event Memorandum	•		uested for re	ecovery through a non-GRC	
2020	0	-1	0	0.0	1-Sided Adj	
Explanation:	Incremental COVID-related costs Catastrophic Event Memorandum	•		uested for re	ecovery through a non-GRC	
2020	0	-1,441	0	0.0	1-Sided Adj	
Explanation:	Incremental COVID-related costs Catastrophic Event Memorandum	•		uested for re	ecovery through a non-GRC	
2020	0	-37	0	0.0	1-Sided Adj	
Explanation:	Incremental COVID-related costs Catastrophic Event Memorandum	•		uested for re	ecovery through a non-GRC	
2020	0	-3	0	0.0	1-Sided Adj	
Explanation:	Incremental COVID-related costs Catastrophic Event Memorandum	•		uested for re	ecovery through a non-GRC	
2020	0	-4	0	0.0	1-Sided Adj	
Explanation:	Incremental COVID-related costs Catastrophic Event Memorandum	•		uested for re	ecovery through a non-GRC	
2020	0	-3	0	0.0	1-Sided Adj	
Explanation:	Incremental COVID-related costs Catastrophic Event Memorandum	•		uested for re	ecovery through a non-GRC	
2020	0	-4	0	0.0	1-Sided Adj	
Explanation:	Incremental COVID-related costs Catastrophic Event Memorandum			uested for re	ecovery through a non-GRC	
2020	0	-2	0	0.0	1-Sided Adj	
Explanation:	Incremental COVID-related costs Catastrophic Event Memorandum	•		uested for re	ecovery through a non-GRC	
2020	0	-5	0	0.0	1-Sided Adj	
Explanation:	Incremental costs that are anticipal Memorandum Account (CEMA).	ated to be reque	ested for reco	very through	a non-GRC Catastrophic Event	
2020	-37	0	0	-0.1	1-Sided Adj	

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek

Category: C. Electric System Operations
Category-Sub: 1. Electric System Operations

Workpaper: 1ED003.000 - Electric System Operations

vvorkpaper.	120003.000 - Electric System	Operations			
<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	Adj Type
Explanation:	Incremental costs that are anticipate Memorandum Account (CEMA).	d to be reque	ested for recov	ery through	a non-GRC Catastrophic Event
2020	0	-407	0	0.0	1-Sided Adj
Explanation:	Incremental costs that are anticipate Memorandum Account (CEMA).	d to be reque	ested for recov	ery through	a non-GRC Catastrophic Event
2020	0	-77	0	0.0	1-Sided Adj
Explanation:	Remoev one-time expense to enhan	ce EGISS tra	aining room.		
2020	-156	-1	0	-2.3	CCTR Transf To 2100-4141.000
Explanation:	Transfer Labor, FTE's and Non-Labo workpaper 1ED003.001 to align Rec			•	
2020	-207	-2	0	-2.9	CCTR Transf To 2100-4141.000
Explanation:	Transfer Labor, FTE's and Non-Labo workpaper 1ED003.001 to align Rec			•	
2020	-189	-13	0	-2.8	CCTR Transf To 2100-4141.000
Explanation:	Transfer Labor, FTE's and Non-Labo workpaper 1ED003.001 to align Rec			•	
2020	-235	-2	0	-3.2	CCTR Transf To 2100-4141.000
Explanation:	Transfer Labor, FTE's and Non-Labo workpaper 1ED003.001 to align Rec			•	
2020	0	0	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment to exclude \$2	09 related to	Events and Ti	ckets.	
2020 Total	-583	-2,967	0	-9.6	
2021	0	6	0	0.0	1-Sided Adj
Explanation:	Incremental costs that are anticipate Memorandum Account (CEMA).	d to be reque	ested for recov	ery through	a non-GRC Catastrophic Event
2021	0	-1	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-related costs that Catastrophic Event Memorandum Ad	•	•	uested for re	ecovery through a non-GRC
2021	253	95	0	1.5	CCTR Transf From 2100-3981.000
Explanation:	Transfer Labor, FTE's and Non-Labor workpaper 1ED003.000 Electric Sys within workpaper 1ED003.001.			• •	
2021	397	0	0	2.6	CCTR Transf From 2100-4141.000
Explanation:	Transfer Labor, FTE's and Non-Labor workpaper 1ED003.000 Electric Syswithin workpaper 1ED003.001.				

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>	Adj Type
2021	0	-1	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-related cos Catastrophic Event Memorando			quested for re	covery through a non-GRC
2021	0	-2	0	0.0	1-Sided Adj
xplanation:	Incremental COVID-related cos Catastrophic Event Memorando	•		quested for re	covery through a non-GRC
2021	0	-1	0	0.0	1-Sided Adj
xplanation:	Incremental COVID-related cos Catastrophic Event Memorando	•		quested for re	covery through a non-GRC
2021	0	-690	0	0.0	1-Sided Adj
xplanation:	Incremental COVID-related cos Catastrophic Event Memorando	•		quested for re	covery through a non-GRC
2021	0	-3	0	0.0	1-Sided Adj
explanation:	Incremental COVID-related cos Catastrophic Event Memorando	•		quested for re	covery through a non-GRC
2021	0	-7	0	0.0	1-Sided Adj
xplanation:	Incremental COVID-related cos Catastrophic Event Memorando			quested for re	covery through a non-GRC
2021	0	-1	0	0.0	1-Sided Adj
xplanation:	Incremental COVID-related cos Catastrophic Event Memorando	•		quested for re	covery through a non-GRC
2021	0	-20	0	0.0	1-Sided Adj
xplanation:	Incremental COVID-related cos Catastrophic Event Memorandu	•		quested for re	covery through a non-GRC
2021	0	-28	0	0.0	1-Sided Adj
explanation:	Incremental COVID-related cos Catastrophic Event Memorando	-		quested for re	covery through a non-GRC
2021	0	-2	0	0.0	1-Sided Adj
xplanation:	Incremental COVID-related cos Catastrophic Event Memorandu	•		quested for re	covery through a non-GRC
		-3	0	0.0	1-Sided Adj
2021	0	-3			
	0 Incremental COVID-related cos Catastrophic Event Memorando	sts that are anticipa	ated to be req	quested for re	covery through a non-GRC
2021 Explanation: 2021	Incremental COVID-related cos	sts that are anticipa	ated to be req	quested for red	covery through a non-GRC

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>	Adj Type
2021	0	-3	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-related costs Catastrophic Event Memorandum	•		quested for r	ecovery through a non-GRC
2021	0	-1	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-related costs Catastrophic Event Memorandum	•		quested for r	ecovery through a non-GRC
2021	-145	-1	0	-2.1	CCTR Transf To 2100-4141.000
Explanation:	Transfer Labor, FTE's and Non-Laworkpaper 1ED003.001 to align F				
2021	-226	-2	0	-3.1	CCTR Transf To 2100-4141.000
Explanation:	Transfer Labor, FTE's and Non-Laworkpaper 1ED003.001 to align F				
2021	-195	-3	0	-2.8	CCTR Transf To 2100-4141.000
Explanation:	Transfer Labor, FTE's and Non-Laworkpaper 1ED003.001 to align F				
2021	-230	-1	0	-3.0	CCTR Transf To 2100-4141.000
Explanation:	Transfer Labor, FTE's and Non-Laworkpaper 1ED003.001 to align F				
2021 Total	-145	-670	0	-6.9	

Supplemental Workpapers for Workpaper 1ED003.000

San Diego Gas & Electric Company

2022 GRC - APP

Non-Shared Service Workpapers

Storeroom:

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

TY2024 GRC FORECAST - DETAILS

							2022			2023			2024			
Initiative/Description	Labor/ Non-Labor	RAMP/ Non-RAMP	Unit Metric	Position Title	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	Total Cost	Explanation
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		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		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		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		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		Distribution Management Systems Analyst	70%	2	\$ 120,000	\$ 112,000	2	\$ 120,000	\$ 168,000	2	\$ 120,000	\$ 168,000		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 Total Labor	Non-RAMP	FTE	Electric Distribution System Operator	30%	6	\$ 135,000	\$ 60,750 \$ 342,750	6	\$ 135,000	\$ 243,000 \$ 762,000	6	\$ 135,000	\$ 243,000 \$ 762,000	\$ 546,750	Upward pressure to hire 6 more Distribution System Operator Trainees to account for long-term staffing needs due to forecasted attrition. Assumes 30% O&M charging for a base salary of \$135k. Assumes October 2022 (3/12 months) hiring date.

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

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												
		Adju	ısted-Recor	Ad	justed-Fored	cast								
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						
Total	1,269	1,047	970	946	922	922	922	922						
FTE	18.4	14.6	13.9	13.1	12.9	12.9	12.9	12.9						

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 Forecast:

	In 2021 \$(000) Incurred Costs													
Forecast Method Base Forecast					Forec	ast Adjust	ments	Adjus	Adjusted-Forecast					
Years	s	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				
Total		922	922	922	0	0	0	922	922	922				
FTE	Base YR Rec	12.9	12.9	12.9	0.0	0.0	0.0	12.9	12.9	12.9				

<u>Year Labor NLbr NSE Total FTE</u>	Adj Type	
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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)

Determination of Adjusted-Recorded (Incurred Costs):

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

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		
	Total	674	645	461	476	55		
FTE		14.5	11.1	9.8	9.5	6.9		

Detail of Adjustments to Recorded:

<u>Year</u>	<u>L</u> :	abor <u>I</u>	N <u>Lbr</u>	NSE	FTE	Adj Type		
2017	-	171 -	147	0	-1.3	CCTR Transf To 2100-0228.000		
Explanation:		0 Electric System			•	3.001 to CC 2100-0228 in ment RAMP related costs		
2017		215	2	0	3.5	CCTR Transf From 2100-3558.000		
Explanation:	· ·			•	•	3.000 to CC 2100-4141 in ithin workpaper 1ED003.001.		
2017		258	3	0	4.3	CCTR Transf From 2100-3559.000		
Explanation:					•	3.000 to CC 2100-4141 in ithin workpaper 1ED003.001.		
2017		244	1	0	4.1	CCTR Transf From 2100-3560.000		
Explanation:	· ·			•	•	3.000 to CC 2100-4141 in ithin workpaper 1ED003.001.		
2017		266	2	0	3.9	CCTR Transf From 2100-3561.000		
Explanation:				•	•	3.000 to CC 2100-4141 in ithin workpaper 1ED003.001.		
2017 Total		812 -	138	0	14.5			
2018	-	189	-5	0	-1.5	CCTR Transf To 2100-0228.000		
Explanation:	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		
Explanation:				-	-	3.000 to CC 2100-4141 in ithin workpaper 1ED003.001.		
2018		214	9	0	3.5	CCTR Transf From 2100-3559.000		

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)

			·		
<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	Adj Type
Explanation:	Transfer Labor, FTE's and Non-Labo workpaper 1ED003.001 to align Rec				
2018	218	2	0	3.4	CCTR Transf From 2100-3560.000
xplanation:	Transfer Labor, FTE's and Non-Labo workpaper 1ED003.001 to align Rec				
2018	238	7	0	3.2	CCTR Transf From 2100-3561.000
xplanation:	Transfer Labor, FTE's and Non-Labo workpaper 1ED003.001 to align Rec				
2018 Total	630	15	0	11.1	
2019	-288	-55	0	-2.1	CCTR Transf To 2100-0228.000
explanation:	Transfer Labor, FTE's and Non-Labo workpaper 1ED003.000 Electric Sys within workpaper 1ED003.001.				
2019	181	4	0	2.8	CCTR Transf From 2100-3558.000
xplanation:	Transfer Labor, FTE's and Non-Labo workpaper 1ED003.001 to align Rec			•	
2019	204	5	0	3.1	CCTR Transf From 2100-3559.000
xplanation:	Transfer Labor, FTE's and Non-Labo workpaper 1ED003.001 to align Rec				
2019	194	4	0	3.0	CCTR Transf From 2100-3560.000
xplanation:	Transfer Labor, FTE's and Non-Labo workpaper 1ED003.001 to align Rec				
2019	207	5	0	3.0	CCTR Transf From 2100-3561.000
xplanation:	Transfer Labor, FTE's and Non-Labo workpaper 1ED003.001 to align Rec			•	
2019 Total	498	-37	0	9.8	
2020	0	-2	0	0.0	1-Sided Adj
xplanation:	Incremental COVID-related costs that Catastrophic Event Memorandum Ac			uested for r	ecovery through a non-GRC
2020	-241	-86	0	-1.7	CCTR Transf To 2100-0228.000
xplanation:	Transfer Labor, FTE's and Non-Labo workpaper 1ED003.000 Electric Sys within workpaper 1ED003.001.				
2020	156	1	0	2.3	CCTR Transf From 2100-3558.000
xplanation:	Transfer Labor, FTE's and Non-Labo workpaper 1ED003.001 to align Rec				

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)

<u>Year</u>	<u>L</u>	<u>abor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	Adj Type
2020		207	2	0	2.9	CCTR Transf From 2100-3559.000
Explanation:					• •	03.000 to CC 2100-4141 in within workpaper 1ED003.001.
2020		189	13	0	2.8	CCTR Transf From 2100-3560.000
Explanation:	·				• •	03.000 to CC 2100-4141 in within workpaper 1ED003.001.
2020		235	2	0	3.2	CCTR Transf From 2100-3561.000
Explanation:						03.000 to CC 2100-4141 in within workpaper 1ED003.001.
2020 Total		546	-69	0	9.5	
2021		0	-2	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-r Catastrophic Event M		-	-	ested for rec	overy through a non-GRC
2021		-253	-95	0	-1.5	CCTR Transf To 2100-0228.000
Explanation:		000 Electric Syster				03.001 to CC 2100-0228 in ement RAMP related costs
2021		-397	0	0	-2.6	CCTR Transf To 2100-0228.000
Explanation:		000 Electric Syster			• •	03.001 to CC 2100-0228 in ement RAMP related costs
2021		145	1	0	2.1	CCTR Transf From 2100-3558.000
Explanation:						03.000 to CC 2100-4141 in within workpaper 1ED003.001.
2021		226	2	0	3.1	CCTR Transf From 2100-3559.000
Explanation:						03.000 to CC 2100-4141 in within workpaper 1ED003.001.
2021		195	3	0	2.8	CCTR Transf From 2100-3560.000
Explanation:					• •	03.000 to CC 2100-4141 in within workpaper 1ED003.001.
2021		230	1	0	3.0	CCTR Transf From 2100-3561.000
Explanation:					• •	03.000 to CC 2100-4141 in workpaper 1ED003.001.

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)

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	2022 Forecast	2023 Forecast	2024 Forecast	2024 RAMP R (2020 Inci	ange
	(2021 \$)	(2021 \$)	(2021 \$)	(2021 \$)	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 inacurate system authorizations being issued by the electric control center. It can also lead to inaccuracies and inefficiencies in the design process and potential unecessary electric outages to customers.

GRC Work Unit/Activity Level Estimates

	2021 Historical	2022	2023	2024	2024 RA	MP
Unit of	Embedded	Forecast	Forecast	Forecast	Range Act	ivities
Measure	Activities	Activities	Activities	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 inacurate system authorizations being issued by the electric control center. It can also lead to inaccuracies and inefficiencies in the design process and potential unecessary electric outages to customers.

	GRC RSE	RAMP RSE	
Tranche 1	0.000	0.000	

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)

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).

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek

Category: D. Kearny Operations Services

Workpaper: 1ED005.000

Summary for Category: D. Kearny Operations Services

	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
Total	2,235	2,132	2,179	2,179
FTE	14.7	15.0	15.5	15.5
Workpapers belonging	to this Category:			
1ED005.000 ET&D: O	perations Services			
Labor	1,827	1,756	1,803	1,803
Non-Labor	408	376	376	376
NSE	0	0	0	0
Total	2,235	2,132	2,179	2,179
FTE	14.7	15.0	15.5	15.5

In 2021\$ (000) Incurred Costs

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

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								
		Adju	sted-Recor	Ad	cast				
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	
Total	1,812	1,780	2,064	1,817	2,235	2,132	2,179	2,179	
FTE	12.9	14.6	15.1	12.8	14.7	15.0	15.5	15.5	

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 Forecast:

	In 2021 \$(000) Incurred Costs									
Forecast	Method	Bas	se Forecast Adjustments Adjusted-Foreca		ast					
Years	3	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
Total	I	2,039	2,039	2,039	93	140	140	2,132	2,179	2,179
FTE	3-YR Average	14.2	14.2	14.2	0.8	1.3	1.3	15.0	15.5	15.5

. Crocact Aujusti	ment Details:								
<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	Adj Type			
2022	33	0	0	33	0.3	1-Sided Adj			
Explanation:	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			
Explanation:	months * 25% O&M) to ensuring correct invoice	ddition of one (1) Project Controls Analyst in 2022 assuming May hire date (1 FTE * \$100K * 8/12 nonths * 25% O&M) to support the Operation Services project controls team and be responsible for insuring 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			
Explanation:	\$130K * 8/12 months * 5	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.							
2022 Total	93	0	0	93	0.8				
2023	50	0	0	50	0.5	1-Sided Adj			
	50 Addition of one (1) Train training instructors. This substation entry authoriz	ing Specialist position will a	(1 FTE * \$100)K * 50% O&I	M), to support	and assist substation			
	Addition of one (1) Train training instructors. This	ing Specialist position will a	(1 FTE * \$100)K * 50% O&I	M), to support	and assist substation			
Explanation: 2023	Addition of one (1) Train training instructors. This substation entry authorizes.	ning Specialist position will a zation. 0 ect Controls An s team and be	(1 FTE * \$100 lso coordinate 0 nalyst (1 FTE * responsible fo	25 * \$100K * 25% or ensuring co	M), to support antry training, e 0.3 6 O&M) to supported invoice of	and assist substation xaminations, and 1-Sided Adj port the Operation harging, interfacing			
Explanation: 2023	Addition of one (1) Train training instructors. This substation entry authorizes 25 Addition of one (1) Projet Services project controls with supply management	ning Specialist position will a zation. 0 ect Controls An s team and be	(1 FTE * \$100 lso coordinate 0 nalyst (1 FTE * responsible fo	25 * \$100K * 25% or ensuring co	M), to support antry training, e 0.3 6 O&M) to supported invoice of	and assist substation xaminations, and 1-Sided Adj port the Operation harging, interfacing			
Explanation: 2023 Explanation:	Addition of one (1) Train training instructors. This substation entry authorizes 25 Addition of one (1) Projes Services project controls with supply management budget reports.	position will a zation. 0 ect Controls And the steam and be not for setting up 0 Project Managostation C&O C	(1 FTE * \$100 lso coordinate 0 nalyst (1 FTE * responsible fo new vendors 0 ger (1 FTE * \$	OK * 50% O&I e substation e 25 * \$100K * 25% or ensuring co and ordering 65 130K * 50% O	M), to support antry training, e 0.3 0.8 0.8 0.9 0.9 0.9 0.5 0.5 0.8 0.5	and assist substation xaminations, and 1-Sided Adj port the Operation harging, interfacing preparing monthly 1-Sided Adj e ET&D Operations			

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

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	Adj_Type		
2024	50	0	0	50	0.5	1-Sided Adj		
Explanation:	Addition of one (1) Train training instructors. This substation entry authorize	position will als						
2024	25	0	0	25	0.3	1-Sided Adj		
Explanation:	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		
Explanation:	Addition of one (1) VPP Services and ET&D Sub certification and recertific	station C&O O	•		•	•		
2024 Total	140	0	0	140	1.3			

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):

terrimation of Aujusteu	-Recorded (incurred Cos 2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
corded (Nominal \$)*					
Labor	1,137	1,265	1,398	1,249	1,588
Non-Labor	310	179	345	330	411
NSE	0	0	0	0	0
Total	1,447	1,444	1,743	1,579	2,000
FTE	11.1	12.5	13.0	11.1	12.5
ljustments (Nominal \$) **					
Labor	0	0	0	0	0
Non-Labor	0	0	0	-11	-3
NSE	0	0	0	0	0
Total	0	0	0	-12	-3
FTE	0.0	0.0	0.0	-0.1	0.0
ecorded-Adjusted (Nomin	al \$)				
Labor	1,137	1,265	1,398	1,249	1,588
Non-Labor	310	179	345	319	408
NSE	0	0	0	0	0
Total	1,447	1,444	1,743	1,568	1,996
FTE	11.1	12.5	13.0	11.0	12.5
cation & Sick (Nominal \$	5)				
Labor	169	192	200	177	239
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	169	192	200	177	239
FTE	1.8	2.1	2.1	1.8	2.2
calation to 2021\$					
Labor	152	125	93	46	0
Non-Labor	45	19	28	26	0
NSE	0	0	0	0	0
Total	196	144	121	72	0
FTE	0.0	0.0	0.0	0.0	0.0
ecorded-Adjusted (Consta	ant 2021\$)				
Labor	1,457	1,582	1,691	1,471	1,827
Non-Labor	355	198	373	345	408
NSE	0	0	0	0	0
Total	1,812	1,780	2,064	1,817	2,235
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

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	
	Total	-0.043	0	0	-12	-3	
FTE		0.0	0.0	0.0	-0.1	0.0	

Detail of Adjustments to Recorded:

Veer	Lahan	NII bu	NCE	ETE	Adi Tuna
<u>Year</u>	<u>Labor</u>	NLbr	<u>NSE</u>	FTE	Adj Type
2017	One sided adjustment to avail	0	0	0.0	1-Sided Adj
xplanation:	One-sided adjustment to excl				
2017 Total	0	0	0	0.0	
2018 Total	0	0	0	0.0	
2019 Total	0	0	0	0.0	
2020	0	-1	0	-0.1	1-Sided Adj
xplanation:	Incremental COVID-related of Catastrophic Event Memoran		•	requested f	or recovery through a non-GRC
2020	0	-9	0	0.0	1-Sided Adj
xplanation:	Incremental COVID-related co Catastrophic Event Memoran			requested f	or recovery through a non-GRC
2020	0	0	0	0.0	1-Sided Adj
xplanation:	Incremental COVID-related concatastrophic Event Memoran		•	requested f	or recovery through a non-GRC
2020 Total	0	-11	0	-0.1	
2021	0	0	0	0.0	1-Sided Adj
xplanation:	Incremental COVID-related co Catastrophic Event Memoran		•	requested f	or recovery through a non-GRC
2021	0	-1	0	0.0	1-Sided Adj
xplanation:	Incremental COVID-related co Catastrophic Event Memoran		•	requested f	or recovery through a non-GRC
2021	0	-1	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-related or Catastrophic Event Memoran		•	requested f	or recovery through a non-GRC

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

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	Adj Type
2021	0	0	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment to e	xclude \$394 relate	d to Events a	nd Tickets.	
2021 Total	0	-3	0	0.0	

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

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	2022 Forecast	2023 Forecast	2024 Forecast	2024 RAMP Range (2020 Incurred \$)	
	(2021 \$)	(2021 \$)	(2021 \$)	(2021 \$)	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.

CPC	Work	I Init/A	ctivity	Lovol	Estimates
GRU	VVOIK	Unit/A	CUVILV	Level	Estimates

Unit of	2021 Historical Embedded	2022 Forecast	2023 Forecast	2024 Forecast	2024 RA Range Act	
Measure	Activities	Activities	Activities	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)

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

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	2022 Forecast	2023 Forecast	2024 Forecast	2024 RAMP Ra (2020 Inc.)	ange
	(2021 \$)	(2021 \$)	(2021 \$)	(2021 \$)	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	2021 Historical Embedded	2022 Forecast	2023 Forecast	2024 Forecast	2024 RAMP Range Activities	
Measure	Activities	Activities	Activities	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)

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				
Total	10,362	9,038	9,369	9,516				
FTE	49.6	45.1	48.2	49.6				
Workpapers belonging to	this Category:							
1ED006.000 ET&D: Sub	station 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				
Total	6,785	5,700	5,785	5,808				
FTE	31.0	26.3	27.2	27.5				
1ED006.002 ET&D: Sub	station C&O (RELAY & SCAI	DA)						
Labor	2,652	2,558	2,804	2,928				
Non-Labor	925	780	780	780				
NSE	0	0	0	0				
Total	3,577	3,338	3,584	3,708				
FTE	18.6	18.8	21.0	22.1				

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

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

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 Results:

	In 2021\$ (000) Incurred Costs							
		Adju	ısted-Recor	Adjusted-Forecast				
Years	2017	2018	2019	2020	2021	2022	2023	2024
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
Total	3,744	3,109	3,912	5,997	6,786	5,702	5,787	5,810
FTE	21.3	15.7	19.0	25.6	31.0	26.3	27.2	27.5

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 Forecast:

In 2021 \$(000) Incurred Costs										
Forecast	t Method	Base Forecast Forecast Adjustments			Adjusted-Forecast					
Years	s	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
Tota	ıl	5,565	5,565	5,565	136	221	244	5,701	5,786	5,809
FTE	3-YR Average	25.2	25.2	25.2	1.1	2.0	2.3	26.3	27.2	27.5

Forecast Adjus	tment Details:								
<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	Adj Type			
2022	34	0	0	34	0.3	1-Sided Adj			
Explanation:	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			
Explanation:	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			
Explanation:	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			
Explanation:	·								

2022 Total	104	32	0	136	1.1	
2023	51	0	0	51	0.6	1-Sided Adj

Explanation: 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.

