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-04-WP-R)

# REVISED WORKPAPERS TO PREPARED DIRECT TESTIMONY OF L. PATRICK KINSELLA ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY

# BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

AUGUST 2022



# 2024 General Rate Case - REVISED INDEX OF WORKPAPERS

# **Exhibit SDG&E-04-WP-R - GAS DISTRIBUTION**

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# Overall Summary For Exhibit No. SDG&E-04-WP-R

Area: GAS DISTRIBUTION

Witness: L. Patrick Kinsella

Description
Non-Shared Services
Shared Services
Total

In 2021 \$ (000) Incurred Costs				
Adjusted-Recorded		Adjusted-Forecast		
2021	2022	2023	2024	
36,545	38,551	40,387	41,843	
0	0	0	0	
36,545	38,551	40,387	41,843	

Area: GAS DISTRIBUTION Witness: L. Patrick Kinsella

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

Description
A. Other Services
B. Leak Survey
C. R-Locate & Mark
D. Main Maintenance
E. Service Maintenance
F. Tools
G. Electric Support
H. Measurement & Regulation
I. Cathodic Protection
J. Asset Management
K. Operations Management Supervision & Training Total

	In 2021 \$ (000) Ir	curred Costs			
Adjusted- Recorded	Adjusted-Forecast				
2021	2022	2023	2024		
69	90	90	90		
2,067	2,067	2,067	2,067		
7,116	8,118	9,107	10,096		
5,009	5,371	5,596	5,822		
3,293	3,578	3,847	4,116		
1,708	1,739	1,667	1,667		
514	495	495	495		
4,638	4,798	5,173	5,153		
2,050	1,834	1,834	1,834		
1,078	1,347	1,346	1,375		
9,003	9,114	9,165	9,128		
36,545	38,551	40,387	41,843		

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: A. Other Services
Workpaper: 1GD000.000

#### Summary for Category: A. Other Services

	In 2021\$ (000) Incurred Costs				
	Adjusted-Recorded		Adjusted-Forecast		
	2021	2022	2023	2024	
Labor	3	44	44	44	
Non-Labor	66	46	46	46	
NSE	0	0	0	0	
Total	69	90	90	90	
FTE	0.0	0.6	0.6	0.6	

#### **Workpapers belonging to this Category:**

1GD000.000 Other Servi	ices
------------------------	------

Labor	3	44	44	44
Non-Labor	66	46	46	46
NSE	0	0	0	0
Total	69	90	90	90
FTE	0.0	0.6	0.6	0.6

Beginning of Workpaper 1GD000.000 - Other Services

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: A. Other Services

Workpaper: 1GD000.000 - Other Services

1. Other Services

#### **Activity Description:**

Category-Sub

This group includes labor and non-labor expenses associated with support activities not captured in the other subgroups. Activities include inspection and repairing of customer's meters, house regulators and house lines, and providing patrolling and other support to Transmission facilities and pipelines.

#### **Forecast Explanations:**

#### Labor - 5-YR Average

This group captures the costs associated with support provided to a wide variety of activities not recorded in the other groups. Due to the wide range of activities included in this group, the costs fluctuate from year to year. Therefore, a five year average was selected to project future costs.

#### Non-Labor - 5-YR Average

This group captures the costs associated with support provided to a wide variety of activities not recorded in the other groups. Due to the wide range of activities included in this group, the costs fluctuate from year to year. Therefore, a five year average was selected to project future costs.

#### NSE - 5-YR Average

N/A

#### **Summary of Results:**

		In 2021\$ (000) Incurred Costs							
		Adjusted-Recorded				Ad	Adjusted-Forecast		
Years	2017	2018	2019	2020	2021	2022	2023	2024	
Labor	35	142	5	33	3	44	44	44	
Non-Labor	10	27	30	98	66	47	47	47	
NSE	0	0	0	0	0	0	0	0	
Total	46	170	35	131	69	91	91	91	
FTE	0.2	2.0	0.1	0.7	0.0	0.6	0.6	0.6	

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: A. Other Services
Category-Sub: 1. Other Services

Workpaper: 1GD000.000 - Other Services

#### **Summary of Adjustments to Forecast:**

			In 202	1 \$(000) Ir	ncurred Co	sts				
Forecast	t Method	Bas	se Foreca	st	Forec	ast Adjust	ments	Adjus	ted-Forec	ast
Years	3	2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	5-YR Average	44	44	44	0	0	0	44	44	44
Non-Labor	5-YR Average	46	46	46	0	0	0	46	46	46
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
Tota	I	90	90	90	0	0	0	90	90	90
FTE	5-YR Average	0.6	0.6	0.6	0.0	0.0	0.0	0.6	0.6	0.6

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

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: A. Other Services
Category-Sub: 1. Other Services

Workpaper: 1GD000.000 - Other Services

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

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
ecorded (Nominal \$)*					
Labor	28	114	4	948	3
Non-Labor	9	25	28	203	66
NSE	0	0	0	0	0
Total	37	139	32	1,151	69
FTE	0.3	1.6	0.0	9.7	0.0
djustments (Nominal \$) **					
Labor	0	0	0	-920	0
Non-Labor	0	0	0	-111	0
NSE	0	0	0	0	0
Total		0	0	-1,031	0
FTE	0.0	0.0	0.0	-9.0	0.0
ecorded-Adjusted (Nomina	al \$)				
Labor	28	114	4	28	3
Non-Labor	9	25	28	92	66
NSE	0	0	0	0	0
Total	37	139	32	120	69
FTE	0.2	1.7	0.1	0.7	0.0
acation & Sick (Nominal \$)	)				
Labor	4	17	1	4	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	4	17	1	4	0
FTE	0.0	0.3	0.0	0.0	0.0
scalation to 2021\$					
Labor	4	11	0	1	0
Non-Labor	1	2	2	6	0
NSE	05	0	0	0	0
Total	5	13	2	7	0
FTE	0.0	0.0	0.0	0.0	0.0
ecorded-Adjusted (Consta	ant 2021\$)				
Labor	35	142	5	33	3
Non-Labor	10	27	30	98	66
NSE	0	0	0	0	0
Total	46	170	35	131	69
FTE	0.2	2.0	0.1	0.7	0.0

<sup>\*</sup> After company-wide exclusions of Non-GRC costs

<sup>\*\*</sup> Refer to "Detail of Adjustments to Recorded" page for line item adjustments

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: A. Other Services
Category-Sub: 1. Other Services

Workpaper: 1GD000.000 - Other Services

#### Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs									
	Years	2017	2018	2019	2020	2021			
Labor		0	0	0	-920	0			
Non-Labor		0	0.036	0	-111	0			
NSE		0	0	0	0	0			
	Total		0.036	0	-1,031	0			
FTE		0.0	0.0	0.0	-9.0	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 Total	0	0	0	0.0			
2018	0	0	0	0.0	1-Sided Adj		
Explanation:	Incremental costs that are a Memorandum Account (CE	·	equested for r	ecovery thro	ough a non-GRC Catastrophic Event		
2018 Total	0	0	0	0.0			
2019 Total	0	0	0	0.0			
2020	-652	-42	0	-6.0	1-Sided Adj		
Explanation:	7074346/7022860 - Adjust and Training) - Remove DC	•	,		(Operations Management, Supervision		
2020	-268	-69	0	-3.0	1-Sided Adj		
Explanation:	7090820 - Adjust from 1GD000 (Other Services) to 1GD009 (Asset Management) - Remove DOH from Other Services to Asset Mgmt.						
2020 Total	-920	-111	0	-9.0			
2021 Total	0	0	0	0.0			

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: B. Leak Survey
Workpaper: 1GD001.000

Summary for Category: B. Leak Survey

	In 2021\$ (000) Incurred Costs							
	Adjusted-Recorded		Adjusted-Forecast					
	2021	2022	2023	2024				
Labor	1,889	1,889	1,889	1,889				
Non-Labor	179	179	179	179				
NSE	0	0	0	0				
Total	2,068	2,068	2,068	2,068				
FTE	20.1	20.1	20.1	20.1				

#### **Workpapers belonging to this Category:**

1	GD001	.000 L	_eak	Survey
	GDUUI	.UUU L	_can	Juivev

· · · · · · · · · · · · · · · · · · ·				
Labor	1,889	1,889	1,889	1,889
Non-Labor	179	179	179	179
NSE	0	0	0	0
Total	2,068	2,068	2,068	2,068
FTE	20.1	20.1	20.1	20.1

Beginning of Workpaper 1GD001.000 - Leak Survey

# San Diego Gas & Electric Company 2024 GRC - REVISED

Non-Shared Service Workpapers

**GAS DISTRIBUTION** Area: L. Patrick Kinsella Witness: B. Leak Survey Category: 1. Leak Survey Category-Sub

1GD001.000 - Leak Survey Workpaper:

#### **Activity Description:**

This all RAMP workpaper (SDG&E-Risk-9, C07) group includes labor and non-labor expenses associated with surveying the SDG&E gas distribution system for leaks. This includes the following surveys: residential gas lines and meter set assemblies (MSAs); atmospheric corrosion (ACOR); business districts; transmission lines; area odor investigations; and highway and railroad crossings. Also included in this group are surveys for special requests such as slide areas and construction projects with blasting.

#### **Forecast Explanations:**

#### Labor - Base YR Rec

Labor and non-labor expenses were stable from 2017 to 2021. Even though survey frequencies were increased (from every three years to one per year and from every five years to every three years) across almost all types of pipe, these labor and non-labor survey costs were absorbed in the 2018 and 2020 SB1371 Compliance plan. Base year Recorded (2021) was chosen as the level of activities in 2021 best represents the expected level of work activities in the forecast years.

#### Non-Labor - Base YR Rec

Labor and non-labor expenses were stable from 2017 to 2021. Even though survey frequencies were increased (from every three years to one per year and every five years to every three years) across almost all types of pipe, these labor and non-labor survey costs were absorbed in the 2018 and 2020 SB1371 Compliance plan. Base year Recorded (2021) was chosen as the level of activities in 2021 best represents the expected level of work activities in the forecast years.

#### **NSE - Base YR Rec**

N/A

#### Summary of Results:

	In 2021\$ (000) Incurred Costs										
		Adju	ısted-Recor	Ad	Adjusted-Forecast						
Years	2017	2018	2019	2020	2021	2022	2023	2024			
Labor	1,941	1,794	1,719	1,773	1,889	1,889	1,889	1,889			
Non-Labor	281	200	162	132	179	178	178	178			
NSE	0	0	0	0	0	0	0	0			
Total	2,222	1,994	1,881	1,905	2,067	2,067	2,067	2,067			
FTE	20.6	22.5	18.5	19.6	20.1	20.1	20.1	20.1			

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: B. Leak Survey
Category-Sub: 1. Leak Survey

Workpaper: 1GD001.000 - Leak Survey

#### **Summary of Adjustments to Forecast:**

	In 2021 \$(000) Incurred Costs										
Forecast	t Method	Bas	se Foreca	st	Forec	ast Adjust	ments	Adjus	ted-Forec	ast	
Years	5	2022	2023	2024	2022	2023	2024	2022	2023	2024	
Labor	Base YR Rec	1,889	1,889	1,889	0	0	0	1,889	1,889	1,889	
Non-Labor	Base YR Rec	179	179	179	0	0	0	179	179	179	
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0	
Tota	I	2,067	2,067	2,067	0	0	0	2,067	2,067	2,067	
FTE	Base YR Rec	20.1	20.1	20.1	0.0	0.0	0.0	20.1	20.1	20.1	

### **Forecast Adjustment Details:**

Forecast Adjusti	ment Details:								
<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	NSE	<u>Total</u>	<u>FTE</u>	Adj Type			
2022	-1,889	-179	0	-2,068	-19.6	1-Sided Adj			
Explanation:	RAMP: SDG&E-Risk-9, adjustment.	C07-T1 & T2:	Removal from	n base adjus	tment to net \$0	from base			
2022	1,889	179	0	2,068	19.6	1-Sided Adj			
Explanation:	dollars included within the	RAMP: SDG&E-Risk-9, C07-T1 (HP Transmission) & T2 (MP Overall): Base adjustment to show the dollars included within the selected forecast methodology related to C07-T1 & T2. Note you will also see an offsetting adjustment "Other" to remove these same costs to net \$0.							
2022 Total	0	0	0	0	0.0				
2023	-1,889	-179	0	-2,068	-19.6	1-Sided Adj			
Explanation:	RAMP: SDG&E-Risk-9, adjustment.	RAMP: SDG&E-Risk-9, C07-T1 & T2: Removal from base adjustment to net \$0 from base							
2023	1,889	179	0	2,068	19.6	1-Sided Adj			
Explanation:	RAMP: SDG&E-Risk-9, dollars included within the see an offsetting adjustr	ne selected for	ecast method	ology related	to C07-T1 & T	•			
2023 Total	0	0	0	0	0.0				
2024	-1,889	-179	0	-2,068	-19.6	1-Sided Adj			
Explanation:	RAMP: SDG&E-Risk-9, C07-T1 & T2: Removal from base adjustment to net \$0 from base adjustment.								
2024	1,889	179	0	2,068	19.6	1-Sided Adj			
2024 Explanation:	1,889 RAMP: SDG&E-Risk-9, dollars included within to see an offsetting adjuste	C07-T1 (HP T	ransmission) ecast method	& T2 (MP Ov ology related	erall): Base ac to C07-T1 & T	justment to show the			

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: B. Leak Survey
Category-Sub: 1. Leak Survey

Workpaper: 1GD001.000 - Leak Survey

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

•	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
ecorded (Nominal \$)*					
Labor	1,514	1,434	1,421	1,505	1,642
Non-Labor	252	185	153	124	179
NSE	0	0	0	0	0
Total	1,766	1,619	1,573	1,629	1,821
FTE	17.7	19.2	15.9	16.9	17.2
djustments (Nominal \$) **					
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0		0	0
FTE	0.0	0.0	0.0	0.0	0.0
ecorded-Adjusted (Nomina	al \$)				
Labor	1,514	1,434	1,421	1,505	1,642
Non-Labor	252	185	153	124	179
NSE	0	0	0	0	0
Total	1,766	1,619	1,573	1,629	1,821
FTE	17.7	19.2	15.9	16.9	17.1
acation & Sick (Nominal \$)	)				
Labor	225	217	203	213	247
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	225	217	203	213	247
FTE	2.9	3.3	2.6	2.7	3.0
scalation to 2021\$					
Labor	202	142	95	55	0
Non-Labor	29	16	10	8	0
NSE	0	0	0	0	0
Total	231	158	104	63	0
FTE	0.0	0.0	0.0	0.0	0.0
ecorded-Adjusted (Consta	ant 2021\$)				
Labor	1,941	1,794	1,719	1,773	1,889
Non-Labor	281	200	162	132	179
NSE	0	0	0	0	0
Total	2,222	1,994	1,881	1,905	2,067
FTE	20.6	22.5	18.5	19.6	20.1

<sup>\*</sup> After company-wide exclusions of Non-GRC costs

<sup>\*\*</sup> Refer to "Detail of Adjustments to Recorded" page for line item adjustments

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: B. Leak Survey
Category-Sub: 1. Leak Survey

Workpaper: 1GD001.000 - Leak Survey

#### Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs									
	Years	2017	2018	2019	2020	2021			
Labor		0	0	0	0	0			
Non-Labor		0	0	0	0	0			
NSE		0	0	0	0	0			
	Total		0	0	0	0			
FTE		0.0	0.0	0.0	0.0	0.0			

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

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: B. Leak Survey
Category-Sub: 1. Leak Survey

Workpaper: 1GD001.000 - Leak Survey

#### RAMP Item # 1

#### **RAMP Activity**

RAMP Chapter: SDG&E-Risk-9 Incident Related to the Medium Pressure System (Excluding Dig-in)

RAMP Line Item ID: C07

RAMP Line Item Name: Pipeline Monitoring (Leak Mitigation, Bridge & Span, Unstable Earth, and Pipeline Patrol

Tranche(/s): Tranche1: HP Transmission; Tranche2: MP Overall

#### **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	24	24	24	24	2,755	3,335
Tranche 2 Cost Estimate	2,043	2,043	2,043	2,043	2,755	3,335

#### **Cost Estimate Changes from RAMP:**

GRC forecast is outside the RAMP range due to reallocation of dollars (units) associated with revised tranching and forecast assumptions.

#### **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 miles surveyed	360.00	360.00	360.00	360.00	894.00	1,082.00
Tranche 2 # of Inspections & Surveys	940.00	940.00	940.00	940.00	894.00	1,082.00

#### Work Unit Changes from RAMP:

The GRC forecast is outside the RAMP range due to reallocation of dollars (units) associated with revised tranching. Units of measure for HP was changed to miles surveyed.

Dick	Snand	Efficiency	(DCE)
L ISK	SUEIIU	EIIICIEIICV	INSEI

	GRC RSE	RAMP RSE	
Tranche 1	0.000	0.000	
Tranche 2	1,009.000	15.000	

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: B. Leak Survey
Category-Sub: 1. Leak Survey

Workpaper: 1GD001.000 - Leak Survey

#### **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). SDG&E-RISK-9, C07-T01 For RSE calculation purposes, Pipeline Monitoring costs are captured in SoCalGas High Pressure Incident chapter within SCG-RISK-1, C04-T01/ SCG-RISK-1, C04-T02 Leak Survey and Patrol for these activities have similar risk reducing benefits.

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: C. R-Locate & Mark
Workpaper: 1GD002.000

Summary for Category: C. R-Locate & Mark

	In 2021\$ (000) Incurred Costs					
	Adjusted-Recorded Adjusted-Forecast					
	2021	2022	2023	2024		
Labor	6,008	6,891	8,036	9,181		
Non-Labor	1,107	1,228	1,071	915		
NSE	0	0	0	0		
Total	7,115	8,119	9,107	10,096		
FTE	62.2	70.7	82.6	94.6		

#### **Workpapers belonging to this Category:**

1GD002.000 R-Locate &	Mark			
Labor	6,008	6,891	8,036	9,181
Non-Labor	1,107	1,228	1,071	915
NSE	0	0	0	0
Total	7,115	8,119	9,107	10,096
FTE	62.2	70.7	82.6	94.6

Beginning of Workpaper 1GD002.000 - R-Locate & Mark

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: C. R-Locate & Mark
Category-Sub 1. R-Locate & Mark

Workpaper: 1GD002.000 - R-Locate & Mark

#### **Activity Description:**

This all RAMP workpaper (SDG&E-Risk-7, C03, C04, & C09) group includes labor and non-labor expenses to locate and mark out multiple underground facilities which include distribution and transmission gas facilities, secondary and primary electric underground, electric transmission, fiber optics, and standby activities of excavators near high pressure distribution facilities. The activities under this cost workgroup are preventative in nature, contribute to sustainability, and are required to avert damages caused by third-party excavators working near gas and electric underground substructures. In 2019, SDG&E started the transition towards the 100% utilization of internal resources. This transition was completed in October of 2020, with 2021 as the first year of 100% internal resources for Locate and Mark.

#### Forecast Explanations:

#### Labor - 5-YR Linear

The trend of expense in labor has seen a continual rise from 2017 to 2021 due to the increase in internal resources hired to replace the outsourced contract resources, in order to meet compliance requirements; increased stand-by requests within the service territory; and an increased amount of customer Dig Alert tickets. One exception in that trend, was in the year 2021 where, due to the impact of Covid and consequent ticket volume decrease, SDG&E experienced a decrease in labor expense. However, this upward trend is expected to return in 2022 and the following forecast years due to three additional drivers all expected to result in ticket volume increases:

- 1/ SB661 was recently passed requiring any person who plans to conduct any excavation to contact the appropriate regional notification center before commencing excavation.
- 2/ SB297 was recently signed by Gov. Newsom, which prescribes increased civil penalties to operators and excavators who violate provisions of California Government Code Sec. 4216 and cause damage to underground utility infrastructure
- 3/ Economic forecasts call for an increase in non-farm employment growth.

Using a historical average or base forecast over the forecast period would not appropriately account for these multiple labor activity drivers, as well as the decline in non-labor due to replacement of the contract resources with internal resources. Thus, to reflect these changing conditions with an increase in Locate and Mark labor, and decrease in non-labor, a five year linear trend based forecast was selected for the forecast period to calculate and best illustrate the Labor and Non-Labor trends for this group.

Due to the uncertainty of upward costs, SDG&E requests a balancing account for Locate and Mark activities.

#### Non-Labor - 5-YR Linear

See description above which applies to both Labor and Non-Labor.

