

Application of SOUTHERN CALIFORNIA GAS )  
COMPANY for authority to update its gas revenue )  
requirement and base rates )  
effective January 1, 2024 (U 904-G) )

Application No. 22-05-015

Exhibit No.: (SCG-07-WP-R)

REVISED WORKPAPERS TO  
PREPARED DIRECT TESTIMONY  
OF MARIA T. MARTINEZ  
ON BEHALF OF SOUTHERN CALIFORNIA GAS COMPANY

BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA

AUGUST 2022



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

**Exhibit SCG-07-WP-R - GAS ENGINEERING**

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**Overall Summary For Exhibit No. SCG-07-WP-R**

<b>Area:</b>	<b>GAS ENGINEERING</b>
<b>Witness:</b>	<b>Maria T. Martinez</b>

Description	In 2021 \$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
<i>Non-Shared Services</i>	15,488	15,477	16,073	16,445
<i>Shared Services</i>	14,677	14,543	15,404	16,598
<b>Total</b>	<b>30,165</b>	<b>30,020</b>	<b>31,477</b>	<b>33,043</b>

*Note: Totals may include rounding differences.*

Southern California Gas Company  
 2024 GRC - REVISED  
 Non-Shared Service Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez

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

Description	In 2021 \$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
A. Analysis, Testing, and Materials	6,351	6,446	6,952	7,082
B. Measurement and Regulation	4,850	4,711	4,711	4,711
C. Land and Right of Way	3,689	3,689	3,689	3,931
D. Research, Plastic Material and Aviation	598	631	721	721
<b>Total</b>	<b>15,488</b>	<b>15,477</b>	<b>16,073</b>	<b>16,445</b>

*Note: Totals may include rounding differences.*

Southern California Gas Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: A. Analysis, Testing, and Materials  
 Workpaper: 2EN000.000

**Summary for Category: A. Analysis, Testing, and Materials**

	In 2021\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	3,969	4,064	4,570	4,700
Non-Labor	2,383	2,383	2,383	2,383
NSE	0	0	0	0
<b>Total</b>	<b>6,352</b>	<b>6,447</b>	<b>6,953</b>	<b>7,083</b>
FTE	36.4	36.9	40.7	41.5

**Workpapers belonging to this Category:**

**2EN000.000 EAC, Materials Lab, NDE, Materials and Eqp, Compressor, Admn, Applied Tech, MQM**

Labor	3,969	4,064	4,570	4,700
Non-Labor	2,383	2,383	2,383	2,383
NSE	0	0	0	0
<b>Total</b>	<b>6,352</b>	<b>6,447</b>	<b>6,953</b>	<b>7,083</b>
FTE	36.4	36.9	40.7	41.5

*Note: Totals may include rounding differences.*

**Beginning of Workpaper**  
**2EN000.000 - EAC, Materials Lab, NDE, Materials and Eqp, Compressor, Admn,**  
**Applied Tech, MQM**

Southern California Gas Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: GAS ENGINEERING  
Witness: Maria T. Martinez  
Category: A. Analysis, Testing, and Materials  
Category-Sub: 1. Analysis, Testing, and Materials  
Workpaper: 2EN000.000 - EAC, Materials Lab, NDE, Materials and Eqp, Compressor, Admn, Applied Tech, MQM

**Activity Description:**

This workpaper includes labor and non-labor expenses and activities of non-shared services in Gas Engineering including Engineering Analysis Center oversight (2200-0301), Engineering Analysis Center Administration (2200-1199), Air Quality and Compressor Services (2200-1180), Materials Quality Management (MQM) (2200-2300), Manufacturer Specifications (MSPs), Materials and Equipment (2200-1179), Non-Destructive Examination (NDE) Program (2200-1107), Materials Laboratory (2200-1106), and Applied Technologies (2200-1200). Activities in these groups include:

- \*Establishing policy and oversight of Non-Destructive Examination (NDE) Testing, Welding Procedure evaluation, and coatings systems for gas materials
- \*Inspection of pressure vessels, materials, equipment and tools, and vent stacks
- \*Laboratory testing and quality assurance services for vendor products, pipeline steel and plastic and failure analysis
- \*Providing guidance and conducting gas quality and odorization testing
- \*Supporting Renewable Natural Gas and Hydrogen initiatives/goals
- \*Performing gas leak investigations, leak mitigation support, gas migration studies, vent stack emission compliance testing
- \*Conducting environmental testing and review of analytical reports
- \*Internal Corrosion Monitoring Program (ICMP)
- \*Evaluating new equipment for field use and recommend/approve gas quality analyzers
- \*Testing and evaluating end-use appliances
- \*Providing technical support for gas compressor unit operations
- \*Providing centralized quality policies, standardization, Material Specifications (MSPs) manufacturers' approval processes for materials
- \*Managing material traceability workflow process and policy
- \*Providing Quality Inspection Management and oversight for complex major projects

**Forecast Explanations:**

**Labor - Base YR Rec**

The forecast method developed for labor in this cost category is a Base Year method . This method is most appropriate because it reflects the existing volume of activity and accounts for growth the NDE and MQM teams have experienced in Base Year 2021 and will continue to see. In addition, incremental costs associated with Engineering Analysis Center labor expense requirements have been added to the Base Year forecast.

**Non-Labor - Base YR Rec**

The forecast method developed for this cost category is a Base Year method . This method is most appropriate because it reflects the existing volume of activity and accounts for growth the NDE and MQM teams have has experienced in Base Year 2021 and will continue to see.

**NSE - Base YR Rec**

There are no Non-Standard Escalation expenses associated with this cost center.

*Note: Totals may include rounding differences.*

Southern California Gas Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: A. Analysis, Testing, and Materials  
 Category-Sub: 1. Analysis, Testing, and Materials  
 Workpaper: 2EN000.000 - EAC, Materials Lab, NDE, Materials and Eqp, Compressor, Admn, Applied Tech, MQM

**Summary of Results:**

		<b>In 2021\$ (000) Incurred Costs</b>								
		<b>Adjusted-Recorded</b>					<b>Adjusted-Forecast</b>			
<b>Years</b>		<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	
Labor		2,726	2,622	2,725	3,218	3,969	4,064	4,570	4,700	
Non-Labor		1,008	1,210	1,344	1,536	2,383	2,383	2,383	2,383	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>3,734</b>	<b>3,833</b>	<b>4,069</b>	<b>4,755</b>	<b>6,351</b>	<b>6,447</b>	<b>6,953</b>	<b>7,083</b>	
FTE		24.9	24.0	23.7	28.7	36.4	36.9	40.7	41.5	

*Note: Totals may include rounding differences.*

Southern California Gas Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: GAS ENGINEERING  
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**Summary of Adjustments to Forecast:**

In 2021 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	Base YR Rec	3,969	3,969	3,969	95	601	731	4,064	4,570	4,700
Non-Labor	Base YR Rec	2,383	2,383	2,383	0	0	0	2,383	2,383	2,383
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>6,351</b>	<b>6,351</b>	<b>6,351</b>	<b>95</b>	<b>601</b>	<b>731</b>	<b>6,446</b>	<b>6,952</b>	<b>7,082</b>
FTE	Base YR Rec	36.4	36.4	36.4	0.5	4.3	5.1	36.9	40.7	41.5