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

	1ED006.000 - ET&I							
<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	NSE	<u>Total</u>	<u>FTE</u>	Adj_Type		
2023	0	32	0	32	0.0	1-Sided Adj		
Explanation:	Incremental costs assoc was rolled out in 2016 at keys secure substations repaired each year.	nd after heavy	use units are	starting to fai	I. Medeco loc	ks and the associated		
2023	25	0	0	25	0.3	1-Sided Adj		
Explanation:	Infrared (IR) inspections crew via ground or helical inspection of 10 non-HF working days at 8 hrs/da of \$5,000 spread across ground.	opter to identif TD circuits pe by to complete	y hotspots on r year, starting with a 2-man	the overhead in 2022. Eac ground-based	distribution s th circuit to tal d crew at \$125	ystem. ke approximately 2 5/hr per crew. Addition		
2023	113	0	0	113	1.1	1-Sided Adj		
	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).							
2023 Total	189	32	0	221	2.0			
2024	51	0	0	51	0.6	1-Sided Adj		
Explanation:	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.							
	Maintenance program, a	ıddressing agi	ng assets and					
2024	Maintenance program, a	ıddressing agi	ng assets and 0					
2024 Explanation:	Maintenance program, a asset health and lifecycl	ddressing agi e strategies. 32 iated with Med nd after heavy	0 deco electronio use units are	performing c 32 key and cyli starting to fai	0.0 nder repairs. I. Medeco loc	ssments to address 1-Sided Adj The Medeco system ks and the associated		
	Maintenance program, a asset health and lifecycl 0 Incremental costs assoc was rolled out in 2016 at keys secure substations	ddressing agi e strategies. 32 iated with Med nd after heavy	0 deco electronio use units are	performing c 32 key and cyli starting to fai	0.0 nder repairs.	ssments to address 1-Sided Adj The Medeco system ks and the associated		
Explanation:	Maintenance program, a asset health and lifecycl 0 Incremental costs assoc was rolled out in 2016 at keys secure substations repaired each year.	addressing agine strategies. 32 iated with Meand after heavy & other critical 0 of the electric opter to identife TD circuits per systems of the strategies of the complete of the strategies	0 deco electronic use units are al facilities Esti 0 distribution sy y hotspots on r year, starting with a 2-man	32 c key and cyli starting to fai mated 64 uni 25 rstem in the N the overhead in 2022. Eac ground-based	0.0 nder repairs. I. Medeco locits (keys and conditions) 0.3 Non-HFTD. Per distribution sensitive to talk discrewat \$128	1-Sided Adj The Medeco system ks and the associated or cylinders) get 1-Sided Adj erformed with a 2-man ystem. ke approximately 2 5/hr per crew. Addition		

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

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	Adj_Type
Explanation:	Electrician Apprentice Pro enter the Electrician appro maintaining the Company to accomplish this work. E Journeyman Electrician in retirement/transfers from year. (2 FTEs * \$68K * 10	entice progra 's electric di Employees p approximat Electricians,	am. Assist Jo stribution sys progress from tely 4 years.	ourneyman in co stem by operati n Electrician Ass Note: Start clas	ompleting field v ng tools and equ sistant to Apprei ss of 10 EA's pe	vork operating and uipment necessary ntice Electrician to r year, but expect 9
2024 Total	212	32	0	244	2.3	

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

Determination of Adjusted-Recorded (Incurred Costs):

Determination of Aujusteu-	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
Recorded (Nominal \$)*					
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
Total	2,994	2,600	3,363	5,906	7,040
FTE	18.2	13.2	16.2	22.9	26.6
djustments (Nominal \$) **					
Labor	25	5	20	-162	-13
Non-Labor	3	3	1	-462	-792
NSE	0	0	0	0	0
Total	28	8	21	-624	-805
FTE	0.1	0.2	0.2	-1.0	-0.1
Recorded-Adjusted (Nomina	al \$)				
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
Total	3,022	2,608	3,385	5,282	6,235
FTE	18.3	13.4	16.4	21.9	26.4
acation & Sick (Nominal \$)					
Labor	309	235	283	414	551
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	309	235	283	414	551
FTE	3.0	2.3	2.6	3.7	4.6
scalation to 2021\$					
Labor	278	154	131	107	0
Non-Labor	136	113	113	193	0
NSE	0	0	0	0	0
Total	413	266	244	300	0
FTE	0.0	0.0	0.0	0.0	0.0
ecorded-Adjusted (Constar	nt 2021\$)				
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
Total	3,744	3,109	3,912	5,997	6,786
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

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			
	Total	28	8	21	-624	-805			
FTE		0.1	0.2	0.2	-1.0	-0.1			

Detail of Adjustments to Recorded:

<u>Year</u>	<u>Lai</u>	<u>oor N</u>	<u>Lbr</u>	<u>NSE</u>	<u>FTE</u>	Adj Type	
2017		-6	0	0	-0.1	1-Sided Adj	
Explanation:	Incremental costs that an Memorandum Account (•	be requeste	d for recover	ry through a r	non-GRC Catastrophic Event	
2017	;	31	3	0	0.2	CCTR Transf From 2100-3989.000	
Explanation:		1ED006.001 to	cost center	•	•	& Analytics from cost center kpaper 1ED006.000 to align	
2017 Total	:	25	3	0	0.1		
2018		3	0	0	0.1	1-Sided Adj	
Explanation:	Incremental costs that a Memorandum Account (•	be requeste	d for recove	ry through a r	non-GRC Catastrophic Event	
2018	;	33	3	0	0.3	CCTR Transf From 2100-3989.000	
Explanation:	Transfer labor, non-labor, and FTE's associated with Forcasting, 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	
Explanation:	One-sided adjustment to	exclude \$151 re	lated to Eve	ents and Tick	cets.		
2018	;	31	0	0	-0.2	CCTR Transf To 2100-0737.000	
Explanation:		•	•			on Generation equipment in sts with where roles reside and	
2018 Total		5	3	0	0.2		

Note: Totals may include rounding differences.

20

2019

0.2

CCTR Transf From 2100-3989.000

1

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

workpaper.	1ED000.000 - E1&D. Subst				
<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	Adj Type
Explanation:	Transfer labor, non-labor, and FTE 2100-3989 in workpaper 1ED006. costs with where roles reside and	001 to cost cente		•	
2019 Total	20	1	0	0.2	
2020	-1	0	0	-0.1	CCTR Transf From 2100-3989.000
Explanation:	Transfer labor, non-labor, and FTE 2100-3989 in workpaper 1ED006. costs with where roles reside and	001 to cost cente			
2020	0	-1	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-related costs Catastrophic Event Memorandum	· · · · · · · · · · · · · · · · · · ·		quested for re	ecovery through a non-GRC
2020	-49	-418	0	-0.2	1-Sided Adj
Explanation:	Incremental COVID-related costs Catastrophic Event Memorandum	· · · · · · · · · · · · · · · · · · ·		quested for re	ecovery through a non-GRC
2020	-5	-19	0	-0.1	1-Sided Adj
Explanation:	Incremental COVID-related costs Catastrophic Event Memorandum	•		quested for re	ecovery through a non-GRC
2020	0	-1	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-related costs Catastrophic Event Memorandum	· · · · · · · · · · · · · · · · · · ·		quested for re	ecovery through a non-GRC
2020	0	-1	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-related costs Catastrophic Event Memorandum	· · · · · · · · · · · · · · · · · · ·		quested for re	ecovery through a non-GRC
2020	0	-9	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-related costs Catastrophic Event Memorandum	•		quested for re	ecovery through a non-GRC
2020	0	0	0	-0.1	1-Sided Adj
Explanation:	Incremental COVID-related costs Catastrophic Event Memorandum	•		quested for re	ecovery through a non-GRC
2020	-48	-12	0	-0.2	1-Sided Adj
Explanation:	Incremental costs that are anticipal Memorandum Account (CEMA).	ated to be reques	ted for reco	very through	a non-GRC Catastrophic Event
2020	0	0	0	0.0	1-Sided Adj
Explanation:	Incremental costs that are anticipal Memorandum Account (CEMA).	ated to be reques	ted for reco	very through	a non-GRC Catastrophic Event
2020	-59	0	0	-0.3	CCTR Transf To 2100-0737.000

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

<u>Year</u>	<u>Labor</u>	NLbr	<u>NSE</u>	<u>FTE</u>	Adj Type	
Explanation:		•			eraton on Generation equipment in ilign costs with where roles reside and	İ
2020 Total	-16	2 -462	0	-1.0		
2021		0 -2	0	0.0	1-Sided Adj	
Explanation:	Incremental costs that are Memorandum Account (C	•	equested for	recovery thro	ugh a non-GRC Catastrophic Event	
2021	-1:	3 -685	0	-0.1	1-Sided Adj	
Explanation:	Incremental COVID-relate Catastrophic Event Memo		•	e requested fo	or recovery through a non-GRC	
2021		0 -4	0	0.0	1-Sided Adj	
Explanation:	Incremental COVID-relate Catastrophic Event Memo		•	e requested fo	or recovery through a non-GRC	
2021		0 -53	0	0.0	1-Sided Adj	
Explanation:	Incremental COVID-relate Catastrophic Event Memo		•	e requested fo	or recovery through a non-GRC	
2021		0 0	0	0.0	1-Sided Adj	
Explanation:	Incremental COVID-relate Catastrophic Event Memo		-	e requested for	or recovery through a non-GRC	
2021		0 -1	0	0.0	1-Sided Adj	
Explanation:	Incremental COVID-relate Catastrophic Event Memo		•	e requested fo	or recovery through a non-GRC	
2021		0 -7	0	0.0	1-Sided Adj	
Explanation:	Incremental COVID-relate Catastrophic Event Memo			e requested fo	or recovery through a non-GRC	
2021		0 -40	0	0.0	1-Sided Adj	
Explanation:	Incremental COVID-relate Catastrophic Event Memo		•	e requested fo	or recovery through a non-GRC	
2021		0 0	0	0.0	1-Sided Adj	
Explanation:	One-sided adjustment to	exclude \$219 relate	ed to Events a	nd Tickets.		
2021 Total	-1	3 -792	0	-0.1		

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

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 Foreca	st Cost	Estimates	(\$000)
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	2021 Historical	2022	2023	2024	2024 RAMP R	ange
	Embedded Cost (2021 \$)	Forecast (2021 \$)	Forecast (2021 \$)	Forecast (2021 \$)	(2020 Inci Low	urred \$) 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.

Unit of	2021 Historical Embedded	2022 Forecast	2023 Forecast	2024 Forecast	2024 R Range A	
Measure	Activities	Activities	Activities	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	RAIMP RSE
Tranche 1	0.000	0.000

RSE Changes from RAMP:

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

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	2022 Forecast	2023 Forecast	2024 Forecast	2024 RAMP R (2020 Inci	ange
	(2021 \$)	(2021 \$)	(2021 \$)	(2021 \$)	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	2021 Historical Embedded	2022 Forecast	2023 Forecast	2024 Forecast	2024 R Range A	
Measure	Activities	Activities	Activities	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:

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

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	2022 Forecast	2023 Forecast	2024 Forecast	2024 RAMP R (2020 Inci	ange
	(2021 \$)	(2021 \$)	(2021 \$)	(2021 \$)	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

	2021 Historical	2022	2023	2024	2024 RA	MP
Unit of	Embedded	Forecast	Forecast	Forecast	Range Activities	
Measure	Activities	Activities	Activities	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:

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

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)

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

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)

Summary of Results:

		In 2021\$ (000) Incurred Costs										
		Adju	sted-Recor	Adjusted-Forecast								
Years	2017	2018	2019	2020	2021	2022	2023	2024				
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				
Total	1,547	1,807	2,462	3,312	3,576	3,339	3,585	3,709				
FTE	8.0	8.4	13.0	18.2	18.6	18.8	21.0	22.1				

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)

Summary of Adjustments to Forecast:

	In 2021 \$(000) Incurred Costs											
Forecast	recast Method Base Forecast			st	Forec	ast Adjust	ments	Adjus	ted-Forec	ast		
Years	5	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		
Tota	I	3,116	3,116	3,116	222	468	592	3,338	3,584	3,708		
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:

Forecast Adjustment Details:										
<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	Adj Type				
2022	31	0	0	31	0.3	1-Sided Adj				
Explanation:	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				
Explanation:	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				
Explanation:	Addition of two (2) SCAE 50% O&M) to install, ope limited to power circuit be battery chargers and dist	erate, maintain reakers, servic	, and test dist e restorers, r	ribution circui	it equipment in	cluding but not				
2022	50	0	0	50	0.5	1-Sided Adj				
Explanation:	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.									
2022 Total	222	0	0	222	2.2					
2023	206	0	0	206	1.7	1-Sided Adj				

Note: Totals may include rounding differences.

Systems and Components.

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Explanation:

2023

Addition of five (5) relay techs in 2023 (5 FTEs * \$125K * 33% O&M) to perform construction and

0

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

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1.9

1-Sided Adj

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)

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	FTE	Adj_Type			
Explanation:	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	8.0	1-Sided Adj			
Explanation:	Addition of two (2) RTU T maintenance of substation		•			construction and			
2023 Total	468	0	0	468	4.4				
2024	206	0	0	206	1.7	1-Sided Adj			
Explanation:	Addition of five (5) relay to maintenance of Substation Systems; repairs of Electric Systems and Component	n Relay and (o-Mechanica	Control Syste	ms; testing an	d calibration o	of Relay and Control			
2024	310	0	0	310	3.0	1-Sided Adj			
Explanation:	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			
Explanation:	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.								
2024 Total	592	0	0	592	5.5				

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):

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

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)

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				
	Total	-85	71	72	368	430				
FTE		-0.3	0.3	0.5	2.8	3.0				

Detail of Adjustments to Recorded:

<u>Year</u>		<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	Adj Type			
2017		-75	-10	0	-0.3	1-Sided Adj			
Explanation:	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).								
2017 Total		-75	-10	0	-0.3				
2018		61	10	0	0.3	1-Sided Adj			
Explanation:	Incremental costs that Memorandum Accou	•	ed to be reque	sted for reco	very through	n a non-GRC Catastrophic Event			
2018 Total		61	10	0	0.3				
2019		71	1	0	0.5	CCTR Transf From 2100-4100.000			
Explanation:	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.								
2019 Total		71	1	0	0.5				
2020		-4	-8	0	-0.1	1-Sided Adj			
Explanation:	Incremental COVID- Catastrophic Event N		•	•	uested for r	ecovery through a non-GRC			
2020		-29	0	0	-0.1	1-Sided Adj			
Explanation:	Incremental costs that Memorandum Account	•	ed to be reque	sted for reco	very through	n a non-GRC Catastrophic Event			
2020		392	16	0	3.0	CCTR Transf From 2100-4100.000			
Explanation:	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.								
2020 Total		359	9	0	2.8				

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)

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	FTE	Adj Type			
2021	0	-34	0	0.0	1-Sided Adj			
Explanation:	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	m 2100-4100.000		
Explanation:	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.							
2021 Total	396	34	0	3.0				

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)

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	2022 Forecast	2023 Forecast	2024 Forecast	2024 RAMP R (2020 Inc.)	ange
	(2021 \$)	(2021 \$)	(2021 \$)	(2021 \$)	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	2021 Historical Embedded	2022 Forecast	2023 Forecast	2024 Forecast	2024 R Range A	
Measure	Activities	Activities	Activities	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:

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek

Category: F. Distribution Design and Project Management

Workpaper: 1ED007.000

Summary for Category: F. Distribution Design and Project Management

		In 2021\$ (000) Incu	urred 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
Total	820	1,239	1,305	1,305
FTE	3.1	3.2	3.3	3.3

Workpapers belonging to this Category:

1ED007.000 Distribution Design and Project Management

277	282	299	299
543	957	1,006	1,006
0	0	0	0
820	1,239	1,305	1,305
3.1	3.2	3.3	3.3
	543 0 820	543 957 0 0 820 1,239	543 957 1,006 0 0 0 820 1,239 1,305

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

Area: ELECTRIC DISTRIBUTION

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

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

Area: ELECTRIC DISTRIBUTION

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

Summary of Results:

		In 2021\$ (000) Incurred Costs								
		Adju	ısted-Recor	Adjusted-Forecast						
Years	2017	2018	2019	2020	2021	2022	2023	2024		
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		
Total	393	906	876	675	820	1,238	1,304	1,304		
FTE	4.9	8.4	5.8	2.1	3.1	3.2	3.3	3.3		

Area: ELECTRIC DISTRIBUTION

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

Summary of Adjustments to Forecast:

			In 202	1 \$(000) lı	ncurred Co	sts					
Forecas	ecast Method Base Forecast			st	Forec	ast Adjust	ments	Adjus	Adjusted-Forecast		
Years	s	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	
Tota	al	820	820	820	419	485	485	1,239	1,305	1,305	
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:

Forecast Adjust	ment Details:					
<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	Adj Type
2022	0	15	0	15	0.0	1-Sided Adj
Explanation:	Automated Utility Design	n (IT capital pro	oject) annual s	oftware mair	ntenance & sup	port service costs
2022	0	250	0	250	0.0	1-Sided Adj
Explanation:	Builder services portal n	najor system e	nhancement (IT capital pro	ject) - annual C	0&M costs.
2022	0	100	0	100	0.0	1-Sided Adj
Explanation:	Customer service impro change management (P and template tools, drivi O&M costs.	rocore/SAP in	tegration), vid	eos, tool crea	ations. Streamli	ning communication
2022	0	35	0	35	0.0	1-Sided Adj
Explanation:	Planner and Designer tr 14% of workforce in 202 internal transfers and pr development support for	and due to to tomotions, ther	he high attritione is an increas	n rate of 15% sed cost to p	% (average 7%) rovide sufficient	, as well as 6%
2022	0	7	0	7	0.0	1-Sided Adj
Explanation:	Bluebeam Maintenance	& Support Cos	st.			
2022	0	7	0	7	0.0	1-Sided Adj
Explanation:	Bluebeam Perpetual Lic	ense - 20 units	s @ \$325/unit.			
2022	5	0	0	5	0.1	1-Sided Adj
Explanation:	Please see supplementa	al workpapers	for detailed ex	planation.		
2022 Total	5	414	0	419	0.1	
2023	0	15	0	15	0.0	1-Sided Adj
Explanation:	Automated Utility Design	n (IT capital pro	oject) annual s	oftware mair	ntenance & sup	port service costs
2023	0	250	0	250	0.0	1-Sided Adj
Explanation:	Builder services portal n	najor system e	nhancement (IT capital pro	ject) - annual C	0&M costs.
2023	0	100	0	100	0.0	1-Sided Adj

Area: ELECTRIC DISTRIBUTION

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

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 Q&M costs. 2023	/vorkpaper.							
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Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek

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

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<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	NSE	<u>Total</u>	<u>FTE</u>	Adj_Type	
2024	0	7	0	7	0.0	1-Sided Adj	
Explanation:	Bluebeam Perpetual Lic	ense - 20 units	s @ \$325/unit				
2024	22	0	0	22	0.2	1-Sided Adj	
Explanation:	Please see supplement	al workpapers	for detailed ex	xplanation.			
2024 Total	22	463	0	485	0.2		

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Determination of Adjusted-Recorded (Incurred Costs):

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

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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	
	Total	-468	-89	-1,387	-1,274	84	
FTE		-2.0	0.6	-1.4	-4.0	0.9	

Detail of Adjustments to Recorded:

Dotail of Aujuo	tments to Recorded								
<u>Year</u>		Labor	NLbr	NSE	FTE	Adj Type			
2017		0	0	0	-0.1	1-Sided Adj			
Explanation:	: 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			
Explanation:	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			
Explanation:	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			
Explanation:	•	group 1ED0007				raining from cost center ng Capital Pool to align activity			
2017		-42	-38	0	-0.5	1-Sided Adj			
Explanation:	•	group 1ED0007				raining from cost center ng Capital Pool to align activity			
2017		-64	-22	0	-0.8	1-Sided Adj			
Explanation:	~	group 1ED0007				raining from cost center ng Capital Pool to align activity			
2017		0	-13	0	0.0	1-Sided Adj			

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

year xplanation: 2017 xplanation: 2017 xplanation: 2017 xplanation: 2017 xplanation: 2017	One-sided adjustment moving no group 1ED0007 Distribution Des 0 One-sided adjustment excluding 0 One-sided adjustment excluding 0 One-sided adjustment excluding 0	ign & PM to the T -14 Special Billable o -119	raining Capit 0 costs entirely 0	al Pool to al	1-Sided Adj		
xplanation: 2017 xplanation: 2017 xplanation: 2017	One-sided adjustment excluding 0 One-sided adjustment excluding 0	Special Billable o	costs entirely	or partially b	•		
2017 xplanation: 2017 xplanation: 2017	0 One-sided adjustment excluding	-119	0		pilled to third parties.		
xplanation: 2017 xplanation: 2017	One-sided adjustment excluding 0		-	0.0			
2017 xplanation: 2017	0	Special Billable of		0.0	1-Sided Adj		
xplanation: 2017			costs entirely	or partially b	oilled to third parties.		
2017	One-sided adjustment excluding	-2	0	0.0	1-Sided Adj		
		Special Billable of	costs entirely	or partially b	oilled to third parties.		
xplanation:	0	-107	0	0.0	1-Sided Adj		
	One-sided adjustment excluding	Special Billable of	costs entirely	or partially b	oilled to third parties.		
2017	0	0	0	-0.1	1-Sided Adj		
xplanation:	Exclude labor expenses associa other costs that have already be	• •	•				
2017 Total	-135	-333	0	-2.0			
2018	0	0	0	0.1	1-Sided Adj		
xplanation:	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 activit where costs reside.						
2018	0	3	0	0.1	1-Sided Adj		
xplanation:	One-sided adjustment moving la 2100-0134 in work group 1ED00 where costs reside.						
2018	4	8	0	0.1	CCTR Transf From 2100-0703.000		
xplanation:	Transfer labor, FTEs and Non-Lacenter 2100-0703 in workpaper 1ED007 Distribution Design and forecated.	IED002 Construc	tion Manage	ment to cost	center 2100-4096 in workpaper		
2018	-1	0	0	-0.1	1-Sided Adj		
xplanation:	One-sided adjustment moving la 2100-0136 in work group 1ED00 where costs reside.						
2018	57	6	0	0.5	CCTR Transf From 2100-3986.000		
	Transfer labor, FTEs and Non-La	abor for Continuo					