#### NSE - 5-YR Linear

N/A

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: C. R-Locate & Mark
Category-Sub 1. R-Locate & Mark

Workpaper: 1GD002.000 - R-Locate & Mark

#### **Summary of Results:**

		In 2021\$ (000) Incurred Costs								
		Adju	sted-Recor	ded		Adjusted-Forecast				
Years	2017	2018	2019	2020	2021	2022	2023	2024		
Labor	1,769	2,053	2,419	5,026	6,008	6,891	8,036	9,181		
Non-Labor	1,838	1,770	2,100	1,668	1,107	1,227	1,071	915		
NSE	0	0	0	0	0	0	0	0		
Total	3,607	3,823	4,518	6,695	7,116	8,118	9,107	10,096		
FTE	17.2	20.7	23.6	50.3	62.2	70.7	82.6	94.6		

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: C. R-Locate & Mark

Workpaper: 1GD002.000 - R-Locate & Mark

1. R-Locate & Mark

#### **Summary of Adjustments to Forecast:**

Category-Sub:

	In 2021 \$(000) Incurred Costs									
Forecast	t Method	Base Forecast Forecast Adjustments Adjusted-Forecast				ast				
Years	5	2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	5-YR Linear	6,891	8,036	9,181	0	0	0	6,891	8,036	9,181
Non-Labor	5-YR Linear	1,228	1,071	915	0	0	0	1,228	1,071	915
NSE	5-YR Linear	0	0	0	0	0	0	0	0	0
Tota	I	8,118	9,107	10,096	0	0	0	8,118	9,107	10,096
FTE	5-YR Linear	70.7	82.6	94.6	0.0	0.0	0.0	70.7	82.6	94.6

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	330	63	0	393	3.0	1-Sided Adj
Explanation:	RAMP: SDG&E-Risk-7 forecast methodology r remove these same co	elated to C09 (I	•			
2022	-330	-63	0	-393	-3.0	1-Sided Adj
Explanation:	RAMP: SDG&E-Risk-7	, C09 (MP): Re	moval from l	oase adjustme	ent to net \$0 fro	om base adjustment.
2022	-6,561	-1,165	0	-7,726	-58.3	1-Sided Adj
Explanation:	RAMP: SDG&E-Risk-7 base adjustment.	, C03 (MP) & F	Risk-7, C04 (I	HP): Remova	l from base ad	ustment to net \$0 from
2022	6,381	1,134	0	7,515	55.3	1-Sided Adj
Explanation:	RAMP: SDG&E-Risk-7 forecast methodology r remove these same co	elated to C03.	•			
2022	180	31	0	211	3.0	1-Sided Adj
Explanation:	RAMP: SDG&E-Risk-7 forecast methodology r remove these same co	elated to C04 (I	•			
2022 Total	0	0	0	0	0.0	
2023	7,495	980	0	8,475	64.9	1-Sided Adj
Explanation:	RAMP: SDG&E-Risk-7 forecast methodology r remove these same co	elated to C03.	•			
2023	-7,706	-1,008	0	-8,714	-67.9	1-Sided Adj
2020						
Explanation:	RAMP: SDG&E-Risk-7 base adjustment.	, C03 (MP) & R	isk-7, C04 (H	IP): Removal	from base adj	ustment to net \$0 from

# San Diego Gas & Electric Company 2024 GRC - REVISED

#### Non-Shared Service Workpapers

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: C. R-Locate & Mark
Category-Sub: 1. R-Locate & Mark

Workpaper: 1GD002.000 - R-Locate & Mark

<u>Year</u>	<u>Labor</u>	NLbr	NSE	<u>Total</u>	FTE	Adj_Type
Explanation:	RAMP: SDG&E-Risk-7, forecast methodology re remove these same cost	lated to C09 (M	•			
2023	-330	-63	0	-393	-3.0	1-Sided Adj
Explanation:	RAMP: SDG&E-Risk-7,	C09 (MP): Ren	noval from	base adjustme	nt to net \$0 fro	om base adjustment.
2023	211	28	0	239	3.0	1-Sided Adj
Explanation:	RAMP: SDG&E-Risk-7, forecast methodology re remove these same cost	lated to C04 (H				
2023 Total	0	0	0	0	0.0	
2024	-8,851	-852	0	-9,703	-77.6	1-Sided Adj
Explanation:	RAMP: SDG&E-Risk-7, base adjustment.	C03 (MP) & Ris	k-7, C04 (H	HP): Removal t	from base adj	ustment to net \$0 from
2024	8,608	828	0	9,436	74.6	1-Sided Adj
Explanation:	RAMP: SDG&E-Risk-7, forecast methodology re remove these same cost	lated to C03. N	•			
2024	330	63	0	393	3.0	1-Sided Adj
Explanation:	RAMP: SDG&E-Risk-7, forecast methodology re remove these same cost	lated to C09 (M	-			
2024	-330	-63	0	-393	-3.0	1-Sided Adj
Explanation:	RAMP: SDG&E-Risk-7,	C09 (MP): Ren	noval from	base adjustme	nt to net \$0 fro	om base adjustment.
2024	243	24	0	267	3.0	1-Sided Adj
Explanation:	RAMP: SDG&E-Risk-7, forecast methodology re	lated to C04 (H	-			
	remove these same cost	s to net \$0.				

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: C. R-Locate & Mark
Category-Sub: 1. R-Locate & Mark

Workpaper: 1GD002.000 - R-Locate & Mark

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

retermination of Aujusteu-i	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
Recorded (Nominal \$)*					
Labor	1,380	1,641	1,999	4,266	7,007
Non-Labor	1,649	1,632	1,976	1,565	1,107
NSE	0	0	0	0	0
Total	3,029	3,273	3,975	5,830	8,114
FTE	14.7	17.8	20.3	43.3	66.2
Adjustments (Nominal \$) **					
Labor	0	0	0	0	-1,783
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	0	-1,783
FTE	0.0	0.0	0.0	0.0	-13.0
Recorded-Adjusted (Nomina	I \$)				
Labor	1,380	1,641	1,999	4,266	5,224
Non-Labor	1,649	1,632	1,976	1,565	1,107
NSE	0	0	0	0	0
Total	3,029	3,273	3,975	5,830	6,331
FTE	14.7	17.7	20.3	43.3	53.2
acation & Sick (Nominal \$)					
Labor	205	249	286	605	785
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	205	249	286	605	785
FTE	2.5	3.0	3.3	7.0	9.0
scalation to 2021\$					
Labor	184	163	133	156	0
Non-Labor	190	138	124	104	0
NSE	0	0	0	0	0
Total	374	301	257	259	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constar	nt 2021\$)				
Labor	1,769	2,053	2,419	5,026	6,008
Non-Labor	1,838	1,770	2,100	1,668	1,107
NSE	0	0	0	0	0
Total	3,607	3,823	4,518	6,695	7,116
FTE	17.2	20.7	23.6	50.3	62.2

<sup>\*</sup> After company-wide exclusions of Non-GRC costs

<sup>\*\*</sup> Refer to "Detail of Adjustments to Recorded" page for line item adjustments

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: C. R-Locate & Mark
Category-Sub: 1. R-Locate & Mark

Workpaper: 1GD002.000 - R-Locate & Mark

#### Summary of Adjustments to Recorded:

	In Nominal \$ (000) Incurred Costs							
	Years	2017	2018	2019	2020	2021		
Labor		0	0	0	0	-1,783		
Non-Labor		0	0	0	0	0		
NSE		0	0	0	0	0		
	Total		0	0 -	0	-1,783		
FTE		0.0	0.0	0.0	0.0	-13.0		

#### 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 Total	0	0	0	0.0			
2018 Total	0	0	0	0.0			
2019 Total	0	0	0	0.0			
2020 Total	0	0	0	0.0			
2021	-1,070	0	0	-8.0	1-Sided Adj		
Explanation:	•		•		ance). Move gas main portion (60% of .) to 1GD003 (Main Maintenance)		
2021	-713	0	0	-5.0	1-Sided Adj		
Explanation:	Order number 427424. Adjust from 1GD002 to 1GD004 (Service Maintenance). Move gas service portion (40% of total Gas Dist System) of standby time from 1GD002 (Locate and Mark) to 1GD004 (Service Maintenance) workpaper.						
2021 Total	-1,783	0	0	·13.0			

# San Diego Gas & Electric Company 2024 GRC - REVISED

Non-Shared Service Workpapers

Area: **GAS DISTRIBUTION** Witness: L. Patrick Kinsella Category: C. R-Locate & Mark Category-Sub: 1. R-Locate & Mark

Workpaper: 1GD002.000 - R-Locate & Mark

#### RAMP Item # 1

#### **RAMP Activity**

RAMP Chapter: SDG&E-Risk-7 Excavation Damage (Dig-In) on the Gas System

RAMP Line Item ID: C04

RAMP Line Item Name: Locate & Mark Activities (HP)

Tranche(/s): Tranche1: HP

#### **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	185	211	239	268	1,458	1,765

#### **Cost Estimate Changes from RAMP:**

The GRC Forecast is outside the RAMP range due the RAMP range including both Gas Transmission and Gas Distribution Supply Line dollars (units). Dollars (units) represented here are only those that are covered by activity for Gas Distribution Supply Lines.

#### **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 tickets	8,339.00	8,589.00	8,847.00	9,112.00	31,675.00	38,344.00

#### Work Unit Changes from RAMP:

The GRC Forecast is outside the RAMP range due the RAMP range including both Gas Transmission and Gas Distribution Supply Line dollars (units). Dollars (units) represented here are only those that are covered by activity for Gas Distribution Supply Lines.

#### Risk Spend Efficiency (RSE)

	GRC RSE	RAMP RSE	
Tranche 1	482.000	61.000	

#### **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: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: C. R-Locate & Mark
Category-Sub: 1. R-Locate & Mark

Workpaper: 1GD002.000 - R-Locate & Mark

#### RAMP Item # 2

#### **RAMP Activity**

RAMP Chapter: SDG&E-Risk-7 Excavation Damage (Dig-In) on the Gas System

RAMP Line Item ID: C09

RAMP Line Item Name: Locate & Mark Quality Assurance

Tranche(/s): Tranche1: MP

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

	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	393	393	393	393	594	759

#### **Cost Estimate Changes from RAMP:**

The forecast is outside the RAMP range due to changes in forecast assumptions since preparing RAMP filing.

GRC W	Vork U	nit/Activity	Level	<b>Estimates</b>
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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 # of FTE	3.00	3.00	3.00	3.00	3.00	3.00

#### Work Unit Changes from RAMP:

Units are in alignment with RAMP forecast.

#### Risk Spend Efficiency (RSE)

	GRC RSE	RAMP RSE
Tranche 1	2.000	1.000

#### **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)

# San Diego Gas & Electric Company 2024 GRC - REVISED

Non-Shared Service Workpapers

Area: **GAS DISTRIBUTION** L. Patrick Kinsella Witness: Category: C. R-Locate & Mark Category-Sub: 1. R-Locate & Mark

Workpaper: 1GD002.000 - R-Locate & Mark

#### RAMP Item #3

#### **RAMP Activity**

RAMP Chapter: SDG&E-Risk-7 Excavation Damage (Dig-In) on the Gas System

RAMP Line Item ID: C03

RAMP Line Item Name: Locate & Mark Activities (MP)

Tranche(/s): Tranche1: MP

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

	2021 Historical Embedded Cost		2023 Forecast	2024 Forecast	2024 RAMP Range (2020 Incurred \$)	
	(2021 \$)	(2021 \$)	(2021 \$)	(2021 \$)	Low	High
Tranche 1 Cost Estimate	6,538	7,514	8,475	9,436	5,135	6,215

#### **Cost Estimate Changes from RAMP:**

The forecast is outside the RAMP range due to changes in forecast assumptions since preparing RAMP.

#### **GRC Work Unit/Activity Level Estimates**

	2021 Historical	2022	2023	2024		RAMP
Unit of Measure	Embedded Activities	Forecast Activities	Forecast Activities	Forecast Activities	Range A Low	Activities High
Tranche 1 # of tickets	148,350.00	137,892.00	142,029.00	146,290.00	138,975.00	168,233.00

#### Work Unit Changes from RAMP:

Units are in alignment with RAMP forecast.

#### Risk Spend Efficiency (RSE)

	GRC RSE	RAIVIP ROE
Tranche 1	7.000	590.000

#### **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)

**GAS DISTRIBUTION** Area: Witness: L. Patrick Kinsella D. Main Maintenance Category:

1GD003.000 Workpaper:

#### Summary for Category: D. Main Maintenance

		111 202 19 (000) IIIC		
	Adjusted-Recorded		Adjusted-Forecast	
	2021	2022	2023	2024
Labor	3,957	4,164	4,360	4,557
Non-Labor	1,052	1,207	1,236	1,266
NSE	0	0	0	0
Total	5,009	5,371	5,596	5,823
FTE	33.6	36.3	38.0	39.7
Workpapers belonging	to this Category:			
1GD003.000 Main Ma	intenance			
Labor	3,957	4,164	4,360	4,557
Non-Labor	1,052	1,207	1,236	1,266
NSE	0	0	0	0
Total	5,009	5,371	5,596	5,823
FTE	33.6	36.3	38.0	39.7

In 2021\$ (000) Incurred Costs

Beginning of Workpaper 1GD003.000 - Main Maintenance

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: D. Main Maintenance
Category-Sub 1. Main Maintenance

Workpaper: 1GD003.000 - Main Maintenance

#### **Activity Description:**

Main maintenance work is generally corrective in nature and is required to keep the natural gas system operating safely and reliably. The work in this workgroup is designed to meet federal, i.e., 49 C.F.R. §192, and state, i.e., CPUC General Order 112-F, pipeline safety regulations and to extend the life of distribution main pipelines and related infrastructure. Main maintenance work is primarily comprised of labor and non-labor expenses associated with investigating and repairing leaks in distribution mains as well as moving, lowering, and raising short sections of gas distribution mains, vaults, valves, and related structures. This group includes the Main Maintenance portion of RAMP (SDG&E-Risk-9, C06): Leak Repair, and (SDG&E-Risk-9, C11): Gas Distribution Emergency Department.

#### Forecast Explanations:

#### Labor - 5-YR Linear

A variety of factors influence the level of spending on main maintenance in a given year. These factors include increasing government regulations, aging infrastructure, public safety, municipality requirements, material failure, infrastructure, and economic conditions. The labor and non-labor expenses have experienced an upward trend in costs. This upward trend is forecasted to continue as work pressures continue to increase. Therefore, a five year (2017 through 2021) historical linear trend was used to forecast the base level of future labor expenses. Using an average forecasting method would not be appropriate for this work category as it would not fully fund future critical compliance and maintenance work.

#### Non-Labor - 5-YR Linear

A variety of factors influence the level of spending on main maintenance in a given year. These factors include increasing government regulations, aging infrastructure, public safety, municipality requirements, material failure, infrastructure, and economic conditions. The labor and non-labor expenses have experienced an upward trend in costs. This upward trend is forecasted to continue as work pressures continue to increase. Therefore, a five year (2017 through 2021) historical linear trend was used to forecast the base level of future non-labor expenses. Using an average forecasting method would not be appropriate for this work category as it would not fully fund future critical compliance and maintenance work.

#### NSE - 5-YR Linear

N/A

#### **Summary of Results:**

		In 2021\$ (000) Incurred Costs						
		Adju	ısted-Recor	ded		Ad	justed-Fore	cast
Years	2017	2018	2019	2020	2021	2022	2023	2024
Labor	3,148	3,592	3,238	3,937	3,957	4,164	4,360	4,557
Non-Labor	1,154	992	905	1,489	1,052	1,206	1,236	1,265
NSE	0	0	0	0	0	0	0	0
Total	4,301	4,584	4,143	5,426	5,009	5,370	5,596	5,822
FTE	26.8	31.7	28.4	35.2	33.6	36.3	38.0	39.7

# San Diego Gas & Electric Company 2024 GRC - REVISED

#### Non-Shared Service Workpapers

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: D. Main Maintenance
Category-Sub: 1. Main Maintenance

Workpaper: 1GD003.000 - Main Maintenance

#### **Summary of Adjustments to Forecast:**

In 2021 \$(000) Incurred Costs										
Forecast Method Base Forecast			Forecast Adjustments			Adjusted-Forecast				
Years	s	2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	5-YR Linear	4,164	4,360	4,557	0		0	4,164	4,360	4,557
Non-Labor	5-YR Linear	1,207	1,236	1,266	0	0	0	1,207	1,236	1,266
NSE	5-YR Linear	0	0	0	0	0	0	0	0	0
Tota	ıl	5,371	5,596	5,822	0		0	5,371	5,596	5,822
FTE	5-YR Linear	36.3	38.0	39.7	0.0	0.0	0.0	36.3	38.0	39.7

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	-1,064	-336	0	-1,400	-12.0	1-Sided Adj		
Explanation:	RAMP: SDG&E-Risk-9 from base adjustment.	, C11-T1 (MP N	1ain Steel & F	Plastic): Remo	oval from base	adjustment to net \$0		
2022	1,064	336	0	1,400	12.0	1-Sided Adj		
Explanation:	RAMP: SDG&E-Risk-9, C11-T1 (MP Main Steel & Plastic): Base adjustment to show dollars included within the selected forecast methodology related to C11-T1. Note you will also see an offsetting adjustment "Other" to remove these same costs to net \$0.							
2022	-831	-262	0	-1,093	-9.0	1-Sided Adj		
Explanation:	RAMP: SDG&E-Risk-9 for T1 & T2	, C06-T1 & T2:	Removal fro	m base adjus	tment to net \$0	from base adjustment		
2022	831	262	0	1,093	9.0	1-Sided Adj		
Explanation:	RAMP: SDG&E-Risk-9, C06-T1 (MP Main Steel) & T2 (MP Main Plastic): Base adjustment to show dollars included within the selected forecast methodology related to C06-T1 &T2. Note you will also see an offsetting adjustment "Other" to remove these same costs to net \$0.							
	3 ,		Tomove the	se same costs	to net yo.			
2022 Total	0	0	0	0	0.0			
<b>2022 Total</b> 2023	, , , , , , , , , , , , , , , , , , ,					1-Sided Adj		
	0	0 376 , C11-T1 (MP M cted forecast n	<b>0</b> 0 1ain Steel & F nethodology r	1,567 Plastic): Base related to C11	0.0 14.0 adjustment to -T1. Note you	show dollars		
2023	1,191 RAMP: SDG&E-Risk-9 included within the sele	0 376 , C11-T1 (MP M cted forecast n	<b>0</b> 0 1ain Steel & F nethodology r	1,567 Plastic): Base related to C11	0.0 14.0 adjustment to -T1. Note you	show dollars		
2023 Explanation:	1,191 RAMP: SDG&E-Risk-9 included within the sele offsetting adjustment "C	376 , C11-T1 (MP Noted forecast in Other" to remove	0 0 flain Steel & F nethodology r e these same 0	1,567 Plastic): Base related to C 11 e costs to net	0.0 14.0 adjustment to -T1. Note you \$0. -14.0	show dollars will also see an 1-Sided Adj		
2023 Explanation: 2023	1,191 RAMP: SDG&E-Risk-9 included within the sele offsetting adjustment "C -1,191 RAMP: SDG&E-Risk-9	376 , C11-T1 (MP Noted forecast in Other" to remove	0 0 flain Steel & F nethodology r e these same 0	1,567 Plastic): Base related to C 11 e costs to net	0.0 14.0 adjustment to -T1. Note you \$0. -14.0	show dollars will also see an 1-Sided Adj		
2023 Explanation: 2023 Explanation:	1,191 RAMP: SDG&E-Risk-9 included within the sele offsetting adjustment "C -1,191 RAMP: SDG&E-Risk-9 from base adjustment.	376 , C11-T1 (MP Meted forecast in Other" to remove -376 , C11-T1 (MP Meted for C06-T1 (MP Methed for C06-T1 (	0 0 Iain Steel & F nethodology r e these same 0 Iain Steel & F 0 Iain Steel & F	1,567 Plastic): Base related to C11 e costs to net -1,567 Plastic): Remo	0.0  14.0  adjustment to -T1. Note you \$0.  -14.0  oval from base  9.0  Plastic): Base to C06-T1 &T2	show dollars will also see an  1-Sided Adj adjustment to net \$0  1-Sided Adj adjustment to show		

# San Diego Gas & Electric Company 2024 GRC - REVISED

#### Non-Shared Service Workpapers

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: D. Main Maintenance
Category-Sub: 1. Main Maintenance

Workpaper: 1GD003.000 - Main Maintenance

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	Adj_Type
Explanation:	RAMP: SDG&E-Risk-9, 0 for T1 & T2.	C06-T1 & T2:	Removal from	n base adjus	tment to net \$0	from base adjustment
2023 Total	0	0	0	0	0.0	
2024	1,318	416	0	1,734	16.0	1-Sided Adj
Explanation:	RAMP: SDG&E-Risk-9, ( within the selected foreca adjustment "Other" to rer	ast methodolog	gy related to	C11-T1. Not		
2024	-1,318	-416	0	-1,734	-16.0	1-Sided Adj
Explanation:	RAMP: SDG&E-Risk-9, 0 from base adjustment.	C11-T1 (MP M	ain Steel & P	lastic): Remo	oval from base	adjustment to net \$0
2024	880	278	0	1,158	10.0	1-Sided Adj
Explanation:	RAMP: SDG&E-Risk-9, 0 dollars included within th see an offsetting adjustm	e selected fore	ecast method	ology related	to C06-T1 &T2	
2024	-880	-278	0	-1,158	-10.0	1-Sided Adj
Explanation:	RAMP: SDG&E-Risk-9, 0 for T1 & T2.	C06-T1 & T2:	Removal froi	m base adjus	tment to net \$0	from base adjustment
2024 Total	0	0	0	0	0.0	

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: D. Main Maintenance
Category-Sub: 1. Main Maintenance

Workpaper: 1GD003.000 - Main Maintenance

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

•	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
Recorded (Nominal \$)*					
Labor	2,713	3,397	3,037	4,006	2,371
Non-Labor	1,034	914	852	1,396	1,052
NSE	0	0	0	0	0
Total	3,747	4,311	3,888	5,402	3,423
FTE	25.3	30.9	27.3	35.6	20.7
djustments (Nominal \$) **	<b>k</b>				
Labor	-257	-525	-360	-664	1,070
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	-257	-525	-360	-664	1,070
FTE	-2.3	-3.8	-2.8	-5.3	8.0
ecorded-Adjusted (Nomir	nal \$)				
Labor	2,455	2,872	2,677	3,341	3,440
Non-Labor	1,034	914	852	1,396	1,052
NSE	0	0	0	0	0
Total	3,490	3,787	3,529	4,738	4,493
FTE	23.0	27.1	24.5	30.3	28.7
acation & Sick (Nominal \$	5)				
Labor	364	435	383	474	517
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	364	435	383	474	517
FTE	3.8	4.6	3.9	4.9	4.9
scalation to 2021\$					
Labor	328	284	178	122	0
Non-Labor	119	77	53	92	0
NSE	0	0	0	0	0
Total	447	362	232	215	0
FTE	0.0	0.0	0.0	0.0	0.0
ecorded-Adjusted (Const	ant 2021\$)				
Labor	3,148	3,592	3,238	3,937	3,957
Non-Labor	1,154	992	905	1,489	1,052
NSE	0	0	0	0	0
Total	4,301	4,584	4,143	5,426	5,009
FTE	26.8	31.7	28.4	35.2	33.6