**Forecast Adjustment Details:**

Year	Labor	NLbr	NSE	Total	FTE	Adj Type
2022	62	0	0	62	0.3	1-Sided Adj
<b>Explanation:</b>	2022 Onboarding adjustment in cost center 2200-2300 for 1 Project Manager, 1 Technical Advisor and 1 Engineer for increase in volume of material specification development and projects.					
2022	20	0	0	20	0.1	1-Sided Adj
<b>Explanation:</b>	2022 Onboarding adjustment in cost center 2200-2300 to add 1 Material Quality Inspector for support to Control Center Modernization (CCM)					
2022	13	0	0	13	0.1	1-Sided Adj
<b>Explanation:</b>	2022 Onboarding adjustment to cost center 2200-1179 to add 1 Assoc Engineer for Plastic- Steel Lab Sampling & Testing to address increase in volume of projects.					
<b>2022 Total</b>	<b>95</b>	<b>0</b>	<b>0</b>	<b>95</b>	<b>0.5</b>	
2023	13	0	0	13	0.1	1-Sided Adj
<b>Explanation:</b>	2023 Onboarding adjustment to cost center 2200-1179 to add 1 Assoc Engineer for Plastic- Steel Lab Sampling & Testing to address increase in volume of projects.					
2023	82	0	0	82	0.4	1-Sided Adj
<b>Explanation:</b>	2023 Onboarding adjustment in cost center 2200-2300 to add 1 Project Manager for Quality Assurance, 1 Engineer for material specification development, 1 Tech Advisor and 1 Project Specialist to address increase in volume of projects.					
2023	20	0	0	20	0.1	1-Sided Adj
<b>Explanation:</b>	2023 Onboarding adjustment in cost center 2200-2300 to add 1 Material Quality Inspector for support to Control Center Modernization (CCM).					
2023	72	0	0	72	0.8	1-Sided Adj
<b>Explanation:</b>	2023 Onboarding adjustment to cost center 2200-1200 to add 1 Lab Tech Assistant to address increase in the volume of Renewable Natural Gas (RNG) projects.					
2023	62	0	0	62	0.3	1-Sided Adj
<b>Explanation:</b>	2023 Onboarding adjustment in cost center 2200-2300 for 1 Project Manager, 1 Technical Advisor and 1 Engineer for increase in volume of material specification development and projects.					
2023	292	0	0	292	2.3	1-Sided Adj

Note: Totals may include rounding differences.

Southern California Gas Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

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 Workpaper: 2EN000.000 - EAC, Materials Lab, NDE, Materials and Eqp, Compressor, Admn, Applied Tech, MQM

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	2023 Onboarding adjustment to cost center 2200-1180 to add 1 Technical Advisor for Air Quality, and 1 Engineer for Emission Control Systems, and 1 Compressor Advisor Supervisor to address increase in the volume of projects.					
2023	60	0	0	60	0.3	1-Sided Adj
<b>Explanation:</b>	2023 Onboarding adjustment in cost center 2200-2300 to add 1 Project Manager for Quality Assurance, 1 Engineer for material specification development, and 1 Project Specialist to address increase in volume of projects.					
<b>2023 Total</b>	<b>601</b>	<b>0</b>	<b>0</b>	<b>601</b>	<b>4.3</b>	
2024	62	0	0	62	0.3	1-Sided Adj
<b>Explanation:</b>	2024 Onboarding adjustment in cost center 2200-2300 to add 1 Project Manager for Quality Control, 1 Engineer for material specification development, and 1 Technical Advisor for material quality inspection control to address increase in volume of projects.					
2024	292	0	0	292	2.3	1-Sided Adj
<b>Explanation:</b>	2024 Onboarding adjustment to cost center 2200-1180 to add 1 Technical Advisor for Air Quality, and 1 Engineer for Emission Control Systems, and 1 Compressor Advisor Supervisor to address increase in the volume of projects.					
2024	62	0	0	62	0.3	1-Sided Adj
<b>Explanation:</b>	2024 Onboarding adjustment in cost center 2200-2300 for 1 Project Manager, 1 Technical Advisor and 1 Engineer for increase in volume of material specification development and projects.					
2024	13	0	0	13	0.1	1-Sided Adj
<b>Explanation:</b>	2024 Onboarding adjustment to cost center 2200-1179 to add 1 Assoc Engineer for Plastic- Steel Lab Sampling & Testing to address increase in volume of projects.					
2024	82	0	0	82	0.4	1-Sided Adj
<b>Explanation:</b>	2024 Onboarding adjustment in cost center 2200-2300 to add 1 Project Manager for Quality Assurance, 1 Engineer for material specification development, 1 Tech Advisor and 1 Project Specialist to address increase in volume of projects.					
2024	72	0	0	72	0.8	1-Sided Adj
<b>Explanation:</b>	2024 Onboarding adjustment to cost center 2200-1200 to add 1 Lab Tech Assistant to address increase in the volume of Renewable Natural Gas (RNG) projects.					
2024	66	0	0	66	0.5	1-Sided Adj
<b>Explanation:</b>	2024 Onboarding adjustment in cost center 2200-1179 to add 1 Engineer to address increase in volume of material specifications projects.					
2024	20	0	0	20	0.1	1-Sided Adj
<b>Explanation:</b>	2024 Onboarding adjustment in cost center 2200-2300 to add 1 Material Quality Inspector for support to Control Center Modernization (CCM).					
2024	62	0	0	62	0.3	1-Sided Adj
<b>Explanation:</b>	2024 Onboarding adjustment in cost center 2200-2300 for 1 Project Manager, 1 Technical Advisor and 1 Engineer for increase in volume of material specification development and projects.					
<b>2024 Total</b>	<b>731</b>	<b>0</b>	<b>0</b>	<b>731</b>	<b>5.1</b>	