Area: ELECTRIC DISTRIBUTION

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>Lab</u>	<u>oor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
2018		0	-8	0	0.0	1-Sided Adj
xplanation:	•	•			•	ost center 2100-0138 in work activity where costs reside.
2018		0	-22	0	0.0	1-Sided Adj
xplanation:	One-sided adjustment of	excluding Speci	ial Billable cos	sts entirely or	partially bille	d to third parties.
2018		0	-70	0	0.0	1-Sided Adj
xplanation:	One-sided adjustment of	excluding Speci	ial Billable cos	sts entirely or	partially bille	d to third parties.
2018		0	-19	0	0.0	1-Sided Adj
xplanation:	One-sided adjustment of	excluding Speci	ial Billable cos	sts entirely or	partially bille	d to third parties.
2018		0	-46	0	0.0	1-Sided Adj
xplanation:	One-sided adjustment of	excluding Speci	ial Billable cos	sts entirely or	partially bille	d to third parties.
2018		0	0	0	-0.1	1-Sided Adj
Explanation:	Exclude labor expenses other costs that have al		• -	•	•	s adjustment is in addition to attributes.
2018 Total		60	-149	0	0.6	
2019						
2010		1	3	0	0.1	CCTR Transf From 2100-0703.000
	center 2100-0703 in wo	nd Non-Labor foorkpaper 1ED00	or Continuous 02 Constructio	Improvemen	t & Permitting ent to cost ce	CCTR Transf From 2100-0703.000 g department costs from cost nter 2100-4096 in workpaper th where roles reside and are
Explanation:	center 2100-0703 in wo 1ED007 Distribution De	nd Non-Labor foorkpaper 1ED00	or Continuous 02 Constructio	Improvemen	t & Permitting ent to cost ce	g department costs from cost nter 2100-4096 in workpaper
Explanation: 2019	center 2100-0703 in wo 1ED007 Distribution De forecated. Transfer labor, FTEs ar center 2100-3986 in wo	nd Non-Labor for orkpaper 1ED00 esign and Project 12 nd Non-Labor for orkpaper 1ED00	or Continuous 02 Constructio ct Manageme 7 or Continuous 02 Constructio	Improvement on Management (DPM) to a 0 Improvement on Management Management on Management of Managem	ont & Permittingent to cost cer align costs wit 0.1 ot & Permittingent to cost cer	g department costs from cost nter 2100-4096 in workpaper th where roles reside and are
Explanation: 2019	center 2100-0703 in wo 1ED007 Distribution De forecated. Transfer labor, FTEs ar center 2100-3986 in wo 1ED007 Distribution De	nd Non-Labor for orkpaper 1ED00 esign and Project 12 nd Non-Labor for orkpaper 1ED00	or Continuous 02 Constructio ct Manageme 7 or Continuous 02 Constructio	Improvement on Management (DPM) to a 0 Improvement on Management Management on Management of Managem	ont & Permittingent to cost cer align costs wit 0.1 ot & Permittingent to cost cer	g department costs from cost inter 2100-4096 in workpaper th where roles reside and are CCTR Transf From 2100-3986.000 g department costs from cost inter 2100-4096 in workpaper
2019 Explanation: 2019 Explanation:	center 2100-0703 in wo 1ED007 Distribution De forecated. Transfer labor, FTEs ar center 2100-3986 in wo 1ED007 Distribution De forecated. Transfer labor, FTEs ar 2100-4091 in workpape	nd Non-Labor for orkpaper 1ED00 esign and Project 12 nd Non-Labor for orkpaper 1ED00 esign and Project 29 nd Non-Labor for er 1ED0014 Ma	or Continuous 22 Construction The continuous 22 Construction Continuous 22 Construction Continuous Continuous Continuous Continuous Construction Continuous Construction Continuous Construction Continuous Construction Continuous Construction Continuous Construction Continuous	Improvement on Management (DPM) to a 0 Improvement on Management (DPM) to a 0 Compliance a cost center 2	ont & Permitting ent to cost ceralign costs with 0.1 t & Permitting ent to cost ceralign costs with 0.4 nd Project Su 2100-0138 in	g department costs from cost inter 2100-4096 in workpaper th where roles reside and are CCTR Transf From 2100-3986.000 g department costs from cost inter 2100-4096 in workpaper th where roles reside and are CCTR Transf From 2100-4091.000 inport costs from cost center
2019 Explanation:	center 2100-0703 in wo 1ED007 Distribution De forecated. Transfer labor, FTEs ar center 2100-3986 in wo 1ED007 Distribution De forecated. Transfer labor, FTEs ar 2100-4091 in workpape	nd Non-Labor for orkpaper 1ED00 esign and Project 12 nd Non-Labor for orkpaper 1ED00 esign and Project 29 nd Non-Labor for er 1ED0014 Ma	or Continuous 22 Construction The continuous 22 Construction Continuous 22 Construction Continuous Continuous Continuous Continuous Construction Continuous Construction Continuous Construction Continuous Construction Continuous Construction Continuous Construction Continuous	Improvement on Management (DPM) to a 0 Improvement on Management (DPM) to a 0 Compliance a cost center 2	ont & Permitting ent to cost ceralign costs with 0.1 t & Permitting ent to cost ceralign costs with 0.4 nd Project Su 2100-0138 in	g department costs from cost inter 2100-4096 in workpaper th where roles reside and are CCTR Transf From 2100-3986.000 g department costs from cost inter 2100-4096 in workpaper th where roles reside and are CCTR Transf From 2100-4091.000 inpport costs from cost center workpaper 1ED007
2019 Explanation: 2019 2019 Explanation:	center 2100-0703 in wo 1ED007 Distribution De forecated. Transfer labor, FTEs ar center 2100-3986 in wo 1ED007 Distribution De forecated. Transfer labor, FTEs ar 2100-4091 in workpape Distribution Design and	nd Non-Labor forkpaper 1ED00 esign and Project 12 nd Non-Labor forkpaper 1ED00 esign and Project 29 nd Non-Labor for 1ED0014 May Project Manag 2 nd Non-Labor for 1ED0014 May 12 nd Non-Labor for 1ED0014 May 13 14 15 15 16 16 17 16 17 16 17 16 17 17 18 18 18 18 18 18 18 18 18 18 18 18 18	or Continuous 02 Construction 02 Construction 03 Continuous 04 Construction 05 Construction 06 Manageme 27 07 Policies & Conjor Projects to perment (DPM) 2 07 Policies & Conjor Projects to perment (DPM) 2 08 Or Policies & Conjor Projects to perment (DPM) 2 09 Or Policies & Conjor Projects to perment (DPM)	Improvement on Management (DPM) to a 0 Improvement on Management (DPM) to a 0 Compliance a 10 cost center 2 10 align cost 0 Compliance a 10 cost center 2 10 co	ont & Permitting ent to cost cellign costs with the cost cellign costs and costs cellign costs with the cost cellign costs and costs cellign costs are costs and costs cellign costs are costs cellign costs and costs cellign costs are costs cellign costs and costs cellign costs are costs are costs cellign costs are costs are costs cellign costs are costs and costs cellign costs are costs are costs are costs and costs are costs a	g department costs from cost inter 2100-4096 in workpaper ith where roles reside and are CCTR Transf From 2100-3986.000 g department costs from cost inter 2100-4096 in workpaper ith where roles reside and are CCTR Transf From 2100-4091.000 apport costs from cost center workpaper 1ED007 roles reside and are forecated. CCTR Transf From 2100-4092.000 apport costs from cost center

Area: ELECTRIC DISTRIBUTION

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

Workpaper.		,			
<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	Adj Type
Explanation:	One-sided adjustment moving labor a 2100-0131 in work group 1ED0007 D where costs reside.				
2019	-69	-3	0	-0.8	1-Sided Adj
Explanation:	One-sided adjustment moving labor a 2100-0132 in work group 1ED0007 D where costs reside.				-
2019	-43	-5	0	-0.4	1-Sided Adj
Explanation:	One-sided adjustment moving labor a 2100-0134 in work group 1ED0007 D where costs reside.				
2019	-14	-4	0	-0.2	1-Sided Adj
Explanation:	One-sided adjustment moving labor a 2100-0136 in work group 1ED0007 D where costs reside.				-
2019	-2	-2	0	-0.1	1-Sided Adj
Explanation:	One-sided adjustment moving labor a 2100-0138 in work group 1ED0007 D where costs reside.				-
2019	-3	-187	0	-0.1	1-Sided Adj
Explanation:	One-sided adjustment moving labor a 2100-4096 in work group 1ED0007 D where costs reside.				
2019	0	-19	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment excluding Spec	cial Billable cos	sts entirely o	partially bille	d to third parties.
2019	0	-45	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment excluding Spec	cial Billable cos	sts entirely o	partially bille	d to third parties.
2019	0	-6	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment excluding Spec	cial Billable cos	sts entirely or	partially bille	d to third parties.
2019	0	-3	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment excluding Spec	cial Billable cos	sts entirely or	partially bille	d to third parties.
2019	0	0	0	-0.1	1-Sided Adj
Explanation:	Exclude labor expenses associated wo other costs that have already been ex				
2019 Total	-140	-1,247	0	-1.4	

Note: Totals may include rounding differences.

0

2020

0.0

1-Sided Adj

-7

Area: ELECTRIC DISTRIBUTION

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

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<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	NSE	<u>FTE</u>	Adj Type			
Explanation:	Incremental COVID-related costs t Catastrophic Event Memorandum	-	-	uested for re	ecovery through a non-GRC			
2020	0	-1	0	0.0	1-Sided Adj			
Explanation:	Incremental COVID-related costs t Catastrophic Event Memorandum	•	-	uested for re	ecovery through a non-GRC			
2020	0	-15	0	0.0	1-Sided Adj			
Explanation:	Incremental COVID-related costs t Catastrophic Event Memorandum	•	-	uested for re	ecovery through a non-GRC			
2020	0	-11	0	0.0	1-Sided Adj			
Explanation:	Incremental COVID-related costs t Catastrophic Event Memorandum	-	-	uested for re	ecovery through a non-GRC			
2020	0	-14	0	0.0	1-Sided Adj			
Explanation:	Incremental COVID-related costs t Catastrophic Event Memorandum	-	-	uested for re	ecovery through a non-GRC			
2020	0	-1	0	0.0	1-Sided Adj			
Explanation:	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			
Explanation:	Incremental COVID-related costs t Catastrophic Event Memorandum	-	-	uested for re	ecovery through a non-GRC			
2020	0	0	0	0.0	1-Sided Adj			
Explanation:	Removal of capital settlement port Overhead.	ion to accurately	y reflect O&N	/I and capital	balances for 2020 Department			
2020	-293	-900	0	-2.4	1-Sided Adj			
Explanation:	One-sided adjustment moving laboration 2100-0131 in work group 1ED000 where costs reside.							
2020	0	24	0	0.0	CCTR Transf From 2100-0703.000			
Explanation:	Transfer Non-Labor for Continuous in workpaper 1ED002 Construction Design and Project Management (n Management	to cost cente	r 2100-4096	in workpaper 1ED007 Distribution			
2020	6	16	0	0.1	CCTR Transf From 2100-3986.000			
Explanation:	Transfer labor, FTEs and Non-Lab center 2100-3986 in workpaper 1E 1ED007 Distribution Design and P forecated.	D002 Construc	tion Manageı	ment to cost	center 2100-4096 in workpaper			
2020	39	65	0	0.6	CCTR Transf From 2100-4091.000			

Area: ELECTRIC DISTRIBUTION

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

1 1 1	
<u>Year</u>	<u>Labor NLbr NSE FTE Adj Type</u>
Explanation:	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
Explanation:	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
Explanation:	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
Explanation:	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
Explanation:	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
Explanation:	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
Explanation:	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
Explanation:	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
Explanation:	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.
2020	0 -6 0 0.0 1-Sided Adj
Explanation:	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.
2020	0 -9 0 0.0 1-Sided Adj
Explanation:	One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties.

Area: ELECTRIC DISTRIBUTION

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

/orkpaper:	12007.000) - Distribution i	Design and Proje	ct Managem	eni	
<u>Year</u>		<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	Adj Type
2020		0	-1	0	0.0	1-Sided Adj
planation:	One-sided adjustn	nent excluding	Special Billable o	costs entirely	or partially b	oilled to third parties.
2020		0	0	0	-0.1	1-Sided Adj
xplanation:	Exclude labor exported other costs that has			•	•	This adjustment is in addition to ng attributes.
2020 Total		-407	-867	0	-4.0	
2021		0	-4	0	0.0	1-Sided Adj
xplanation:	Incremental COVI Catastrophic Even		•		uested for re	ecovery through a non-GRC
2021		0	-1	0	0.0	1-Sided Adj
xplanation:	Incremental COVI Catastrophic Even		•		uested for re	ecovery through a non-GRC
2021		0	-19	0	0.0	1-Sided Adj
xplanation:	Incremental COVI Catastrophic Even		•		uested for re	ecovery through a non-GRC
2021		0	-13	0	0.0	1-Sided Adj
cplanation:	Incremental COVI Catastrophic Even		•		uested for re	ecovery through a non-GRC
2021		0	-16	0	0.0	1-Sided Adj
planation:	Incremental COVI Catastrophic Even		•		uested for re	ecovery through a non-GRC
2021		0	0	0	0.0	1-Sided Adj
cplanation:	Incremental COVI Catastrophic Even		•		uested for re	ecovery through a non-GRC
2021		0	-1	0	0.0	1-Sided Adj
xplanation:	Incremental COVI Catastrophic Even				uested for re	ecovery through a non-GRC
2021		0	0	0	0.1	1-Sided Adj
cplanation:						st center 2100-0131 in work group ivity where costs reside.
2021		12	41	0	0.1	CCTR Transf From 2100-0703.000
xplanation:	center 2100-0703	in workpaper 1	ED002 Construc	tion Manage	ment to cost	tting department costs from cost center 2100-4096 in workpaper with where roles reside and are
2021		12	21	0	0.1	CCTR Transf From 2100-3986.000
ote: Totals ma	ay include rounding	differences.				

Area: ELECTRIC DISTRIBUTION

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>	Adj Type
Explanation:	Transfer labor, FTEs and Non-Lab center 2100-3986 in workpaper 1E 1ED007 Distribution Design and P forecated.	D002 Construc	tion Manage	ment to cost o	center 2100-4096 in workpaper
2021	43	27	0	0.7	CCTR Transf From 2100-4091.000
Explanation:	Transfer labor, FTEs and Non-Lab 2100-4091 in workpaper 1ED0014 Distribution Design and Project Maforecasted.	Major Projects	to cost cente	er 2100-0138	in workpaper 1ED007
2021	4	3	0	0.1	CCTR Transf From 2100-4092.000
Explanation:	Transfer labor, FTEs and Non-Lab 2100-4092 in workpaper 1ED0014 Distribution Design and Project Maforecasted.	Major Projects	to cost cente	er 2100-0138	in workpaper 1ED007
2021	0	-10	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment moving non group 1ED0007 Distribution Design			•	
2021	0	-9	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment moving non group 1ED0007 Distribution Design			_	
2021	-1	0	0	-0.1	1-Sided Adj
Explanation:	One-sided adjustment moving laboration 2100-0136 in work group 1ED0007 where costs reside.				
2021	0	-3	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment excluding S	pecial Billable c	osts entirely	or partially bi	lled to third parties.
2021	0	-1	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment excluding S	pecial Billable c	osts entirely	or partially bi	lled to third parties.
2021	0	-1	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment excluding S	pecial Billable c	osts entirely	or partially bi	lled to third parties.
2021	0	-1	0	0.0	1-Sided Adj
xplanation:	One-sided adjustment excluding S	pecial Billable c	osts entirely	or partially bi	lled to third parties.
2021	0	0	0	-0.1	1-Sided Adj
Explanation:	Exclude labor expenses associated other costs that have already been		•	,	
2021 Total	70	14	0	0.9	

Supplemental Workpapers for Workpaper 1ED007.000

TY2024 GRC FORECAST - DETAILS

						2022	2		202	3		2024			
Initiative/ Description	Labor/ Non-Labor	RAMP/ Non-RAMP	Unit Description	O&M/Capital Split		Cost per unit	Total cost	# of units	Cost per unit	Total cost	# of units	Cost per unit	Total cost	Total Cost	Explanation
WFP	Labor	Non-RAMP	FTEs	2%	4	\$ 85,000	\$ 1,700	4	\$ 85,000	\$ 6,800	4	\$ 85,000	\$ 6,800		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		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			\$ 85,000		4	\$ 85,000		\$ 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).
					1	Total	\$ 4,750			\$ 22,400			\$ 22,400	\$ 49,550	

ELECTRIC DISTRIBUTION Area:

Witness: Tyson J. Swetek

G. Electric Regional Operations Category:

1ED008.000 Workpaper:

Summary for Category: G. Electric Regional Operations

	Adjusted-Recorded		Adjusted-Forecast	
	2021	2022	2023	2024
Labor	23,984	24,840	25,958	27,722
Non-Labor	11,375	11,739	11,904	11,944
NSE	0	0	0	0
Total	35,359	36,579	37,862	39,666
FTE	159.2	167.8	178.9	196.6
Workpapers belonging	to this Category:			
1ED008.000 Electric R	Regional Operations			
Labor	23,984	24,840	25,958	27,722
Non-Labor	11,375	11,739	11,904	11,944
NSE	0	0	0	0
Total	35,359	36,579	37,862	39,666
FTE	159.2	167.8	178.9	196.6

In 2021\$ (000) Incurred Costs

Beginning of Workpaper
1ED008.000 - Electric Regional Operations

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											
		Adju	sted-Recor	Adjusted-Forecast									
Years	2017	2018	2019	2020	2021	2022	2023	2024					
Labor	21,799	22,719	23,191	28,636	23,984	24,841	25,959	27,723					
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					
Total	31,964	32,618	32,058	40,580	35,359	36,580	37,863	39,667					
FTE	160.9	159.7	166.6	191.1	159.2	167.8	178.9	196.6					

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek

Category: G. Electric Regional Operations
Category-Sub: 1. Electric Regional Operations

Workpaper: 1ED008.000 - Electric Regional Operations

Summary of Adjustments to Forecast:

	In 2021 \$(000) Incurred Costs											
Forecas	Forecast Method Base Forecast			st	Forec	ast Adjust	ments	Adjus	ted-Forec	ast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024		
Labor	Base YR Rec	23,984	23,984	23,984	856	1,974	3,738	24,840	25,958	27,722		
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		
Total		35,359	35,359	35,359	1,220	2,503	4,307	36,579	37,862	39,666		
FTE	Base YR Rec	159.2	159.2	159.2	8.6	19.7	37.4	167.8	178.9	196.6		

Forecast Adjustment Details:

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	Adj Type	
2022	856	364	0	1,220	8.6	1-Sided Adj	
Explanation:	Please see supplementa	l workpapers	for detailed ex	xplanation.			
2022 Total	856	364	0	1,220	8.6		
2023	1,974	529	0	2,503	19.7	1-Sided Adj	
Explanation:	Please see supplementa	l workpapers	for detailed ex	xplanation.			
2023 Total	1,974	529	0	2,503	19.7		
2024	3,738	569	0	4,307	37.4	1-Sided Adj	
Explanation:	Please see supplementa	l workpapers	for detailed ex	xplanation.			
2024 Total	3,738	569	0	4,307	37.4		

Area: ELECTRIC DISTRIBUTION

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Category: G. Electric Regional Operations
Category-Sub: 1. Electric Regional Operations

Workpaper: 1ED008.000 - Electric Regional Operations

Determination of Adjusted-Recorded (Incurred Costs):

Determination of Aujusteu-	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
Recorded (Nominal \$)*					
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
Total	27,454	26,589	28,376	42,221	43,017
FTE	144.9	132.1	143.5	179.4	136.5
djustments (Nominal \$) **					
Labor	-1,441	938	0	-3,490	-6
Non-Labor	-123	-414	-995	-3,388	-10,783
NSE	0	0	0	0	0
Total	-1,564	524	-995	-6,877	-10,789
FTE	-7.1	4.6	0.0	-15.2	-0.5
Recorded-Adjusted (Nomina	al \$)				
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
Total	25,890	27,113	27,381	35,344	32,227
FTE	137.8	136.8	143.5	164.2	135.9
acation & Sick (Nominal \$)					
Labor	2,524	2,752	2,745	3,446	3,132
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	2,524	2,752	2,745	3,446	3,132
FTE	23.1	22.9	23.1	26.9	23.3
scalation to 2021\$					
Labor	2,269	1,799	1,276	888	0
Non-Labor	1,281	953	656	903	0
NSE	0	0	0	0	0
Total	3,550	2,753	1,932	1,791	0
FTE	0.0	0.0	0.0	0.0	0.0
ecorded-Adjusted (Consta	nt 2021\$)				
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
Total	31,964	32,618	32,058	40,580	35,359
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

Area: ELECTRIC DISTRIBUTION

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

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					
	Total	-1,564	524	-995	-6,877	-10,789					
FTE		-7.1	4.6	0.0	-15.2	-0.5					

Detail of Adjustments to Recorded:

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	Adj Type	
2017	0	-6	0	0.0	1-Sided Adj	
Explanation:	Incremental costs that are anti Memorandum Account (CEMA	•	uested for red	covery throug	h a non-GRC Catastrophic Event	
2017	0	41	0	0.0	CCTR Transf From 2100-359	5.000
Explanation:	Electric Distribution costs that	were erroneously	mapped to T	IMP due to r	emapping rules.	
2017	-28	-7	0	-0.1	1-Sided Adj	
Explanation:	Incremental costs that are anti Memorandum Account (CEMA	•	uested for red	covery throug	h a non-GRC Catastrophic Event	
2017	-3	0	0	-0.1	1-Sided Adj	
Explanation:	Incremental costs that are anti Memorandum Account (CEMA	•	uested for red	covery throug	h a non-GRC Catastrophic Event	
2017	0	-5	0	0.0	1-Sided Adj	
Explanation:	Incremental costs that are anti Memorandum Account (CEMA		uested for red	covery throug	h a non-GRC Catastrophic Event	
2017	-37	-10	0	-0.2	1-Sided Adj	
Explanation:	Incremental costs that are anti Memorandum Account (CEMA		uested for red	covery throug	h a non-GRC Catastrophic Event	
2017	0	-9	0	0.0	1-Sided Adj	
Explanation:	Incremental costs that are anti Memorandum Account (CEMA	•	uested for red	covery throug	h a non-GRC Catastrophic Event	
2017	-728	-13	0	-3.3	1-Sided Adj	
Explanation:	Incremental costs that are anti Memorandum Account (CEMA	-	uested for red	covery throug	h a non-GRC Catastrophic Event	
2017	-227	-1	0	-1.0	1-Sided Adj	

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

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<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	Adj Type
Explanation:	Incremental costs that are anticipated Memorandum Account (CEMA).	to be reque	ested for recov	ery through	a non-GRC Catastrophic Event
2017	0	-2	0	0.0	1-Sided Adj
Explanation:	Incremental costs that are anticipated Memorandum Account (CEMA).	to be reque	ested for recov	ery through	a non-GRC Catastrophic Event
2017	-37	-6	0	-0.2	1-Sided Adj
Explanation:	Incremental costs that are anticipated Memorandum Account (CEMA).	to be reque	ested for recov	ery through	a non-GRC Catastrophic Event
2017	0	-2	0	-0.1	1-Sided Adj
Explanation:	Incremental costs that are anticipated Memorandum Account (CEMA).	to be reque	ested for recov	ery through	a non-GRC Catastrophic Event
2017	-108	-5	0	-0.5	1-Sided Adj
Explanation:	Incremental costs that are anticipated Memorandum Account (CEMA).	to be reque	ested for recov	ery through	a non-GRC Catastrophic Event
2017	-234	-2	0	-1.1	1-Sided Adj
Explanation:	Incremental costs that are anticipated Memorandum Account (CEMA).	to be reque	ested for recov	ery through	a non-GRC Catastrophic Event
2017	-5	-9	0	-0.1	1-Sided Adj
Explanation:	Incremental costs that are anticipated Memorandum Account (CEMA).	to be reque	ested for recov	ery through	a non-GRC Catastrophic Event
2017	0	0	0	-0.1	1-Sided Adj
Explanation:	Incremental costs that are anticipated Memorandum Account (CEMA).	to be reque	ested for recov	very through	a non-GRC Catastrophic Event
2017	-2	0	0	-0.1	1-Sided Adj
Explanation:	Incremental costs that are anticipated Memorandum Account (CEMA).	to be reque	ested for recov	very through	a non-GRC Catastrophic Event
2017	-30	-6	0	-0.2	1-Sided Adj
Explanation:	Incremental costs that are anticipated Memorandum Account (CEMA).	to be reque	ested for recov	very through	a non-GRC Catastrophic Event
2017	0	-4	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment to exclude \$35	23 related t	o Events and	Tickets.	
2017	0	0	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment excluding Spec	cial Billable	costs entirely	or partially b	oilled to third parties.
2017	0	-14	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment excluding Spec	cial Billable	costs entirely	or partially b	oilled to third parties.
2017	0	-9	0	0.0	1-Sided Adj

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Workpaper: 1ED008.000 - Electric Regional Operations

			•			
<u>Year</u>	Lab	or <u>N</u>	ILbr <u>1</u>	NSE	<u>FTE</u>	Adj Type
Explanation:	One-sided adjustment of	excluding Specia	l Billable costs	entirely or	partially bille	d to third parties.
2017		0	-14	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment e	excluding Specia	l Billable costs	entirely or	partially bille	d to third parties.
2017		0	-3	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment e	excluding Specia	l Billable costs	entirely or	partially bille	d to third parties.
2017		0	-25	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment e	excluding Specia	l Billable costs	entirely or	partially bille	d to third parties.
2017		0	-10	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment e	excluding Specia	I Billable costs	entirely or	partially bille	d to third parties.
2017		0	0	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment e	excluding Specia	I Billable costs	entirely or	partially bille	d to third parties.
2017		0	-1	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment e	excluding Specia	I Billable costs	entirely or	partially bille	d to third parties.
2017 Total	-1,4	141	-123	0	-7.1	
2018		5	-19	0	0.1	1-Sided Adj
Explanation:	Incremental costs that a Memorandum Account	•	be requested	for recove	ry through a i	non-GRC Catastrophic Event
2018		22	2	0	0.1	1-Sided Adj
Explanation:	Incremental costs that a Memorandum Account	•	be requested	for recove	ry through a i	non-GRC Catastrophic Event
2018		0	3	0	0.0	CCTR Transf From 2100-0122.000
Explanation:		076 in workpape				rkpaper 1ED001 Reliability and tions to align costs with where
2018	2	114	-9	0	1.9	1-Sided Adj
Explanation:	Incremental costs that a Memorandum Account	•	be requested	for recove	ry through a i	non-GRC Catastrophic Event
2018	2	207	-3	0	1.1	1-Sided Adj
Explanation:	Incremental costs that a Memorandum Account	•	be requested	for recove	ry through a i	non-GRC Catastrophic Event
2018		19	0	0	0.1	1-Sided Adj
Explanation:	Incremental costs that a Memorandum Account	•	be requested	for recove	ry through a i	non-GRC Catastrophic Event
2018		0	0	0	-0.1	1-Sided Adj