<sup>\*</sup> After company-wide exclusions of Non-GRC costs

<sup>\*\*</sup> Refer to "Detail of Adjustments to Recorded" page for line item adjustments

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: D. Main Maintenance
Category-Sub: 1. Main Maintenance

Workpaper: 1GD003.000 - Main Maintenance

#### Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs								
	Years	2017	2018	2019	2020	2021		
Labor	-	-257	-525	-360	-664	1,070		
Non-Labor		0	0	0	0	0		
NSE		0	0	0	0	0		
	Total –	-257	-525	-360	-664	1,070		
FTE		-2.3	-3.8	-2.8	-5.3	8.0		

#### Detail of Adjustments to Recorded:

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	NSE	<u>FTE</u>	Adj Type				
2017	-257	0	0	-2.3	1-Sided Adj				
Explanation:	Order number 427424/200236812 Adjust from 1GD003 (Main Maintenance) to 1GD004 (Service Maintenance). Move gas services portion (40% of total Gas Dist System) of standby time from 1GD003 (Main Maintenance) to 1GD004 (Service Maintenance) workpaper								
2017 Total	-257	0	0	-2.3					
2018	-525	0	0	-3.8	1-Sided Adj				
Explanation:	Order number 427424/200236812 A Maintenance). Move gas services po (Main Maintenance) to 1GD004 (Services)	ortion (40% of	total Gas Di	ist System)	,				
2018 Total	-525	0	0	-3.8					
2019	-360	0	0	-2.8	1-Sided Adj				
Explanation:	Order number 427424/200236812 Adjust from 1GD003 (Main Maintenance) to 1GD004 (Service Maintenance). Move gas services portion (40% of total Gas Dist System) of standby time from 1GD003 (Main Maintenance) to 1GD004 (Service Maintenance) workpaper								
2019 Total	-360	0	0	-2.8					
2020	-664	0	0	-5.3	1-Sided Adj				
Explanation:	Order number 427424/200236812 A Maintenance). Move gas services po (Main Maintenance) to 1GD004 (Services)	ortion (40% of	total Gas Di	ist System)	,				
2020 Total	-664	0	0	-5.3					
2021	1,070	0	0	8.0	1-Sided Adj				
Explanation:	Order number 427424. Adjust from 1 (60% of total Gas Dist System) of sta Maintenance) workpaper		•		· · · · · · · · · · · · · · · · · · ·				

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: D. Main Maintenance
Category-Sub: 1. Main Maintenance

Workpaper: 1GD003.000 - Main Maintenance

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	Adj Type	
2021 Total	1,070	0	0	8.0		

Non-Shared Service Workpapers

Area: **GAS DISTRIBUTION** Witness: L. Patrick Kinsella Category: D. Main Maintenance Category-Sub: 1. Main Maintenance

Workpaper: 1GD003.000 - Main Maintenance

#### RAMP Item #1

#### **RAMP Activity**

RAMP Chapter: SDG&E-Risk-9 Incident Related to the Medium Pressure System (Excluding Dig-in)

RAMP Line Item ID: C11

RAMP Line Item Name: Gas Distribution Emergency Department - Main Portion

Tranche(/s): Tranche1: MP Main Steel & Plastic

#### **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	1,230	1,401	1,567	1,734	2,595	3,140

#### **Cost Estimate Changes from RAMP:**

The GRC forecast is outside the RAMP range due to reallocation of dollars (units) associated with revised tranching and across two workpapers (1GD003 & 1GD004).

#### **GRC Work Unit/Activity Level Estimates**

	2021 Historical	2022	2023	2024	2024 R	
Unit of Measure	Embedded Activities	Forecast Activities	Forecast Activities	Forecast Activities	Range A	ctivities High
Tranche 1 # of Responses	768.00	768.00	768.00	768.00	1,216.00	1,472.00

#### Work Unit Changes from RAMP:

The GRC forecast is outside the RAMP range due to reallocation of dollars (units) associated with revised tranching and across two workpapers (1GD003 & 1GD004).

#### Risk Spend Efficiency (RSE)

**GRC RSE RAMP RSE** Tranche 1 58.000 144.000

#### **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: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: D. Main Maintenance
Category-Sub: 1. Main Maintenance

Workpaper: 1GD003.000 - Main Maintenance

#### RAMP Item # 2

#### **RAMP Activity**

RAMP Chapter: SDG&E-Risk-9 Incident Related to the Medium Pressure System (Excluding Dig-in)

RAMP Line Item ID: C06

RAMP Line Item Name: Leak Repair - Main Portion

Tranche(/s): Tranche1: MP Main Steel; Tranche2: MP Main Plastic

#### **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	605	692	713	733	1,330	1,610	
Tranche 2 Cost Estimate	351	401	413	425	1,330	1,610	

#### **Cost Estimate Changes from RAMP:**

Change in forecast methodology from base year to five year linear due to increase in expenses showing an upward trend in history from 2017-2021. The GRC forecast is outside the RAMP range due to reallocation of dollars (units) associated with revised tranching and across two workpapers (1GD003 & 1GD004).

#### **GRC Work Unit/Activity Level Estimates**

Unit of	2021 Historical Embedded	2022 Forecast	2023 Forecast	2024 Forecast	2024 RA Range Ac	
Measure	Activities	Activities	Activities	Activities	Low	High
Tranche 1 # of Projects	193.00	193.00	193.00	193.00	601.00	728.00
Tranche 2 # of Projects	112.00	112.00	112.00	112.00	601.00	728.00

#### Work Unit Changes from RAMP:

The GRC forecast is outside the RAMP range due to reallocation of dollars (units) associated with revised tranching and across two workpapers (1GD003 & 1GD004).

Risk S	pend	<b>Efficien</b>	ncv (RSE)

	GRC RSE	RAMP RSE	
Tranche 1	37.000	0.000	
Tranche 2	66.000	0.000	

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: D. Main Maintenance
Category-Sub: 1. Main Maintenance

Workpaper: 1GD003.000 - Main Maintenance

### **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: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: E. Service Maintenance

Workpaper: 1GD004.000

FTE

### Summary for Category: E. Service Maintenance

	Adjusted-Recorded Adjusted-Forecast					
	2021	2022	2023	2024		
Labor	2,814	3,055	3,256	3,457		
Non-Labor	480	524	591	659		
NSE	0	0	0	0		
Total	3,294	3,579	3,847	4,116		
FTE	24.1	27.3	29.4	31.4		
Workpapers belonging	to this Category:					
1GD004.000 Service I	Maintenance					
Labor	2,814	3,055	3,256	3,457		
Non-Labor	480	524	591	659		
NSE	0	0	0	0		
Total	3,294	3,579	3,847	4,116		

27.3

29.4

31.4

24.1

In 2021\$ (000) Incurred Costs

Beginning of Workpaper
1GD004.000 - Service Maintenance

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: E. Service Maintenance
Category-Sub 1. Service Maintenance

Workpaper: 1GD004.000 - Service Maintenance

#### **Activity Description:**

Service maintenance work is generally corrective in nature and is required to keep the natural gas system operating safely and reliably. The work in this workgroup is designed to meet federal, i.e., 49 C.F.R. §192, and state, i.e., CPUC General Order 112-F, pipeline safety regulations and to extend the life of distribution service pipelines and related infrastructure. Service maintenance work is primarily comprised of labor and non-labor expenses associated with investigating and repairing leaks in distribution services, changing service valves, checking the condition of coating at the MSA, testing service pipe for leaks, inspecting and testing service pipe after repairs have been made, and installing, maintaining and removing temporary feeds. Also included in this subgroup are expenses for moving, lowering, and raising sections of distribution services. Rearranging and changing the location of an existing service may be required due to alterations in buildings or grounds, and municipal improvements such as street widening or sewer and water system work. This group includes the Service Maintenance portion of RAMP (SDG&E-Risk-9, C06): Leak Repair, and (SDG&E-Risk-9, C11): Gas Distribution Emergency Department.

#### Forecast Explanations:

#### Labor - 5-YR Linear

A variety of factors influence the level of spending on service maintenance in a given year. These factors include increasing government regulations, aging infrastructure, public safety, municipality requirements, material failure, infrastructure, and economic conditions. The labor and non-labor expenses have experienced an upward trend in costs. This upward trend is forecasted to continue as work pressures continue to increase. Therefore, a five year linear trend was used to forecast the base level of future labor expenses. Using an average forecasting method would not be appropriate for this work category as it would not fully fund future critical compliance and maintenance work.

#### Non-Labor - 5-YR Linear

A variety of factors influence the level of spending on service maintenance in a given year. These factors include increasing government regulations, aging infrastructure, public safety, municipality requirements, material failure, infrastructure, and economic conditions. The labor and non-labor expenses have experienced an upward trend in costs. This upward trend is forecasted to continue as work pressures continue to increase. Therefore, a five year linear trend was used to forecast the base level of future non-labor expenses. Using an average forecasting method would not be appropriate for this work category as it would not fully fund future critical compliance and maintenance work.

#### NSE - 5-YR Linear

N/A

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: E. Service Maintenance
Category-Sub 1. Service Maintenance

Workpaper: 1GD004.000 - Service Maintenance

### **Summary of Results:**

		In 2021\$ (000) Incurred Costs							
		Adjι	ısted-Recor	ded		Ad	justed-Fore	cast	
Years	2017	2018	2019	2020	2021	2022	2023	2024	
Labor	2,087	2,274	2,249	2,832	2,814	3,054	3,255	3,457	
Non-Labor	233	203	303	385	480	524	591	659	
NSE	0	0	0	0	0	0	0	0	
Total	2,320	2,477	2,552	3,218	3,293	3,578	3,846	4,116	
FTE	17.8	18.5	19.7	26.2	24.1	27.3	29.4	31.4	

## Non-Shared Service Workpapers

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: E. Service Maintenance
Category-Sub: 1. Service Maintenance

Workpaper: 1GD004.000 - Service Maintenance

## **Summary of Adjustments to Forecast:**

			In 202	1 \$(000) li	ncurred Co	sts				
Forecast	t Method	Bas	se Foreca	st	Fored	ast Adjust	ments	Adjus	ted-Forec	ast
Years	5	2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	5-YR Linear	3,055	3,256	3,457	0	0	0	3,055	3,256	3,457
Non-Labor	5-YR Linear	524	591	659	0	0	0	524	591	659
NSE	5-YR Linear	0	0	0	0	0	0	0	0	0
Tota	I	3,578	3,847	4,116	0	0	0	3,578	3,847	4,116
FTE	5-YR Linear	27.3	29.4	31.4	0.0	0.0	0.0	27.3	29.4	31.4

## Forecast Adjustment Details:

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	Adj Type
2022	710	224	0	934	7.6	1-Sided Adj
Explanation:	RAMP: SDG&E-Risk-9, 0 included within the select offsetting adjustment "Ot	ted forecast n	nethodology re	lated to C11	-T2. Note you	
2022	-710	-224	0	-934	-7.6	1-Sided Adj
Explanation:	RAMP: SDG&E-Risk-9, 0	C11-T2: Rem	oval from base	adjustment	to net \$0 from	base adjustment.
2022	-1,271	-173	0	-1,444	-10.7	1-Sided Adj
Explanation:	RAMP: SDG&E-Risk-9, 0 for T3 & T4.	C06-T3 & T4:	Removal from	n base adjus	tment to net \$0	from base adjustment
2022	1,271	173	0	1,444	10.7	1-Sided Adj
Explanation:	RAMP: SDG&E-Risk-9, 0 show the dollars included will also see an offsetting	d within the se	elected forecas	t methodolo	gy related to C0	06-T3 & T4. Note you
2022 Total	0	0	0	0	0.0	

	will also see all olisetting t	aujuoimom on	101 10 10111	ovo unoco cam	10 00010 10 110	ι ψο.
2022 Total	0	0	0	0	0.0	
2023	794	251	0	1,045	8.4	1-Sided Adj
Explanation:	RAMP: SDG&E-Risk-9, C included within the selecte offsetting adjustment "Oth	ed forecast met	hodology re	elated to C 11-	Γ2. Note you	
2023	-794	-251	0	-1,045	-8.4	1-Sided Adj
Explanation:	RAMP: SDG&E-Risk-9, C	11-T2: Remova	al from bas	e adjustment t	o net \$0 from	base adjustment.
2023	1,349	184	0	1,533	10.7	1-Sided Adj
Explanation:	RAMP: SDG&E-Risk-9, Co show the dollars included will also see an offsetting a	within the selec	ted forecas	st methodology	y related to C	06-T3 & T4. Note you
2023	-1,349	-184	0	-1,533	-10.7	1-Sided Adj
Explanation:	RAMP: SDG&E-Risk-9, Confor T3 & T4.	06-T3 & T4: Re	emoval fror	n base adjustr	nent to net \$0	) from base adjustment

Area: GAS DISTRIBUTION

Witness: L. Patrick Kinsella

Category: E. Service Maintenance

Category-Sub: 1. Service Maintenance

Workpaper: 1GD004.000 - Service Maintenance

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	Adj_Type
2023 Total	0	0	0	0	0.0	
2024	878	277	0	1,155	9.3	1-Sided Adj
Explanation:	RAMP: SDG&E-Risk-9, included within the select offsetting adjustment "Offsetting adjustment".	ted forecast r	methodology r	elated to C11-	T2. Note you	
2024	-878	-277	0	-1,155	-9.3	1-Sided Adj
Explanation:	RAMP: SDG&E-Risk- 9,	C11-T2: Rer	moval from ba	se adjustment	to net \$0 from	base adjustment.
2024	1,427	195	0	1,622	10.7	1-Sided Adj
Explanation:	RAMP: SDG&E-Risk-9, show the dollars include will also see an offsetting	d within the s	elected foreca	st methodolog	y related to Co	06-T3 & T4. Note you
2024	-1,427	-195	0	-1,622	-10.7	1-Sided Adj
Explanation:	RAMP: SDG&E-Risk-9, for T3 & T4.	C06-T3 & T4:	Removal fro	m base adjust	ment to net \$0	from base adjustment
2024 Total	0	0	0	0	0.0	

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: E. Service Maintenance
Category-Sub: 1. Service Maintenance

Workpaper: 1GD004.000 - Service Maintenance

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

•	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
Recorded (Nominal \$)*					
Labor	1,371	1,294	1,499	1,739	1,735
Non-Labor	209	187	285	361	481
NSE	0	0	0	0	0
Total	1,580	1,481	1,784	2,101	2,216
FTE	13.0	12.6	14.3	17.2	15.6
djustments (Nominal \$) **					
Labor	257	525	360	664	711
Non-Labor	0	0	0	0	-1
NSE	0	0	0	0	0
Total	257	525	360	664	710
FTE	2.3	3.8	2.8	5.3	4.9
Recorded-Adjusted (Nomina	al \$)				
Labor	1,629	1,818	1,859	2,404	2,446
Non-Labor	209	187	285	361	480
NSE	0	0	0	0	0
Total	1,837	2,006	2,144	2,765	2,926
FTE	15.3	16.4	17.0	22.5	20.5
acation & Sick (Nominal \$)	)				
Labor	242	275	266	341	367
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	242	275	266	341	367
FTE	2.5	2.1	2.7	3.7	3.6
scalation to 2021\$					
Labor	217	180	124	88	0
Non-Labor	24	16	18	24	0
NSE	0	0	0	0	0
Total	241	196	142	112	0
FTE	0.0	0.0	0.0	0.0	0.0
ecorded-Adjusted (Consta	ant 2021\$)				
Labor	2,087	2,274	2,249	2,832	2,814
Non-Labor	233	203	303	385	480
NSE	0	0	0	0	0
Total	2,320	2,477	2,552	3,218	3,293
FTE	17.8	18.5	19.7	26.2	24.1

<sup>\*</sup> After company-wide exclusions of Non-GRC costs

<sup>\*\*</sup> Refer to "Detail of Adjustments to Recorded" page for line item adjustments

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: E. Service Maintenance
Category-Sub: 1. Service Maintenance

Workpaper: 1GD004.000 - Service Maintenance

### Summary of Adjustments to Recorded:

	In Nominal \$ (000) Incurred Costs								
	Years	2017	2018	2019	2020	2021			
Labor		257	525	360	664	711			
Non-Labor		0	0	0	0	-1			
NSE		0	0	0	0	0			
	Total	257	525	360	664	710			
FTE		2.3	3.8	2.8	5.3	4.9			

## Detail of Adjustments to Recorded:

Vacr	Labor	NLbr	NSE	FTE	Adi Tuno	
<u>Year</u>	<u>Labor</u>	NLDr	NOE	FIE	<u>Adj Type</u>	
2017	257	0	0	2.3	1-Sided Adj	
Explanation:	Order number 427424/20023 Maintenance). Move gas ser (Main Maintenance) to 1GD0	vices portion (40%	% of total Ga	s Dist Syster	ance) to 1GD004 (Service n) of standby time from 1GD003	
2017 Total	257	0	0	2.3		
2018	525	0	0	3.8	1-Sided Adj	
Explanation:	Order number 427424/20023 Maintenance). Move gas ser (Main Maintenance) to 1GD00	vices portion (40%	% of total Ga	s Dist Syster	ance) to 1GD004 (Service n) of standby time from 1GD003	
2018 Total	525	0	0	3.8		
2019	360	0	0	2.8	1-Sided Adj	
Explanation:	Order number 427424/20023 Maintenance). Move gas ser (Main Maintenance) to 1GD00	vices portion (40%	% of total Ga	s Dist Syster	ance) to 1GD004 (Service n) of standby time from 1GD003	
2019 Total	360	0	0	2.8		
2020	664	0	0	5.3	1-Sided Adj	
Explanation:	Order number 427424/20023 Maintenance). Move gas ser (Main Maintenance) to 1GD0	vices portion (40%	% of total Ga	s Dist Syster	ance) to 1GD004 (Service n) of standby time from 1GD003	
2020 Total	664	0	0	5.3		
2021	713	0	0	5.0	1-Sided Adj	
Explanation:					enance). Move gas services porti intenance) to 1GD004 (Service	ion

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: E. Service Maintenance
Category-Sub: 1. Service Maintenance

Workpaper: 1GD004.000 - Service Maintenance

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	Adj Type
2021	-2	-1	0	-0.1	CCTR Transf From 2100-3569.001
Explanation:	Transfer costs for DIMP DC	RR order 530000	221763 from	GOGD WKP	1GD004 to GOTD WKP 1TD002.
2021 Total	711	-1	0	4.9	

Non-Shared Service Workpapers

**GAS DISTRIBUTION** Area: L. Patrick Kinsella Witness: Category: E. Service Maintenance Category-Sub: 1. Service Maintenance

Workpaper: 1GD004.000 - Service Maintenance

#### RAMP Item # 1

#### **RAMP Activity**

RAMP Chapter: SDG&E-Risk-9 Incident Related to the Medium Pressure System (Excluding Dig-in)

RAMP Line Item ID: C06

RAMP Line Item Name: Leak Repair - Service Portion

Tranche(/s): Tranche1: N/A; Tranche2: N/A; Tranche3: MP Service Steel; Tranche4: MP Service Plastic

#### **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	0	0	0	0	0
Tranche 2 Cost Estimate	0	0	0	0	0	0
Tranche 3 Cost Estimate	941	871	924	978	1,330	1,610
Tranche 4 Cost Estimate	620	573	609	644	1,330	1,610

### **Cost Estimate Changes from RAMP:**

Change in forecast methodology from base year to five year linear due to increase in expenses showing an upward trend in history from 2017-2021. The GRC forecast is outside the RAMP range due to reallocation of dollars (units) associated with revised tranching and across two workpapers (1GD003 & 1GD004).

#### **GRC Work Unit/Activity Level Estimates**

Unit of	2021 Historical Embedded	2022 Forecast	2023 Forecast	2024 Forecast	2024 RA	
Measure	Activities	Activities	Activities	Activities	Low	High
Tranche 1 N/A	0.00	0.00	0.00	0.00	0.00	0.00
Tranche 2 N/A	0.00	0.00	0.00	0.00	0.00	0.00
Tranche 3 # of Projects	198.00	198.00	198.00	198.00	601.00	728.00
Tranche 4 # of Projects	131.00	131.00	131.00	131.00	601.00	728.00

### Work Unit Changes from RAMP:

The GRC forecast is outside the RAMP range due to reallocation of dollars (units) associated with revised tranching and across two workpapers (1GD003 & 1GD004).

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: E. Service Maintenance
Category-Sub: 1. Service Maintenance

Workpaper: 1GD004.000 - Service Maintenance

Risk Spend Efficiency (RSE)			
	GRC RSE	RAMP RSE	
Tranche 1	0.000	0.000	
Tranche 2	0.000	0.000	
Tranche 3	1,209.000	0.000	
Tranche 4	1,725.000	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)

Non-Shared Service Workpapers

**GAS DISTRIBUTION** Area: L. Patrick Kinsella Witness: Category: E. Service Maintenance Category-Sub: 1. Service Maintenance

1GD004.000 - Service Maintenance Workpaper:

#### RAMP Item # 2

#### **RAMP Activity**

RAMP Chapter: SDG&E-Risk-9 Incident Related to the Medium Pressure System (Excluding Dig-in)

RAMP Line Item ID: C11

RAMP Line Item Name: Gas Distribution Emergency Department - Service Portion

Tranche(/s): Tranche1: N/A; Tranche2: MP Service Steel & Plastic

#### **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	0	0	0	0	0	0
Tranche 2 Cost Estimate	820	934	1,045	1,155	2,595	3,140

#### **Cost Estimate Changes from RAMP:**

The GRC forecast is outside the RAMP range due to reallocation of dollars (units) associated with revised tranching and across two workpapers (1GD003 & 1GD004).