Note: Totals may include rounding differences.

SCG/GAS ENGINEERING/Exh No:SCG-07-WP-R/Witness: M. Martinez

Southern California Gas Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

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

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	2,092	2,063	2,170	2,684	3,197
Non-Labor	896	1,114	1,254	1,447	2,395
NSE	0	0	0	0	0
<b>Total</b>	<b>2,987</b>	<b>3,177</b>	<b>3,424</b>	<b>4,132</b>	<b>5,592</b>
FTE	21.1	20.4	20.5	24.4	28.1
<b>Adjustments (Nominal \$) **</b>					
Labor	-2	-2	-2	-27	177
Non-Labor	0	-4	0	-20	-12
NSE	0	0	0	0	0
<b>Total</b>	<b>-2</b>	<b>-5</b>	<b>-2</b>	<b>-47</b>	<b>164</b>
FTE	0.0	0.0	-0.8	-0.5	2.8
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	2,090	2,062	2,169	2,657	3,374
Non-Labor	896	1,110	1,254	1,427	2,383
NSE	0	0	0	0	0
<b>Total</b>	<b>2,986</b>	<b>3,171</b>	<b>3,422</b>	<b>4,084</b>	<b>5,756</b>
FTE	21.1	20.4	19.7	23.9	30.8
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	354	355	411	468	595
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>354</b>	<b>355</b>	<b>411</b>	<b>468</b>	<b>595</b>
FTE	3.8	3.6	4.0	4.8	5.6
<b>Escalation to 2021\$</b>					
Labor	282	206	145	93	0
Non-Labor	112	101	90	109	0
NSE	0	0	0	0	0
<b>Total</b>	<b>394</b>	<b>307</b>	<b>235</b>	<b>202</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2021\$)</b>					
Labor	2,726	2,622	2,725	3,218	3,969
Non-Labor	1,008	1,210	1,344	1,536	2,383
NSE	0	0	0	0	0
<b>Total</b>	<b>3,734</b>	<b>3,833</b>	<b>4,069</b>	<b>4,755</b>	<b>6,351</b>
FTE	24.9	24.0	23.7	28.7	36.4

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

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

Note: Totals may include rounding differences.