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workpaper.	January 5	- 1			
<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	Adj Type
Explanation:	Incremental costs that are anticipate Memorandum Account (CEMA).	ed to be reques	sted for recov	very through	a non-GRC Catastrophic Even
2018	50	1	0	0.2	1-Sided Adj
Explanation:	Incremental costs that are anticipate Memorandum Account (CEMA).	ed to be reques	sted for recov	very through	a non-GRC Catastrophic Even
2018	202	-3	0	1.0	1-Sided Adj
Explanation:	Incremental costs that are anticipate Memorandum Account (CEMA).	ed to be reques	sted for recov	ery through	a non-GRC Catastrophic Even
2018	2	2	0	0.1	1-Sided Adj
Explanation:	Incremental costs that are anticipate Memorandum Account (CEMA).	ed to be reques	sted for recov	ery through	a non-GRC Catastrophic Even
2018	0	-3	0	0.0	1-Sided Adj
Explanation:	Incremental costs that are anticipate Memorandum Account (CEMA).	ed to be reques	sted for recov	ery through	a non-GRC Catastrophic Even
2018	17	6	0	0.1	1-Sided Adj
Explanation:	Incremental costs that are anticipate Memorandum Account (CEMA).	ed to be reques	sted for recov	ery through	a non-GRC Catastrophic Even
2018	0	0	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment to exclude \$2	294 related to E	Events and T	ickets.	
2018	0	0	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment excluding Sp	ecial Billable c	osts entirely	or partially b	illed to third parties.
2018	0	-90	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment excluding Sp	ecial Billable c	osts entirely	or partially b	illed to third parties.
2018	0	-69	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment excluding Spe	ecial Billable c	osts entirely	or partially b	illed to third parties.
2018	0	-57	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment excluding Spe	ecial Billable c	osts entirely	or partially b	illed to third parties.
2018	0	-1	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment excluding Spe	ecial Billable c	osts entirely	or partially b	illed to third parties.
2018	0	-128	0	0.0	1-Sided Adj
	0 11 1 11 1 1 1 1 0	ecial Rillahle c	osts entirely	or partially b	illed to third parties.
Explanation:	One-sided adjustment excluding Sp	Colai Diliabic C	,		
Explanation: 2018	One-sided adjustment excluding Spi	-41	0	0.0	1-Sided Adj
		-41	0		•
2018	0	-41	0		•

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<u>Year</u>	Labo	<u>or</u>	<u>NLbr</u>	NSE	<u>FTE</u>	Adj Type
2018		0	-3	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment ex					•
2018 Total	9.	38	-414	0	4.6	
2019		0	19	0	-0.1	1-Sided Adj
Explanation:	Incremental costs that a Memorandum Account (to be request	ed for recove	ry through a	non-GRC Catastrophic Event
2019		0	2	0	0.0	CCTR Transf From 2100-3595.000
Explanation:	Electric Distribution cost	s that were er	roneously ma	pped to TIMF	due to rema	pping rules.
2019		0	0	0	-0.1	1-Sided Adj
Explanation:	Incremental costs that an Memorandum Account (-	to be request	ed for recove	ry through a	non-GRC Catastrophic Event
2019		0	16	0	0.0	CCTR Transf From 2100-0122.000
Explanation:		76 in workpap				rkpaper 1ED001 Reliability and tions to align costs with where
2019		0	0	0	0.1	1-Sided Adj
Explanation:	Incremental costs that an Memorandum Account (to be request	ed for recove	ry through a	non-GRC Catastrophic Event
2019		0	0	0	0.1	1-Sided Adj
explanation:	Incremental costs that a Memorandum Account (to be request	ed for recove	ry through a	non-GRC Catastrophic Event
2019		0	-4	0	0.0	1-Sided Adj
xplanation:	One-sided adjustment ex	xcluding Spec	cial Billable co	sts entirely or	partially bille	d to third parties.
2019		0	-274	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment ex	xcluding Spec	cial Billable co	sts entirely or	partially bille	d to third parties.
2019		0	-274	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment ex	xcluding Spec	cial Billable co	sts entirely or	partially bille	d to third parties.
2019		0	-87	0	0.0	1-Sided Adj
xplanation:	One-sided adjustment ex	xcluding Spec	cial Billable co	sts entirely or	partially bille	d to third parties.
2019		0	-5	0	0.0	1-Sided Adj
xplanation:	One-sided adjustment ex	xcluding Spec	cial Billable co	sts entirely or	partially bille	d to third parties.
0040		0	-249	0	0.0	1-Sided Adj
2019						
2019 Explanation:	One-sided adjustment ex	xcluding Spec		sts entirely or	partially bille	d to third parties.

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2019 0 -6 0 0.0 1-Sided Adj Explanation: One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties. 2019 0 -3 0 0.0 1-Sided Adj Explanation: One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties. 2019 Total 0 -995 0 0.0 2020 -60 0 0 0 -0.3 1-Sided Adj Explanation: 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 Explanation: 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 Explanation: 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 Explanation: 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 Explanation: 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 Explanation: 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 0.0 1-Sided Adj 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 0.0 1-Sided Adj 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 0 0 0 0 0 0 0 0 0 0 0 0	Workpaper.						
Explanation: 2019 One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties. 2019 Explanation: One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties. 2019 Explanation: One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties. 2019 Catastrophic Event Memorandum Account (CEMA). Explanation: Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA). Explanation: Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA). Explanation: Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA). Explanation: Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA). Explanation: Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA). 2020 Explanation: 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 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 0 0 0 0 0 1-Sided Adj Explanation: 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 0 1-Sided Adj Explanation: 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 0 1-Sided Adj Incremental COVID-rel	<u>Year</u>		<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	Adj Type
Explanation: One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties. 2019 0 -3 0 0.0 1-Sided Adj Explanation: One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties. 2019 Total 0 -995 0 0.0 Explanation: 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 Explanation: Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA). 2020 0 -44 0 0.0 1-Sided Adj Explanation: 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 Explanation: 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 Explanation: Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA). 2020 4-75 -57 0 -2.0 1-Sided Adj Explanation: 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 Explanation: 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 CCTR Transf From 2100-0122.00 Explanation: 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 Explanation: Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Cata	Explanation:	One-sided adjustme	ent excluding S	Special Billable co	osts entirely	or partially l	billed to third parties.
2019 0 -3 0 0.0 1-Sided Adj Explanation: One-sided adjustment excluding Special Billable costs entirely or partially billed to third parties. 2019 Total 0 -895 0 0.0 Explanation: 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 Explanation: 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 Explanation: 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 Explanation: 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 Explanation: 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 Explanation: 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 0.0 1-Sided Adj Explanation: 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 CCTR Transf From 2100-0122.00 Explanation: 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 Explanation: 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 Explanation: Incremental COVID-related costs	2019						,
Cone-sided adjustment excluding Special Billable costs entirely or partially billed to third parties. 2019 Total 0 995 0 0.0 Explanation: 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 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 Explanation: 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 Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA). 2020 Explanation: Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA). 2020 -475 -570 0 -2.0 1-Sided Adj 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 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 0 0 0 0 0 0 0 0 0 0 0 0	Explanation:	One-sided adjustme	ent excluding S	Special Billable co	osts entirely	or partially l	billed to third parties.
2019 Total 2020	2019		-	_			•
Explanation: Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA). 2020	Explanation:	One-sided adjustme	ent excluding S	Special Billable co	osts entirely		billed to third parties.
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 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 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 Explanation: 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 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 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 0 0 0 0 1-Sided Adj 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 0 0 0 0 0 0 0 0 0 0 0	2019 Total		0	-995	0	0.0	
Catastrophic Event Memorandum Account (CEMA). 2020	2020		-60	0	0	-0.3	1-Sided Adj
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 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 Explanation: 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 Explanation: 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 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 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 2100-0122.00 Explanation: Transfer Non-Labor associated with contract lineman for CC 2100-0122 in workpaper 1ED001 Reliability and Capacity to CC 2100-076 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 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 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 Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).	Explanation:			•		uested for r	ecovery through a non-GRC
Catastrophic Event Memorandum Account (CEMA). 2020	2020		-184	-648	0	-0.8	1-Sided Adj
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 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 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 0.0 1-Sided Adj 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 0.0 1-Sided Adj 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 2100-0122.00 Explanation: 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 Explanation: 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 Explanation: Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).	Explanation:			•		uested for r	ecovery through a non-GRC
Catastrophic Event Memorandum Account (CEMA). 2020 0 -570 0 0.0 1-Sided Adj Explanation: 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 Explanation: 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 0.0 1-Sided Adj Explanation: Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA). 2020 0 0 155 0 0.0 CCTR Transf From 2100-0122.00 Explanation: 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 Explanation: 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 Explanation: 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 Explanation: 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
Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA). 2020	Explanation:			•		uested for r	ecovery through a non-GRC
Catastrophic Event Memorandum Account (CEMA). 2020 -475 -57 0 -2.0 1-Sided Adj 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 0.0 1-Sided Adj 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 2100-0122.00 Explanation: 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 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 Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA). 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
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 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 2100-0122.00 Explanation: 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 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 Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).	Explanation:			•		uested for r	ecovery through a non-GRC
Catastrophic Event Memorandum Account (CEMA). 2020 0 0 0 0.0 1-Sided Adj 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 2100-0122.00 Explanation: 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 Explanation: 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 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
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 2100-0122.00 Explanation: 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 Explanation: 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 Explanation: Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).	Explanation:			•		uested for r	ecovery through a non-GRC
Catastrophic Event Memorandum Account (CEMA). 2020 0 155 0 0.0 CCTR Transf From 2100-0122.000 Explanation: 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 Explanation: 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 Explanation: 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
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 Explanation: 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 Explanation: Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).	Explanation:			•		uested for r	ecovery through a non-GRC
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 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 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
Explanation: 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 Explanation: Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).	Explanation:	Capacity to CC 210	0-0076 in worl	kpaper 1ED008.0			
Catastrophic Event Memorandum Account (CEMA). 2020 0 -1 0 0.0 1-Sided Adj Explanation: Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).	2020		-26	-380	0	-0.1	1-Sided Adj
Explanation: Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).	Explanation:					uested for r	ecovery through a non-GRC
Catastrophic Event Memorandum Account (CEMA).	2020		0	-1	0	0.0	1-Sided Adj
2020 -220 -17 0 -1.0 1-Sided Adj	Explanation:			•		uested for r	ecovery through a non-GRC
	2020		-220	-17	0	-1.0	1-Sided Adj

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek

Category: G. Electric Regional Operations
Category-Sub: 1. Electric Regional Operations

Workpaper: 1ED008.000 - Electric Regional Operations

vvorkpaper:	TED008.000 - Electric Regio	ла Орегацопѕ	'			
<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	Adj Type	
Explanation:	Incremental COVID-related costs Catastrophic Event Memorandum	•		uested for re	ecovery through a non-GRC	
2020	0	-386	0	0.0	1-Sided Adj	
Explanation:	Incremental COVID-related costs Catastrophic Event Memorandum	•		uested for re	ecovery through a non-GRC	
2020	-319	-116	0	-1.3	1-Sided Adj	
Explanation:	Incremental COVID-related costs Catastrophic Event Memorandum	•		uested for re	ecovery through a non-GRC	
2020	0	-52	0	0.0	1-Sided Adj	
Explanation:	Incremental COVID-related costs Catastrophic Event Memorandum	-		uested for re	ecovery through a non-GRC	
2020	-196	-91	0	-0.9	1-Sided Adj	
Explanation:	Incremental COVID-related costs Catastrophic Event Memorandum	-		uested for re	ecovery through a non-GRC	
2020	-162	-12	0	-0.7	1-Sided Adj	
Explanation:	Incremental COVID-related costs Catastrophic Event Memorandum	-		uested for re	ecovery through a non-GRC	
2020	0	0	0	0.0	1-Sided Adj	
Explanation:	Incremental COVID-related costs Catastrophic Event Memorandum	-		uested for re	ecovery through a non-GRC	
2020	-515	-13	0	-2.2	1-Sided Adj	
Explanation:	Incremental COVID-related costs Catastrophic Event Memorandum	-		uested for re	ecovery through a non-GRC	
2020	0	-2	0	0.0	1-Sided Adj	
Explanation:	Incremental COVID-related costs Catastrophic Event Memorandum	-		uested for re	ecovery through a non-GRC	
2020	0	-1	0	0.0	1-Sided Adj	
Explanation:	Incremental COVID-related costs Catastrophic Event Memorandum			uested for re	ecovery through a non-GRC	
2020	0	-4	0	0.0	1-Sided Adj	
Explanation:	Incremental COVID-related costs Catastrophic Event Memorandum	•		uested for re	ecovery through a non-GRC	
2020	-20	-1	0	-0.1	1-Sided Adj	
Explanation:	Incremental COVID-related costs Catastrophic Event Memorandum	•		uested for re	ecovery through a non-GRC	
2020	0	-59	0	0.0	1-Sided Adj	

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek

Category: G. Electric Regional Operations
Category-Sub: 1. Electric Regional Operations

Workpaper: 1ED008.000 - Electric Regional Operations

vvorkpaper.	TED000.000 - Electric Regional Oper	ations		
<u>Year</u>	Labor NLb	r NSE	FTE	Adj Type
Explanation:	Incremental COVID-related costs that are a Catastrophic Event Memorandum Account	nticipated to be	requested for recov	
2020	0 -2	2 0	0.0	1-Sided Adj
Explanation:	Incremental costs that are anticipated to be Memorandum Account (CEMA).	requested for re	ecovery through a no	on-GRC Catastrophic Event
2020	-49 -19	0	-0.2	1-Sided Adj
Explanation:	Incremental costs that are anticipated to be Memorandum Account (CEMA).	requested for re	ecovery through a no	on-GRC Catastrophic Event
2020	0 0	0	0.0	1-Sided Adj
Explanation:	Incremental costs that are anticipated to be Memorandum Account (CEMA).	requested for re	ecovery through a no	on-GRC Catastrophic Event
2020	-178	0	-0.7	1-Sided Adj
Explanation:	Incremental costs that are anticipated to be Memorandum Account (CEMA).	requested for re	ecovery through a no	on-GRC Catastrophic Event
2020	0 0	0	-0.1	1-Sided Adj
Explanation:	Incremental costs that are anticipated to be Memorandum Account (CEMA).	requested for re	ecovery through a no	on-GRC Catastrophic Event
2020	-219 -6	0	-0.9	1-Sided Adj
Explanation:	Incremental costs that are anticipated to be Memorandum Account (CEMA).	requested for re	ecovery through a no	on-GRC Catastrophic Event
2020	-160 -4			1-Sided Adj
Explanation:	Incremental costs that are anticipated to be Memorandum Account (CEMA).	requested for re	ecovery through a no	on-GRC Catastrophic Event
2020	-156 -6	0	-0.6	1-Sided Adj
Explanation:	Incremental costs that are anticipated to be Memorandum Account (CEMA).	requested for re	ecovery through a no	on-GRC Catastrophic Event
2020	0 0	0	-0.1	1-Sided Adj
Explanation:	Incremental costs that are anticipated to be Memorandum Account (CEMA).	requested for re	ecovery through a no	on-GRC Catastrophic Event
2020	-302 -151	0	-1.3	1-Sided Adj
Explanation:	Incremental costs that are anticipated to be Memorandum Account (CEMA).	requested for re	ecovery through a no	on-GRC Catastrophic Event
2020	-150 -71			1-Sided Adj
Explanation:	Incremental costs that are anticipated to be Memorandum Account (CEMA).	requested for re	ecovery through a no	on-GRC Catastrophic Event
2020	-63 -3	0	-0.3	1-Sided Adj

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek

Category: G. Electric Regional Operations
Category-Sub: 1. Electric Regional Operations

Workpaper: 1ED008.000 - Electric Regional Operations

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<u>Year</u>	<u>Labor</u> <u> </u>	NLbr	<u>NSE</u>	<u>FTE</u>	Adj Type
Explanation:	Incremental costs that are anticipated to Memorandum Account (CEMA).	o be requeste	ed for recove	ry through a r	non-GRC Catastrophic Event
2020	0	0	0	-0.1	1-Sided Adj
Explanation:	Incremental costs that are anticipated to Memorandum Account (CEMA).	o be requeste	ed for recove	ry through a r	non-GRC Catastrophic Event
2020	-12	0	0	-0.1	1-Sided Adj
Explanation:	Incremental costs that are anticipated to Memorandum Account (CEMA).	o be requeste	ed for recove	ry through a r	non-GRC Catastrophic Event
2020	0	0	0	0.0	1-Sided Adj
Explanation:	Incremental costs that are anticipated to Memorandum Account (CEMA).	o be requeste	ed for recove	ry through a r	non-GRC Catastrophic Event
2020	-23	-9	0	-0.2	CCTR Transf To 2100-4089.002
Explanation:	Transfer wildfire related to Asset Manager to Workpaper 1WM004 Asset Manager where they are reflected in the Wildfire	nent & Inspe	ctions in cos	t center 2100-	4089.002 to align costs
2020	0	0	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment to exclude \$154	related to Ev	ents and Tic	kets.	
2020	0	-5	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment excluding Specia	al Billable cos	sts entirely or	partially bille	d to third parties.
2020	0	-181	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment excluding Specia	al Billable cos	sts entirely or	partially bille	d to third parties.
2020	0	-205	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment excluding Specia	al Billable cos	sts entirely or	partially bille	d to third parties.
2020	0	-111	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment excluding Specia	al Billable cos	sts entirely or	partially bille	d to third parties.
2020	0	-270	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment excluding Specia	al Billable cos	sts entirely or	partially bille	d to third parties.
2020	0	-77	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment excluding Specia	al Billable cos	sts entirely or	partially bille	d to third parties.
2020	0	-3	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment excluding Specia	al Billable cos	sts entirely or	partially bille	d to third parties.
2020	0	-1	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment excluding Specia	al Billable cos	sts entirely or	partially bille	d to third parties.
2020 Total	-3,490 -3	3,388	0	-15.2	

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>	NLbr	NSE	FTE	Adj Type
2021	0		0	0.0	1-Sided Adj
planation:	Incremental costs that are anticip Memorandum Account (CEMA).				•
2021	-1	0	0	-0.1	1-Sided Adj
planation:	Incremental costs that are anticip Memorandum Account (CEMA).	ated to be reque	ested for reco	very through	a non-GRC Catastrophic Event
2021	0	0	0	0.0	1-Sided Adj
planation:	Incremental costs that are anticip Memorandum Account (CEMA).	ated to be reque	ested for reco	very through	a non-GRC Catastrophic Event
2021	0	-19	0	0.0	1-Sided Adj
oplanation:	Incremental costs that are anticip Memorandum Account (CEMA).	ated to be reque	ested for reco	very through	a non-GRC Catastrophic Event
2021	0	-764	0	-0.1	1-Sided Adj
cplanation:	Incremental COVID-related costs Catastrophic Event Memorandun	•		uested for re	ecovery through a non-GRC
2021	0	-5	0	-0.1	1-Sided Adj
planation:	Incremental COVID-related costs Catastrophic Event Memorandun			uested for re	ecovery through a non-GRC
2021	0	-716	0	0.0	1-Sided Adj
planation:	Incremental COVID-related costs Catastrophic Event Memorandun			uested for re	ecovery through a non-GRC
2021	-2	-1	0	-0.1	1-Sided Adj
xplanation:	Incremental COVID-related costs Catastrophic Event Memorandun			uested for re	ecovery through a non-GRC
0001	0	0	0	0.0	1-Sided Adj
2021			ated to be rec	uested for re	ecovery through a non-GRC
	Incremental COVID-related costs Catastrophic Event Memorandun			jacotoa ioi i	seerery amongs a new conte
		n Account (CEM			1-Sided Adj
xplanation: 2021	Catastrophic Event Memorandun	-367 s that are anticipa	A). 0 ated to be req	0.0	1-Sided Adj
xplanation:	Catastrophic Event Memorandun 0 Incremental COVID-related costs	-367 s that are anticipa	A). 0 ated to be req	0.0	1-Sided Adj
xplanation: 2021 xplanation:	Catastrophic Event Memorandun 0 Incremental COVID-related costs Catastrophic Event Memorandun	-367 s that are anticipa n Account (CEM) -4 s that are anticipa	A). 0 ated to be req A). 0 ated to be req	0.0 quested for re	1-Sided Adj ecovery through a non-GRC 1-Sided Adj
xplanation: 2021 xplanation: 2021	Catastrophic Event Memorandum 0 Incremental COVID-related costs Catastrophic Event Memorandum 0 Incremental COVID-related costs	-367 s that are anticipa n Account (CEM) -4 s that are anticipa	A). 0 ated to be req A). 0 ated to be req	0.0 quested for re	1-Sided Adj ecovery through a non-GRC 1-Sided Adj

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>	Adj Type
2021	0	-731	0	0.0	1-Sided Adj
xplanation:	Incremental COVID-related Catastrophic Event Memor		-	requested fo	r recovery through a non-GRC
2021	0	-89	0	0.0	1-Sided Adj
xplanation:	Incremental COVID-related Catastrophic Event Memor		•	requested fo	r recovery through a non-GRC
2021	0	-37	0	0.0	1-Sided Adj
xplanation:	Incremental COVID-related Catastrophic Event Memor		-	requested fo	r recovery through a non-GRC
2021	-2	-417	0	-0.1	1-Sided Adj
planation:	Incremental COVID-related Catastrophic Event Memor		•	requested fo	r recovery through a non-GRC
2021	0	-9	0	0.0	1-Sided Adj
xplanation:	Incremental COVID-related Catastrophic Event Memor		-	requested fo	r recovery through a non-GRC
2021	0	-	0	0.0	1-Sided Adj
planation:	Incremental COVID-related Catastrophic Event Memor			requested fo	r recovery through a non-GRC
2021	0	-1	0	0.0	1-Sided Adj
planation:	Incremental COVID-related Catastrophic Event Memor		-	requested fo	r recovery through a non-GRC
2021	0	-7	0	0.0	1-Sided Adj
xplanation:	Incremental COVID-related Catastrophic Event Memor		-	requested fo	r recovery through a non-GRC
2021	0	-3	0	0.0	1-Sided Adj
xplanation:	Incremental COVID-related Catastrophic Event Memor		-	requested fo	r recovery through a non-GRC
2021	0	-1	0	0.0	1-Sided Adj
xplanation:	Incremental COVID-related Catastrophic Event Memor		•	requested fo	r recovery through a non-GRC
2024	0	-3	0	0.0	1-Sided Adj
2021			icinated to be	requested fo	r recovery through a non-GRC
2021 xplanation:	Incremental COVID-related Catastrophic Event Memor			'	, 3
		andum Account (C		0.0	1-Sided Adj

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek

Category: G. Electric Regional Operations
Category-Sub: 1. Electric Regional Operations

Workpaper: 1ED008.000 - Electric Regional Operations

Year	Labor NLbr	NSE F	FTE Adj Type
2021	0 -23		0.0 1-Sided Adj
Explanation:	Incremental COVID-related costs that are ant Catastrophic Event Memorandum Account (C		ted for recovery through a non-GRC
2021	0 0	-	0.0 1-Sided Adj
Explanation:	One-sided adjustment to exclude \$280 relate	d to Events and Ticket	ets.
2021	0 -1	0 (0.0 1-Sided Adj
Explanation:	One-sided adjustment to exclude \$800 relate	d to Events and Ticket	ets.
2021	0 -299	0 (0.0 1-Sided Adj
Explanation:	One-sided adjustment excluding Special Billa	ble costs entirely or pa	partially billed to third parties.
2021	0 -188	0 0	0.0 1-Sided Adj
Explanation:	One-sided adjustment excluding Special Billa	ble costs entirely or pa	partially billed to third parties.
2021	0 -150	0 0	0.0 1-Sided Adj
Explanation:	One-sided adjustment excluding Special Billa	ble costs entirely or pa	partially billed to third parties.
2021	0 -1	0 0	0.0 1-Sided Adj
Explanation:	One-sided adjustment excluding Special Billa	ble costs entirely or pa	partially billed to third parties.
2021	0 -350	0 0	0.0 1-Sided Adj
Explanation:	One-sided adjustment excluding Special Billa	ble costs entirely or pa	partially billed to third parties.
2021	0 -64	0 0	0.0 1-Sided Adj
Explanation:	One-sided adjustment excluding Special Billa	ble costs entirely or pa	partially billed to third parties.
2021	0 -2	0 0	0.0 1-Sided Adj
Explanation:	One-sided adjustment excluding Special Billa	ble costs entirely or pa	partially billed to third parties.
2021	0 -69	0 (0.0 1-Sided Adj
Explanation:	One-sided adjustment excluding Special Billa	ble costs entirely or pa	partially billed to third parties.
2021	0 -5,564	0 0	0.0 1-Sided Adj
Explanation:	One-sided adjustment to remove non-labor as	ssociated with Capital	l related undergrounding costs.
2021	0 -846	0 0	0.0 1-Sided Adj
Explanation:	One-sided adjustment to remove non-labor as	ssociated with Capital	l related undergrounding costs.

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	2024 RAMP Range (2020 Incurred \$)	
				(2021 \$)	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	2021 Historical Embedded	2022 Forecast	2023 Forecast	2024 Forecast	2024 R Range A	
Measure	Activities	Activities	Activities	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:

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)
\circ	I UI CCASL	OUSL	Louinateo	140001

	2021 Historical Embedded Cost (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2024 RAMP Range	
					(2020 Inci Low	urred \$) 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.