GRC	Work	Unit/Activity	y Level Estimates

Unit of	2021 Historical Embedded	2022 Forecast	2023 Forecast	2024 Forecast	2024 R Range Ad	
Measure	Activities	Activities	Activities	Activities	Low	High
Tranche 1 N/A	0.00	0.00	0.00	0.00	0.00	0.00
Tranche 2 # of Responses	512.00	512.00	512.00	512.00	1,216.00	1,472.00

### Work Unit Changes from RAMP:

The GRC forecast is outside the RAMP range due to reallocation of dollars (units) associated with revised tranching and across two workpapers (1GD003 & 1GD004).

Diek	Spand	<b>Efficiency</b>	(DQE)
KISK	SORIIO	EHICIENCY	IKSEL

	GRC RSE	RAMP RSE	
Tranche 1	0.000	0.000	
Tranche 2	344.000	144.000	

#### **RSE Changes from RAMP:**

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: E. Service Maintenance

Workpaper: 1GD004.000 - Service Maintenance

1. Service Maintenance

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)

Category-Sub:

Area: GAS DISTRIBUTION Witness: L. Patrick Kinsella

Category: F. Tools Workpaper: 1GD005.000

## Summary for Category: F. Tools

		In 2021\$ (000) Incurred Costs							
	Adjusted-Recorded	Adjusted-Recorded Adjusted-Forecast							
	2021	2022	2023	2024					
Labor	317	371	371	371					
Non-Labor	1,391	1,368	1,296	1,296					
NSE	0	0	0	0					
Total	1,708	1,739	1,667	1,667					
FTE	3.2	3.8	3.8	3.8					

## **Workpapers belonging to this Category:**

1GD005.000 Tools				
Labor	317	371	371	371
Non-Labor	1,391	1,368	1,296	1,296
NSE	0	0	0	0
Total	1,708	1,739	1,667	1,667
FTE	3.2	3.8	3.8	3.8

Beginning of Workpaper 1GD005.000 - Tools

Non-Shared Service Workpapers

**GAS DISTRIBUTION** Area: L. Patrick Kinsella Witness:

F. Tools Category: 1. Tools Category-Sub

1GD005.000 - Tools Workpaper:

#### **Activity Description:**

This group includes labor and non-labor expenses necessary for small tools, small pipe fittings, miscellaneous pipeline materials, and miscellaneous installation materials used during construction and maintenance activities and those held in inventory as vehicle truck stock. These materials are necessary on the job to provide complete and safe work results. This also includes tool repair and maintenance. This workpaper includes RAMP: SDG&E-Risk-8, C10: Personal Protective Equipment.

#### Forecast Explanations:

#### Labor - 3-YR Average

Labor and non-labor expenses associated with activities in this group (purchases of small tools, fittings and miscellaneous materials) tend to fluctuate from year to year. A three year average would more accurately represents the forecasted level of funding. 2017 and 2018 were not included in the average as those years didn't include the Gas Emergency Department nor the 100% conversion of Locate & Mark to internal resources.

### Non-Labor - 3-YR Average

Labor and non-labor expenses associated with activities in this group (purchases of small tools, fittings and miscellaneous materials) tend to fluctuate from year to year. A three year average would more accurately represents the forecasted level of funding. 2017 and 2018 were not included in the average as those years didn't include the Gas Emergency Department nor the 100% conversion of Locate & Mark to internal resources.

#### NSE - 3-YR Average

N/A

#### Summary of Results:

		In 2021\$ (000) Incurred Costs								
		Adju	sted-Recor	Ad	justed-Fore	cast				
Years	2017	2018	2019	2020	2021	2022	2023	2024		
Labor	407	440	422	374	317	371	371	371		
Non-Labor	617	625	1,073	1,423	1,391	1,368	1,296	1,296		
NSE	0	0	0	0	0	0	0	0		
Total	1,024	1,065	1,495	1,797	1,708	1,739	1,667	1,667		
FTE	4.5	4.7	4.4	3.8	3.2	3.8	3.8	3.8		

## Non-Shared Service Workpapers

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella

Category: F. Tools
Category-Sub: 1. Tools

Workpaper: 1GD005.000 - Tools

## **Summary of Adjustments to Forecast:**

	In 2021 \$(000) Incurred Costs									
Forecast Method Base Forecast			st	Forec	ast Adjust	ments	Adjus	ted-Forec	ast	
Years	6	2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	3-YR Average	371	371	371	0	0	0	371	371	371
Non-Labor	3-YR Average	1,296	1,296	1,296	72	0	0	1,368	1,296	1,296
NSE	3-YR Average	0	0	0	0	0	0	0	0	0
Tota	ı	1,667	1,667	1,667	72	0	0	1,739	1,667	1,667
FTE	3-YR Average	3.8	3.8	3.8	0.0	0.0	0.0	3.8	3.8	3.8

			•		•				
Forecast Adjustr <u>Year</u>	Labor	<u>NLbr</u>	NSE	<u>Total</u>	FTE	Adj Type			
2022	0	27	0	27	0.0	1-Sided Adj			
Explanation:	Incremental adjustment to show the dollars requested in addition to the base selected forecast methodology. Thirty-Five Range Finders are required for Field Utility Specialist personnel to be used to a/ determine electric wire heights for electric conflict checks and b/ to look above proposed gas construction activity to determine safe locations for gas handling requirements. The total cost is estimated to be 35 X \$.77 = \$27K non-labor expense. The meters will be purchased in 2022. There is no range meter expense in 2023 and TY2024 There is no labor expense.								
2022	0	441	0	441	0.0	1-Sided Adj			
Explanation:	forecast methodology rela	RAMP: SDG&E-Risk-8, C10: Base adjustment to show the dollars included within the selected forecast methodology related to C10. Note you will also see an offsetting adjustment "Other" to remove these same costs to net \$0.							
2022	0	-441	0	-441	0.0	1-Sided Adj			
Explanation:	RAMP: SDG&E-Risk-8, C	10: Remova	al from base a	djustment to r	net \$0 from bas	se adjustment.			
2022	0	45	0	45	0.0	1-Sided Adj			
Explanation:	methodology. Thirty-Five be used to help with efficie total cost is estimated to be	Incremental adjustment to show the dollars requested in addition to the base selected forecast methodology. Thirty-Five field capable tablets are requested for Field Utility Specialist personnel to be used to help with efficiency and accuracy with design of gas infrastructure while in the field. The total cost is estimated to be 35 X \$1.29 = \$45K non-labor expense. The tablets will be purchased in 2022. There is no tablet expense in 2023 and TY2024. There is no labor expense.							
2022 Total	0	72	0	72	0.0				
2023	0	441	0	441	0.0	1-Sided Adj			
Explanation:	RAMP: SDG&E-Risk-8, C10: Base adjustment to show the dollars included within the selected forecast methodology related to C10. Note you will also see an offsetting adjustment "Other" to remove these same costs to net \$0.								
2023	0	-441	0	-441	0.0	1-Sided Adj			
Explanation:	RAMP: SDG&E-Risk-8, C	10: Remova	al from base a	djustment to r	net \$0 from bas	se adjustment.			
2023 Total	0	0	0	0	0.0				
2024	0	441	0	441	0.0	1-Sided Adj			

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella

Category: F. Tools
Category-Sub: 1. Tools

Workpaper: 1GD005.000 - Tools

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	Adj_Type		
Explanation:	RAMP: SDG&E-Risk-8, 0 forecast methodology rel remove these same cost	ated to C10.	•					
2024	0	-441	0	-441	0.0	1-Sided Adj		
Explanation:	RAMP: SDG&E-Risk-8, C10: Removal from base adjustment to net \$0 from base adjustment.							
2024 Total	0	0	0	0	0.0			

Area: GAS DISTRIBUTION Witness: L. Patrick Kinsella

Category: F. Tools
Category-Sub: 1. Tools

Workpaper: 1GD005.000 - Tools

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

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
corded (Nominal \$)*					
Labor	317	351	348	318	276
Non-Labor	554	577	1,010	1,335	1,391
NSE	0	0	0	0	0
Total	871	928	1,359	1,652	1,667
FTE	3.9	4.0	3.8	3.3	2.7
justments (Nominal \$) **					
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	0	0
FTE	0.0	0.0	0.0	0.0	0.0
corded-Adjusted (Nomina	al \$)				
Labor	317	351	348	318	276
Non-Labor	554	577	1,010	1,335	1,391
NSE	0	0	0	0	0
Total	871	928	1,359	1,652	1,667
FTE	3.9	4.0	3.8	3.3	2.7
cation & Sick (Nominal \$)					
Labor	47	53	50	45	41
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	47	53	50	45	41
FTE	0.6	0.7	0.6	0.5	0.5
calation to 2021\$					
Labor	42	35	23	12	0
Non-Labor	64	49	63	88	0
NSE	0	0	0	0	0
Total	106	84	87	100	0
FTE	0.0	0.0	0.0	0.0	0.0
corded-Adjusted (Consta	nt 2021\$)				
Labor	407	440	422	374	317
Non-Labor	617	625	1,073	1,423	1,391
NSE	0	0	0	0	0
Total	1,024	1,065	1,495	1,797	1,708
FTE	4.5	4.7	4.4	3.8	3.2

<sup>\*</sup> After company-wide exclusions of Non-GRC costs

<sup>\*\*</sup> Refer to "Detail of Adjustments to Recorded" page for line item adjustments

Area: GAS DISTRIBUTION Witness: L. Patrick Kinsella

Category: F. Tools
Category-Sub: 1. Tools

Workpaper: 1GD005.000 - Tools

# Summary of Adjustments to Recorded:

	In Nominal \$ (000) Incurred Costs									
	Years	2017	2018	2019	2020	2021				
Labor		0	0	0	0	0				
Non-Labor		0	0	0	0	0				
NSE		0	0	0	0	0				
	Total	0	0	0	0	0				
FTE		0.0	0.0	0.0	0.0	0.0				

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

Non-Shared Service Workpapers

**GAS DISTRIBUTION** Area: Witness: L. Patrick Kinsella

F. Tools Category: Category-Sub: 1. Tools

1GD005.000 - Tools Workpaper:

### RAMP Item # 1

#### **RAMP Activity**

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

RAMP Line Item ID: C10

RAMP Line Item Name: Personal Protective Equipment

Tranche(/s): Tranche1: N/A

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

	2021 Historical Embedded Cost	2022 Forecast	2023 Forecast	2024 Forecast	2024 RAMP Range (2020 Incurred \$)	
	(2021 \$)	(2021 \$)	(2021 \$)	(2021 \$)	Low	High
Tranche 1 Cost Estimate	441	441	441	441	1,689	2,045

#### **Cost Estimate Changes from RAMP:**

2021 RAMP cost estimate was forecast for all field SDG&E work areas. Forecast represented here is exclusively Gas Operations.

#### **GRC Work Unit/Activity Level 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	576.00	576.00	576.00	576.00	4,400.00	4,800.00

#### Work Unit Changes from RAMP:

2021 RAMP cost estimate was forecast for all field SDG&E work areas. Forecast represented here is exclusively Gas Operations.

### Risk Spend Efficiency (RSE)

	GRC RSE	RAMP RSE	
Tranche 1	0.000	0.000	

#### **RSE Changes from RAMP:**

An RSE was not calculated for this activity

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: G. Electric Support
Workpaper: 1GD006.000

## **Summary for Category: G. Electric Support**

		In 2021\$ (000) Incurred Costs							
	Adjusted-Recorded		Adjusted-Forecast						
	2021	2022	2023	2024					
Labor	339	317	317	317					
Non-Labor	176	178	178	178					
NSE	0	0	0	0					
Total	515	495	495	495					
FTE	3.3	3.0	3.0	3.0					

## **Workpapers belonging to this Category:**

1	IGD006	.000 E	lectric	Support

Labor	339	317	317	317
Non-Labor	176	178	178	178
NSE	0	0	0	0
Total	515	495	495	495
FTE	3.3	3.0	3.0	3.0

Beginning of Workpaper 1GD006.000 - Electric Support

Non-Shared Service Workpapers

**GAS DISTRIBUTION** Area: Witness: L. Patrick Kinsella G. Electric Support Category: Category-Sub 1. Electric Support

1GD006.000 - Electric Support Workpaper:

#### **Activity Description:**

Gas Distribution provides crew and street repair support to Electric Distribution primarily for the Corrective Maintenance Program (CMP), the Quality Control Repairs and Inspection Program, the restoration of outages, and transformer change outs. There are no RAMP mitigation activities in the 1GD006 cost element.

#### **Forecast Explanations:**

### Labor - 3-YR Average

Electric Distribution maintenance support expenses vary from year to year. Support work activities in this work group have remained stable in the last 3 years, therefore, a 3 year average best represents future funding for the forecast years.

#### Non-Labor - 3-YR Average

Electric Distribution maintenance support expenses vary from year to year. Support work activities in this work group have remained stable in the last 3 years, therefore, a 3 year average best represents future funding for the forecast years.

#### NSE - 3-YR Average

N/A

#### **Summary of Results:**

		In 2021\$ (000) Incurred Costs									
		Adju	sted-Recor	Adjusted-Forecast							
Years	2017	2017 2018 2019 2020 2021					2023	2024			
Labor	453	389	302	311	339	317	317	317			
Non-Labor	209	151	155	203	176	178	178	178			
NSE	0	0	0	0	0	0	0	0			
Total	662	540	457	514	514	495	495	495			
FTE	4.5	3.7	3.0	2.7	3.3	3.0	3.0	3.0			

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: G. Electric Support
Category-Sub: 1. Electric Support

Workpaper: 1GD006.000 - Electric Support

## **Summary of Adjustments to Forecast:**

In 2021 \$(000) Incurred Costs										
Forecast Method Base Forecast Forecast Adjustments Adjusted-Forecast							ast			
Years	5	2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	3-YR Average	317	317	317	0	0	0	317	317	317
Non-Labor	3-YR Average	178	178	178	0	0	0	178	178	178
NSE	3-YR Average	0	0	0	0	0	0	0	0	0
Tota	ı	495	495	495	0	0	0	495	495	495
FTE	3-YR Average	3.0	3.0	3.0	0.0	0.0	0.0	3.0	3.0	3.0

Year	Labor	NLbr	NSE	Total	FTE	Adj Type	
<u>i cai</u>		ITEDI	INOL	IOlai	<del></del>		

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: G. Electric Support
Category-Sub: 1. Electric Support

Workpaper: 1GD006.000 - Electric Support

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

Determination of Aujusteu-	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
Recorded (Nominal \$)*					
Labor	374	306	249	265	294
Non-Labor	187	139	146	190	176
NSE	0	0	0	0	0
Total	561	445	396	455	470
FTE	4.0	3.1	2.5	2.4	2.9
Adjustments (Nominal \$) **					
Labor	-20	5	0	-1	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	-20	5	0	-1	0
FTE	-0.1	0.1	0.1	-0.1	0.0
Recorded-Adjusted (Nomina	al \$)				
Labor	354	311	249	264	294
Non-Labor	187	139	146	190	176
NSE	0	0	0	0	0
Total	541	450	396	454	470
FTE	3.9	3.2	2.6	2.3	2.8
acation & Sick (Nominal \$)					
Labor	52	47	36	37	44
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	52	47	36	37	44
FTE	0.6	0.5	0.4	0.4	0.5
scalation to 2021\$					
Labor	47	31	17	10	0
Non-Labor	22	12	9	13	0
NSE	0	0	0	0	0
Total	69	43	26	22	0
FTE	0.0	0.0	0.0	0.0	0.0
ecorded-Adjusted (Constar	nt 2021\$)				
Labor	453	389	302	311	339
Non-Labor	209	151	155	203	176
NSE	0	0	0	0	0
Total	662	540	457	514	514
FTE	4.5	3.7	3.0	2.7	3.3

<sup>\*</sup> After company-wide exclusions of Non-GRC costs

<sup>\*\*</sup> Refer to "Detail of Adjustments to Recorded" page for line item adjustments

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: G. Electric Support
Category-Sub: 1. Electric Support

Workpaper: 1GD006.000 - Electric Support

## Summary of Adjustments to Recorded:

	In Nominal \$ (000) Incurred Costs								
Years 2017 2018 2019 2020 2021									
Labor		-20	5	0.005	-0.646	0			
Non-Labor		0	0	0	0	0			
NSE		0	0	0	0	0			
	Total	-20	5	0.005	-0.646	0			
FTE		-0.1	0.1	0.1	-0.1	0.0			

## Detail of Adjustments to Recorded:

						=
<u>Year</u>	<u>L</u>	<u>.abor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
2017		-20	0	0	-0.1	1-Sided Adj
Explanation:	Incremental costs that Memorandum Account	· · · · · · · · · · · · · · · · · · ·	d to be reques	sted for reco	very through	a non-GRC Catastrophic Event
2017 Total		-20	0	0	-0.1	
2018		5	0	0	0.1	1-Sided Adj
Explanation:	Incremental costs that Memorandum Account	•	d to be reques	sted for reco	very through	a non-GRC Catastrophic Event
2018 Total		5	0	0	0.1	
2019		0	0	0	0.1	1-Sided Adj
Explanation:	Incremental costs that Memorandum Account	•	d to be reques	sted for reco	very through	a non-GRC Catastrophic Event
2019 Total		0	0	0	0.1	
2020		-1	0	0	-0.1	1-Sided Adj
Explanation:	Incremental costs that Memorandum Account	· · · · · · · · · · · · · · · · · · ·	d to be reques	sted for reco	very through	a non-GRC Catastrophic Event
2020 Total		-1	0	0	-0.1	
2021 Total		0	0	0	0.0	

Area: GAS DISTRIBUTION Witness: L. Patrick Kinsella

Category: H. Measurement & Regulation

Workpaper: 1GD007.000

### Summary for Category: H. Measurement & Regulation

	In 2021\$ (000) Incurred Costs					
	Adjusted-Recorded					
	2021	2022	2023	2024		
Labor	3,320	3,303	3,663	3,663		
Non-Labor	1,318	1,495	1,510	1,490		
NSE	0	0	0	0		
Total	4,638	4,798	5,173	5,153		
FTE	33.7	34.2	38.2	38.2		
Workpapers belonging	to this Category:					
1GD007.000 Measure	ement & Regulation					
Labor	3,320	3,303	3,663	3,663		
Non-Labor	1,318	1,495	1,510	1,490		
NSE	0	0	0	0		
Total	4,638	4,798	5,173	5,153		
FTE	33.7	34.2	38.2	38.2		

Beginning of Workpaper 1GD007.000 - Measurement & Regulation

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella

Category: H. Measurement & Regulation
Category-Sub 1. Measurement & Regulation

Workpaper: 1GD007.000 - Measurement & Regulation

#### **Activity Description:**

This group includes the cost of labor, materials used, and expenses incurred in inspecting and maintaining large gas meters and their Meter Set Assemblies (MSAs), gas instruments, company Compressed Natural Gas (CNG) facilities, inspection and maintenance of gas regulator stations and other equipment used in measuring and regulating gas within gas distribution system operations other than the measurement of gas deliveries to customers. This group includes RAMP SDG&E-Risk-9, C04: Regulator Station, Valve, and Large Meter Set Inspection and SDG&E-Risk-09, C17: Control Center Modernization.

#### **Forecast Explanations:**

#### Labor - 5-YR Average

Labor and non-labor expenses stayed fairly at a flat level of expense from 2017 to 2021 due to the wide range of activities included in this group and without major regulatory or compliance drivers over this timeframe. Therefore, a five year average was selected to project future costs. An incremental addition has been added to this base forecast to support the new distribution Control Center Modifications (CCM).

#### Non-Labor - 5-YR Average

Labor and non-labor expenses stayed fairly at a flat level of expense from 2017 to 2021 due to the wide range of activities included in this group and without major regulatory or compliance drivers over this timeframe. Therefore, a five year average was selected to project future costs. An incremental addition has been added to this base forecast to support the new distribution Control Center Modifications (CCM).