Southern California Gas Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: A. Analysis, Testing, and Materials  
 Category-Sub: 1. Analysis, Testing, and Materials  
 Workpaper: 2EN000.000 - EAC, Materials Lab, NDE, Materials and Eqp, Compressor, Admn, Applied Tech, MQM

**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs					
Years	2017	2018	2019	2020	2021
Labor	-2	-2	-2	-27	177
Non-Labor	0	-4	0	-20	-12
NSE	0	0	0	0	0
<b>Total</b>	<b>-2</b>	<b>-5</b>	<b>-2</b>	<b>-47</b>	<b>164</b>
FTE	0.0	0.0	-0.8	-0.5	2.8

**Detail of Adjustments to Recorded:**

Year	Labor	NLbr	NSE	FTE	Adj Type
2017	-2	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	Exclude labor expenses associated with lobbying activities (FERC 426.4). This adjustment is in addition to other costs that have already been excluded based other specific accounting attributes.				
<b>2017 Total</b>	<b>-2</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
2018	0	-4	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	-2	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	Exclude labor expenses associated with lobbying activities (FERC 426.4). This adjustment is in addition to other costs that have already been excluded based other specific accounting attributes.				
<b>2018 Total</b>	<b>-2</b>	<b>-4</b>	<b>0</b>	<b>0.0</b>	
2019	0	0	0	-0.8	1-Sided Adj
<b>Explanation:</b>	One sided adjustment to exclude non-GRC PSEP-Pipeline Safety Reliability Project.				
2019	-2	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	Exclude labor expenses associated with lobbying activities (FERC 426.4). This adjustment is in addition to other costs that have already been excluded based other specific accounting attributes.				
<b>2019 Total</b>	<b>-2</b>	<b>0</b>	<b>0</b>	<b>-0.8</b>	
2020	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-2	-3	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-4	0	0.0	1-Sided Adj

Note: Totals may include rounding differences.

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 Workpaper: 2EN000.000 - EAC, Materials Lab, NDE, Materials and Eqp, Compressor, Admn, Applied Tech, MQM

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-3	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-3	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-2	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-4	-3	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-19	-1	0	-0.2	CCTR Transf To 2200-2011.001
<b>Explanation:</b>	Transfer costs to GOSI CC 2200-2011.001 related to SB1371 (BLP) Emissions Strategy Program				
2020	0	0	0	-0.1	CCTR Transf To 2200-2011.002
<b>Explanation:</b>	Transfer costs to GOSI CC 2200-2011.002 related to SB1371 (BLM) Emissions Strategy Program				
2020	-2	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	Exclude labor expenses associated with lobbying activities (FERC 426.4). This adjustment is in addition to other costs that have already been excluded based other specific accounting attributes.				
<b>2020 Total</b>	<b>-27</b>	<b>-20</b>	<b>0</b>	<b>-0.5</b>	
2021	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-2	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	176	7	0	1.4	CCTR Transf From 2200-2038.000
<b>Explanation:</b>	Transfer from FIMP WKP 2TD004 to WKP 2EN000 in order to align the historical expenses with the workgroup in which the activity will be forecasted.				
2021	0	0	0	0.0	CCTR Transf From 2200-2038.000

Note: Totals may include rounding differences.

Southern California Gas Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: A. Analysis, Testing, and Materials  
 Category-Sub: 1. Analysis, Testing, and Materials  
 Workpaper: 2EN000.000 - EAC, Materials Lab, NDE, Materials and Eqp, Compressor, Admn, Applied Tech, MQM

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Transfer from FIMP WKP 2TD004 to WKP 2EN000 in order to align the historical expenses with the workgroup in which the activity will be forecasted.				
2021	0	-5	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-4	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-2	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-2	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-2	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Adjustment to remove non-GRC costs related to the SB1371 Emissions Strategy Program that are being recovered through a separate regulatory process.				
2021	-2	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Adjustment to remove non-GRC costs related to the SB1371 Emissions Strategy Program that are being recovered through a separate regulatory process.				
2021	3	0	0	0.8	1-Sided Adj
<b>Explanation:</b>	Adjustment to remove non GRC costs related to SEEBA-P2				
2021	0	0	0	0.8	1-Sided Adj
<b>Explanation:</b>	Adjustment to remove non GRC costs related to SW Midstream Water				
<b>2021 Total</b>	<b>177</b>	<b>-12</b>	<b>0</b>	<b>2.8</b>	

Note: Totals may include rounding differences.