	2021 Historical	2022	2023	2024	2024 F	
Unit of Measure	Embedded Activities	Forecast Activities	Forecast Activities	Forecast Activities	Range A	ctivities 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:

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 C	Cost Estimates	(\$000)
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	2021 Historical Embedded Cost	2022 Forecast	2023 Forecast	2024 Forecast	2024 RAMP R (2020 Inci	ange
	(2021 \$)	(2021 \$)	(2021 \$)	(2021 \$)	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	2021 Historical Embedded	2022 Forecast	2023 Forecast	2024 Forecast	2024 R Range A	
Measure	Activities	Activities	Activities	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:

Supplemental Workpapers for Workpaper 1ED008.000

SDG&E/ELECTRIC DISTRIBUTION/Exh No:SDG&E-12-WP-R-E/Witness: T. Swetek Page 125 of 222

TY2024 GRC FORECAST - DETAILS

					2022			2023			2024		Total Cost	
Initiative/Description	Labor/ Non-Labor	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	Total Cost	Explanation
RC - ERO Non-Lineman (2022-		FTEs	30%	16					\$ 750,000		·	\$ 1,020,000		Assumes department overhead 70% Capital/30% O&M. 2022 additions assuming May hire date (7/12 months).
RC - ERO 2021 Line Assistants pril 2021)	Labor	FTEs	30%	16	\$ 68.640	\$ 219,648	16	\$ 68,640	\$ 219.648	16	\$ 68,640	\$ 219,648		Assumes department overhead 70% Capital/30% O&M. 533hr for Lineman Assistant salary. 2021 Line Assistant class of 16 started April 2021 (8/12 months).
·		FTEs	30%	2		\$ 219,646		\$ 145,600	\$ 209.664		\$ 145,600	\$ 314.496		Assumes \$70hr for Lineman salary, attrition rate of 40% in 2022.
C - ERO 2022 Lineman (Mar)	Labor	FTEs	30%	2	\$ 145,600	\$ 78,624	5	\$ 145,600	\$ 209,664	7	\$ 145,600	\$ 314,496	\$ 602,784	Assumes beginning March (9/12 months), attrition rate of 40% in 2022.
RC - ERO Line Assistant Class May 2022)	Labor	FTEs	30%	14	\$ 68,640	\$ 172,973	28	\$ 68,640	\$ 584,813	43	\$ 145,600	\$ 1,869,504	\$ 2,627,290	Assumes \$33hr for Lineman Assistant salary, increases to \$70hr 2024. Assumes beginning May (7/12 months). Attrition rate of 40% in 2022.
	Labor					\$ 856,077			\$ 1,973,789			\$ 3,738,144	\$ 6,568,010	
RC - ERO Headcount Non-Labor	Non-Labor	FTE's	100%	16	\$ 5,000	\$ 80,000	-	\$ 5,000	\$ -		\$ 5,000	\$ -		Increased labor & non-labor primarily related to additional lineman. Assumes department overhead 70% Capital/30% O&M at 100k per FTE.
	Non-Labor	ea.	100%	20	\$ 10,000	\$ 200,000	20	\$ 10,000	\$ 200,000	20	\$ 10,000	\$ 200,000		program is to address the ongoing safety concerns of the increased rate of equipment failures, specifically caused by coastal climate contamination resulting in corrosion.
RO IIP Cloud Consumption	Non-Labor	mo.	100%	-	\$ -	\$ -	12	\$ 2,500	\$ 30,000	24	\$ 2,500	\$ 60,000		AWS Cloud Services monthly consumption costs for running AI and Machine Learning (ML) models for asset and damage detection.
RO IIP QA Review and occessing	Non-Labor	hr	100%	930	\$ 90	\$ 83,700	2,790	\$ 93	\$ 259,470	2,790	\$ 96	\$ 267,840	\$ 611,010	processing related to Intelligent Image Processing asset and damage model predictions. Assumes contractor rate of \$90/hr with 3% increase year over year.
RO IIP Fleet Image Data														Incremental contractors for driving related to Intelligent Image Processing fleet image capture. Assumes contract rate of \$80/hr with 3% increase
	Non-Labor Non-Labor	nr	100%	-	\$ -	\$ - \$ 363,700	500		\$ 40,000 \$ 529,470	500	\$ 82	\$ 41,000 \$ 568.840		year over year.
	Non-Labor Total					\$ 363,700			\$ 529,470			\$ 4,306,984		

San Diego Gas & Electric Company

2024 GRC - REVISED ERRATA
Non-Shared Service Workpapers

In 2021\$ (000) Incurred Costs

Adjusted-Forecast

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek

Category: H. Skills & Compliance Training

Workpaper: VARIOUS

Summary for Category: H. Skills & Compliance Training

Adjusted-Recorded

L	2021	2022	2023	2024
Labor	1,064	1,064	1,064	1,064
Non-Labor	1,775	2,419	2,419	2,419
NSE	0	0	0	0
Total	2,839	3,483	3,483	3,483
FTE	8.0	8.0	8.0	8.0
Workpapers belonging t	o this Category:			
1ED009.000 Skills & C	ompliance Training			
Labor	798	798	798	798
Non-Labor	1,100	1,744	1,744	1,744
NSE	0	0	0	0
Total	1,898	2,542	2,542	2,542
FTE	5.4	5.4	5.4	5.4
1ED009.001 Skills & C	ompliance Training (TNG)			
Labor	266	266	266	266
Non-Labor	675	675	675	675
NSE	0	0	0	0
Total	941	941	941	941
FTE	2.6	2.6	2.6	2.6

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

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								
		Adju	ısted-Recor	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	1,744	1,744	1,744		
NSE	0	0	0	0	0	0	0	0		
Total	995	851	1,359	1,442	1,898	2,542	2,542	2,542		
FTE	6.2	4.9	6.3	6.9	5.4	5.4	5.4	5.4		

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										
Forecas	t Method	Base Forecast			Forec	Forecast Adjustments			Adjusted-Forecast		
Years	s	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	644	644	644	1,744	1,744	1,744	
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0	
Tota	al	1,898	1,898	1,898	644	644	644	2,542	2,542	2,542	
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:

Forecast Adjustment Details:									
<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	Adj Type			
2022	0	149	0	149	0.0	1-Sided Adj			
Explanation:	The increase in non labor for Industrial Athletic Program is to support the on-boarding of three contracts @ \$165K/contract with a 70% capital / 30% O&M split for industrial athletic trainers to support SDGE's vision of "Building a Better Lineman" by extending the Skills training program to include the entire workforce within the Electric Distribution Operations.								
2022	0	495	0	495	0.0	1-Sided Adj			
Explanation:	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.								
2022 Total	0	644	0	644	0.0				
2023	0	149	0	149	0.0	1-Sided Adj			
Explanation:	The increase in non labor for Industrial Athletic Program is to support the on-boarding of three contracts @ \$165K/contract with a 70% capital / 30% O&M split for industrial athletic trainers to support SDGE's vision of "Building a Better Lineman" by extending the Skills training program to include the entire workforce within the Electric Distribution Operations.								
	include the entire workto	rce within the	Electric Distri	bution Opera	tions.				
2023	include the entire workto	orce within the 495	Electric Distri 0	bution Opera 495	tions.	1-Sided Adj			
2023 Explanation:		495 or for Electrica stracted qualifi ur first respond	0 I Hazard Awaı ed electrical v ders, public w	495 reness in Mur vorker instruc	0.0 nicipalities is to tors to support	support the public safety outreach			
	0 The increase in non labor on-boarding of three cor in an effort to educate or	495 or for Electrica stracted qualifi ur first respond	0 I Hazard Awaı ed electrical v ders, public w	495 reness in Mur vorker instruc	0.0 nicipalities is to tors to support	support the public safety outreach			

Note: Totals may include rounding differences.

Distribution Operations.

0

495

Explanation:

2024

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

0

495

0.0

1-Sided Adj

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek

2024 Total

Category: H. Skills & Compliance Training
Category-Sub: 1. Skills & Compliance Training

Workpaper: 1ED009.000 - Skills & Compliance Training

0

644

Year Labor NLbr NSE Total FTE Adj_Type

Explanation: 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.

644

0.0

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek

Category: H. Skills & Compliance Training
Category-Sub: 1. Skills & Compliance Training

Workpaper: 1ED009.000 - Skills & Compliance Training

Determination of Adjusted-Recorded (Incurred Costs):

•	ecorded (Incurred Cos 2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
ecorded (Nominal \$)*	,	,	,		,
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
Total	2,109	1,942	2,988	3,972	1,799
FTE	14.3	12.4	16.3	19.6	4.6
djustments (Nominal \$) **					
Labor	-1,089	-1,024	-1,387	-1,885	0
Non-Labor	-223	-216	-423	-828	-6
NSE	0	0	0	0	0
Total	-1,312	-1,239	-1,810	-2,713	-6
FTE	-9.0	-8.1	-10.9	-13.6	0.0
Recorded-Adjusted (Nominal \$	5)				
Labor	603	513	668	834	693
Non-Labor	195	189	510	424	1,100
NSE	0	0	0	0	0
Total	797	702	1,178	1,259	1,793
FTE	5.3	4.3	5.4	5.9	4.6
acation & Sick (Nominal \$)					
Labor	89	78	96	118	104
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	89	78	96	118	104
FTE	0.9	0.6	0.9	1.0	0.8
scalation to 2021\$					
Labor	80	51	44	30	0
Non-Labor	28	20	41	35	0
NSE	0	0	0	0	0
Total	109	71	85	65	0
FTE	0.0	0.0	0.0	0.0	0.0
ecorded-Adjusted (Constant	2021\$)				
Labor	773	642	809	983	798
Non-Labor	223	209	551	459	1,100
NSE	0	0	0	0	0
Total	995	851	1,359	1,442	1,898
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

ELECTRIC DISTRIBUTION Area:

Tyson J. Swetek Witness:

H. Skills & Compliance Training Category: 1. Skills & Compliance Training Category-Sub:

1ED009.000 - Skills & Compliance Training Workpaper:

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				
	Total	-1,312	-1,239	-1,810	-2,713	-6				
FTE		-9.0	-8.1	-10.9	-13.6	0.0				

Detail of Adjus	tments to Recorded:	:				
<u>Year</u>		<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	Adj Type
2017		-483	-87	0	-3.6	1-Sided Adj
Explanation:	2100-0043 in work g	group 1ED0009 Sk	ills and Comp	liance Tng to	the Training	rith Training from cost center Capital Pool to align activity ital pool assuming 70%
2017		-100	-5	0	-1.1	1-Sided Adj
Explanation:	2100-0205 in work g	group 1ED0009 Sk	ills and Comp	liance Tng to	the Training	rith Training from cost center Capital Pool to align activity ital pool assuming 70%
2017		-286	-10	0	-2.1	1-Sided Adj
Explanation:	2100-3643 in work (group 1ED0009 Sk	ills and Comp	liance Tng to	the Training	oth Training from cost center Capital Pool to align activity ital pool assuming 70%
2017		-220	-121	0	-2.2	1-Sided Adj
Explanation:	2100-3850 in work g	group 1ED0009 Sk	ills and Comp	liance Tng to	the Training	rith Training from cost center Capital Pool to align activity ital pool assuming 70%
2017 Total		-1,089	-223	0	-9.0	

2017 Total	-1,089	-223	0	-9.0		
2018	-543	-134	0	-3.9	1-Sided Adj	

Explanation: 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.

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek

Category: H. Skills & Compliance Training
Category-Sub: 1. Skills & Compliance Training

Workpaper: 1ED009.000 - Skills & Compliance Training

Year	Labor	NLbr	<u>NSE</u>	FTE	Adj Type
2018 Explanation:	-31	-1	0 on-labor cos	-0.3 ts associated	1-Sided Adj d with Training from cost center
		0009 Skills and Com	npliance Tng	to the Train	ing Capital Pool to align activity
2018	-223	-38	0	-1.6	1-Sided Adj
Explanation:	-	0009 Skills and Con	npliance Tng	to the Train	d with Training from cost center ing Capital Pool to align activity capital pool assuming 70%
2018	-227	-43	0	-2.3	1-Sided Adj
Explanation:	-	0009 Skills and Con	npliance Tng	to the Train	d with Training from cost center ing Capital Pool to align activity capital pool assuming 70%
2018 Total	-1,024	-216	0	-8.1	
2019	-1,143	-376	0	-8.7	1-Sided Adj
Explanation:	-	0009 Skills and Con	npliance Tng	to the Train	d with Training from cost center ing Capital Pool to align activity capital pool assuming 70%
2019	-55	-1	0	-0.4	1-Sided Adj
Explanation:	-	0009 Skills and Con	npliance Tng	to the Train	d with Training from cost center ing Capital Pool to align activity capital pool assuming 70%
2019	-190	-46	0	-1.8	1-Sided Adj
Explanation:		0009 Skills and Com	npliance Tng	to the Train	d with Training from cost center ing Capital Pool to align activity capital pool assuming 70%
2019 Total	-1,387	-423	0	.10.9	
2020	-65	-294	0	-0.3	1-Sided Adj
Explanation:	Incremental COVID-related co Catastrophic Event Memorano	•		uested for re	ecovery through a non-GRC
2020	0	-1	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-related co Catastrophic Event Memorano	•		uested for re	ecovery through a non-GRC

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>FTE</u>	Adj Type		
2020	0	-19	0	0.0	1-Sided Adj		
Explanation:	Incremental COVID-related Catastrophic Event Memora		-	requested for	r recovery through a non-GRC		
2020	-1	0	0	-0.3	1-Sided Adj		
Explanation:	Removal of capital settleme Overhead.	nt portion to accura	ately reflect (D&M and cap	ital balances for 2020 Department		
2020	-1,475	-449	0	-9.8	1-Sided Adj		
Explanation:	2100-0043 in work group 1E	D0009 Skills and	Compliance ²	Tng to the Tr	ated with Training from cost center aining Capital Pool to align activity ng capital pool assuming 70%		
2020	-143	-1	0	-1.5	1-Sided Adj		
Explanation:	2100-0205 in work group 1E	D0009 Skills and	Compliance ²	Tng to the Tr	ated with Training from cost center aining Capital Pool to align activity ng capital pool assuming 70%		
2020	-200	-66	0	-1.7	1-Sided Adj		
Explanation:	2100-3850 in work group 1E	D0009 Skills and	Compliance ³	Tng to the Tr	ated with Training from cost center aining Capital Pool to align activity ng capital pool assuming 70%		
2020 Total	-1,885	-828	0	·13.6			
2021	0	-3	0	0.0	1-Sided Adj		
Explanation:	Incremental COVID-related Catastrophic Event Memora		-	requested fo	r recovery through a non-GRC		
2021	0	0	0	0.0	1-Sided Adj		
Explanation:	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		
Explanation:	Incremental COVID-related Catastrophic Event Memora		-	requested for	r recovery through a non-GRC		
2021 Total	0	-6	0	0.0			

ELECTRIC DISTRIBUTION Area:

Witness: Tyson J. Swetek

Category: H. Skills & Compliance Training 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	2022 Forecast	2023 Forecast	2024 Forecast	2024 RAMP R (2020 Inci	ange
	(2021 \$)	(2021 \$)	(2021 \$)	(2021 \$)	Low	High
Tranche 1 Cost Estimate	0	149	149	149	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	2021 Historical Embedded	2022 Forecast	2023 Forecast	2024 Forecast	2024 RA Range Act	
Measure	Activities	Activities	Activities	Activities	Low	High
Tranche 1 # of contract employees	0.00	0.90	0.90	0.90	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).

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek

Category: H. Skills & Compliance Training
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	2022	2023	202
	F	F4	-

24 **RAMP Range** (2020 Incurred \$) **Embedded Cost Forecast Forecast Forecast** (2021 \$)(2021 \$)(2021 \$)(2021 \$)Low High 1,689 2,045 Tranche 1 Cost Estimate 113 113 113 113

2024

Cost Estimate Changes from RAMP:

Skills portion of RAMP item.

GRC Work Unit/Activity Level Estimates

Unit of	2021 Historical Embedded	2022 Forecast	2023 Forecast	2024 Forecast	2024 R Range A	
Measure	Activities	Activities	Activities	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:

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

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								
		Adju	ısted-Recor	ded		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	
Total	218	255	330	370	941	941	941	941	
FTE	1.1	1.4	1.8	2.0	2.6	2.6	2.6	2.6	

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			Forec	ast Adjust	ments	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
Total		941	941	941	0		0	941	941	941
FTE	Base YR Rec	2.6	2.6	2.6	0.0	0.0	0.0	2.6	2.6	2.6

<u>Year Labor NLbr NSE Total FTE</u>	Adj Type	
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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):

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

ELECTRIC DISTRIBUTION Area:

Witness: Tyson J. Swetek

H. Skills & Compliance Training Category: 1. Skills & Compliance Training Category-Sub:

1ED009.001 - Skills & Compliance Training (TNG) Workpaper:

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
	Total	-89	-73	-152	-122	-10
FTE		-0.5	-0.6	-1.4	-1.2	0.0

Detail of Adjust	ments to Recorded:					
Year		Labor	NLbr	NSE	FTE	Adj Type
2017		-66	-24	0	-0.5	1-Sided Adj
Explanation:		nt moving 70% of	labor and non	-labor costs	associated w	rith Training from cost center 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 Total		-66	-24	0	-0.5	
2018		-53	-20	0	-0.6	1-Sided Adj
Explanation:	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.					
2018 Total		-53	-20	0	-0.6	
2019		-127	-25	0	-1.4	1-Sided Adj
Explanation:	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.					
2019 Total		-127	-25	0	-1.4	
2020		-4	-3	0	-0.1	1-Sided Adj
Explanation:	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
Explanation:	Removal of capital settlement portion to accurately reflect O&M and capital balances for 2020 Department Overhead.					alances for 2020 Department

Note: Totals may include rounding differences.

-69

2020

0

-0.9

1-Sided Adj

-14

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>	Adj Type	
Explanation:	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.						
2020 Total		-98	-24	0	-1.2		
2021		0	-10	0	0.0	1-Sided Adj	
Explanation:	Incremental COVII Catastrophic Even		•		quested for re	covery through a non-GRC	
2021		0	0	0	0.0	1-Sided Adj	
Explanation:	One-sided adjustm	ent to exclude	\$199 related to E	vents and 1	Γickets.		
2021 Total		0	-10	0	0.0		

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

<u>GRC</u>	Forecast	Cost	Estimates	<u>(\$000)</u>

	2021 Historical Embedded Cost	2022 Forecast	2023 Forecast	2024 Forecast	2024 RAMP Ra (2020 Incu	ange
	(2021 \$)	(2021 \$)	(2021 \$)	(2021 \$)	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	2021 Historical Embedded	2022 Forecast	2023 Forecast	2024 Forecast	2024 R Range Ad	ctivities
Measure	Activities	Activities	Activities	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).

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek

Category: I. Service Order Team (SOT)

Workpaper: 1ED010.000

FTE

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

Adjusted-Recorded

11.3

2021

		-		
Labor	881	889	889	889
Non-Labor	3,180	3,180	3,180	3,180
NSE	0	0	0	0
Total	4,061	4,069	4,069	4,069
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
Total	4,061	4,069	4,069	4,069

11.4

2022

In 2021\$ (000) Incurred Costs

Adjusted-Forecast

11.4

2024

11.4

2023

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

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								
		Adju	ısted-Recor	ded		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		
Total	1,559	2,095	1,823	2,098	4,061	4,069	4,069	4,069		
FTE	-0.2	2.1	0.2	0.7	11.3	11.4	11.4	11.4		

ELECTRIC DISTRIBUTION Area:

Witness: Tyson J. Swetek

I. Service Order Team (SOT) Category: Category-Sub: 1. Service Order Team (SOT)

Workpaper: 1ED010.000 - Service Order Team (SOT)

Summary of Adjustments to Forecast:

	In 2021 \$(000) Incurred Costs									
Forecas	Forecast Method Base Forecast Forecast Adjustme			ments	Adjusted-Forecast					
Years	s	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
Tota	ıl	4,061	4,061	4,061	8	8	8	4,069	4,069	4,069
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:									
<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	Adj Type			
2022	8	0	0	8	0.1	1-Sided Adj			
Explanation:	unmetered services CIPS	ncreased 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.							
2022 Total	8	0	0	8	0.1				
2023	8	0	0	8	0.1	1-Sided Adj			
Explanation:	Increased labor related to unmetered services CIPS upgraded installs. 98% C	G 5G network,	solar installa	itions, remodel					
2023 Total	8	0	0	8	0.1				
2024	8	0	0	8	0.1	1-Sided Adj			
Explanation:	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.								
2024 Total	8	0	0	8	0.1				

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):

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

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					
	Total	-18	-84	-188	-188	-176					
FTE		-0.5	0.2	0.0	-0.2	0.0					

Detail of Adjustments to Recorded:

<u>Year</u>	<u>Labor</u> <u>N</u>	Lbr N	<u>SE</u>	<u>FTE</u>	Adj Type
2017	-1	0	0	-0.1	1-Sided Adj
Explanation:	Incremental costs that are anticipated to Memorandum Account (CEMA).	be requested t	or recover	y through a n	on-GRC Catastrophic Event
2017	-1	0	0	-0.1	1-Sided Adj
Explanation:	Incremental costs that are anticipated to Memorandum Account (CEMA).	be requested f	or recover	y through a n	on-GRC Catastrophic Event
2017	0	0	0	-0.1	1-Sided Adj
Explanation:	Incremental costs that are anticipated to Memorandum Account (CEMA).	be requested t	or recover	y through a n	on-GRC Catastrophic Event
2017	-2	0	0	-0.1	1-Sided Adj
Explanation:	Incremental costs that are anticipated to Memorandum Account (CEMA).	be requested f	or recover	y through a n	on-GRC Catastrophic Event
2017	-1	0	0	-0.1	1-Sided Adj
Explanation:	Incremental costs that are anticipated to Memorandum Account (CEMA).	be requested f	or recover	y through a n	on-GRC Catastrophic Event
2017	0	-1	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment excluding Special	Billable costs	entirely or	partially billed	d to third parties.
2017	0	-1	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment excluding Special	Billable costs	entirely or	partially billed	d to third parties.
2017	0	-1	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment excluding Special	Billable costs	entirely or	partially billed	d to third parties.
2017	0	-6	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment excluding Special	Billable costs	entirely or	partially billed	d to third parties.
2017	0	-4	0	0.0	1-Sided Adj

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>	Adj Type
Explanation:	One-sided adjustment excluding	ng Special Billable co	sts entirely	or partially b	illed to third parties.
2017 Total	-5	-13	0	-0.5	
2018	1	0	0	0.1	1-Sided Adj
Explanation:	Incremental costs that are anti- Memorandum Account (CEMA	•	ed for reco	very through	a non-GRC Catastrophic Even
2018	1	0	0	0.1	1-Sided Adj
Explanation:	Incremental costs that are antion Memorandum Account (CEMA	•	ed for reco	very through	a non-GRC Catastrophic Even
2018	0	-17	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment excluding	ng Special Billable co	sts entirely	or partially b	illed to third parties.
2018	0	-7	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment excluding	ng Special Billable co	sts entirely	or partially b	illed to third parties.
2018	0	-6	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment excluding	ng Special Billable co	sts entirely	or partially b	illed to third parties.
2018	0	-25	0	0.0	1-Sided Adj
xplanation:	One-sided adjustment excluding	ng Special Billable co	sts entirely	or partially b	illed to third parties.
2018	0	-30	0	0.0	1-Sided Adj
xplanation:	One-sided adjustment excluding	ng Special Billable co	sts entirely	or partially b	illed to third parties.
2018 Total	1	-85	0	0.2	
2019	0	0	0	0.0	1-Sided Adj
xplanation:	One-sided adjustment to exclu	de \$3 related to Ever	nts and Tick	kets.	
2019	0	-24	0	0.0	1-Sided Adj
xplanation:	One-sided adjustment excluding	ng Special Billable co	sts entirely	or partially b	illed to third parties.
2019	0	-20	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment excluding	ng Special Billable co	sts entirely	or partially b	illed to third parties.
2019	0	-18	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment excluding	ng Special Billable co	sts entirely	or partially b	illed to third parties.
2019	0	-52	0	0.0	1-Sided Adj
xplanation:	One-sided adjustment excluding	ng Special Billable co	sts entirely	or partially b	illed to third parties.
2019	0	-74	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment excludir	ng Special Billable co	sts entirely	or partially b	illed to third parties.
2019 Total	0	-188	0	0.0	
2020	0	-3	0	0.0	1-Sided Adj