#### NSE - 5-YR Average

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	2,926	3,175	3,268	3,227	3,320	3,304	3,664	3,664		
Non-Labor	1,528	1,754	1,324	1,526	1,318	1,495	1,510	1,490		
NSE	0	0	0	0	0	0	0	0		
Total	4,454	4,929	4,593	4,753	4,638	4,799	5,174	5,154		
FTE	30.3	33.6	33.6	33.4	33.7	34.2	38.2	38.2		

## Non-Shared Service Workpapers

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella

Category: H. Measurement & Regulation
Category-Sub: 1. Measurement & Regulation

Workpaper: 1GD007.000 - Measurement & Regulation

## **Summary of Adjustments to Forecast:**

	In 2021 \$(000) Incurred Costs									
Forecast Method		Bas	se Foreca	st	Forec	ast Adjust	ments	Adjusted-Forecast		
Years	Years		2023	2024	2022	2023	2024	2022	2023	2024
Labor	5-YR Average	3,183	3,183	3,183	120	480	480	3,303	3,663	3,663
Non-Labor	5-YR Average	1,490	1,490	1,490	5	20	0	1,495	1,510	1,490
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
Tota	ı	4,673	4,673	4,673	125	500	480	4,798	5,173	5,153
FTE	5-YR Average	32.9	32.9	32.9	1.3	5.3	5.3	34.2	38.2	38.2

## **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	3,030	957	0	3,987	33.7	1-Sided Adj		
Explanation:	RAMP: SDG&E-Risk-9, C04-T1 (HP Supply Line) & T2 (MP Overall): Base adjustment to show how much money is included within the selected forecast methodology related to C04-T1 & T2. Note you will also see an offsetting adjustment "Other" to remove these same costs to net \$0.							
2022	-3,030	-957	0	-3,987	-33.7	1-Sided Adj		
Explanation:	RAMP: SDG&E-Risk-9, C04-T1 & T2: Removal from base adjustment to net \$0 from base adjustment.							
2022	120	5	0	125	1.3	1-Sided Adj		
Explanation:	RAMP: SDG&E-Risk-9, C17: Adjustment to show the incremental dollars requested greater than the value realized from the base forecast methodology. C17 is to provide operational support to the Control Center Modification project, operation and maintenance of communication equipment necessary to monitor the distribution gas system. Added will be one CCM Supervisor. Labor expense is estimated to be 1 X \$120K=\$120K starting in 2022 and continuing thereafter. In addition, four Regulator technicians will be added at 4 X \$90k = \$360K labor expense starting in 2023 and continuing thereafter. Non-labor expense is 1 X \$5K=\$5K in 2022 and 4X\$5K=\$20K in 2023.							
2022 Total	120	5	0	125	1.3			

2022 Total	120	5	0	125	1.3			
2023	3,030	957	0	3,987	33.7	1-Sided Adj		
Explanation:	RAMP: SDG&E-Risk-9, dollars included within the see an offsetting adjustnesses	ne selected fored	cast method	dology related	to C04-T1 & 7			
2023	-3,030	-957	0	-3,987	-33.7	1-Sided Adj		
Explanation:	RAMP: SDG&E-Risk-9, C04-T1 & T2: Removal from base adjustment to net \$0 from base adjustment.							
2023	480	20	0	500	5.3	1-Sided Adj		

Non-Shared Service Workpapers

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella

Category: H. Measurement & Regulation
Category-Sub: 1. Measurement & Regulation

Workpaper: 1GD007.000 - Measurement & Regulation

value realized from the base forecast methodology C17 is to provide operational support to the Control Center Modification project, operation and maintenance of communication equipment necessary to monitor the distribution gas system. Added will be one CCM Supervisor. Labor expense is estimated to be 1 X \$120K=\$120K starting in 2022 and continuing thereafter. In addition, four Regulator technicians will be added at 4 X \$90k = \$360K labor expense starting in 2023 and continuing thereafter. Non-labor expense is 1 X \$5K=\$5K in 2022 and 4X\$5K=\$20K in 2023.  2023 Total 480 20 0 500 5.3  2024 3,030 957 0 3,987 33.7 1-Sided Adj  Explanation: RAMP: SDG&E-Risk-9, C04-T1 (HP Supply Line) & T2 (MP Overall): Base adjustment to show the dollars included within the selected forecast methodology related to C04-T1 & T2. Note you will also see an offsetting adjustment "Other" to remove these same costs to net \$0.  2024 -3,030 -957 0 -3,987 -33.7 1-Sided Adj  Explanation: RAMP: SDG&E-Risk-9, C04-T1 & T2: Removal from base adjustment to net \$0 from base adjustment.  2024 480 0 0 480 5.3 1-Sided Adj	Workpaper:	1GD007.000 - Mea	surement & Ro	egulation					
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2024 3,030 957 0 3,987 33.7 1-Sided Adj  Explanation: RAMP: SDG&E-Risk-9, C04-T1 (HP Supply Line) & T2 (MP Overall): Base adjustment to show the dollars included within the selected forecast methodology related to C04-T1 & T2. Note you will also see an offsetting adjustment "Other" to remove these same costs to net \$0.  2024 -3,030 -957 0 -3,987 -33.7 1-Sided Adj  Explanation: RAMP: SDG&E-Risk-9, C04-T1 & T2: Removal from base adjustment to net \$0 from base adjustment.  2024 480 0 0 480 5.3 1-Sided Adj  Explanation: RAMP: SDG&E-Risk-9, C17: Adjustment to show the incremental dollars requested greater than the value realized from the base forecast methodology. C17 is to provide operational support to the Control Center Modification project, operation and maintenance of communication equipment necessary to monitor the distribution gas system. Added will be one CCM Supervisor. Labor expense is estimated to be 1 X \$120K=\$120K starting in 2022 and continuing thereafter. In addition, four Regulator technicians will be added at 4 X \$90k = \$360K labor expense starting in 2023 and continuing thereafter. Non-labor expense is 1 X \$5K=\$5K in 2022 and 4X\$5K=\$20K in 2023.	Explanation:	RAMP: SDG&E-Risk-9, C17: Adjustment to show the incremental dollars requested greater than the value realized from the base forecast methodology C17 is to provide operational support to the Control Center Modification project, operation and maintenance of communication equipment necessary to monitor the distribution gas system. Added will be one CCM Supervisor. Labor expense is estimated to be 1 X \$120K=\$120K starting in 2022 and continuing thereafter. In addition, four Regulator technicians will be added at 4 X \$90k = \$360K labor expense starting in 2023 and							
Explanation:  RAMP: SDG&E-Risk-9, C04-T1 (HP Supply Line) & T2 (MP Overall): Base adjustment to show the dollars included within the selected forecast methodology related to C04-T1 & T2. Note you will also see an offsetting adjustment "Other" to remove these same costs to net \$0.  2024  -3,030 -957 0 -3,987 -33.7 1-Sided Adj  Explanation:  RAMP: SDG&E-Risk-9, C04-T1 & T2: Removal from base adjustment to net \$0 from base adjustment.  2024  480 0 0 480 5.3 1-Sided Adj  Explanation:  RAMP: SDG&E-Risk-9, C17: Adjustment to show the incremental dollars requested greater than the value realized from the base forecast methodology. C17 is to provide operational support to the Control Center Modification project, operation and maintenance of communication equipment necessary to monitor the distribution gas system. Added will be one CCM Supervisor. Labor expense is estimated to be 1 X \$120K=\$120K starting in 2022 and continuing thereafter. In addition, four Regulator technicians will be added at 4 X \$90k = \$360K labor expense starting in 2023 and continuing thereafter. Non-labor expense is 1 X \$5K=\$5K in 2022 and 4X\$5K=\$20K in 2023.	2023 Total	480	20	0	500	5.3			
dollars included within the selected forecast methodology related to C04-T1 & T2. Note you will also see an offsetting adjustment "Other" to remove these same costs to net \$0.  2024  -3,030 -957 0 -3,987 -33.7 1-Sided Adj  Explanation:  RAMP: SDG&E-Risk-9, C04-T1 & T2: Removal from base adjustment to net \$0 from base adjustment.  2024  480 0 0 480 5.3 1-Sided Adj  Explanation:  RAMP: SDG&E-Risk-9, C17: Adjustment to show the incremental dollars requested greater than the value realized from the base forecast methodology. C17 is to provide operational support to the Control Center Modification project, operation and maintenance of communication equipment necessary to monitor the distribution gas system. Added will be one CCM Supervisor. Labor expense is estimated to be 1 X \$120K=\$120K starting in 2022 and continuing thereafter. In addition, four Regulator technicians will be added at 4 X \$90k = \$360K labor expense starting in 2023 and continuing thereafter. Non-labor expense is 1 X \$5K=\$5K in 2022 and 4X\$5K=\$20K in 2023.	2024	3,030	957	0	3,987	33.7	1-Sided Adj		
Explanation: RAMP: SDG&E-Risk-9, C04-T1 & T2: Removal from base adjustment to net \$0 from base adjustment.  2024  480  0  0  480  5.3  1-Sided Adj  Explanation: RAMP: SDG&E-Risk-9, C17: Adjustment to show the incremental dollars requested greater than the value realized from the base forecast methodology. C17 is to provide operational support to the Control Center Modification project, operation and maintenance of communication equipment necessary to monitor the distribution gas system. Added will be one CCM Supervisor. Labor expense is estimated to be 1 X \$120K=\$120K starting in 2022 and continuing thereafter. In addition, four Regulator technicians will be added at 4 X \$90k = \$360K labor expense starting in 2023 and continuing thereafter. Non-labor expense is 1 X \$5K=\$5K in 2022 and 4X\$5K=\$20K in 2023.	Explanation:	dollars included within the selected forecast methodology related to C04-T1 & T2. Note you will also							
adjustment.  2024  480  0  0  480  5.3  1-Sided Adj  Explanation:  RAMP: SDG&E-Risk-9, C17: Adjustment to show the incremental dollars requested greater than the value realized from the base forecast methodology. C17 is to provide operational support to the Control Center Modification project, operation and maintenance of communication equipment necessary to monitor the distribution gas system. Added will be one CCM Supervisor. Labor expense is estimated to be 1 X \$120K=\$120K starting in 2022 and continuing thereafter. In addition, four Regulator technicians will be added at 4 X \$90k = \$360K labor expense starting in 2023 and continuing thereafter. Non-labor expense is 1 X \$5K=\$5K in 2022 and 4X\$5K=\$20K in 2023.	2024	-3,030	-957	0	-3,987	-33.7	1-Sided Adj		
RAMP: SDG&E-Risk-9, C17: Adjustment to show the incremental dollars requested greater than the value realized from the base forecast methodology. C17 is to provide operational support to the Control Center Modification project, operation and maintenance of communication equipment necessary to monitor the distribution gas system. Added will be one CCM Supervisor. Labor expense is estimated to be 1 X \$120K=\$120K starting in 2022 and continuing thereafter. In addition, four Regulator technicians will be added at 4 X \$90k = \$360K labor expense starting in 2023 and continuing thereafter. Non-labor expense is 1 X \$5K=\$5K in 2022 and 4X\$5K=\$20K in 2023.	Explanation:		C04-T1 & T2:	Removal fro	om base adjust	ment to net \$0	from base		
value realized from the base forecast methodology. C17 is to provide operational support to the Control Center Modification project, operation and maintenance of communication equipment necessary to monitor the distribution gas system. Added will be one CCM Supervisor. Labor expense is estimated to be 1 X \$120K=\$120K starting in 2022 and continuing thereafter. In addition, four Regulator technicians will be added at 4 X \$90k = \$360K labor expense starting in 2023 and continuing thereafter. Non-labor expense is 1 X \$5K=\$5K in 2022 and 4X\$5K=\$20K in 2023.	2024	480	0	0	480	5.3	1-Sided Adj		
2024 Total 480 0 0 480 5.3	Explanation:	value realized from the base forecast methodology. C17 is to provide operational support to the Control Center Modification project, operation and maintenance of communication equipment necessary to monitor the distribution gas system. Added will be one CCM Supervisor. Labor expense is estimated to be 1 X \$120K=\$120K starting in 2022 and continuing thereafter. In addition, four Regulator technicians will be added at 4 X \$90K = \$360K labor expense starting in 2023 and							
	2024 Total	480	0	0	480	5.3			

Area: GAS DISTRIBUTION Witness: L. Patrick Kinsella

Category: H. Measurement & Regulation
Category-Sub: 1. Measurement & Regulation

Workpaper: 1GD007.000 - Measurement & Regulation

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

retermination of Adjusted-	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
Recorded (Nominal \$)*					
Labor	2,283	2,539	2,702	2,836	2,886
Non-Labor	1,370	1,617	1,246	1,432	1,318
NSE	0	0	0	0	0
Total	3,653	4,156	3,948	4,268	4,205
FTE	26.1	28.8	28.9	29.4	28.8
djustments (Nominal \$) **					
Labor	0	0	0	-98	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	-98	0
FTE	0.0	0.0	0.0	-0.5	0.0
Recorded-Adjusted (Nomina	al \$)				
Labor	2,283	2,539	2,702	2,738	2,886
Non-Labor	1,370	1,617	1,246	1,431	1,318
NSE	0	0	0	0	0
Total	3,653	4,156	3,948	4,170	4,205
FTE	26.0	28.8	28.9	28.8	28.8
acation & Sick (Nominal \$)					
Labor	339	385	387	388	434
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	339	385	387	388	434
FTE	4.3	4.8	4.7	4.6	4.9
scalation to 2021\$					
Labor	305	251	180	100	0
Non-Labor	158	137	78	95	0
NSE	0	0	0	0	0
Total	462	388	258	195	0
FTE	0.0	0.0	0.0	0.0	0.0
ecorded-Adjusted (Constant	nt 2021\$)				
Labor	2,926	3,175	3,268	3,227	3,320
Non-Labor	1,528	1,754	1,324	1,526	1,318
NSE	0	0	0	0	0
Total	4,454	4,929	4,593	4,753	4,638
FTE	30.3	33.6	33.6	33.4	33.7

<sup>\*</sup> After company-wide exclusions of Non-GRC costs

<sup>\*\*</sup> Refer to "Detail of Adjustments to Recorded" page for line item adjustments

Area: GAS DISTRIBUTION Witness: L. Patrick Kinsella

Category: H. Measurement & Regulation
Category-Sub: 1. Measurement & Regulation

Workpaper: 1GD007.000 - Measurement & Regulation

### Summary of Adjustments to Recorded:

	In Nominal \$ (000) Incurred Costs						
	Years	2017	2018	2019	2020	2021	
Labor		0	0	0	-98	0	
Non-Labor		-0.036	0	0	-0.343	0	
NSE		0	0	0	0	0	
	Total	-0.036	0	0	-98	0	
FTE		0.0	0.0	0.0	-0.5	0.0	

#### Detail of Adjustments to Recorded:

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	FTE	Adj Type		
2017	0	0	0	0.0	1-Sided Adj		
Explanation:	Incremental costs that are a Memorandum Account (CE	•	equested for r	ecovery thro	ough a non-GRC Catastrophic Even	t	
2017 Total	0	0	0	0.0			
2018 Total	0	0	0	0.0			
2019 Total	0	0	0	0.0			
2020	-98	0	0	-0.5	1-Sided Adj		
Explanation:	anation: Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).						
2020 Total	-98	0	0	-0.5			
2021 Total	0	0	0	0.0			

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella

Category: H. Measurement & Regulation
Category-Sub: 1. Measurement & Regulation

Workpaper: 1GD007.000 - Measurement & Regulation

#### RAMP Item # 1

#### **RAMP Activity**

RAMP Chapter: SDG&E-Risk-9 Incident Related to the Medium Pressure System (Excluding Dig-in)

RAMP Line Item ID: C04

RAMP Line Item Name: Regulator Station, Valve, and Large Meter Set Inspection

Tranche(/s): Tranche1: HP Supply Line; Tranche2: MP Overall

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

	2021 Historical Embedded Cost	2022 Forecast	2023 Forecast	2024 Forecast	202 RAMP R (2020 Inc	ange
	(2021 \$)	(2021 \$)	(2021 \$)	(2021 \$)	Low	High
Tranche 1 Cost Estimate	81	80	80	80	4,240	5,130
Tranche 2 Cost Estimate	3,947	3,907	3,907	3,907	4,240	5,130

#### **Cost Estimate Changes from RAMP:**

GRC forecast is outside the RAMP range due to reallocation of dollars (units) associated with revised tranching and forecast assumptions.

GRC Work	Unit/Activity	Level Estimates

Unit of	2021 Historical Embedded	2022 Forecast	2023 Forecast	2024 Forecast	2024 RA Range Ac	
Measure	Activities	Activities	Activities	Activities	Low	High
Tranche 1 # of Inspections	17.00	17.00	17.00	17.00	816.00	988.00
Tranche 2 # of Inspections	842.00	842.00	842.00	842.00	816.00	988.00

#### Work Unit Changes from RAMP:

GRC forecast is outside the RAMP range due to reallocation of dollars (units) associated with revised tranching and forecast assumptions.

			· ·
Risk	Spend	Efficiency	(RSF)

	GRC RSE	RAMP RSE	
Tranche 1	368.000	4.000	
Tranche 2	140.000	3.000	

#### **RSE Changes from RAMP:**

Non-Shared Service Workpapers

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella

Category: H. Measurement & Regulation
Category-Sub: 1. Measurement & Regulation

Workpaper: 1GD007.000 - Measurement & Regulation

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)

#### RAMP Item # 2

#### **RAMP Activity**

RAMP Chapter: SDG&E-Risk-9 Incident Related to the Medium Pressure System (Excluding Dig-in)

RAMP Line Item ID: C17

RAMP Line Item Name: Control Center Modernization - Incremental add of personnel

Tranche(/s): Tranche1: N/A

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

	2021 Historical	2022	2023	2024	2024 RAMP R	
	Embedded Cost (2021 \$)	Forecast (2021 \$)	Forecast (2021 \$)	Forecast (2021 \$)	(2020 Incurred \$) Low High	urred \$) High
Tranche 1 Cost Estimate	0	125	500	480	265	382

#### **Cost Estimate Changes from RAMP:**

The forecast is outside the RAMP range due to changes in forecast assumptions since preparing RAMP filing.

GRC Work Unit/Activity Lev	vel Estimates					
Unit of	2021 Historical Embedded	2022 Forecast	2023 Forecast	2024 Forecast	2024 RA	
Measure	Activities	Activities	Activities	Activities	Range Act Low	High
Tranche 1 # of SCADA	0.00	0.00	2.00	3.00	10.00	14.00

#### Work Unit Changes from RAMP:

The forecast is outside the RAMP range due to changes in forecast assumptions since preparing RAMP filing.

Risk Spend Efficiency (RSE)							
	GRC RSE	RAMP RSE					
Tranche 1	0.000	0.000					
RSE Changes from RAMP: An RSE was not calculated for this	s activity						

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: I. Cathodic Protection

Workpaper: 1GD008.000

#### Summary for Category: I. Cathodic Protection

	Adjusted-Recorded	Adjusted-Forecast			
	2021	2022	2023	2024	
Labor	1,834	1,673	1,673	1,673	
Non-Labor	216	161	161	161	
NSE	0	0	0	0	
Total	2,050	1,834	1,834	1,834	
FTE	16.7	15.9	15.9	15.9	
Workpapers belonging	to this Category:				
1GD008.000 Cathodic	Protection				
Labor	1,834	1,673	1,673	1,673	
Non-Labor	216	161	161	161	
NSE	0	0	0	0	
Total	2,050	1,834	1,834	1,834	
FTE	16.7	15.9	15.9	15.9	

In 2021\$ (000) Incurred Costs

Beginning of Workpaper
1GD008.000 - Cathodic Protection

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: I. Cathodic Protection
Category-Sub 1. Cathodic Protection

Workpaper: 1GD008.000 - Cathodic Protection

#### **Activity Description:**

This all RAMP workpaper (SDG&E-Risk-9, C01) group includes labor and non-labor costs for cathodic protection (CP) system maintenance. Examples of maintenance activities performed within this workgroup include monitoring CP system performance, installing anodes, troubleshooting system shorts and interference, repairing or replacing broken wires to anodes or test stations, raising test station lids as a result of the re-pavement of streets adding test points on pipelines, installing insulators on mains and services, and CP rectifier and other code required inspections. Cathodic Protection activities fall entirely within RAMP.

#### **Forecast Explanations:**

#### Labor - 5-YR Average

Labor and non-labor expenses, which provide necessary monitoring and inspection to ensure compliance and maintenance of the CP system, have remained stable over the historical years. Therefore a five year average methodology was chosen to forecast expenses over the forecast years.

#### Non-Labor - 5-YR Average

Labor and non-labor expenses, which provide necessary monitoring and inspection to ensure compliance and maintenance of the CP system, have remained stable over the historical years. Therefore a five year average methodology was chosen to forecast expenses over the forecast years.