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)

vvorkpaper:	1ED010.000 - Servic	e Order Team	(801)			
<u>Year</u>	<u>Labor</u>	<u>NI</u>	<u>Lbr</u> <u>N</u>	ISE	<u>FTE</u>	Adj Type
Explanation:	Incremental COVID-related Catastrophic Event Memor		•	o be reques	sted for recov	ery through a non-GRC
2020	0		-3	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-related Catastrophic Event Memor		-	o be reques	sted for recov	ery through a non-GRC
2020	0		-1	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-related Catastrophic Event Memor		-	o be reques	sted for recov	ery through a non-GRC
2020	0		-2	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-related Catastrophic Event Memor		-	o be reques	sted for recov	ery through a non-GRC
2020	0		-14	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-related Catastrophic Event Memor		-	o be reques	sted for recov	ery through a non-GRC
2020	-1		0	0	-0.1	1-Sided Adj
Explanation:	Incremental costs that are Memorandum Account (CE	-	be requested	for recovery	y through a n	on-GRC Catastrophic Event
2020	0		0	0	-0.1	1-Sided Adj
Explanation:	Incremental costs that are Memorandum Account (CE	-	be requested	for recover	y through a n	on-GRC Catastrophic Event
2020	0		-2	0	0.0	1-Sided Adj
Explanation:	Removal of capital settlem Overhead.	ent portion to a	accurately refl	ect O&M ar	nd capital bal	ances for 2020 Department
2020	0		-28	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment exc	luding Special	Billable costs	entirely or	partially billed	I to third parties.
2020	0		-14	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment exc	luding Special	Billable costs	entirely or	partially billed	I to third parties.
2020	0		-29	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment exc	luding Special	Billable costs	entirely or	partially billed	I to third parties.
2020	0		-44	0		1-Sided Adj
Explanation:	One-sided adjustment exc	luding Special	Billable costs	entirely or	partially billed	I to third parties.
2020	0		-49	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment exc	luding Special	Billable costs	entirely or	partially billed	I to third parties.
2020 Total	-1		187	0	-0.2	
2021	0		-2	0	0.0	1-Sided Adj

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>	Adj Type
Explanation:	Incremental COVID-related costs tha Catastrophic Event Memorandum Ac	•		uested for re	ecovery through a non-GRC
2021	0	-5	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-related costs tha Catastrophic Event Memorandum Ac	•	•	uested for re	ecovery through a non-GRC
2021	0	-1	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-related costs tha Catastrophic Event Memorandum Ac	•	•	uested for re	ecovery through a non-GRC
2021	0	-3	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-related costs tha Catastrophic Event Memorandum Ac	•	•	uested for re	ecovery through a non-GRC
2021	0	-4	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-related costs tha Catastrophic Event Memorandum Ac	•	•	uested for re	ecovery through a non-GRC
2021	0	-26	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment excluding Spe	cial Billable	costs entirely	or partially b	oilled to third parties.
2021	0	-15	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment excluding Spe	cial Billable	costs entirely	or partially b	oilled to third parties.
2021	0	-21	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment excluding Spe	cial Billable	costs entirely	or partially b	oilled to third parties.
2021	0	-63	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment excluding Spe	cial Billable	costs entirely	or partially b	oilled to third parties.
2021	0	-36	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment excluding Spe	cial Billable	costs entirely	or partially b	oilled to third parties.
2021 Total	0	-176	0	0.0	

In 2021\$ (000) Incurred Costs

Adjusted-Forecast

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek
Category: J. Electric Engineering

Workpaper: VARIOUS

Summary for Category: J. Electric Engineering

Adjusted-Recorded

	2021	2022	2023	2024
Labor	540	558	582	590
Non-Labor	1,545	1,606	1,606	1,606
NSE	0	0	0	0
Total	2,085	2,164	2,188	2,196
FTE	4.7	4.8	5.0	5.1
Workpapers belonging	to this Category:			
1ED012.000 Electric E	Engineering			
Labor	521	539	563	571
Non-Labor	1,497	1,558	1,558	1,558
NSE	0	0	0	0
Total	2,018	2,097	2,121	2,129
FTE	4.5	4.6	4.8	4.9
1ED012.001 Electric E	Engineering (TNG)			
Labor	19	19	19	19
Non-Labor	48	48	48	48
NSE	0	0	0	0
Total	67	67	67	67
FTE	0.2	0.2	0.2	0.2

Beginning of Workpaper
1ED012.000 - Electric Engineering

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek
Category: J. Electric Engineering

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

ln/A

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek
Category: J. Electric Engineering
Category-Sub 1. Electric Engineering

Workpaper: 1ED012.000 - Electric Engineering

Summary of Results:

	In 2021\$ (000) Incurred Costs										
		Adju	sted-Recor	Adjusted-Forecast							
Years	2017	2018	2019	2020	2021	2022	2023	2024			
Labor	665	628	520	561	521	539	563	571			
Non-Labor	1,054	950	443	1,281	1,497	1,558	1,558	1,558			
NSE	0	0	0	0	0	0	0	0			
Total	1,719	1,577	964	1,842	2,017	2,097	2,121	2,129			
FTE	5.6	5.4	4.7	4.5	4.5	4.6	4.8	4.9			

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 202	1 \$(000) li	ncurred Co	sts				
Forecast Method Base		se Foreca	e Forecast		ast Adjust	ments	Adjusted-Forecast			
Year	s	2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	Base YR Rec	521	521	521	18	42	50	539	563	571
Non-Labor	Base YR Rec	1,497	1,497	1,497	61	61	61	1,558	1,558	1,558
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
Tota	al	2,017	2,017	2,017	79	103	111	2,096	2,120	2,128
FTE	Base YR Rec	4.5	4.5	4.5	0.1	0.3	0.4	4.6	4.8	4.9

Forecast Adjustment Details:

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	Adj Type						
2022	18	61	0	79	0.1	1-Sided Adj						
Explanation:	Please see supplemen	tal workpapers t	for detailed ex	planation.								
2022 Total	18	61	0	79	0.1							
2023	40	61	0	101	0.2	1-Sided Adj						
Explanation:	Please see supplemen	Please see supplemental workpapers for detailed explanation.										
2023	2	0	0	2	0.1	1-Sided Adj						
Explanation:	RAMP CFF-1 Asset Ma	nagement, ID:	1 AIM (Gov, S	Strat, AIP)								
2023 Total	42	61	0	103	0.3							
2024	46	61	0	107	0.3	1-Sided Adj						
Explanation:	Please see supplemen	tal workpapers t	for detailed ex	planation.								
2024	4	0	0	4	0.1	1-Sided Adj						
Explanation:	RAMP CFF-1 Asset Ma	nagement, ID:	1 AIM (Gov, S	Strat, AIP)								
2024 Total	50	61	0	111	0.4							

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek

Category: J. Electric Engineering
Category-Sub: 1. Electric Engineering

Workpaper: 1ED012.000 - Electric Engineering

Determination of Adjusted-Recorded (Incurred Costs):

communition of Aujustea	i-Recorded (incurred Cos 2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
corded (Nominal \$)*					
Labor	519	502	436	476	453
Non-Labor	1,135	2,010	413	1,550	1,857
NSE	0	0	0	0	0
Total	1,654	2,512	849	2,026	2,310
FTE	5.0	4.8	4.2	4.0	3.7
ljustments (Nominal \$) **	•				
Labor	0	0	-6	0	0
Non-Labor	-214	-1,152	-3	-366	-360
NSE	0	0	0	0	0
Total	-214	-1,152	-8	-366	-360
FTE	-0.2	-0.2	-0.1	-0.1	0.0
ecorded-Adjusted (Nomin	nal \$)				
Labor	519	502	430	476	453
Non-Labor	921	858	411	1,184	1,497
NSE	0	0	0	0	0
Total	1,440	1,360	841	1,660	1,949
FTE	4.8	4.6	4.1	3.9	3.8
cation & Sick (Nominal \$	S)				
Labor	77	76	62	67	68
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	77	76	62	67	68
FTE	0.8	0.8	0.6	0.6	0.7
calation to 2021\$					
Labor	69	50	29	17	0
Non-Labor	133	91	33	97	0
NSE	0	0	0	0	0
Total	202	141	61	114	0
FTE	0.0	0.0	0.0	0.0	0.0
ecorded-Adjusted (Consta	ant 2021\$)				
Labor	665	628	520	561	521
Non-Labor	1,054	950	443	1,281	1,497
NSE	0	0	0	0	0
Total	1,719	1,577	964	1,842	2,017
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

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 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				
	Total	-214	-1,152	-8	-366	-360				
FTE		-0.2	-0.2	-0.1	-0.1	0.0				

Detail of Adjustments to Recorded:

<u>Year</u>		<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	Adj Type					
2017		0	-10	0	0.0	1-Sided Adj					
Explanation:		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					
Explanation:	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					
Explanation:		kpaper 1WM00	03 Grid Design 8	ß System Ha	ordening in c	rkpaper 1ED012 Electric ost center 2100-3932 to align ve Categories.					
2017		0	0	0	-0.1	CCTR Transf To 2100-3932.000					
Explanation:		kpaper 1WM00	03 Grid Design 8	ß System Ha	ordening in c	rkpaper 1ED012 Electric ost center 2100-3932 to align ve Categories.					
2017		0	-199	0	-0.1	CCTR Transf To 2100-3932.000					
Explanation:		kpaper 1WM00	03 Grid Design 8	ß System Ha	ordening in c	rkpaper 1ED012 Electric ost center 2100-3932 to align ve Categories.					
2017		0	-2	0	0.0	1-Sided Adj					
				· ·		,					
Explanation:	One-sided adjustm	ent to exclude	\$2010 related to	Events and	Tickets.	,					
Explanation: 2017 Total		ent to exclude :	\$2010 related to	Events and	Tickets.	,					
						1-Sided Adj					
2017 Total		0 0 hat are anticipa	-214 10	0 0	-0.2 0.0	, and the second					

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>Lab</u>	<u>or</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	Adj Type
explanation:	Electric Operations trave remapping rules.	el expenses th	at were errone	ously mappe	ed to gas cap	ital overhead pool due to
2018		0	-31	0	0.0	CCTR Transf To 2100-3932.000
Explanation:	Transfer wildfire related Engineering to Workpap costs where they are ref	er 1WM003 G	irid Design & S	System Harde	ening in cost	center 2100-3932 to align
2018		0	0	0	-0.1	CCTR Transf To 2100-3932.000
Explanation:	Transfer wildfire related Engineering to Workpap costs where they are ref	er 1WM003 G	irid Design & S	System Harde	ening in cost	center 2100-3932 to align
2018		0	-15	0	0.0	CCTR Transf To 2100-3932.000
Explanation:	Transfer wildfire related Engineering to Workpap costs where they are ref	er 1WM003 G	irid Design & S	System Harde	ening in cost	center 2100-3932 to align
2018		0 -	1,108	0	-0.1	CCTR Transf To 2100-3932.000
Explanation:	Transfer wildfire related Engineering to Workpap costs where they are ref	er 1WM003 G	irid Design & S	System Harde	ening in cost	center 2100-3932 to align
2018		0	-8	0	0.0	CCTR Transf To 2100-4089.002
	Transfer wildfire related to Workpaper 1WM004 where they are reflected	to Asset Mana Asset Manage	ngement & Inspec	pections fron ctions in cost	n Workpaper center 2100-	1ED012 Electric Engineering 4089.002 to align costs
	to Workpaper 1WM004	to Asset Mana Asset Manage I in the Wildfire	ngement & Inspec	pections fron ctions in cost	n Workpaper center 2100-	1ED012 Electric Engineering 4089.002 to align costs
Explanation:	to Workpaper 1WM004	to Asset Mana Asset Manage I in the Wildfire	gement & Inspecting Mitigation Pla	pections fron ctions in cost an (WMP) Ini	n Workpaper center 2100- tiative Catego	1ED012 Electric Engineering 4089.002 to align costs ories.
Explanation: 2018 Total	to Workpaper 1WM004 where they are reflected. Transfer wildfire related	to Asset Mana Asset Manage I in the Wildfire 0 0 0 0 0 0 0 0 0 0 0 0 0	ngement & Inspect e Mitigation Place 1,152 0 red with System irid Design & S	opections from toons in cost an (WMP) Ini 0 0 m Hardening System Harde	n Workpaper center 2100- tiative Catego -0.2 0.0 from Workpa ening in cost	1ED012 Electric Engineering 4089.002 to align costs ories. CCTR Transf To 2100-3932.000 aper 1ED012 Electric center 2100-3932 to align
Explanation: 2018 Total 2019	to Workpaper 1WM004 where they are reflected. Transfer wildfire related Engineering to Workpap	to Asset Mana Asset Manage I in the Wildfire 0 0 0 0 0 0 0 0 0 0 0 0 0	ngement & Inspect e Mitigation Place 1,152 0 red with System irid Design & S	opections from toons in cost an (WMP) Ini 0 0 m Hardening System Harde	n Workpaper center 2100- tiative Catego -0.2 0.0 from Workpa ening in cost	1ED012 Electric Engineering 4089.002 to align costs ories. CCTR Transf To 2100-3932.000 aper 1ED012 Electric center 2100-3932 to align Categories.
Explanation: 2018 Total 2019 Explanation:	to Workpaper 1WM004 where they are reflected. Transfer wildfire related Engineering to Workpap costs where they are ref	to Asset Manage Asset Manage I in the Wildfire 0 0 0 0 0 0 0 0 0 0 0 0 0	igement & Inspects ment & Inspects Mitigation Plant 1,152 0 ded with System 1,152 Vildfire Mitigation 29 ded with System 1,29	pections from the pections in cost an (WMP) Initial of the pection	n Workpaper center 2100-tiative Categorial Categoria Categoria Cat	1ED012 Electric Engineering 4089.002 to align costs ories. CCTR Transf To 2100-3932.000 aper 1ED012 Electric center 2100-3932 to align Categories. CCTR Transf To 2100-3932.000 aper 1ED012 Electric center 2100-3932 to align
2018 Total 2019 Explanation: 2019	to Workpaper 1WM004 where they are reflected. Transfer wildfire related Engineering to Workpap costs where they are reflected Engineering to Workpap to Workpapering to Workp	to Asset Manage Asset Manage I in the Wildfire 0 0 0 0 0 0 0 0 0 0 0 0 0	igement & Inspects ment & Inspects Mitigation Plant 1,152 0 ded with System 1,152 Vildfire Mitigation 29 ded with System 1,29	pections from the pections in cost an (WMP) Initial of the pection	n Workpaper center 2100-tiative Categorial Categoria Categoria Cat	1ED012 Electric Engineering 4089.002 to align costs ories. CCTR Transf To 2100-3932.000 aper 1ED012 Electric center 2100-3932 to align Categories. CCTR Transf To 2100-3932.000 aper 1ED012 Electric center 2100-3932 to align Categories.
2018 Total 2019 Explanation: 2019 Explanation:	Transfer wildfire related Engineering to Workpap costs where they are reflected	to Asset Mana Asset Manage I in the Wildfire 0 0 0 0 0 0 0 0 0 0 0 0 0	igement & Inspects ment & Inspects Mitigation Plant 1,152 0 med with System 1 Design & S Vildfire Mitigation 29 med with System 1 System 1 System 2 Sylidfire Mitigation 3 Sylidfire Mitigation 4 Sylidfire M	opections from the citions in cost an (WMP) Initial of the citions in cost and the citions in cost and citions from the citions in cost and cost and citions in citions in cost and citions in cit	n Workpaper center 2100-tiative Categor -0.2 0.0 from Workpapering in cost IP) Initiative (0.0 from Workpapering in cost IP) Initiative (0.0 -0.1 in Workpaper center 2100-	CCTR Transf To 2100-3932.000 aper 1ED012 Electric center 2100-3932 to align Categories. CCTR Transf To 2100-3932.000 aper 1ED012 Electric center 2100-3932 to align Categories. CCTR Transf To 2100-3932.000 aper 1ED012 Electric center 2100-3932 to align Categories. CCTR Transf To 2100-4089.002 1ED012 Electric Engineering 4089.002 to align costs
2018 Total 2019 Explanation: 2019 Explanation: 2019 Explanation:	Transfer wildfire related Engineering to Workpap costs where they are referenced. Transfer wildfire related Engineering to Workpap costs where they are referenced Engineering to Workpap costs where they are referenced to Workpaper 1WM004	to Asset Mana Asset Manage I in the Wildfire 0 0 0 0 0 0 0 0 0 0 0 0 0	igement & Inspects ment & Inspects Mitigation Plant 1,152 0 med with System 1 Design & S Vildfire Mitigation 29 med with System 1 System 1 System 2 Sylidfire Mitigation 3 Sylidfire Mitigation 4 Sylidfire M	opections from the citions in cost an (WMP) Initial of the citions in cost and the citions in cost and citions from the citions in cost and cost and citions in citions in cost and citions in cit	n Workpaper center 2100-tiative Categor -0.2 0.0 from Workpapering in cost IP) Initiative (0.0 from Workpapering in cost IP) Initiative (0.0 -0.1 in Workpaper center 2100-	1ED012 Electric Engineering 4089.002 to align costs bries. CCTR Transf To 2100-3932.000 aper 1ED012 Electric center 2100-3932 to align Categories. CCTR Transf To 2100-3932.000 aper 1ED012 Electric center 2100-3932 to align Categories. CCTR Transf To 2100-4089.002 aper 1ED012 Electric center 2100-3932 to align Categories. CCTR Transf To 2100-4089.002 1ED012 Electric Engineering 4089.002 to align costs

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>L</u>	<u>abor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	Adj Type
2019 Total		-6	-3	0	-0.1	
2020		0	-67	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-r Catastrophic Event M		•		uested for re	ecovery through a non-GRC
2020		0	-4	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-r Catastrophic Event M		•		uested for re	ecovery through a non-GRC
2020		0	-13	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-r Catastrophic Event M		•		uested for re	ecovery through a non-GRC
2020		0	-12	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-r Catastrophic Event M		•		uested for re	ecovery through a non-GRC
2020		0	-9	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-r Catastrophic Event M		•		uested for re	ecovery through a non-GRC
2020		0	-9	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-r Catastrophic Event M		•		uested for re	ecovery through a non-GRC
2020		0	-4	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-r Catastrophic Event M		•		uested for re	ecovery through a non-GRC
2020		0	0	0	-0.1	1-Sided Adj
Explanation:	Incremental costs that Memorandum Account	-	ated to be reque	sted for reco	very through	a non-GRC Catastrophic Event
2020		0	-11	0	0.0	CCTR Transf To 2100-3932.000
Explanation:		paper 1WM0	003 Grid Design 8	& System Ha	rdening in co	kpaper 1ED012 Electric ost center 2100-3932 to align ve Categories.
2020		0	-5	0	0.0	CCTR Transf To 2100-3932.000
Explanation:	Engineering to Work	paper 1WM0	003 Grid Design 8	ß System Ha	rdening in co	kpaper 1ED012 Electric ost center 2100-3932 to align
	costs where they are	reflected in	the Wildfire Mitig	ation Plan (V	VMP) Initiativ	ve Categories.

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek

Category: J. Electric Engineering
Category-Sub: 1. Electric Engineering

Workpaper: 1ED012.000 - Electric Engineering

vvorkpaper.			9			
<u>Year</u>	<u>Lab</u>	<u>or</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	Adj Type
Explanation:		Asset Manage	ment & Inspe	ctions in cost	center 2100	1ED012 Electric Engineering -4089.002 to align costs ories.
2020		0	-179	0	0.0	CCTR Transf To 2100-4089.002
Explanation:		Asset Manage	ment & Inspe	ctions in cost	center 2100	1ED012 Electric Engineering -4089.002 to align costs ories.
2020		0	0	0	0.0	1-Sided Adj
Explanation:	One-sided adjustment t	o exclude \$5 re	elated to Even	its and Ticket	S.	
2020 Total		0	-366	0	-0.1	
2021		0	-133	0	0.0	1-Sided Adj
Explanation:	Incremental costs that a Memorandum Account	-	to be requeste	ed for recove	ry through a	non-GRC Catastrophic Event
2021		0	-17	0	0.0	1-Sided Adj
Explanation:	Incremental costs that a Memorandum Account	•	to be requeste	ed for recove	ry through a	non-GRC Catastrophic Event
2021		0	-9	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-rela Catastrophic Event Mer				ested for reco	overy through a non-GRC
2021		0	-1	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-rela Catastrophic Event Mer		-	-	ested for reco	overy through a non-GRC
2021		0	-10	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-rela Catastrophic Event Mer		-	-	ested for reco	overy through a non-GRC
2021		0	-12	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-rela Catastrophic Event Mer				ested for reco	overy through a non-GRC
2021		0	-6	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-rela Catastrophic Event Mer		•	•	ested for reco	overy through a non-GRC
2021		0	-6	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-rela Catastrophic Event Mer				ested for reco	overy through a non-GRC
2021		0	-4	0	0.0	1-Sided Adj

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>Lat</u>	<u>oor</u>	NLbr	NSE	<u>FTE</u>	Adj Type				
Explanation:	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				
Explanation:	One-sided adjustment t	to exclude \$469	9 related to Ev	ents and Ticl	kets.					
2021		0	0	0	0.0	1-Sided Adj				
Explanation:	One-sided adjustment t	to exclude \$115	related to Ev	ents and Ticl	kets.					
2021		0	-7	0	0.0	1-Sided Adj				
Explanation:	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				
Explanation:	charged to a capital rer	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 Engingeering to the Capital Pool.								
2021 Total		0	-360	0	0.0					

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek

Category: J. Electric Engineering
Category-Sub: 1. Electric Engineering

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	<u>(\$000)</u>

	2021 Historical Embedded Cost	2022 Forecast	2023 Forecast	2024 Forecast	2024 RAMP Range (2020 Incurred \$)	
	(2021 \$)	(2021 \$)	(2021 \$)	(2021 \$)	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	2021 Historical Embedded	2022 Forecast	2023 Forecast	2024 Forecast	2024 RAMP Range Activities		
Measure	Activities	Activities	Activities	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).

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek

Category: J. Electric Engineering
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	2022	2023	2024	2024 RAMP Range (2020 Incurred \$)	
	Embedded Cost (2021 \$)	Forecast (2021 \$)	Forecast (2021 \$)	Forecast (2021 \$)	Low	urrea \$) High
Tranche 1 Cost Estimate	0	0	2	4	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	2021 Historical Embedded	2022 Forecast	2023 Forecast	2024 Forecast	2024 RA Range Act	
Measure	Activities	Activities	Activities	Activities	Low	High
Tranche 1 Asset management system processes and asset	0.00	0.00	1.00	1.00	9.00	12.00

management plans (per

asset class)

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

SDG&E/ELECTRIC DISTRIBUTION/Exh No:SDG&E-12-WP-R-E/Witness: T. Swetek Page 167 of 222

Asset Management Cross iness Advisors added for Asset Management cross \$ 100,000 \$ 100,000 4,000 6,000 functional support. Functional Support ject objective is to perform comprehensive update to Design Unit Update Initiative esign units to enhance project estimates and allocation of 0.22 \$ 102,000 0.22 \$ 102,000 0.22 \$ 102,000 (DUUI) Non-Ramp 1,960 resources. ngineering salary market adjustment triggered by challenges retaining and attracting skilled employees due o market wide resource shortages and demand for skiller Engineering Capabilities 10,000 10,000 10,000 10,000 10,000 10,000 30.000 leed internal resources to manage large number of onsultants needed to execute capital plan, support rildfire mitigation, and support sustainability goals. 2022 \$ 129,000 129,000 \$ 129,000 \$ addition assumes an October hire date. **Engineering Capabilities** Need internal resources to manage large number of consultants needed to execute capital plan, support wildfire mitigation, and support sustainability goals. 2023 1 \$ 129,000 \$ 2,150 1 \$ 129,000 \$ Engineering Capabilities 2,580 4,730 addition assumes a March hire date. Need internal resources to manage large number of onsultants needed to execute capital plan, support vildfire mitigation, and support sustainability goals. 2022 Engineering Capabilities \$ 129,000 \$ 129,000 \$ 5,805 addition assumes an October hire date. Need internal resources to manage large number of onsultants needed to execute capital plan, support wildfire mitigation, and support sustainability goals. 2023 **Engineering Capabilities** Non-Ramp \$ 114,000 1,330 \$ 114,000 \$ 2,280 3,610 addition assumes a June hire date. Need internal resources to manage large number of consultants needed to execute capital plan, support wildfire mitigation, and support sustainability goals. 2023 Ion-Ramn \$ 129,000 1,505 \$ 129,000 2,580 4,085 addition assumes a June hire date. Need internal resources to manage large number of onsultants needed to execute capital plan, support wildfire mitigation, and support sustainability goals. 2022 \$ 114,000 1 \$ 114,000 \$ \$ 114,000 \$ 5,130 addition assumes an October hire date. **Engineering Capabilities** Non-Ramp 2,280 2,280 Need internal resources to manage large number of consultants needed to execute capital plan, support vildfire mitigation, and support sustainability goals. 2022 Engineering Capabilities Non-Ramp \$ 129,000 129,000 \$ 129,000 2,580 addition assumes an October hire date. Need internal resources to manage large number of consultants needed to execute capital plan, support wildfire mitigation, and support sustainability goals. 2023 \$ 114,000 \$ \$ 114,000 **Engineering Capabilities** Non-Ramp 2,280 3,610 addition assumes a June hire date. Need internal resources to manage large number of consultants needed to execute capital plan, support wildfire mitigation, and support sustainability goals. 2022 Engineering Capabilities Non-Ramp \$ 99,000 1,815 \$ 99,000 1,980 \$ 99,000 \$ 1,980 5,775 addition is calculated with a February hire date. Need internal resources to manage large number of onsultants needed to execute capital plan, support wildfire mitigation, and support sustainability goals. 2022 \$ 129,000 1 \$ 129,000 \$ 1 \$ 129,000 \$ 1,075 2,580 2,580 6,235 addition assumes an August hire date. **Engineering Capabilities** Need internal resources to manage large number of onsultants needed to execute capital plan, support vildfire mitigation, and support sustainability goals. 2022 **Engineering Capabilities** 129.000 \$ 129,000 \$ 129,000 2.580 5,805 addition assumes an October hire date. leed internal resources to manage large number of onsultants needed to execute capital plan, support wildfire mitigation, and support sustainability goals. 2022 \$ 114,000 \$ 114,000 \$ **Engineering Capabilities** \$ 114,000 \$ 2,280 5,510 addition assumes an August hire date. Need internal resources to manage large number of onsultants needed to execute capital plan, support wildfire mitigation, and support sustainability goals. 2023 dition assumes a May hire date. **Engineering Capabilities** \$ 114,000 \$ 114,000 Ion-Ramp 2.280 17,643

1 \$ 50,000 \$

50,000

60,595

1 \$ 50,000 \$

50,000

60,595

1 \$ 50,000 \$

50,000

60,595

150.000

181,785

San Diego Gas & Electric Company 2024 GRC - REVISED ERRATA

Non-Shared Service Workpapers

Testing and root cause analysis of failed equipment to understand the failure mechanism of the equipment and

lesign units to enhance project estimates and allocation of

improve new distribution equipment acquisitions. Project objective is to perform comprehensive update to

TY2024 GRC FORECAST - DETAILS

Failed Equipment Root Cause

Design Unit Update Initiative

Non-Labor

on-RAMP

Contractors

endor Contract

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

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek
Category: J. Electric Engineer

Category: J. Electric Engineering
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										
		Adju	ısted-Recor	ded		Ad	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			
Total	53	56	69	65	67	67	67	67			
FTE	1.1	0.4	0.2	1.0	0.2	0.2	0.2	0.2			

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek

Category: J. Electric Engineering
Category-Sub: 1. Electric Engineering

Workpaper: 1ED012.001 - Electric Engineering (TNG)

Summary of Adjustments to Forecast:

	In 2021 \$(000) Incurred Costs										
Forecas	t Method	Base Forecast			Forec	ast Adjust	ments	Adjusted-Forecast			
Years	s	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	
Tota	ıl	67	67	67	0	0	0	67	67	67	
FTE	Base YR Rec	0.2	0.2	0.2	0.0	0.0	0.0	0.2	0.2	0.2	

<u>Year Labor NLbr NSE Total FTE</u>	Adj Type	
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Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek

Category: J. Electric Engineering
Category-Sub: 1. Electric Engineering

Workpaper: 1ED012.001 - Electric Engineering (TNG)

Determination of Adjusted-Recorded (Incurred Costs):

termination of Aujustea	-Recorded (incurred Cos 2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
ecorded (Nominal \$)*					
Labor	214	120	301	296	17
Non-Labor	38	41	51	54	54
NSE	0	0	0	0	0
Total	252	160	352	350	71
FTE	3.1	1.5	3.1	3.7	0.2
ljustments (Nominal \$) **	,				
Labor	-206	-109	-289	-282	0
Non-Labor	0	-2	0	-9	-6
NSE	0	0	0	0	0
Total	-206	-111	-289	-291	-6
FTE	-2.2	-1.2	-2.9	-2.8	0.0
ecorded-Adjusted (Nomin	al \$)				
Labor	8	11	12	14	17
Non-Labor	38	38	51	45	48
NSE	0	0	0	0	0
Total	46	49	62	59	65
FTE	0.9	0.3	0.2	0.9	0.2
cation & Sick (Nominal \$	5)				
Labor	1	2	2	2	2
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	1	2	2	2	2
FTE	0.2	0.1	0.0	0.1	0.0
scalation to 2021\$					
Labor	1	1	1	1	0
Non-Labor	5	4	4	4	0
NSE	0	0	0	0	0
Total	6	5	5	4	0
FTE	0.0	0.0	0.0	0.0	0.0
ecorded-Adjusted (Consta	ant 2021\$)				
Labor	10	13	14	17	19
Non-Labor	43	42	55	49	48
NSE	0	0	0	0	0
Total	53	56	69	65	67
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

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek

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		
	Total	-206	-111	-289	-291	-6		
FTE		-2.2	-1.2	-2.9	-2.8	0.0		

Detail of Adjustments to Recorded:

	ments to Necorded.									
<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	Adj Type					
2017	-1	0	0	-0.1	CCTR Transf To 2100-3932.000					
Explanation:	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					
Explanation:	One-sided adjustment moving 99% of labor costs associated with Associate Engineers training from cost center 2100-0119 in work group 1ED0012 Electrical Engingeering to the Training Capital Pool, based on accounting change that started in 2021.									
2017 Total	-206	0	0	-2.2						
2018	0	0	0	-0.1	CCTR Transf To 2100-3932.000					
Explanation:	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					
Explanation:	One-sided adjustment to exc	lude \$2165 relate	d to Events a	nd Tickets.						
2018	-109	0	0	-1.1	1-Sided Adj					
Explanation:	-	oup 1ED0012 Elec			ate Engineers training from cost Training Capital Pool, based on					
2018 Total	-109	-2	0	-1.2						
2019	0	0	0	0.0	1-Sided Adj					
Explanation:	One-sided adjustment to exc	lude \$376 related	to Events an	d Tickets.						
2019	-289	0	0	-2.9	1-Sided Adj					

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

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	· · ·							
	2021	2022	2023	2024					
Labor	8,773	8,773	8,773	8,773					
Non-Labor	861	861	861	861					
NSE	0	0	0	0					
Total	9,634	9,634	9,634	9,634					
FTE	48.4	48.4	48.4	48.4					

Workpapers belonging to this Category:

1	ED ₀	13.0	00 Tro	oubles	hootina
	$-\nu$	10.0	00 11 0	JUDICS	HOOLIHA

Labor	8,773	8,773	8,773	8,773
Non-Labor	861	861	861	861
NSE	0	0	0	0
Total	9,634	9,634	9,634	9,634
FTE	48.4	48.4	48.4	48.4

Beginning of Workpaper 1ED013.000 - Troubleshooting

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									
		ısted-Recor	Ad	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		
Total	8,687	8,811	8,595	10,107	9,634	9,633	9,633	9,633		
FTE	49.8	49.9	47.7	51.4	48.4	48.4	48.4	48.4		

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	Bas	Base Forecast		Forecast Adjustments			Adjusted-Forecast		
Years	3	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
Tota	I	9,634	9,634	9,634	0	0	0	9,634	9,634	9,634
FTE	Base YR Rec	48.4	48.4	48.4	0.0	0.0	0.0	48.4	48.4	48.4

<u>Year Labor NLbr NSE Total FTE</u>	Adj Type	
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Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek
Category: K. Troubleshooting
Category-Sub: 1. Troubleshooting

Workpaper: 1ED013.000 - Troubleshooting

Determination of Adjusted-Recorded (Incurred Costs):

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

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		
	Total	-201	114	-0.116	-462	-12		
FTE		-1.0	0.5	0.0	-3.2	-0.1		

Detail of Adjustments to Recorded:

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

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek
Category: K. Troubleshooting
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Workpaper: 1ED013.000 - Troubleshooting

Memorandum Account (CEMA). 2018	vvorkpaper:	TED013.000	- Troubleshoo	ung			
Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA). 2018	<u>Year</u>		<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	Adj Type
Memorandum Account (CEMA). 2018	2018		49	0	0	0.2	1-Sided Adj
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 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 Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA). 2018 2018 Explanation: Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA). 2019 2019 2020 0 0 0 0.5 2020 0 -3 0 0.0 1-Sided Adj 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 0.0 1-Sided Adj 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 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 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 Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA). 2020 0 -0.1 1-Sided Adj 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 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-Sided Adj Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA)	Explanation:		-	ated to be reques	sted for reco	very through	a non-GRC Catastrophic Event
Memorandum Account (CEMA).	2018		1	0	0	0.1	1-Sided Adj
Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA). 2018	Explanation:		· · · · · · · · · · · · · · · · · · ·	ated to be reques	sted for reco	very through	a non-GRC Catastrophic Event
Memorandum Account (CEMA). 2018	2018		-1	0	0	-0.1	1-Sided Adj
Explanation: Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA). 2018 Total 2019 0 0 0 0 0.0 1-Sided Adj Explanation: One-sided adjustment to exclude \$116 related to Events and Tickets. 2019 Total 0 0 0 0 0 0 0 0 0 0 1-Sided Adj Explanation: 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 0 0 0 1-Sided Adj Explanation: 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 0 1-Sided Adj Explanation: 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 0 0 1-Sided Adj Explanation: 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 0 0 1-Sided Adj 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 0 0 0 0 1-Sided Adj 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 0 0 0 0 0 0 0 0 0 0 0	Explanation:		· · · · · · · · · · · · · · · · · · ·	ated to be reques	sted for reco	very through	a non-GRC Catastrophic Event
2018 Total 2019	2018		40	0	0	0.2	1-Sided Adj
Explanation: One-sided adjustment to exclude \$116 related to Events and Tickets. 2019 Total 0 0 0 0.0 2020 Explanation: 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 Explanation: 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 Explanation: 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 Explanation: 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 Explanation: 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 Explanation: 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 Explanation: 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 Explanation: 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 Explanation: Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).	Explanation:			ated to be reques	sted for reco	very through	a non-GRC Catastrophic Event
Cone-sided adjustment to exclude \$116 related to Events and Tickets. 2019 Total O O O O O O O O O O O O O O O O O O O	2018 Total		114	0	0	0.5	
2019 Total 0 0 0 0 0.0 Explanation: 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 Explanation: 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 Explanation: 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 Explanation: 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 Explanation: 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-Sided Adj Explanation: 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 Explanation: 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 0-0.1 1-Sided Adj Explanation: Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).	2019		0	0	0	0.0	1-Sided Adj
Explanation: Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA). 2020	Explanation:	One-sided adjustm	ent to exclude	\$116 related to E	vents and T	ickets.	
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 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 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 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 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 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 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 Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).	2019 Total		0	0	0	0.0	
Catastrophic Event Memorandum Account (CEMA). 2020	2020		0	-3	0	0.0	1-Sided Adj
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 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 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 Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA). 2020 1 -3 0 0.0 1-Sided Adj 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 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 Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).	Explanation:			•		uested for re	ecovery through a non-GRC
Catastrophic Event Memorandum Account (CEMA). 2020 0 -5 0 0.0 1-Sided Adj Explanation: 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 Explanation: 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 Explanation: 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 Explanation: Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA). 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
Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA). 2020 -6 0 -0.1 1-Sided Adj 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 Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA). 2020 -3 0 -0.1 1-Sided Adj Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA). Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).	Explanation:					uested for re	covery through a non-GRC
Catastrophic Event Memorandum Account (CEMA). 2020 -6 0 0 -0.1 1-Sided Adj 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 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 Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA). 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
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 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 Explanation: Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).	Explanation:			•		uested for re	covery through a non-GRC
Catastrophic Event Memorandum Account (CEMA). 2020 0 -3 0 0.0 1-Sided Adj Explanation: 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 Explanation: 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
Explanation: 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 Explanation: Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).	Explanation:			•		uested for re	covery through a non-GRC
Catastrophic Event Memorandum Account (CEMA). 2020 -3 0 0 -0.1 1-Sided Adj Explanation: Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).	2020						•
Explanation: Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).	Explanation:					uested for re	covery through a non-GRC
Catastrophic Event Memorandum Account (CEMA).	2020		-3	0	0	-0.1	1-Sided Adj
2020 0 -4 0 0.0 1-Sided Adj	Explanation:			•		uested for re	ecovery through a non-GRC
	2020		0	-4	0	0.0	1-Sided Adj

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek
Category: K. Troubleshooting
Category-Sub: 1. Troubleshooting

Workpaper: 1ED013.000 - Troubleshooting

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

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek
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>	Adj Type
Explanation:	Incremental costs to Memorandum Acco	•	ated to be reques	sted for reco	very through	a non-GRC Catastrophic Event
2020		-6	0	0	-0.1	1-Sided Adj
Explanation:	Incremental costs the Memorandum Acco	-	ated to be reques	sted for reco	very through	a non-GRC Catastrophic Event
2020		-101	-40	0	-1.5	1-Sided Adj
Explanation:	Removal of capital Overhead.	settlement por	tion to accurately	reflect O&I	M and capita	I balances for 2020 Department
2020 Total		-363	-99	0	-3.2	
2021		-2	0	0	-0.1	1-Sided Adj
Explanation:	Incremental costs the Memorandum Acco	-	ated to be reques	sted for reco	very through	a non-GRC Catastrophic Event
2021		0	-2	0	0.0	1-Sided Adj
Explanation:	Incremental COVID Catastrophic Event		•		quested for re	ecovery through a non-GRC
2021		0	-2	0	0.0	1-Sided Adj
Explanation:	Incremental COVID Catastrophic Event		•		quested for re	ecovery through a non-GRC
2021		0	-2	0	0.0	1-Sided Adj
Explanation:	Incremental COVID Catastrophic Event		•		quested for re	ecovery through a non-GRC
2021		0	-1	0	0.0	1-Sided Adj
Explanation:	Incremental COVID Catastrophic Event		•		quested for r	ecovery through a non-GRC
2021		0	-3	0	0.0	1-Sided Adj
Explanation:	Incremental COVID Catastrophic Event		•		quested for r	ecovery through a non-GRC
2021		0	-1	0	0.0	1-Sided Adj
Explanation:	Incremental COVID Catastrophic Event		•		quested for r	ecovery through a non-GRC
2021 Total		-2	-10	0	-0.1	

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek
Category: K. Troubleshooting
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	2022	2023	2024	2024 RAMP R	
	Embedded Cost (2021 \$)	Forecast (2021 \$)	Forecast (2021 \$)	Forecast (2021 \$)	(2020 Inc	urred \$) 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	2021 Historical Embedded	2022 Forecast	2023 Forecast	2024 Forecast	2024 R Range A	
Measure	Activities	Activities	Activities	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).

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek
Category: K. Troubleshooting
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 Estima	ates (\$000)					
	2021 Historical Embedded Cost	2022 Forecast	2023 Forecast	2024 Forecast	2024 RAMP R (2020 Inc	ange
	(2021 \$)	(2021 \$)	(2021 \$)	(2021 \$)	Low	High
Tranche 1 Cost Estimate	33	33	33	33	1,689	2,045
Cost Estimate Changes fro Electric Troubleshooting por						

GRC Work Unit/Activity Level Estimates 2021 Historical 2022 2023 2024 2024 RAMP Unit of Embedded Forecast Forecast Forecast Range Activities						
Measure	Activities	Activities	Activities	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 RA Electric Troubleshooting portion						

Risk Spend Efficiency (RSE)			
	GRC RSE	RAMP RSE	
Tranche 1	0.000	0.000	
DSE Changes from DAMD.			

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).

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) Incu	irred 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	
Total	487	491	503	512	
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
Total	487	491	503	512
FTE	0.5	0.6	0.7	8.0

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

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							
		Adju	sted-Recor	ded		Ad	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	
Total	801	530	317	647	487	491	503	512	
FTE	2.3	0.8	0.3	0.6	0.5	0.6	0.7	0.8	

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										
Forecas	t Method	Bas	Base Forecast		Forec	Forecast Adjustments			Adjusted-Forecast		
Years	s	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	
Tota	ıl	487	487	487	4	16	25	491	503	512	
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>	Adj Type	
2022	4	0	0	4	0.1	1-Sided Adj	
Explanation:	Please see supplementa	l workpapers f	or detailed e	xplanation.			
2022 Total	4	0	0	4	0.1		
2023	16	0	0	16	0.2	1-Sided Adj	
Explanation:	Please see supplementa	l workpapers f	or detailed e	xplanation.			
2023 Total	16	0	0	16	0.2		
2024	25	0	0	25	0.3	1-Sided Adj	
Explanation:	Please see supplementa	l workpapers f	or detailed e	xplanation.			
2024 Total	25	0	0	25	0.3		

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):

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

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		
	Total	-0.015	-0.937	-59	-244	-141		
FTE		0.0	0.0	-0.5	-0.9	-0.8		

Detail of Adjustments to Recorded:

V	Laban	NII I	NOE		A.H. T.		
<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	Adj Type		
2017	0	0	0	0.0	1-Sided Adj		
Explanation:	One-sided adjustment to exclude	de \$15 related to Ev	ents and T	ckets.			
2017 Total	0	0	0	0.0			
2018	0	-1	0	0.0	1-Sided Adj		
Explanation:	Incremental costs that are antic Memorandum Account (CEMA)	•	ted for reco	overy through	a non-GRC Catastrophic Event		
2018	0	0	0	0.0	1-Sided Adj		
Explanation:	One-sided adjustment to exclude	de \$425 related to E	vents and	Tickets.			
2018 Total	0	-1	0	0.0			
2019	0	1	0	0.0	1-Sided Adj		
Explanation:	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		
Explanation:	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		
Explanation:	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 Total	-31	-28	0	-0.5			
2020	0	-50	0	0.0	1-Sided Adj		
Explanation:	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).						

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>	Adj Type
2020	0	-1	0	0.0	1-Sided Adj
xplanation:	Incremental COVID-related of Catastrophic Event Memoran			quested for re	ecovery through a non-GRC
2020	0	-2	0	0.0	1-Sided Adj
cplanation:	Incremental COVID-related or Catastrophic Event Memoran	· ·		quested for re	covery through a non-GRC
2020	-3	-2	0	-0.1	1-Sided Adj
xplanation:	Incremental COVID-related or Catastrophic Event Memoran	•		quested for re	covery through a non-GRC
2020	0	-1	0	0.0	1-Sided Adj
xplanation:	Incremental COVID-related or Catastrophic Event Memoran	· ·		quested for re	covery through a non-GRC
2020	-1	-30	0	-0.1	1-Sided Adj
xplanation:	Incremental COVID-related or Catastrophic Event Memoran	· ·		quested for re	covery through a non-GRC
2020	0	0	0	0.0	1-Sided Adj
xplanation:	Incremental COVID-related or Catastrophic Event Memoran			quested for re	covery through a non-GRC
2020	0	-4	0	0.0	1-Sided Adj
xplanation:	Incremental COVID-related or Catastrophic Event Memoran	•		quested for re	covery through a non-GRC
2020	0	-19	0	0.0	1-Sided Adj
xplanation:	Incremental COVID-related or Catastrophic Event Memoran	•		quested for re	covery through a non-GRC
2020	0	-2	0	0.0	1-Sided Adj
xplanation:	Incremental COVID-related or Catastrophic Event Memoran	•		quested for re	covery through a non-GRC
2020	-39	-65	0	-0.6	CCTR Transf To 2100-0138.000
xplanation:	Transfer labor, FTEs and Nor 2100-4091 in workpaper 1ED Distribution Design and Proje forecasted.	0014 Major Projects	to cost cente	er 2100-0138	
2020	-4	-20	0	-0.1	CCTR Transf To 2100-0138.000
xplanation:	Transfer labor, FTEs and Nor 2100-4092 in workpaper 1ED Distribution Design and Proje forecasted.	0014 Major Projects	to cost cente	er 2100-0138	

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek

Category: L. Portfolio & Project Management
Category-Sub: 1. Portfolio & Project Management

Workpaper: 1ED014.000 - Portfolio & Project Management

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<u>Year</u>	<u>Labo</u>	<u>r 1</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	Adj Type
2020 Total	-4	17	-197	0	-0.9	
2021		0	-31	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-relate Catastrophic Event Memo		-	-	ested for reco	very through a non-GRC
2021		0	-1	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-relate Catastrophic Event Memo		-	-	ested for reco	very through a non-GRC
2021		0	-3	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-relate Catastrophic Event Memo		-	-	ested for reco	very through a non-GRC
2021		0	-2	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-relate Catastrophic Event Memo		•	•	ested for reco	very through a non-GRC
2021		0	-1	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-relate Catastrophic Event Memo		-	-	ested for reco	very through a non-GRC
2021		0	-11	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-relate Catastrophic Event Memo		-	-	ested for reco	very through a non-GRC
2021		0	-1	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-relate Catastrophic Event Memo		-	-	ested for reco	very through a non-GRC
2021		0	-3	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-relate Catastrophic Event Memo		-	-	ested for reco	very through a non-GRC
2021		0	-10	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-relate Catastrophic Event Memo				ested for reco	very through a non-GRC
2021		0	-1	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-relate Catastrophic Event Memo		-	-	ested for reco	very through a non-GRC
2021	-4	.3	-27	0	-0.7	CCTR Transf To 2100-0138.000
Explanation:	Transfer labor, FTEs and 2100-4091 in workpaper Distribution Design and F forecasted.	1ED0014 Majo	or Projects to	cost center	2100-0138 in	• •

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>	FTE	Adj Type
2021	-4	-3	0	-0.1	CCTR Transf To 2100-0138.000
Explanation:	Transfer labor, FTEs and No. 2100-4092 in workpaper 1E Distribution Design and Proforecasted.	D0014 Major Proj	ects to cost o	enter 2100-0	
2021 Total	-47	-94	0	-0.8	

Area: ELECTRIC DISTRIBUTION

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 Esti	mates (\$000)

					2024	1
	2021 Historical Embedded Cost	2022 Forecast	2023 Forecast	2024 Forecast	RAMP Range (2020 Incurred \$)	
	(2021 \$)	(2021 \$)	(2021 \$)	(2021 \$)	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 W	Vork U	nit/Activity	Level	Estimates
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Unit of	2021 Historical Embedded	2022 Forecast	2023 Forecast	2024 Forecast	2024 RA Range Act	
Measure	Activities	Activities	Activities	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

TY2024 GRC FORECAST - DETAILS

						2022			2	023		2024			
	Labor/	RAMP/		O&M/Capital											
Initiative/Description	Non-Labor	Non-RAMP	Unit Metric	Split	# of units	Cost per unit	Total cost	# of units	Cost per unit	Total cost	# of units	Cost per unit	Total cost	Total Cost	Explanation
															New project managers to support new battery storage
Enterprise Project Management Standardization	Labor	Non-Ramp	FTE												projects and electric system hardening projects. 2022
				2%	2	\$ 100,000	\$ 2,000	2	\$ 100,000	\$ 4,000	2	\$ 100,000	\$ 4,000	\$ 10,000	additions assume July hire date.
															New project managers to support new battery storage
Enterprise Project Management Standardization	Labor	Non-Ramp	FTE												projects and electric system hardening projects. 2023
				2%			\$ -	2	\$ 100,000	\$ 2,000	2	\$ 100,000	\$ 4,000	\$ 6,000	additions assume July hire date.
															New project specialist to support new battery storage
Enterprise Project Management Standardization	Labor	Non-Ramp	FTE												projects and electric system hardening projects. 2022
				2%	1	\$ 100,000	\$ 1,000	1	\$ 100,000	\$ 2,000	1	\$ 100,000	\$ 2,000	\$ 5,000	addition assumes July hire date.
															New project specialist to support new battery storage
Enterprise Project Management Standardization	Labor	Non-Ramp	FTE												projects and electric system hardening projects. 2023
				2%			\$ -	1	\$ 100,000	\$ 1,000	1	\$ 100,000	\$ 2,000	\$ 3,000	addition assumes July hire date.
	1	1			ĺ										
															New personnel to provide supervision and coordination
Enterprise Project Management Standardization	Labor	Non-Ramp	FTE												with business units regarding document
Enterprise Project Management Standardization	20001	rron namp													control/management policies per company standards and
															to provide P6 technical support to scheduling team. 2023
				2%			\$ -	1	\$ 100,000	\$ 1,000	1	\$ 100,000	\$ 2,000	\$ 3,000	addition assumes July hire date.
															New personnel to provide supervision and coordination
Enterprise Project Management Standardization	Labor	Non-Ramp	FTE												with business units regarding document
			=												control/management policies per company standards and
															to provide P6 technical support to scheduling team. 2024
				2%			\$ -			\$ -	1	\$ 100,000	\$ 1,000	\$ 1,000	addition assumes July hire date.
															New advisor to assist with increased QA/QC work
															including work in clean transportation, Electric
Enterprise Project Management Standardization	Labor	Non-Ramp	FTE												Distribution Planning, Electric System Hardening and
						l .									Electric Regional Operations work. 2022 addition assumes
				2%	1	\$ 100,000	\$ 1,000	1	\$ 100,000	\$ 2,000	1	\$ 100,000	\$ 2,000	\$ 5,000	July hire date.
	1	1			ĺ										New advisor to assist with increased QA/QC work
	l	L													including work in clean transportation, Electric
Enterprise Project Management Standardization	Labor	Non-Ramp	FTE		ĺ										Distribution Planning, Electric System Hardening and
	1	1			ĺ										Electric Regional Operations work. 2023 addition assumes
				2%				1	\$ 100,000	\$ 1,000	1	\$ 100,000	\$ 2,000	\$ 3,000	July hire date.
															New personnel to provide supervision and coordination
	1	1			ĺ										with business units regarding document
Enterprise Project Management Standardization	Labor	Non-Ramp	FTE		ĺ										control/management policies per company standards and
	1	1			ĺ										to provide P6 technical support to scheduling team. 2023
	1	1		20/	ĺ		•		¢ 400.000	<u>.</u>		£ 400.000	ć 6000		additions assume July hire date.
	T I			2%			\$ -	3	\$ 100,000			\$ 100,000			
	Total						\$ 4,000			\$ 16,000	,		\$ 25,000	\$ 45,000	