#### **NSE - 5-YR Average**

N/A

#### Summary of Results:

		In 2021\$ (000) Incurred Costs						
		Adju	ısted-Recor	ded		Ad	justed-Fore	cast
Years	2017	2018	2019	2020	2021	2022	2023	2024
Labor	1,551	1,651	1,690	1,637	1,834	1,673	1,673	1,673
Non-Labor	141	103	131	217	216	161	161	161
NSE	0	0	0	0	0	0	0	0
Total	1,692	1,754	1,821	1,853	2,050	1,834	1,834	1,834
FTE	16.2	15.4	16.1	15.2	16.7	15.9	15.9	15.9

#### Non-Shared Service Workpapers

GAS DISTRIBUTION Area: Witness: L. Patrick Kinsella I. Cathodic Protection Category: Category-Sub: 1. Cathodic Protection

Workpaper: 1GD008.000 - Cathodic Protection

### **Summary of Adjustments to Forecast:**

	In 2021 \$(000) Incurred Costs									
Forecast	Forecast Method Base Forecast			Forecast Adjustments			Adjusted-Forecast			
Years	3	2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	5-YR Average	1,673	1,673	1,673	0	0	0	1,673	1,673	1,673
Non-Labor	5-YR Average	161	161	161	0	0	0	161	161	161
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
Tota	I	1,834	1,834	1,834	0	0	0	1,834	1,834	1,834
FTE	5-YR Average	15.9	15.9	15.9	0.0	0.0	0.0	15.9	15.9	15.9

Forecast Adjustr	nent Details:						
<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	Adj Type	
2022	-1,673	-161	0	-1,834	-17.9	1-Sided Adj	
Explanation:	RAMP: SDG&E-Risk-9, for T1 & T2.	C01-T1 & T2:	Removal from	n base adjus	tment to net \$0	from base adjustment	
2022	1,673	161	0	1,834	17.9	1-Sided Adj	
Explanation:	RAMP: SDG&E-Risk-9, the dollars included with also see an offsetting ac	in the selected	forecast met	hodology rela	ated to C01-T1	& T2. Note you will	
2022 Total	0	0	0	0	0.0		
2023	-1,673	-161	0	-1,834	-17.9	1-Sided Adj	
Explanation:	RAMP: SDG&E-Risk-9, for T1 & T2.	C01-T1 & T2:	Removal from	n base adjus	tment to net \$0	from base adjustment	
2023	1,673	161	0	1,834	17.9	1-Sided Adj	
Explanation:	RAMP: SDG&E-Risk-9, the dollars included with also see an offsetting ac	in the selected	forecast met	hodology rela	ated to C01-T1	& T2. Note you will	
2023 Total	0	0	0	0	0.0		
2024	-1,673	-161	0	-1,834	-17.9	1-Sided Adj	
Explanation:	RAMP: SDG&E-Risk-9, for T1 & T2.	C01-T1 & T2:	Removal from	n base adjus	tment to net \$0	from base adjustment	
2024	1,673	161	0	1,834	17.9	1-Sided Adj	
Explanation:	RAMP: SDG&E-Risk-9, the dollars included with also see an offsetting ac	in the selected	forecast met	hodology rela	ated to C01-T1	& T2. Note you will	
2024 Total	0	0	0	0	0.0		

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: I. Cathodic Protection
Category-Sub: 1. Cathodic Protection

Workpaper: 1GD008.000 - Cathodic Protection

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

retermination of Aujusteu-	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
Recorded (Nominal \$)*					
Labor	1,210	1,320	1,397	1,389	1,595
Non-Labor	127	95	123	203	216
NSE	0	0	0	0	0
Total	1,337	1,415	1,521	1,592	1,810
FTE	13.8	13.3	13.8	13.1	14.3
djustments (Nominal \$) **					
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	0	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Nomina	al \$)				
Labor	1,210	1,320	1,397	1,389	1,595
Non-Labor	127	95	123	203	216
NSE	0	0	0	0	0
Total	1,337	1,415	1,521	1,592	1,810
FTE	13.9	13.2	13.8	13.1	14.3
acation & Sick (Nominal \$)					
Labor	180	200	200	197	240
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	180	200	200	197	240
FTE	2.3	2.2	2.3	2.1	2.4
scalation to 2021\$					
Labor	162	131	93	51	0
Non-Labor	15	8	8	13	0
NSE	0	0	0	0	0
Total	176	139	101	64	0
FTE	0.0	0.0	0.0	0.0	0.0
ecorded-Adjusted (Consta	nt 2021\$)				
Labor	1,551	1,651	1,690	1,637	1,834
Non-Labor	141	103	131	217	216
NSE	0	0	0	0	0
Total	1,692	1,754	1,821	1,853	2,050
FTE	16.2	15.4	16.1	15.2	16.7

<sup>\*</sup> After company-wide exclusions of Non-GRC costs

<sup>\*\*</sup> Refer to "Detail of Adjustments to Recorded" page for line item adjustments

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: I. Cathodic Protection
Category-Sub: 1. Cathodic Protection

Workpaper: 1GD008.000 - Cathodic Protection

#### Summary of Adjustments to Recorded:

	In Nominal \$ (000) Incurred Costs						
	Years	2017	2018	2019	2020	2021	
Labor		0	0	0	0	0	
Non-Labor		0	0	0	0	0	
NSE		0	0	0	0	0	
	Total	0	0	0	0	0	
FTE		0.0	0.0	0.0	0.0	0.0	

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

Non-Shared Service Workpapers

**GAS DISTRIBUTION** Area: Witness: L. Patrick Kinsella Category: I. Cathodic Protection Category-Sub: 1. Cathodic Protection

1GD008.000 - Cathodic Protection Workpaper:

#### RAMP Item # 1

#### **RAMP Activity**

RAMP Chapter: SDG&E-Risk-9 Incident Related to the Medium Pressure System (Excluding Dig-in)

RAMP Line Item ID: C01

RAMP Line Item Name: Cathodic Protection - O&M

Tranche(/s): Tranche1: HP Supply Line; Tranche2: MP Main Steel

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

	2021 Historical	2022	2023	2024	2024 RAMP R	ange
	Embedded Cost (2021 \$)	Forecast (2021 \$)	Forecast (2021 \$)	Forecast (2021 \$)	(2020 Inci Low	urrea \$) High
Tranche 1 Cost Estimate	110	99	99	99	1,853	2,245
Tranche 2 Cost Estimate	1,939	1,735	1,735	1,735	1,853	2,245

#### **Cost Estimate Changes from RAMP:**

The GRC forecast is outside the RAMP range due to reallocation of dollars (units) associated with revised tranching.

GRC Work	Unit/Activity	Level Estimates

Unit of	2021 Historical Embedded	2022 Forecast	2023 Forecast	2024 Forecast	2024 R Range Ad	
Measure	Activities	Activities	Activities	Activities	Low	High
Tranche 1 # of Trouble Orders - HP	74.00	74.00	74.00	74.00	1,305.00	1,580.00
Tranche 2 # of Trouble Orders - MP	1,300.00	1,300.00	1,300.00	1,300.00	1,305.00	1,580.00

#### Work Unit Changes from RAMP:

The GRC forecast is outside the RAMP range due to reallocation of dollars (units) associated with revised tranching.

Diek	Snand	Efficiency	(DCE)

	GRC RSE	RAMP RSE	
Tranche 1	17.000	13.000	
Tranche 2	1.000	13.000	

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: I. Cathodic Protection
Category-Sub: 1. Cathodic Protection

Workpaper: 1GD008.000 - Cathodic Protection

#### **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: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: J. Asset Management

Workpaper: 1GD009.000

FTE

#### Summary for Category: J. Asset Management

	Adjusted-Recorded		Adjusted-Forecast	
	2021	2022	2023	2024
Labor	804	1,038	1,067	1,091
Non-Labor	273	308	278	283
NSE	0	0	0	0
Total	1,077	1,346	1,345	1,374
FTE	9.0	11.2	11.5	11.7
Workpapers belonging	to this Category:			
1GD009.000 Asset Ma	nagement			
Labor	804	1,038	1,067	1,091
Non-Labor	273	308	278	283
NSE	0	0	0	0
Total	1,077	1,346	1,345	1,374

11.2

11.5

11.7

9.0

In 2021\$ (000) Incurred Costs

Beginning of Workpaper 1GD009.000 - Asset Management

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: J. Asset Management
1. Asset Management

Workpaper: 1GD009.000 - Asset Management

#### **Activity Description:**

This workgroup records the labor and non-labor costs for services provided by SDG& E's Gas Design, Project Management, Engineering, and Geographic Information Systems groups. These groups provide many of the technical and administrative services needed for the successful and timely completion of the O&M activities in Gas Distribution. Activities performed by this office include items such as identifying construction design requirements, evaluating pressure specifications, conducting pipeline planning, providing project drawings, identifying material selection, preparing work order estimates, acquiring third-party contract services, developing and maintaining pipeline and pipeline component mapped records in the GIS system, processing as-built drawings from the field to create a final record of pipeline system additions and changes, and obtaining permits for construction from city, county, state, and federal agencies. This workpaper includes RAMP: SDG&E-CFF-2, New 02 & New 03: Records Management and SDG&E-CFF-1, 1: Asset Management.

#### Forecast Explanations:

#### Labor - Base YR Rec

Labor and non-labor expenses increased steadily over the historic years due to incremental planning, engineering, and facility mapping activities as the level of maintenance work, general construction activity, municipality work, construction permit turnaround time, and customer generated activity increased. Due to these recent incremental cost drivers, a historical average would not represent future business needs. Whereas, base year 2021 is representative of our expectations for the 2024 Test Year and therefore, is used as the base level of expense for future years. To this base are added incremental expenses. Incremental expenses are added to the base year in order to support the growth in activity in the Geographic Information Systems (GIS) workgroup, Engineering additions for Hydrogen projects, and Asset Integrity Management support.

#### Non-Labor - Base YR Rec

Labor and non-labor expenses increased steadily over the historic years due to incremental planning, engineering, and facility mapping activities as the level of maintenance work, general construction activity, municipality work, construction permit turnaround time, and customer generated activity increased. Due to these recent incremental cost drivers, a historical average would not represent future business needs. Whereas, base year 2021 is representative of our expectations for the 2024 Test Year and therefore, is used as the base level of expense for future years. To this base are added incremental expenses. Incremental expenses are added to the base year in order to support the growth in activity in the Geographic Information Systems (GIS) workgroup, Engineering additions for Hydrogen projects, and Asset Integrity Management support.

#### **NSE - Base YR Rec**

N/A

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: J. Asset Management
Category-Sub 1. Asset Management

Workpaper: 1GD009.000 - Asset Management

#### **Summary of Results:**

	In 2021\$ (000) Incurred Costs								
		Adju	sted-Recor	Adjusted-Forecast					
Years	2017	2018	2019	2020	2021	2022	2023	2024	
Labor	956	1,014	943	825	804	1,039	1,068	1,092	
Non-Labor	206	236	379	395	273	308	278	283	
NSE	0	0	0	0	0	0	0	0	
Total	1,162	1,250	1,322	1,220	1,078	1,347	1,346	1,375	
FTE	11.4	12.0	10.9	8.5	9.0	11.2	11.5	11.7	

#### Non-Shared Service Workpapers

**GAS DISTRIBUTION** Area: L. Patrick Kinsella Witness: Category: J. Asset Management Category-Sub: 1. Asset Management

Workpaper: 1GD009.000 - Asset Management

#### **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	804	804	804	234	263	287	1,038	1,067	1,091	
Non-Labor	Base YR Rec	273	273	273	35	5	10	308	278	283	
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0	
Tota	al	1,078	1,078	1,078	269	268	297	1,347	1,346	1,375	
FTE	Base YR Rec	9.0	9.0	9.0	2.2	2.5	2.7	11.2	11.5	11.7	

Veer	Labor	NI br	NCE	Total	<u>FTE</u>	Adj Type			
<u>Year</u>	<u>Luboi</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u> </u>	<u>Auj 1990</u>			
2022	50	5	0	55	0.6	1-Sided Adj			
Explanation:	QA/Compliance - One Field Ops QA Inspector will be added starting in 2022 to review the work done by the company Gas Field Operations personnel, determining the effectiveness and adequacy of the processes and procedures used in normal operation and maintenance. This position will charge 50% of their time to O&M. Labor expense is estimated to be 1 X \$100K X 0.50= \$50K for 2022, 2023 and for TY2024 and thereafter. Non-Labor expense is estimated to be 1 X \$10K X 0.5=\$5K in 2022 for one year only.								
2022	12	5	0	17	0.1	1-Sided Adj			
Explanation:	Engineering for Hydrogen Projects - One Engineer will be added starting in 2022 to focus on hydrogen blending in natural gas pipeline systems. This position will charge 10% of their time to O&M. Labor expense is estimated to be 1 X \$120K X 0.10= \$12K for 2022, 2023 and for TY2024 and thereafter. Non-Labor expense is estimated to be 1 X \$5K =\$5K in 2022 for one year only.								
2022	33	5	0	38	0.3	1-Sided Adj			
Explanation:	QA & Compliance - One CP QA Technical Specialist will be added starting in 2022 to review the work done by the company System Protection personnel, determining the effectiveness and adequacy of the processes and procedures used in normal operation and maintenance and verify training effectiveness. This position will charge 33% of their time to O&M. Labor expense is estimated to be 1 X \$100K X 0.33= \$33K for 2022, 2023 and for TY2024 and thereafter. Non-Labor expense is estimated to be 1 X \$5K =\$5K in 2022 for one year only.								
2022	29	5	0	34	0.2	1-Sided Adj			
Explanation:	RAMP: SDG&E-CFF-6, Specialist/Technicians w support the growing GIS and recorded in GIS. Ov orders they are respons Labor expense is estima	vill be added of S workload as ver the recent ible to map ar	one starting in 2 a result of the past the GGIS and close. Thes	2022 and the increased ca department e positions w	second one b pital and other has seen a 18 vill charge 23%	peginning in 2023 to r work being performed 35% increase in work 6 of their time to O&M.			

Note: Totals may include rounding differences.

110

15

2022

0

125

1.0

1-Sided Adj

#### Non-Shared Service Workpapers

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: J. Asset Management
Category-Sub: 1. Asset Management

Workpaper: 1GD009.000 - Asset Management

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	Adj_Type
Explanation:	RAMP: SDG&E-CFF-1, 1 base selected forecast m support the asset manag Integrity Management Primplementation. This posto be 1X 110k=\$110k for in 2022 only.	ethodology rela ement in Gas E ogram organiza sition will charg	ated to one A Distribution a ation as part e 100% of th	sset Strategy nd act as a lia of the asset m eir time to O8	Advisor will be a significant with the element significant signifi	e added in 2022 to enterprise- wide Asset ystem enterprise penses are estimated
2022	452	139	0	591	4.5	1-Sided Adj
Explanation:	RAMP: SDG&E-CFF-6, N dollars included within the offsetting adjustment "Oth	e selected fored	cast methodo	ology related t	o M01. Note	-
2022	-452	-139	0	-591	-4.5	1-Sided Adj
Explanation:	RAMP: SDG&E-CFF-6, N	New 02: Remo	val from base	e adjustment t	o net \$0 from	base adjustment.
2022 Total	234	35	0	269	2.2	
2023	50	0	0	50	0.6	1-Sided Adj
	by the company Gas Fiel processes and procedure of their time to O&M. Lab	es used in norm	nal operation	and maintena	nce. This pos	ition will charge 50%
	for TY2024 and thereafte year only.	•				
2023	for TY2024 and thereafte	-				
2023 Explanation:	for TY2024 and thereafte year only.	0 n Projects - On peline systems oe 1 X \$120K X	xpense is es  0 ne Engineer v n. This positio ( 0.10= \$12K	timated to be  12 will be added son will charge for 2022, 202	0.1 0.1 starting in 202 10% of their ti 3 and for TY2	5=\$5K in 2022 for one  1-Sided Adj 2 to focus on hydrogen me to O&M. Labor
	for TY2024 and thereafte year only.  12  Engineering for Hydroger blending in natural gas pi expense is estimated to be	0 n Projects - On peline systems oe 1 X \$120K X	xpense is es  0 ne Engineer v n. This positio ( 0.10= \$12K	timated to be  12 will be added son will charge for 2022, 202	0.1 0.1 starting in 202 10% of their ti 3 and for TY2	5=\$5K in 2022 for one  1-Sided Adj 2 to focus on hydrogen me to O&M. Labor
Explanation:	for TY2024 and thereafte year only.  12 Engineering for Hydroger blending in natural gas pi expense is estimated to be Non-Labor expense is estimated.	on Projects - On peline systems of 1 X \$120K X timated to be 1 0 CP QA Technic stem Protection dures used in no will charge for 2022, 2023 a	one Engineer volume Engineer volume. This position (0.10= \$12K	timated to be  12  vill be added son will charge for 2022, 2023 in 2022 for o  33  will be added determining the tion and maintime to O&M.	0.1 starting in 202 10% of their ti 3 and for TY2 ne year only. 0.3 starting in 20 ne effectivene tenance and v	1-Sided Adj 2 to focus on hydrogen me to O&M. Labor 2024 and thereafter.  1-Sided Adj 22 to review the work ss and adequacy of verify training se is estimated to be 1
Explanation: 2023	for TY2024 and thereafter year only.  12  Engineering for Hydroger blending in natural gas piexpense is estimated to be Non-Labor expense is estimated to be Non-Labor expense is estimated to be Non-Labor expense of the company Systhe processes and proceed effectiveness. This position X \$100K X 0.33=\$33K for the processes and proceed the company Systhematics.	on Projects - On peline systems of 1 X \$120K X timated to be 1 0 CP QA Technic stem Protection dures used in no will charge for 2022, 2023 a	one Engineer volume Engineer volume. This position (0.10= \$12K	timated to be  12  vill be added son will charge for 2022, 2023 in 2022 for o  33  will be added determining the tion and maintime to O&M.	0.1 starting in 202 10% of their ti 3 and for TY2 ne year only. 0.3 starting in 20 ne effectivene tenance and v	1-Sided Adj 2 to focus on hydrogen me to O&M. Labor 2024 and thereafter.  1-Sided Adj 22 to review the work ss and adequacy of verify training se is estimated to be 1

#### Non-Shared Service Workpapers

Area: GAS DISTRIBUTION

Witness: L. Patrick Kinsella

Category: J. Asset Management

Category-Sub: 1. Asset Management

Workpaper: 1GD009.000 - Asset Management

Workpaper:	1GD009.000 - Asse	t Managemen	t			
<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	Adj_Type
2023	110	0	0	110	1.0	1-Sided Adj
Explanation:	RAMP: SDG&E-CFF-1, base selected forecast in support the asset managintegrity Management Primplementation. This poto be 1X 110k=\$110k for in 2022 only.	nethodology regement in Gas gement in Gas rogram organi psition will cha	elated to one as Distribution as part rge 100% of t	Asset Strategy and act as a lia of the asset r neir time to Oo	Advisor will be alson with the endinger management sy &M. Labor exp	e added in 2022 to enterprise-wide Asset ystem enterprise enses are estimated
2023	452	139	0	591	4.5	1-Sided Adj
Explanation:	RAMP: SDG&E-CFF-6, dollars included within the offsetting adjustment "Offsetting adjustment"	ne selected for	ecast method	ology related	to M01. Note	
2023	-452	-139	0	-591	-4.5	1-Sided Adj
Explanation:	RAMP: SDG&E-CFF-6,	New 02: Rem	noval from bas	e adjustment	to net \$0 from	base adjustment.
2023 Total	263	5	0	268	2.5	
2024	50	0	0	50	0.6	1-Sided Adj
Explanation:	QA/Compliance - One F by the company Gas Fie processes and procedur of their time to O&M. Lal for TY2024 and thereafteyear only.	eld Operations es used in no bor expense is	personnel, do rmal operation s estimated to	etermining the and mainten be 1 X \$100k	effectiveness ance. This pos X X 0.50= \$50K	and adequacy of the ition will charge 50% for 2022, 2023 and
2024	12	0	0	12	0.1	1-Sided Adj
Explanation:	Engineering for Hydroge blending in natural gas p expense is estimated to Non-Labor expense is e	pipeline syster be 1 X \$120K	ns. This positi X 0.10= \$12l	on will charge K for 2022, 20	10% of their ti 23 and for TY2	me to O&M. Labor
2024	33	0	0	33	0.3	1-Sided Adj
Explanation:	QA & Compliance - One done by the company Sy the processes and proceeffectiveness. This posi X \$100K X 0.33= \$33K for be 1 X \$5K =\$5K in 20	ystem Protecti edures used ir tion will charg for 2022, 2023	on personnel, normal opera e 33% of their and for TY20	determining that ation and main time to O&M.	the effectivene ntenance and v Labor expens	ss and adequacy of erify training e is estimated to be 1
2024	58	0	0	58	0.5	1-Sided Adj

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: J. Asset Management
Category-Sub: 1. Asset Management

Workpaper: 1GD009.000 - Asset Management

Workpaper.	10000.000 7	looot Managemen				
<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	Adj_Type
Explanation:	and recorded in GIS orders they are responsible to the control of	ns will be added on GIS workload as a . Over the recent ponsible to map an timated to be 1 X	ne starting in a result of the past the GGIS d close. The \$125K X 0.23	2022 and the solution increased cap increased cap is department has been positions will be \$29K for 202	second one b ital and other as seen a 18 Il charge 23% 22 and 2 X \$1	eginning in 2023 to work being performed
2024	24	10	0	34	0.2	1-Sided Adj
Explanation:	facility design and su pressure monitoring	ipport GOCC mor sites. These posi \$120K X 0.10= \$2	itoring and co tions will cha 4K beginning	ontrol retrofit pr rge 10% of thei g in TY2024 and	ojects at reguir time to O&N	
2024	110	0	0	110	1.0	1-Sided Adj
Explanation:	Integrity Managemer implementation. This	est methodology re anagement in Gas nt Program organi s position will cha	elated to one Distribution a zation as par rge 100% of t	Asset Strategy and act as a lia t of the asset m their time to O8	Advisor will be a discort with the nanagement standard with the nanagement standard with the contract	oe added in 2022 to enterprise-wide Asset
2024	452	139	0	591	4.5	1-Sided Adj
Explanation:	RAMP: SDG&E-CFF dollars included with offsetting adjustment	in the selected for	ecast method	dology related t	o M01. Note	djustment to show the you will also see an
2024	-452	-139	0	-591	-4.5	1-Sided Adj
Explanation:	RAMP: SDG&E-CFF	-6, New 02: Rem	oval from ba	se adjustment t	to net \$0 from	ı base adjustment.
2024 Total	287	10	0	297	2.7	

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: J. Asset Management
Category-Sub: 1. Asset Management

Workpaper: 1GD009.000 - Asset Management

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

Determination of Aujusteu-	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
Recorded (Nominal \$)*					
Labor	502	383	361	420	500
Non-Labor	158	117	200	288	196
NSE	0	0	0	0	0
Total	660	500	561	708	696
FTE	6.1	4.1	3.6	4.3	4.7
djustments (Nominal \$) **					
Labor	244	428	418	280	200
Non-Labor	27	101	157	83	77
NSE	0	0	0	0	0
Total	271	528	575	363	277
FTE	3.7	6.2	5.8	3.0	3.0
Recorded-Adjusted (Nomina	al \$)				
Labor	746	811	779	700	699
Non-Labor	185	218	357	371	273
NSE	0	0	0	0	0
Total	931	1,028	1,136	1,071	972
FTE	9.8	10.3	9.4	7.3	7.7
acation & Sick (Nominal \$)					
Labor	111	123	112	99	105
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	111	123	112	99	105
FTE	1.6	1.7	1.5	1.2	1.3
scalation to 2021\$					
Labor	99	80	52	26	0
Non-Labor	21	18	22	25	0
NSE	0	0	0	0	0
Total	121	99	74	50	0
FTE	0.0	0.0	0.0	0.0	0.0
ecorded-Adjusted (Consta	nt 2021\$)				
Labor	956	1,014	943	825	804
Non-Labor	206	236	379	395	273
NSE	0	0	0	0	0
Total	1,162	1,250	1,322	1,220	1,078
FTE	11.4	12.0	10.9	8.5	9.0