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek

Category: M. Compliance Management

Workpaper: 1ED015.000

FTE

Summary for Category: M. Compliance Management

Adjusted-Recorded

8.2

2021

Labor	875	875	875	875
Non-Labor	2,186	13,011	12,807	6,399
NSE	0	0	0	0
Total	3,061	13,886	13,682	7,274
FTE	8.2	8.2	8.2	8.2
Workpapers belonging	to this Category:			
1ED015.000 Complia	nce Management			
Labor	875	875	875	875
Non-Labor	2,186	13,011	12,807	6,399
NSE	0	0	0	0
Total	3,061	13,886	13,682	7,274

8.2

2022

In 2021\$ (000) Incurred Costs

Adjusted-Forecast

8.2

2024

8.2

2023

Beginning of Workpaper
1ED015.000 - Compliance Management

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								
		Adju	ısted-Recor	Ad	justed-Fore	cast				
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		
Total	3,071	3,168	317	2,151	3,061	13,886	13,682	7,274		
FTE	9.4	8.3	8.4	8.4	8.2	8.2	8.2	8.2		

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 202	1 \$(000) Ir	ncurred Co	sts				
Forecas	t Method	Bas	Base Forecast			ast Adjust	ments	Adjusted-Forecast		
Years	s	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
Tota	ıl	3,061	3,061	3,061	10,825	10,621	4,213	13,886	13,682	7,274
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:

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	Adj Type
2022	0	350	0	350	0.0	1-Sided Adj
Explanation:	Non-labor charge to rev Revenue.	iew/validate jo	int use attachı	ments. One-ti	ime cost, to be	offset with Misc
2022	0	150	0	150	0.0	1-Sided Adj
Explanation:	QA/QC increased cost pof \$25k per month less costs.		_			
2022	0	432	0	432	0.0	1-Sided Adj
Explanation:	Wood Pole Intrusive No 2021 * \$63 per inspection		ast includes 20),256 poles ir	nspected less 1	3,392 completed in
2022	0	858	0	858	0.0	1-Sided Adj
Explanation:	Special/CIP Wood Pole each year at \$109 each completion of most HFT	. 2022 O&M es	stimate at 75%	5, 2023 80%,	2024 85% due	to expected
2022	0	9,035	0	9,035	0.0	1-Sided Adj
Explanation:	Pole Attachment Data F Databases Ordered in D data points such as ass design information, and to be developed and op	Decision 20-07- et information structural load	-004 issued O on attachmen ling informatio	ctober 25, 20 ts, the status	021 requires pol of attachment i	e owners to provide 20 requests, attachment
2022 Total	0	10 825	0	10 825	0.0	

2022 Total	0	10,825	0	10,825	0.0	
2023	0	150	0	150	0.0	1-Sided Adj
Explanation:		cost pressures due less 6 months for J	_			2022-2024 increase ts the increased
2023	0	429	0	429	0.0	1-Sided Adj
Explanation:	Wood Pole Intrusiv 2021 * \$63 per ins	e Non-HFTD forect	ast includes 2	0,204 poles i	nspected less 13	3,392 completed in

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek

Category: M. Compliance Management
Category-Sub: 1. Compliance Management

Workpaper: 1ED015.000 - Compliance Management

Workpaper:	1ED015.000 - Com	pliance Manag	1ED015.000 - Compliance Management									
<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	FTE	Adj_Type						
2023	0	1,007	0	1,007	0.0	1-Sided Adj						
Explanation:	each year at \$109 each	pecial/CIP Wood Pole Intrusive estimating 10,500 special/CIP inspections for 2022 increasing 10% ach year at \$109 each. 2022 O&M estimate at 75%, 2023 80%, 2024 85% due to expected ompletion of most HFTD no longer requiring POIN inspections for pole loading calculations.										
2023	0	9,035	0	9,035	0.0	1-Sided Adj						
Explanation:	Pole Attachment Data F Databases Ordered in E data points such as assi design information, and to be developed and op-	ecision 20-07 et information structural load	-004 issued C on attachmer ling informatio	October 25, 20 ots, the status	21 requires po of attachment	le owners to provide 20 requests, attachment						
2023 Total	0	10,621	0	10,621	0.0							
2024	0	150	0	150	0.0	1-Sided Adj						
Explanation:	QA/QC increased cost p of \$25k per month less costs.		•									
2024	0	427	0	427	0.0	1-Sided Adj						
Explanation:	Wood Pole Intrusive No 2021 * \$63 per inspection		ast includes 2	0,175 poles in	spected less 1	3,392 completed in						
2024	0	1,177	0	1,177	0.0	1-Sided Adj						
Explanation:	Special/CIP Wood Pole each year at \$109 each completion of most HFT	. 2022 O&M es	stimate at 75%	%, 2023 80%,	2024 85% due	to expected						
2024	0	2,459	0	2,459	0.0	1-Sided Adj						
Explanation:	Pole Attachment Data F Databases Ordered in D data points such as assi design information, and to be developed and op The 2024 total cost was 2024-2027 +\$200,000 a maintain the program or	Decision 20-07 et information structural load erated by the p updated to sp djustment to a	-004 issued C on attachmen ling informational poole owners. bread the \$9,0 accommodate	October 25, 20 ats, the status on. The data voids 34,564 cost of Licensing fee	21 requires po of attachment will be manage f the program o	le owners to provide 20 requests, attachment d through a database over the 4 years						
2024 Total	0	4,213	0	4,213	0.0							
	-											

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):

eriiiiiation of Aujusted	i-Recorded (incurred Cos 2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
corded (Nominal \$)*					
Labor	795	702	774	817	761
Non-Labor	1,793	2,069	755	1,940	2,191
NSE	0	0	0	0	0
Total	2,588	2,772	1,529	2,757	2,951
FTE	8.1	7.1	7.3	7.4	7.0
ljustments (Nominal \$) **	•				
Labor	0	0	0	-7	0
Non-Labor	0	0	-1,328	-834	-5
NSE	0	0	0	0	0
Total	0	0	-1,328	-841	-5
FTE	0.0	0.0	0.0	-0.3	0.0
corded-Adjusted (Nomin	nal \$)				
Labor	795	702	774	811	761
Non-Labor	1,793	2,069	-573	1,105	2,186
NSE	0	0	0	0	0
Total	2,588	2,772	201	1,916	2,947
FTE	8.1	7.1	7.3	7.2	7.0
cation & Sick (Nominal \$	5)				
Labor	118	106	111	115	114
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	118	106	111	115	114
FTE	1.3	1.2	1.1	1.2	1.2
calation to 2021\$					
Labor	106	70	51	30	0
Non-Labor	259	221	-46	90	0
NSE	0	0	0	0	0
Total	365	290	6	120	0
FTE	0.0	0.0	0.0	0.0	0.0
ecorded-Adjusted (Const	ant 2021\$)				
Labor	1,019	878	936	955	875
Non-Labor	2,052	2,290	-619	1,196	2,186
NSE	0	0	0	0	0
Total	3,071	3,168	317	2,151	3,061
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

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				
	Total		0	-1,328	-841	-5				
FTE		0.0	0.0	0.0	-0.3	0.0				

Detail of Adjustments to Recorded:

Year	Labo	or NL	br NSE	FTE	Adi Type
2017 Total			0 0	0.0	
2018 Total)	0 0	0.0	
2019	() -1,32	8 0	0.0	1-Sided Adj
Explanation:	One-sided adjustment exc	cluding Special B	illable costs ent	irely or partia	ally billed to third parties.
2019 Total	(-1,32	8 0	0.0	
2020	() -	1 0	0.0	1-Sided Adj
Explanation:	Incremental COVID-relate Catastrophic Event Memo		•	e requested f	or recovery through a non-GRC
2020	() -	2 0	0.0	1-Sided Adj
Explanation:	Incremental COVID-relate Catastrophic Event Memo			e requested f	or recovery through a non-GRC
2020	() -	3 0	0.0	1-Sided Adj
Explanation:	Incremental COVID-relate Catastrophic Event Memo		•	e requested f	or recovery through a non-GRC
2020	-7	7	0 0	-0.3	1-Sided Adj
Explanation:	Removal of capital settlem Overhead.	nent portion to ac	curately reflect	O&M and ca	pital balances for 2020 Department
2020	(-82	8 0	0.0	1-Sided Adj
Explanation:	One-sided adjustment exc	cluding Special B	illable costs ent	irely or partia	ally billed to third parties.
2020 Total		7 -83	4 0	-0.3	
2021	() -	1 0	0.0	1-Sided Adj
Explanation:	Incremental COVID-relate Catastrophic Event Memo		•	e requested f	or recovery through a non-GRC

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>	FTE	Adj Type	
2021	0	-1	0	0.0	1-Sided Adj	
Explanation:	Incremental COVID-related of Catastrophic Event Memorar		-	requested f	or recovery through a no	n-GRC
2021	0	-3	0	0.0	1-Sided Adj	
Explanation:	Incremental COVID-related of Catastrophic Event Memorar		•	requested f	or recovery through a no	n-GRC
2021 Total	0	-5	0	0.0		

ELECTRIC DISTRIBUTION Area:

Witness: Tyson J. Swetek

N. Officer Category: 1ED016.000 Workpaper:

Summary for Category: N. Officer

		In 2021\$ (000) Incu	urred 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
Total	1,286	1,286	1,286	1,286
FTE	5.5	5.5	5.5	5.5
ــ apers belonging t	o this Category:			
16.000 Officer	is and suregery.			

Workpa

1ED016.00	00 Officer
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Labor	1,165	1,165	1,165	1,165
Non-Labor	121	121	121	121
NSE	0	0	0	0
Total	1,286	1,286	1,286	1,286
FTE	5.5	5.5	5.5	5.5

Beginning of Workpaper 1ED016.000 - Officer

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:

				ln 2021\$ (00	0) Incurred (Costs			
		Adju	sted-Recor	ded		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	
Total	1,702	2,051	2,176	1,325	1,287	1,288	1,288	1,288	
FTE	5.6	6.7	5.8	5.3	5.5	5.5	5.5	5.5	

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek

Category: N. Officer
Category-Sub: 1. Officer

Workpaper: 1ED016.000 - Officer

Summary of Adjustments to Forecast:

			In 202	1 \$(000) li	ncurred Co	sts					
Forecast	t Method	Bas	Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years	5	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	
Tota	I	1,287	1,287	1,287	0		0	1,287	1,287	1,287	
FTE	Base YR Rec	5.5	5.5	5.5	0.0	0.0	0.0	5.5	5.5	5.5	

<u>Year Labor NLbr NSE Total FTE</u>	Adj Type	
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Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek

Category: N. Officer
Category-Sub: 1. Officer

Workpaper: 1ED016.000 - Officer

Determination of Adjusted-Recorded (Incurred Costs):

crimination of Adjusted	-Recorded (Incurred Cos 2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
corded (Nominal \$)*					
Labor	1,131	1,115	1,087	1,000	1,013
Non-Labor	223	593	797	138	123
NSE	0	0	0	0	0
Total	1,354	1,708	1,884	1,138	1,136
FTE	5.0	5.6	5.0	4.6	4.7
ljustments (Nominal \$) **					
Labor	-2	1	0	0	0
Non-Labor	-1	0	0	-2	-2
NSE	0	0	0	0	0
Total	-3	1	0	-2	-2
FTE	-0.2	0.2	0.0	0.0	0.0
ecorded-Adjusted (Nomin	al \$)				
Labor	1,129	1,116	1,087	1,000	1,013
Non-Labor	222	593	797	136	121
NSE	0	0	0	0	0
Total	1,351	1,709	1,884	1,136	1,134
FTE	4.8	5.8	5.0	4.6	4.7
cation & Sick (Nominal \$)				
Labor	168	169	156	142	152
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	168	169	156	142	152
FTE	0.8	0.9	0.8	0.7	0.8
scalation to 2021\$					
Labor	151	111	72	37	0
Non-Labor	32	63	64	11	0
NSE	0	0	0	0	0
Total	183	174	136	48	0
FTE	0.0	0.0	0.0	0.0	0.0
ecorded-Adjusted (Consta	ant 2021\$)				
Labor	1,447	1,395	1,315	1,178	1,165
Non-Labor	254	656	861	147	121
NSE	0	0	0	0	0
Total	1,702	2,051	2,176	1,325	1,287
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

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 Co	osts		
	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
	Total	-3	1	0	-2	-2
FTE		-0.2	0.2	0.0	0.0	0.0

Detail of Adjustments to Recorded:

<u>Year</u>		<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>	
2017		-1	0	0	-0.1	1-Sided Adj	
Explanation:	Incremental costs the Memorandum Accou	•	ated to be reques	sted for reco	very through	n a non-GRC Catastrophic Event	
2017		-1	0	0	-0.1	1-Sided Adj	
Explanation:	Incremental costs the Memorandum Accou	•	ated to be reques	sted for reco	very through	n a non-GRC Catastrophic Event	
2017		0	-1	0	0.0	1-Sided Adj	
Explanation:	One-sided adjustme	nt to exclude	\$715 related to E	ents and ⊓	īckets.		
2017 Total		-2	-1	0	-0.2		
2018		1	0	0	0.1	1-Sided Adj	
Explanation:	Incremental costs the Memorandum Accou	•	ated to be reques	sted for reco	very through	n a non-GRC Catastrophic Event	
2018		1	0	0	0.1	1-Sided Adj	
Explanation:	Incremental costs the Memorandum Accou	-	ated to be reques	sted for reco	very through	n a non-GRC Catastrophic Event	
2018 Total		1	0	0	0.2		
2019 Total		0	0	0	0.0		
2020		0	-1	0	0.0	1-Sided Adj	
Explanation:	Incremental COVID- Catastrophic Event N		•		quested for r	ecovery through a non-GRC	
2020		0	0	0	0.0	1-Sided Adj	
Explanation:	Incremental COVID- Catastrophic Event N		-		quested for r	ecovery through a non-GRC	
			-1	0	0.0	1-Sided Adj	

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

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek

Category: O. Regional Public Affairs

Workpaper: 1ED022.000

Summary for Category: O. Regional Public Affairs

L		In 2021\$ (000) Inc	urred 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		
Total	1,160	1,388	1,388	1,388		
FTE	8.9	11.0	11.0	11.0		
ے apers belonging t	o this Category:					

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
Total	1,160	1,388	1,388	1,388
FTE	8.9	11.0	11.0	11.0

Beginning of Workpaper 1ED022.000 - Regional Public Affairs

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								
		Adju	ısted-Recor	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		
Total	960	805	981	1,075	1,160	1,388	1,388	1,388		
FTE	4.7	4.7	5.7	7.5	8.9	11.0	11.0	11.0		

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 202	1 \$(000) lı	ncurred Co	sts					
Forecast	t Method	Bas	se Foreca	st	Forec	Forecast Adjustments			Adjusted-Forecast		
Years	5	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	
Tota	I	1,160	1,160	1,160	228	228	228	1,388	1,388	1,388	
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:

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	NSE	<u>Total</u>	<u>FTE</u>	Adj Type	
2022	213	15	0	228	2.1	1-Sided Adj	

Explanation:

Adding incremental labor costs for three FTEs, hired in 2021, for Franchise committments 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.

2022 Total	213	15	0	228	2.1	
2023	213	15	0	228	2.1	1-Sided Adj

Explanation:

Adding incremental labor costs for three FTEs, hired in 2021, for Franchise committments 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.

2023 Total	213	15	0	228	2.1	
2024	213	15	0	228	2.1	1-Sided Adj

Explanation:

Adding incremental labor costs for three FTEs, hired in 2021, for Franchise committments 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.

0004 T 4 I	040	4.0	•	000		
2024 Total	213	15	U	228	2.1	
			•			

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)
ecorded (Nominal \$)*					
Labor	487	512	774	981	876
Non-Labor	406	256	183	-103	82
NSE	0	0	0	0	0
Total	892	768	957	878	958
FTE	4.3	4.2	5.8	8.0	7.1
djustments (Nominal \$) **					
Labor	-44	-47	-129	-185	62
Non-Labor	-63	-55	2	229	-1
NSE	0	0	0	0	0
Total	-107	-101	-126	44	61
FTE	-0.2	-0.2	-0.9	-1.6	0.5
ecorded-Adjusted (Nominal \$)					
Labor	443	465	645	796	938
Non-Labor	343	202	185	126	81
NSE	0	0	0	0	0
Total	785	667	831	922	1,019
FTE	4.1	4.0	4.9	6.4	7.6
acation & Sick (Nominal \$)					
Labor	66	70	92	113	141
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	66	70	92	113	141
FTE	0.6	0.7	0.8	1.1	1.3
scalation to 2021\$					
Labor	59	46	43	29	0
Non-Labor	49	21	15	10	0
NSE	0	0	0	0	0
Total	108	68	58	39	0
FTE	0.0	0.0	0.0	0.0	0.0
ecorded-Adjusted (Constant 202	1\$)				
Labor	568	582	781	938	1,079
Non-Labor	392	223	200	136	81
NSE	0	0	0	0	0
Total	960	805	981	1,075	1,160
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

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		
	Total	-107	-101	-126	44	61		
FTE		-0.2	-0.2	-0.9	-1.6	0.5		

Detail of Adjustments to Recorded:

Voor		Lahar	NII ba	NCE	CTC	Adi Timo					
<u>Year</u>		<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	Adj Type					
2017		78	95	0	0.9	CCTR Transf From 2100-3592.000					
Explanation:		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					
Explanation:	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					
Explanation:	One-Sided transfe GRC costs.	er Non-Labor for	CC 2100-3592	attributable t	oelow-the-lin	e (BTL) activities and excluded from					
2017 Total		-44	-63	0	-0.2						
2018		81	-15	0	0.9	CCTR Transf From 2100-3592.000					
Explanation:	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					
Explanation:	One-Sided transfeactivities and exc			or for CC 210	00-3463 attri	butable below-the-line (BTL)					
2018		0	0	0	0.0	1-Sided Adj					
Explanation:	One-Sided transfe	er Non-Labor for	CC 2100-3592	attributable t	oelow-the-lin	e (BTL) activities and excluded from					
2018		0	29	0	0.0	CCTR Transf From 2100-3592.000					
Explanation:	Transfer costs in group 1ED022 wh			r group 1AG	G012 to cost	center 2100-3463 work paper					
2018 Total		-47	-55	0	-0.2						

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>	Adj Type			
Explanation:	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			
Explanation:	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			
Explanation:	Transfer costs in cost center 2100-3592 workpaper group 1AG012 to cost center 2100-3463 work paper group 1ED022 where function resides.							
2019 Total	-129	2	0	-0.9				
2020	0	-4	0	0.0	1-Sided Adj			
Explanation:	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			
Explanation:	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			
Explanation:	Transfer costs in cost center 2 group 1ED022 where function	• •	r group 1AG	012 to cost	center 2100-3463 work paper			
2020	0	113	0	0.0	1-Sided Adj			
Explanation:	One-Sided transfer Non-Labor GRC costs.	r for CC 2100-3592 a	attributable b	elow-the-lin	e (BTL) activities and excluded from			
2020 Total	-185	229	0	-1.6				
2021	0	-4	0	0.0	1-Sided Adj			
Explanation:	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			
Explanation:	Transfer costs in cost center 2 group 1ED022 where function	• •	r group 1AG	012 to cost	center 2100-3463 work paper			
2021 Total	62	-1	0	0.5				

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

Cost Center	Sub	Description
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 METRO A
2100-0132	000	PROJECT MGMT METRO A
2100-0133	000	METRO C&O SOT ORDER TEAM
	SDCSE	JELECTRIC RISTRIRITION/Eyb No.SRC&E 12 M/D R E/Mitnoss: T. Swotok

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

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

Cost Center		Description
2100-0134	<u>Sub</u> 000	PROJECT MGMT METRO B
2100-0134	000	NORTHEAST C&O SORT ORDER TEAM
2100-0135	000	PROJECT MGMT NORTHERN
2100-0136	000	CS PROJ CONTRACT ADMIN
	000	PROJECT MANAGEMENT POLICY & PROCEDURES
2100-0138	000	CONSTRUCTION SERVICES DIRECTOR
2100-0150	000	PROJ CONTRIBETRO ELECTRIC
2100-0152	000	PROJ CONTR - BEACH CITIES ELE
2100-0153	000	PROJ CONTR - BEAGIT GITIES ELE PROJ CONTR NORTHEAST ELE
2100-0154	000	PROJ CONTR EASTERN ELE
2100-0155	000	PROJ CONTRICASTERNI ELE PROJ CONTRINORTH COAST ELE
2100-0156	000	PROJ CONTRINORTH COAST ELE PROJ CONTRIOR ORANGE COUNTY ELE
2100-0157	000	PROJ CONTR-NON-DISTRICT ELE
2100-0158	000	PROJ CONTRINON-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 ORANGE COUNTY GAS
2100-0164	000	PROJ CONTR ORANGE COUNTY GAS
2100-0165	000	MATERIALS ANALYSIS LAB
2100-0175	000	FLEET EQUIPMENT OPERATIONS
2100-0189 2100-0205	000	EQUIPMENT TRAINING & OPERATIONS SERVICES
2100-0205	000	ELE TRANS & DIST ENGINEERING DIR
2100-0221	000	TRANS ENGINEERING
2100-0222	000	SUBSTATION ENG & DESIGN
2100-0223	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
	SDCSE	JELECTRIC DISTRIBUTION/Eyb No.SDC&E 12 WR R E/Mitnoss: T. Swotok

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

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

<u>Sub</u>	<u>Description</u>	
000	ELE TRANS & DIST VP	
000	ELECTRIC REGIONAL OPERATIONS DIRECTOR	
000	NORTH COAST C&O SORT ORDER TEAM	
000	REGIONAL PUBLIC AFFAIRS SAN DIEGO	
000	ELE TRANS & DIST PROJECT MGMT	
000	CONSTRUCTION OPERATIONS SUPPORT	
000	EGIM STRATEGY	
000	EGIM DISTRICT OPERATIONS	
000	EGIM LAND	
000	EGIM REGIONAL SUPPORT	
000	EGIM - GIS MANAGEMENT	
000	Capital Projects Outreach	
000	SKILLS COMPLIANCE & TRAINING	
000	ELECTIC DISTRIBUTION OPS TECH SUPPORT	
000	C&O CENTER TRAINING - UG TRAINERS & ETS	
000	ASSET & INVEST STRGY	
000	TECHNICAL ANALYSIS	
000	PROGRAM MGMT	
000	COMPLIANCE MGMT	
000	SPRVSR ENABLEMENT	
000	DISTRIBUTED GENERATION PROGRAMS	
000	DIRECTOR SRPL GM CONST & ENGINGEERING	
000	MGR SRPL ENG PROCUREMENT & CONST SVCS	
000	SRPL 230KV OVERHEAD PROJECT MANAGER	
000	SRPL 230KV UNDERGROUND PROJECT MANAGER	
000	SUNCREST SUBSTATION PROJECT MANAGER	
000	SRPL 500KV OVERHEAD SD PROJECT MANAGER	
000	SRPL 500KV OVERHEAD IV PROJECT MANAGER	
000	Financial and Business Planning	
000	SRPL SAFETY MANAGER	
000	SUNRISE POWERLINK IV OFFICE	
000	Major Projects - Subsation	
000	AREA RESOURCE SCHEDULING ORG - SOUTH	
000	OPERATIONS & PROJECT MANAGEMENT TRAINING	
000	Elec T&D - Kearny Maint & Ops	
000	Elec T&D - Construction Ops	
000	BUSINESS SOLUTIONS & TRAINING	
000	Elec T&D - Major Projects	
000	SAFETY & PROJECT COMPLIANCE MANAGER	
000	MAJOR PROJECT OUTREACH	
000	MAJOR PROJECTS - TRANSMISSION	
000	MAJOR PROJECTS - SUPPORT SERVICES	
000	Elec T&D - T&D Tech Assessment	
000	OPERATIONS ENGINEERING	
	000 000 000 000 000 000 000 000 000 00	

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

Area: ELECTRIC DISTRIBUTION

Witness: Tyson J. Swetek

Appendix A: List of Non-Shared Cost Centers

Cost Center	Sub	<u>Description</u>
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
2100-3989	000	FORECASTING, COMPLIANCE & ANALYTICS
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 PRTFLIO MGMT
2100-4091	000	PROJECT SUPPORT
2100-4092	000	POLICY & COMPLIANCE
2100-4096	000	DESIGN PLANNING & PROJECT MANAGEMENT
2100-4100	000	ELECTRONIC CONTROL SYSTEM TECHS
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
2100-4190	000	PLANNING & SERVICE ORDER TEAM MANAGER