<sup>\*</sup> After company-wide exclusions of Non-GRC costs

<sup>\*\*</sup> Refer to "Detail of Adjustments to Recorded" page for line item adjustments

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: J. Asset Management
Category-Sub: 1. Asset Management

Workpaper: 1GD009.000 - Asset Management

#### Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs								
	Years	2017	2018	2019	2020	2021		
Labor	-	244	428	418	280	200		
Non-Labor		27	101	157	83	77		
NSE		0	0	0	0	0		
	Total	271	528	575	363	277		
FTE		3.7	6.2	5.8	3.0	3.0		

#### Detail of Adjustments to Recorded:

Year		Labor	NLbr	NSE	FTE	Adi Type
2017		244	27	0	3.7	1-Sided Adj
Explanation:	7090820 - Adjust from OpsMgmtSupTrn to A	n 1GD010 (OpMg			***	ment) - Remove DOH from
2017 Total		244	27	0	3.7	
2018		428	101	0	6.2	1-Sided Adj
Explanation:	7090820 - Adjust from OpsMgmtSupTrn to A		gmtSupTrn) to	1GD009 (A	sset Manager	ment) - Remove DOH from
2018 Total		428	101	0	6.2	
2019		418	157	0	5.8	1-Sided Adj
Explanation:	7090820 - Adjust from OpsMgmtSupTrn to A		gmtSupTrn) to	1GD009 (A	sset Manager	ment) - Remove DOH from
	opolinginitoup i i i to i	Social Might.				
2019 Total	opomymicap iii to i	418	157	0	5.8	
<b>2019 Total</b> 2020	opoling.iii.cap iiii to /		<b>157</b> 69	<b>0</b>	<b>5.8</b> 3.0	1-Sided Adj
		418 268 n 1GD000 (Other	69	0	3.0	1-Sided Adj ent) - Remove DOH from Other
2020	7090820 - Adjust fron	418 268 n 1GD000 (Other	69	0	3.0	,
2020 Explanation:	7090820 - Adjust fror Services to Asset Mg	418  268 n 1GD000 (Other mt.  184 n 1GD010 (OpMg	69 Services) to	0 1GD009 (As	3.0 set Managem 2.2	ent) - Remove DOH from Other
2020 Explanation:	7090820 - Adjust from Services to Asset Mg	418  268 n 1GD000 (Other mt.  184 n 1GD010 (OpMg	69 Services) to	0 1GD009 (As	3.0 set Managem 2.2	ent) - Remove DOH from Other  1-Sided Adj
2020 Explanation: 2020 Explanation:	7090820 - Adjust from Services to Asset Mg 7090820 - Adjust from OpsMgmtSupTrn to A	418 268 In 1GD000 (Other mt. 184 In 1GD010 (OpMgasset Mgmt171 Int to remove cost	69 61 gmtSupTrn) to -47 s that were in	0 1GD009 (As 0 1GD009 (A	3.0 set Managem 2.2 sset Manager -2.2 orted in O&M	ent) - Remove DOH from Other  1-Sided Adj ment) - Remove DOH from
2020 Explanation: 2020 Explanation:	7090820 - Adjust from Services to Asset Mg 7090820 - Adjust from OpsMgmtSupTrn to A	418 268 In 1GD000 (Other mt. 184 In 1GD010 (OpMgasset Mgmt171 Int to remove cost	69 61 gmtSupTrn) to -47 s that were in	0 1GD009 (As 0 1GD009 (A	3.0 set Managem 2.2 sset Manager -2.2 orted in O&M	ent) - Remove DOH from Other  1-Sided Adj ment) - Remove DOH from  1-Sided Adj

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: J. Asset Management
Category-Sub: 1. Asset Management

Workpaper: 1GD009.000 - Asset Management

Year Labor NLbr NSE FTE Adj Type

Explanation: 7090820 - Adjust from 1GD010 (OpMgmtSupTrn) to 1GD009 (Asset Management) - Remove DOH from

OpsMgmtSupTrn to Asset Mgmt.

2021 Total 200 77 0 3.0

Non-Shared Service Workpapers

Area: **GAS DISTRIBUTION** Witness: L. Patrick Kinsella Category: J. Asset Management Category-Sub: 1. Asset Management

Workpaper: 1GD009.000 - Asset Management

#### RAMP Item # 1

#### **RAMP Activity**

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

RAMP Line Item ID: New 02

RAMP Line Item Name: Gas Geographic Information System

Tranche(/s): Tranche1: N/A

GRC Forecast Cost Estima						
	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	591	591	591	591	0	0
Cost Estimate Changes fro RAMP did not forecast a rar		r this CFF.				

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 reconciled WO	2,957.00	2,957.00	2,957.00	2,957.00	0.00	0.00

Risk Spend Efficiency (RSE)			
	GRC RSE	RAMP RSE	
Tranche 1	0.000	0.000	
RSE Changes from RAMP: An RSE was not calculated for this	activity		

Non-Shared Service Workpapers

Area: **GAS DISTRIBUTION** Witness: L. Patrick Kinsella Category: J. Asset Management Category-Sub: 1. Asset Management

Workpaper: 1GD009.000 - Asset Management

#### RAMP Item # 2

### **RAMP Activity**

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

RAMP Line Item ID: New 03

RAMP Line Item Name: Gas Geographic Information System

Tranche(/s): Tranche1: N/A

GRC Forecast Cost Estima	tes (\$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	34	63	58	0	0
Cost Estimate Changes fro RAMP did not forecast a ran		r this CFF.				

GRC Work Unit/Activity Le	evel Estimates							
Unit of	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2024 RA	ivities		
Measure Tranche 1 # of FTE	0.00	1.00	2.00	2.00	0.00	<b>High</b> 0.00		
Tranche 1 # of FTE 0.00 1.00 2.00 2.00 0.00 0.00  Work Unit Changes from RAMP:  RAMP did not forecast a range for dollars (units) for this CFF.								

Risk Spend Efficiency (RSE)			
	GRC RSE	RAMP RSE	
Tranche 1	0.000	0.000	
RSE Changes from RAMP: An RSE was not calculated for this	activity		

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella
Category: J. Asset Management
Category-Sub: 1. Asset Management

Workpaper: 1GD009.000 - Asset Management

#### RAMP Item # 3

#### **RAMP Activity**

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

RAMP Line Item ID: 1

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

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	125	110	110	1,200	1,500	

#### **Cost Estimate Changes from RAMP:**

The forecast for this activity is shared with another witness area (Safety, Risk, and Asset Management Systems: Exhibit: SDGE-31).

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 FTE	1.00	1.00	1.00	1.00	0.00	0.00

#### Work Unit Changes from RAMP:

RAMP did not forecast a range for units for this CFF.

#### Risk Spend Efficiency (RSE)

	GRC RSE	RAMP RSE	
Tranche 1	0.000	0.000	

#### **RSE Changes from RAMP:**

An RSE was not calculated for this activity

Area: GAS DISTRIBUTION Witness: L. Patrick Kinsella

Category: K. Operations Management Supervision & Training

Workpaper: 1GD010.000

#### Summary for Category: K. Operations Management Supervision & Training

		In 2021\$ (000) Incurred Costs							
	Adjusted-Recorded		Adjusted-Forecast						
	2021	2022	2023	2024					
Labor	6,797	6,838	6,879	6,877					
Non-Labor	2,206	2,276	2,286	2,251					
NSE	0	0	0	0					
Total	9,003	9,114	9,165	9,128					
FTE	68.2	68.3	68.7	68.5					

#### Workpapers belonging to this Category:

#### 1GD010.000 Operations Management, Supervision & Training

Labor	6,797	6,838	6,879	6,877
Non-Labor	2,206	2,276	2,286	2,251
NSE	0	0	0	0
Total	9,003	9,114	9,165	9,128
FTE	68.2	68.3	68.7	68.5

Beginning of Workpaper

1GD010.000 - Operations Management, Supervision & Training

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella

Category: K. Operations Management Supervision & Training
Category-Sub 1. Operations Management Supervision & Training

Workpaper: 1GD010.000 - Operations Management, Supervision & Training

#### **Activity Description:**

This group includes labor and non-labor expenses for management and staff support of Gas Operations; Gas Operations Training group, based at the SKILLS training center; and Gas Distribution leadership. In addition, this group includes labor and non-labor expenses for all supervision and management in the operating districts and training expenses for all gas employees within the districts. Work completed within this group includes Gas Distribution leadership; developing and maintaining gas distribution construction and operating standards; evaluating new field technologies; development of field training materials and providing the skills training both in classroom and simulation format; providing code required welder testing, training and welding inspection; and managing the Operator Qualification (OQ) program for SDG&E gas employees and contractors. This workpaper includes RAMP: SDG&E-Risk-9, C14: Human Factors Mitigations - Ops Qual Training, SDG&E-Risk-9, C15: Human Factors Mitigation - QA/QC Program, and SDG&E-Risk-7, C01: L&M Training Groupings.

#### Forecast Explanations:

#### Labor - Base YR Rec

Operations leadership and support, field management, as well as personnel training expenses have increased from 2017-2021 in tandem with an escalating level of work and resulting growth in workforce. Programs, processes, and technologies were implemented to meet growing demands, such as an increasing number of Locate and Mark service requests, and compliance requirements. Because of these upwards pressures and new requirements, a historic trend or average for this group would not be representative of required base funding level. A base year methodology with incremental expenses to reflect the new business needs in this group in the future was selected. Added to this base level are incremental funds for supervision personnel for welding instruction and to manage and ensure compliance for Operator Qualification

#### Non-Labor - Base YR Rec

See description above for both Labor and Non-Labor

#### **NSE - Base YR Rec**

ln/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	5,883	5,929	5,977	6,970	6,797	6,839	6,880	6,878					
Non-Labor	1,647	1,260	1,497	1,992	2,206	2,276	2,286	2,251					
NSE	0	0	0	0	0	0	0	0					
Total	7,530	7,188	7,475	8,962	9,003	9,115	9,166	9,129					
FTE	59.4	62.5	63.7	75.4	68.2	68.3	68.7	68.5					

#### Non-Shared Service Workpapers

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella

Category: K. Operations Management Supervision & Training
Category-Sub: 1. Operations Management Supervision & Training

Workpaper: 1GD010.000 - Operations Management, Supervision & Training

#### **Summary of Adjustments to Forecast:**

	In 2021 \$(000) Incurred Costs												
Forecast	t Method	Bas	Base Forecast		Forec	ast Adjust	ments	Adjusted-Forecast					
Years	s	2022	2023	2024	2022	2023	2024	2022	2023	2024			
Labor	Base YR Rec	6,797	6,797	6,797	41	82	80	6,838	6,879	6,877			
Non-Labor	Base YR Rec	2,206	2,206	2,206	70	80	45	2,276	2,286	2,251			
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0			
Tota	ıl	9,003	9,003	9,003	111	162	125	9,114	9,165	9,128			
FTE	Base YR Rec	68.2	68.2	68.2	0.1	0.5	0.3	68.3	68.7	68.5			

#### **Forecast Adjustment Details:**

_	I share				FTF	Adi Tuna	
<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj Type</u>	
2022	746	0	0	746	8.3	1-Sided Adj	
Explanation:	RAMP: SDG&E-Risk-7, C forecast methodology rela remove these same costs	ated to C01.	•				
2022	-746	0	0	-746	-8.3	1-Sided Adj	
Explanation:	RAMP: SDG&E-Risk-7, C	01: Remova	al from base a	adjustment to	net \$0 from bas	se adjustment.	
2022	1,329	332	0	1,661	14.8	1-Sided Adj	
Explanation:	RAMP: SDG&E-Risk-9, C forecast methodology rela remove these same costs	ated to C14.	•				
2022	-1,329	-332	0	-1,661	-14.8	1-Sided Adj	
Explanation:	RAMP: SDG&E-Risk-9, C	C14: Remova	al from base a	adjustment to	net \$0 from bas	se adjustment.	
2022	300	0	0	300	3.0	1-Sided Adj	
Explanation:	RAMP: SDG&E-Risk-9, C forecast methodology rela remove these same costs	ated to C15.	-				
2022	-300	0	0	-300	-3.3	1-Sided Adj	
Explanation:	RAMP: SDG&E-Risk-9, 0	C15: Remova	al from base a	adjustment to	net \$0 from bas	se adjustment.	
2022	12	5	0	17	0.1	1-Sided Adj	
Explanation:	Night Welding Class - A r pre-school for the day we are \$40K/class X 1 class are estimated to be 1 X \$ thereafter.	elding classes X 0.30 = \$12	s. Labor charg K in 2023 an	ges to this clas d TY2024. No	ss will be 30% ( on-labor charge	O&M. Labor charges s for class expenses	
2022	29	5	0	34	0.3	1-Sided Adj	

#### Non-Shared Service Workpapers

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella

Category: K. Operations Management Supervision & Training Category-Sub: 1. Operations Management Supervision & Training

Workpaper: 1GD010.000 - Operations Management, Supervision & Training

Workpaper:	1GD010.000 - Opera	illoris iviariagei	neni, Supei	VISION & Mainin	ig	
<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	Adj_Type
Explanation:	Instructional Additions - T capital demands on weld ensure training competer is estimated to be 1 X \$1 TY2024 and thereafter.	ing, welding tra ncies These po 15K X 0.25= \$2	iining, and wositions will 29K for 2022	velding inspect charge 25% o 2 and 2 X \$115	ion. These po f their time to K X 0.25 = \$5	ositions will also help O&M. Labor expense 58K for 2023 and
2022	0	60	0	60	0.0	1-Sided Adj
Explanation:	Develop Virtual Training - that involve higher risk ar Virtual Reality application Non-labor expense is est in TY2024 is estimated to	nd difficult to re is. This training imated to be \$2	plicate, real will charge 200K X 0.30	life scenarios 30% to O&M.	that can be sa There is no la	afely simulated within abor expense.
2022 Total	41	70	0	111	0.1	
2023	746	0	0	746	8.3	1-Sided Adj
Explanation:	RAMP: SDG&E-Risk-7, C forecast methodology rela remove these same costs	ated to C01. N				
2023	-746	0	0	-746	-8.3	1-Sided Adj
Explanation:	RAMP: SDG&E-Risk-7, C	01: Removal	from base a	djustment to n	et \$0 from ba	se adjustment.
2023	1,329	332	0	1,661	14.8	1-Sided Adj
Explanation:	RAMP: SDG&E-Risk-9, Office ast methodology relations to these same costs	ated to C14. N				
2023	-1,329	-332	0	-1,661	-14.8	1-Sided Adj
Explanation:	RAMP: SDG&E-Risk-9, C	C14: Removal	from base a	djustment to n	et \$0 from ba	se adjustment.
2023	300	0	0	300	3.0	1-Sided Adj
Explanation:	RAMP: SDG&E-Risk-9, C forecast methodology rela remove these same costs	ated to C15. N				
2023	-300	0	0	-300	-3.3	1-Sided Adj
Explanation:	RAMP: SDG&E-Risk-9, 0	C15: Removal	from base a	djustment to n	et \$0 from ba	se adjustment.
2023	12	10	0	22	0.1	1-Sided Adj
Explanation:	Night Welding Class - Ar pre-school for the day we are \$40K/class X 1 class are estimated to be 1 X \$ thereafter.	elding classes. X 0.30 = \$12K	Labor charg in 2023 and	es to this class d TY2024. Nor	s will be 30% n-labor charge	O&M. Labor charges es for class expenses
2023	58	5	0	63	0.6	1-Sided Adj

#### Non-Shared Service Workpapers

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella

Category: K. Operations Management Supervision & Training
Category-Sub: 1. Operations Management Supervision & Training

Workpaper: 1GD010.000 - Operations Management, Supervision & Training

	<u> </u>					
<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	Adj_Type
xplanation:	Instructional Additions - capital demands on weldensure training compete is estimated to be 1 X \$TY2024 and thereafter.	ding, welding tra ncies These po 115K X 0.25= \$2	ining, and wo psitions will o	elding inspect charge 25% o and 2 X \$115	ion. These po f their time to K X 0.25 = \$5	sitions will also help O&M. Labor expense 58K for 2023 and
2023	12	5	0	17	0.1	1-Sided Adj
explanation:	Technical Advisor - One control oversight due to compliance with Operate compliance issues direct 10% of their time to O&N X \$120K X 0.10 +1 X \$1 estimated to be 1 X \$5K	the growth in the or Qualification. I tly pertaining to t M. Labor expens 00K X 0.10 = \$2	e number of In addition, o the Compan e is estimate 22K) for TY2	company and one NDE Prog y's NDE Prog ed to be 1 X \$ 024 and there	contract emp ram Supervis ram . These p 120K X 0.10 =	loyees requiring or to mitigate any ositions will charge = \$12K for 2023 and (1
2023	0	60	0	60	0.0	1-Sided Adj
xplanation:	Develop Virtual Training that involve higher risk a Virtual Reality applicatio Non-labor expense is es in TY2024 is estimated t	ind difficult to rep ns. This training stimated to be \$2	olicate, real- will charge a 200K X 0.30	life scenarios 30% to O&M.	that can be sa There is no la	afely simulated within abor expense.
2023 Total	82	80	0	162	0.5	
<b>2023 Total</b> 2024	<b>82</b> 746	<b>80</b> 0	0	<b>162</b> 746	<b>0.5</b> 8.3	1-Sided Adj
		0 C01: Base adju lated to C01. N	0 stment to sh	746 low the dollars	8.3 s included with	nin the selected
2024	746 RAMP: SDG&E-Risk-7, forecast methodology re	0 C01: Base adju lated to C01. N	0 stment to sh	746 low the dollars	8.3 s included with	nin the selected
2024 Explanation: 2024	746 RAMP: SDG&E-Risk-7, forecast methodology re remove these same cos	0 C01: Base adju lated to C01. Nots to net \$0. 0	0 stment to sh ote you will a	746 now the dollars also see an of -746	8.3 included with fsetting adjust	nin the selected tment "Other" to 1-Sided Adj
2024 Explanation:	746 RAMP: SDG&E-Risk-7, forecast methodology re remove these same cost	0 C01: Base adju lated to C01. Nots to net \$0. 0	0 stment to sh ote you will a	746 now the dollars also see an of -746	8.3 included with fsetting adjust	nin the selected tment "Other" to 1-Sided Adj
2024 Explanation: 2024 Explanation:	746 RAMP: SDG&E-Risk-7, forecast methodology re remove these same cost -746 RAMP: SDG&E-Risk-7,	0 C01: Base adju lated to C01. Notes to net \$0.  0 C01: Removal f 332 C14: Base adju lated to C14. No	0 stment to sh ote you will a  0 from base ac  0 stment to sh	746 now the dollars also see an of -746 djustment to now the dollars	8.3 s included with fsetting adjust  -8.3 et \$0 from base  14.8 s included with	nin the selected truent "Other" to  1-Sided Adj se adjustment.  1-Sided Adj hin the selected
2024 Explanation: 2024 Explanation: 2024	746 RAMP: SDG&E-Risk-7, forecast methodology re remove these same cost -746 RAMP: SDG&E-Risk-7, 1,329 RAMP: SDG&E-Risk-9, forecast methodology re	0 C01: Base adju lated to C01. Notes to net \$0.  0 C01: Removal f 332 C14: Base adju lated to C14. No	0 stment to sh ote you will a  0 from base ac  0 stment to sh	746 now the dollars also see an of -746 djustment to now the dollars	8.3 s included with fsetting adjust  -8.3 et \$0 from base  14.8 s included with	nin the selected truent "Other" to  1-Sided Adj se adjustment.  1-Sided Adj hin the selected
2024 Explanation: 2024 Explanation: 2024 Explanation: 2024 Explanation:	746 RAMP: SDG&E-Risk-7, forecast methodology re remove these same cost -746 RAMP: SDG&E-Risk-7, 1,329 RAMP: SDG&E-Risk-9, forecast methodology re remove these same cost	0 C01: Base adjulated to C01. Note to net \$0.  0 C01: Removal f 332 C14: Base adjulated to C14. Note to net \$0332	0 stment to shote you will a  0 from base ac  0 stment to shote you will a	746 now the dollars also see an of  -746 djustment to now 1,661 now the dollars also see an of	8.3 s included with fsetting adjusting adjusti	nin the selected trment "Other" to  1-Sided Adj se adjustment.  1-Sided Adj shin the selected trment "Other" to  1-Sided Adj
2024 Explanation: 2024 Explanation: 2024 Explanation: 2024 Explanation:	746 RAMP: SDG&E-Risk-7, forecast methodology re remove these same cost -746 RAMP: SDG&E-Risk-7, 1,329 RAMP: SDG&E-Risk-9, forecast methodology re remove these same cost -1,329	0 C01: Base adjulated to C01. Note to net \$0.  0 C01: Removal f 332 C14: Base adjulated to C14. Note to net \$0332	0 stment to shote you will a  0 from base ac  0 stment to shote you will a	746 now the dollars also see an of  -746 djustment to now 1,661 now the dollars also see an of	8.3 s included with fsetting adjusting adjusti	nin the selected trment "Other" to  1-Sided Adj se adjustment.  1-Sided Adj shin the selected trment "Other" to  1-Sided Adj
2024 Explanation: 2024 Explanation: 2024 Explanation: 2024 Explanation:	746 RAMP: SDG&E-Risk-7, forecast methodology re remove these same cost -746 RAMP: SDG&E-Risk-7, 1,329 RAMP: SDG&E-Risk-9, forecast methodology re remove these same cost -1,329 RAMP: SDG&E-Risk-9, RAMP: SDG&E-Risk-9,	0 C01: Base adjulated to C01. Notes to net \$0. 0 C01: Removal f 332 C14: Base adjulated to C14. Notes to net \$0332 C14: Removal f 0 C15: Base adjulated to C15. Notes to C15. Notes Sase adjulated Sase Sase Sase Sase Sase Sase Sase Sase	0 stment to shote you will a 0 from base ac 0 stment to shote you will a 0 from base ac 0 stment to shote you will a	746 flow the dollars also see an of 1,661 flow the dollars also see an of 1,661 flow the dollars also see an of 1,661 flows also see an of 1,661 flows the dollars also see an of 1,661 flows the dollars also see an of 1,661	8.3 s included with feetting adjust -8.3 et \$0 from base 14.8 s included with feetting adjust -14.8 et \$0 from base 3.0 s included with	nin the selected tment "Other" to  1-Sided Adj se adjustment.  1-Sided Adj thin the selected tment "Other" to  1-Sided Adj se adjustment.  1-Sided Adj se adjustment.  1-Sided Adj nin the selected
2024 Explanation: 2024 Explanation: 2024 Explanation: 2024 Explanation: 2024 Explanation:	746 RAMP: SDG&E-Risk-7, forecast methodology re remove these same cost -746 RAMP: SDG&E-Risk-7, 1,329 RAMP: SDG&E-Risk-9, forecast methodology re remove these same cost -1,329 RAMP: SDG&E-Risk-9, 300 RAMP: SDG&E-Risk-9, forecast methodology re remove these same cost -1,329	0 C01: Base adjulated to C01. Notes to net \$0. 0 C01: Removal f 332 C14: Base adjulated to C14. Notes to net \$0332 C14: Removal f 0 C15: Base adjulated to C15. Notes to C15. Notes Sase adjulated Sase Sase Sase Sase Sase Sase Sase Sase	0 stment to shote you will a 0 from base ac 0 stment to shote you will a 0 from base ac 0 stment to shote you will a	746 flow the dollars also see an of 1,661 flow the dollars also see an of 1,661 flow the dollars also see an of 1,661 flows also see an of 1,661 flows the dollars also see an of 1,661 flows the dollars also see an of 1,661	8.3 s included with feetting adjust -8.3 et \$0 from base 14.8 s included with feetting adjust -14.8 et \$0 from base 3.0 s included with	nin the selected tment "Other" to  1-Sided Adj se adjustment.  1-Sided Adj thin the selected tment "Other" to  1-Sided Adj se adjustment.  1-Sided Adj se adjustment.  1-Sided Adj nin the selected
2024 Explanation: 2024 Explanation: 2024 Explanation: 2024 Explanation: 2024 Explanation:	746 RAMP: SDG&E-Risk-7, forecast methodology re remove these same cost -746 RAMP: SDG&E-Risk-7, 1,329 RAMP: SDG&E-Risk-9, forecast methodology re remove these same cost -1,329 RAMP: SDG&E-Risk-9, 300 RAMP: SDG&E-Risk-9, forecast methodology re remove these same cost methodology re remove these same cost methodology re remove these same cost remove the c	0 C01: Base adjulated to C01. Notes to net \$0.  0 C01: Removal f 332 C14: Base adjulated to C14. Notes to net \$0.  -332 C14: Removal f 0 C15: Base adjulated to C15. Notes to net \$0.	0 stment to shote you will a 0 from base ac 0 stment to shote you will a 0 from base ac 0 stment to shote you will a	746 now the dollars also see an of  -746 djustment to now the dollars also see an of  -1,661 djustment to now the dollars also see an of  -000 now the dollars also see an of	8.3 s included with fsetting adjusting adjusti	nin the selected trment "Other" to  1-Sided Adj se adjustment.  1-Sided Adj shin the selected trment "Other" to  1-Sided Adj se adjustment.  1-Sided Adj se adjustment.

#### Non-Shared Service Workpapers

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella

Category: K. Operations Management Supervision & Training Category-Sub: 1. Operations Management Supervision & Training

Workpaper: 1GD010.000 - Operations Management, Supervision & Training

Workpaper. 190010.000 - Operations Management, Supervision & Training						
<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	Adj_Type
Explanation:	Night Welding Class - A r pre-school for the day we are \$40K/class X 1 class are estimated to be 1 X \$ thereafter.	lding classes X 0.30 = \$12	s. Labor charge 2K in 2023 and	s to this clas: TY2024. Nor	s will be 30% ( n-labor charge	D&M. Labor charges s for class expenses
2024	58	0	0	58	0.5	1-Sided Adj
Explanation:	Instructional Additions - T capital demands on weldi ensure training competen is estimated to be 1 X \$1 TY2024 and thereafter.	ng, welding to icies These 15K X 0.25=	training, and we positions will c \$29K for 2022	elding inspect harge 25% o and 2 X \$115	tion. These po f their time to 5K X 0.25 = \$5	sitions will also help O&M. Labor expense 8K for 2023 and
2024	22	5	0	27	0.1	1-Sided Adj
Explanation:	Technical Advisor - One control oversight due to the compliance with Operator compliance issues directl 10% of their time to O&M X \$120K X 0.10 +1 X \$100 estimated to be 1 X \$5K = 100 control over the control of the control of the control of the control of the control over the control of th	ne growth in r Qualification y pertaining to Labor expe OK X 0.10 =	the number of control of the number of control of the Company nse is estimate \$22K) for TY20	company and ne NDE Prog 's NDE Prog d to be 1 X \$ 024 and there	contract emp gram Supervise ram . These po 120K X 0.10 =	loyees requiring or to mitigate any ositions will charge \$12K for 2023 and (1
2024	0	30	0	30	0.0	1-Sided Adj
Explanation:	Develop Virtual Training - that involve higher risk ar Virtual Reality application Non-labor expense is esti in TY2024 is estimated to	nd difficult to s. This traini imated to be	replicate, real-l ng will charge 3 \$200K X 0.30 =	ife scenarios 30% to O&M.	that can be sa There is no la	afely simulated within bor expense.
2024 Total	80	45	0	125	0.3	

Non-Shared Service Workpapers

**GAS DISTRIBUTION** Area: L. Patrick Kinsella Witness:

K. Operations Management Supervision & Training Category: 1. Operations Management Supervision & Training Category-Sub:

1GD010.000 - Operations Management, Supervision & Training Workpaper:

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

Determination of Aujusteu-	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
Recorded (Nominal \$)*					
Labor	4,867	5,152	5,359	5,860	6,137
Non-Labor	1,505	1,262	1,566	3,366	4,292
NSE	0	0	0	0	0
Total	6,371	6,414	6,925	9,227	10,428
FTE	54.7	59.6	60.7	61.3	61.2
Adjustments (Nominal \$) **					
Labor	-277	-412	-418	55	-227
Non-Labor	-28	-101	-157	-1,498	-2,086
NSE	0	0	0	0	0
Total	-305	-512	-575	-1,444	-2,313
FTE	-3.8	-6.1	-5.8	3.5	-3.1
Recorded-Adjusted (Nomina	al \$)				
Labor	4,590	4,741	4,941	5,915	5,910
Non-Labor	1,477	1,161	1,409	1,868	2,206
NSE	0	0	0	0	0
Total	6,066	5,902	6,350	7,783	8,116
FTE	50.9	53.5	54.8	64.9	58.2
acation & Sick (Nominal \$)					
Labor	681	718	708	839	888
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	681	718	708	839	888
FTE	8.5	9.0	8.9	10.5	10.0
Escalation to 2021\$					
Labor	612	470	329	216	0
Non-Labor	170	98	88	124	0
NSE	0	0	0	0	0
Total	782	568	417	340	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant	nt 2021\$)				
Labor	5,883	5,929	5,977	6,970	6,797
Non-Labor	1,647	1,260	1,497	1,992	2,206
NSE	0	0	0	0	0
Total	7,530	7,188	7,475	8,962	9,003
FTE	59.4	62.5	63.7	75.4	68.2

<sup>\*</sup> After company-wide exclusions of Non-GRC costs

<sup>\*\*</sup> Refer to "Detail of Adjustments to Recorded" page for line item adjustments

Non-Shared Service Workpapers

Area: GAS DISTRIBUTION Witness: L. Patrick Kinsella

Category: K. Operations Management Supervision & Training
Category-Sub: 1. Operations Management Supervision & Training

Workpaper: 1GD010.000 - Operations Management, Supervision & Training

#### Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs						
	Years	2017	2018	2019	2020	2021
Labor	-	-277	-412	-418	55	-227
Non-Labor		-28	-101	-157	-1,498	-2,086
NSE		0	0	0	0	0
	Total	-305	-512	-575	-1,444	-2,313
FTE		-3.8	-6.1	-5.8	3.5	-3.1

#### Detail of Adjustments to Recorded:

Year	Labor	NLbr	NSE	FTE	Adj Type	
2017	-33	<u>-1</u>	0	-0.1	1-Sided Adj	
Explanation:	Incremental costs that are anticip Memorandum Account (CEMA).	pated to be reque	sted for reco	very through	n a non-GRC Catastrophic Event	
2017	-244	-27	0	-3.7	1-Sided Adj	
Explanation:	7090820 - Adjust from 1GD010 ( OpsMgmtSupTrn to Asset Mgmt.	. • . ,	to 1GD009 (	(Asset Mana	gement) - Remove DOH from	
2017 Total	-277	-28	0	-3.8		
2018	16	0	0	0.1	1-Sided Adj	
Explanation:	Incremental costs that are anticip Memorandum Account (CEMA).	pated to be reque	sted for reco	very through	n a non-GRC Catastrophic Event	
2018	-428	-101	0	-6.2	1-Sided Adj	
Explanation:	7090820 - Adjust from 1GD010 (	OpMgmtSupTrn)	to 1GD009 (	Asset Mana	gement) - Remove DOH from	
	OpsMgmtSupTrn to Asset Mgmt.	,		`	,	
2018 Total	OpsMgmtSupTrn to Asset Mgmt412	-101	0	-6.1	<b>,</b>	
<b>2018 Total</b> 2019			<b>0</b>	`	1-Sided Adj	
	-412	<b>-101</b> -157 OpMgmtSupTrn)	0	<b>-6.1</b> -5.8	1-Sided Adj	
2019	-412 -418 7090820 - Adjust from 1GD010 (	<b>-101</b> -157 OpMgmtSupTrn)	0	<b>-6.1</b> -5.8	1-Sided Adj	
2019 Explanation:	-412 -418 7090820 - Adjust from 1GD010 ( OpsMgmtSupTrn to Asset Mgmt.	<b>-101</b> -157 OpMgmtSupTrn)	0 to 1GD009 (	<b>-6.1</b> -5.8 (Asset Mana	1-Sided Adj	
2019 Explanation: 2019 Total	-412 -418 7090820 - Adjust from 1GD010 ( OpsMgmtSupTrn to Asset Mgmt418	-101 -157 OpMgmtSupTrn) -157 -1	0 to 1GD009 ( <b>0</b> 0	-6.1 -5.8 (Asset Mana -5.8 0.0	1-Sided Adj gement) - Remove DOH from 1-Sided Adj	
2019 Explanation:  2019 Total  2020	-412 -418 7090820 - Adjust from 1GD010 ( OpsMgmtSupTrn to Asset Mgmt418 0 Incremental costs that are anticip	-101 -157 OpMgmtSupTrn) -157 -1	0 to 1GD009 ( <b>0</b> 0	-6.1 -5.8 (Asset Mana -5.8 0.0	1-Sided Adj gement) - Remove DOH from 1-Sided Adj	

Area: GAS DISTRIBUTION Witness: L. Patrick Kinsella

Category: K. Operations Management Supervision & Training
Category-Sub: 1. Operations Management Supervision & Training

Workpaper: 1GD010.000 - Operations Management, Supervision & Training

<u>Year</u>		<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	Adj Type	
2020		652	42	0	6.0	1-Sided Adj	
Explanation:	7074346/7022860 and Training) - Rer	-	·		• •	erations Management, Supervision	
2020		-184	-61	0	-2.2	1-Sided Adj	
Explanation:	7090820 - Adjust fr OpsMgmtSupTrn to	,	,	to 1GD009 (	Asset Mana	gement) - Remove DOH from	
2020		-383	-22	0	-0.2	1-Sided Adj	
Explanation:	Accounting adjustn reported as capital.			•	•	&M that should have been	
2020 Total		55	-1,498	0	3.5		
2021		-27	-2,009	0	-0.1	1-Sided Adj	
Explanation:	Incremental COVID				uested for r	ecovery through a non-GRC	
2021		-200	-77	0	-3.0	1-Sided Adj	
Explanation:	7090820 - Adjust fr OpsMgmtSupTrn to			to 1GD009 (	Asset Mana	gement) - Remove DOH from	
2021 Total		-227	-2,086	0	-3.1		

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella

Category: K. Operations Management Supervision & Training
Category-Sub: 1. Operations Management Supervision & Training

Workpaper: 1GD010.000 - Operations Management, Supervision & Training

#### RAMP Item #1

#### **RAMP Activity**

RAMP Chapter: SDG&E-Risk-7 Excavation Damage (Dig-In) on the Gas System

RAMP Line Item ID: C01

RAMP Line Item Name: L&M Training Groupings

Tranche(/s): Tranche1: MP

#### **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	746	746	746	746	252	314

#### **Cost Estimate Changes from RAMP:**

The forecast is outside the RAMP range due to changes in forecast assumptions since preparing RAMP filing.

<b>GRC Work Unit/Activi</b>	v Level Estimates
-----------------------------	-------------------

Unit of	2021 Historical	2022	2023	2024	2024 F	
Measure	Embedded Activities	Forecast Activities	Forecast Activities	Forecast Activities	Range A	High
Tranche 1 # of Training Hours	1,255.00	1,374.00	1,374.00	1,374.00	1,255.00	1,519.00

#### Work Unit Changes from RAMP:

Units are in alignment with RAMP forecast.

#### Risk Spend Efficiency (RSE)

	GRC RSE	RAMP RSE	
Tranche 1	0.000	0.000	

#### **RSE Changes from RAMP:**

An RSE was not calculated for this activity

GAS DISTRIBUTION

Witness: L. Patrick Kinsella

Category: K. Operations Management Supervision & Training
Category-Sub: 1. Operations Management Supervision & Training

Workpaper: 1GD010.000 - Operations Management, Supervision & Training

#### RAMP Item # 2

Area:

#### **RAMP Activity**

RAMP Chapter: SDG&E-Risk-9 Incident Related to the Medium Pressure System (Excluding Dig-in)

RAMP Line Item ID: C14

RAMP Line Item Name: Human Factors Mitigations - Ops Qual Training

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	1,661	1,661	1,661	1,661	2,347	2,841

#### **Cost Estimate Changes from RAMP:**

The forecast is outside the RAMP range due to changes in forecast assumptions since preparing RAMP filing.

Unit of	2021 Historical Embedded	2022 Forecast	2023 Forecast	2024 Forecast	2024 RA	
Measure	Activities	Activities	Activities	Activities	Low	High
Tranche 1 # of EE/Contractors Trained	749.00	749.00	749.00	749.00	712.00	861.00

### Work Unit Changes from RAMP:

Units are in alignment with RAMP forecast.

#### Risk Spend Efficiency (RSE)

	GRC RSE	RAMP RSE	
Tranche 1	0.500	0.400	

#### **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)

Non-Shared Service Workpapers

**GAS DISTRIBUTION** Area: Witness: L. Patrick Kinsella

Category: K. Operations Management Supervision & Training 1. Operations Management Supervision & Training Category-Sub:

Workpaper: 1GD010.000 - Operations Management, Supervision & Training

#### RAMP Item #3

#### **RAMP Activity**

RAMP Chapter: SDG&E-Risk-9 Incident Related to the Medium Pressure System (Excluding Dig-in)

RAMP Line Item ID: C15

RAMP Line Item Name: Human Factors Mitigation - QA/QC Program

Tranche(/s): Tranche1: N/A

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

	2021 Historical Embedded Cost (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2024 RAMP Range (2020 Incurred \$)	
					Low	High
Tranche 1 Cost Estimate	300	300	300	300	342	414

#### **Cost Estimate Changes from RAMP:**

The forecast is outside the RAMP range due to changes in forecast assumptions since preparing RAMP filing.

<b>GRC Work Unit/Activit</b>	y Level Estimates
------------------------------	-------------------

Unit of	2021 Historical Embedded	2022 Forecast	2023 Forecast	2024 Forecast	2024 RA	
Measure	Activities	Activities	Activities	Activities	Low	High
Tranche 1 # of QA/QC field audits	239.00	239.00	239.00	239.00	227.00	275.00

#### Work Unit Changes from RAMP:

Units are in alignment with RAMP forecast.

#### Risk Spend Efficiency (RSE)

	GRC RSE	RAMP RSE	
Tranche 1	0.000	0.000	

#### **RSE Changes from RAMP:**

An RSE was not calculated for this activity

#### Non-Shared Service Workpapers

Area: GAS DISTRIBUTION
Witness: L. Patrick Kinsella

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

ost Center	Sub	<u>Description</u>
2100-0079	000	METRO C&O GAS
2100-0081	000	SOUTH STREET REPAIR
2100-0087	000	NORTH COAST C&O CENTER GAS
2100-0093	000	NORTHEAST C&O-GAS
2100-0094	000	NORTH STREET REPAIR
2100-0102	000	BEACH CITIES C&O CENTER GAS
2100-0107	000	EASTERN C&O CENTER GAS
2100-0171	000	PIPELINE OPERATIONS
2100-0173	000	SHOPS SERVICES
2100-0174	000	M&R/SYSTEM PROTECTION SUPERVISOR
2100-0176	000	GAS INSTRUMENT SHOP
2100-0177	000	GAS ENGINEERING
2100-0182	000	GAS GEO INFO SYS/SVC
2100-0183	000	TECH SERVICES - HP PIPELINE & FRCHS
2100-0310	000	GAS TSM & DISTB LVC for Budget Use Only
2100-0637	000	CATHODIC PROTECTION
2100-0654	000	PIPELINE SERVICES
2100-0716	000	WELDING TRAINING & INSPECTION
2100-3400	000	VP Field Services
2100-3402	000	GAS TECHNICAL SERVICES MIRAMAR STAFF
2100-3405	000	CNG MAINTENANCE
2100-3417	000	SVP GAS TRANS & DISTR-NSS
2100-3426	000	GAS OPERATIONS DIRECTOR
2100-3459	000	CUSTOMER SERVICE-SOUTH INLAND DIRECTOR
2100-3538	000	VP ENGINEERING & OPERATION STAFF
2100-3567	000	GAS DESIGN
2100-3568	000	TECH SERVICES - PROGRAMS
2100-3586	000	SD REG FLD OPS MGR
2100-3606	000	Work Eff Office (WEO)
2100-3625	000	LEAKAGE MITIGATION
2100-3678	000	CONSTRUCTION RESOURCE MGMT
2100-3720	000	NC C&O STREET REPAIR
2100-3723	000	OC GAS DISTRIBUTION
2100-3728	000	EA C&O STREET REPAIR
2100-3729	000	BC C&O STREET REPAIR
2100-3730	000	GAS, LOCATORS, PROJECT MANAGEMENT
2100-3734	000	OPERATIONS TRAINING MANAGER
2100-3767	000	LOCATE & MARK-NORTH
2100-3768	000	LOCATE & MARK-SOUTH
2100-3769	000	LOCATE & MARK-COASTL
2100-3815	000	MOBILE BUSINESS SUPPORT
2100-3914	000	GOS CPD SUPPORT
2100-3927	000	TRAFFIC CONTROL NORTH
2100-3928	000	TRAFFIC CONTROL SOUTH

SDG&E/GAS DISTRIBUTION/Exh No:SDG&E-04-WP-R/Witness: L. Kinsella

Area: GAS DISTRIBUTION Witness: L. Patrick Kinsella

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

Cost Center	Sub	<u>Description</u>
2100-3944	000	QUALIFICATIONS & COMPLIANCE
2100-3947	000	MHP OUTREACH
2100-3948	000	MHP PLAN & CONSTUCT
2100-3957	000	TECH SERVICES - COMPLIANCE
2100-3990	000	SANDIEGO GAS DISTR OPS COMPLIANCE GROUP
2100-4037	000	GAS EMERGENCY DEPARTMENT 24/7
2100-4038	000	GAS REGIONAL OPS CONSTRUCTION (GROC)
2100-4093	000	LEAKAGE MITIGATION SOUTH
2100-4116	000	TECHNICAL SERVICES RAMP
2100-4140	000	Const. Mgmt - Gas Dist
2100-4147	000	TRAFFIC CONTROL BEACH CITIES
2100-4148	000	TRAFFIC CONTROL NORTH COAST
2100-4149	000	TRAFFIC CONTROL EASTERN
2100-4150	000	GAS EMERGENCY DEPARTMENT-NORTHEAST
2100-4151	000	GAS EMERGENCY DEPARTMENT-BEACH CITIES
2100-4152	000	GAS EMERGENCY DEPARTMENT-METRO
2100-4153	000	GAS EMERGENCY DEPARTMENT-EASTERN