Southern California Gas Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: GAS ENGINEERING  
Witness: Maria T. Martinez  
Category: B. Measurement and Regulation  
Workpaper: 2EN002.000

**Summary for Category: B. Measurement and Regulation**

	In 2021\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	3,259	3,035	3,035	3,035
Non-Labor	1,591	1,677	1,677	1,677
NSE	0	0	0	0
<b>Total</b>	<b>4,850</b>	<b>4,712</b>	<b>4,712</b>	<b>4,712</b>
FTE	30.9	29.6	29.6	29.6

**Workpapers belonging to this Category:**

**2EN002.000 NGV, Measurement, Instrument Shop**

Labor	3,259	3,035	3,035	3,035
Non-Labor	1,591	1,677	1,677	1,677
NSE	0	0	0	0
<b>Total</b>	<b>4,850</b>	<b>4,712</b>	<b>4,712</b>	<b>4,712</b>
FTE	30.9	29.6	29.6	29.6

*Note: Totals may include rounding differences.*

**Beginning of Workpaper**  
**2EN002.000 - NGV, Measurement, Instrument Shop**

Southern California Gas Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: B. Measurement and Regulation  
 Category-Sub: 1. Measurement and Regulation  
 Workpaper: 2EN002.000 - NGV, Measurement, Instrument Shop

**Activity Description:**

This workpaper includes labor and non-labor expenses and non-shared services activities provided by Natural Gas Vehicle (NGV) & Electrical Field Maintenance (2200-2265), Meter Shop & Records (2200-0798), and Instrumentation Shop and Meter Quality support (2200-0799). These workgroups participate in field support activities. NGV & Electrical Field Maintenance involves activities associated with Natural Gas Vehicle fueling stations and other field support and maintenance. Instrumentation Repair and Field Support includes activities that provide calibration of instruments used for field maintenance of gas facilities, field inspection, and the configuration, programming, testing and repair/assessment of electronic measurement devices used for customer billing. The Meter Shop & Records includes activities involving refurbishing, repairing, and maintaining a variety of meter types.

**Forecast Explanations:**

**Labor - 5-YR Average**

The 5 year average was selected as the foundation for future labor expense requirements. The nature of work performed under this organization has proven to be consistent over time, as evidenced by historical record costs in this workpaper. Current activity levels and support functions are expected to continue moving forward. The 5 year average serves as the best indication of the ongoing requirements for this organization and is expected to meet future funding requirements.

**Non-Labor - 5-YR Average**

The 5 year average was chosen as the foundation for future non-labor expense requirements. The nature of work performed under this organization has proven to be consistent over time, as evidenced by historical record costs in this workpaper. Current activity levels and support functions are expected to continue moving forward. The 5 year average serves as the best indication of the ongoing requirements for this organization and is expected to meet future non-labor funding requirements.

**NSE - 5-YR Average**

There are no Non-Standard Escalation expenses associated with this cost center.

**Summary of Results:**

		In 2021\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2017	2018	2019	2020	2021	2022	2023	2024	
Labor		3,171	2,726	2,975	3,043	3,259	3,035	3,035	3,035	
Non-Labor		1,797	1,275	1,802	1,919	1,591	1,676	1,676	1,676	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>4,968</b>	<b>4,001</b>	<b>4,777</b>	<b>4,962</b>	<b>4,850</b>	<b>4,711</b>	<b>4,711</b>	<b>4,711</b>	
FTE		32.8	26.4	28.9	28.9	30.9	29.6	29.6	29.6	

*Note: Totals may include rounding differences.*

Southern California Gas Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: B. Measurement and Regulation  
 Category-Sub: 1. Measurement and Regulation  
 Workpaper: 2EN002.000 - NGV, Measurement, Instrument Shop

**Summary of Adjustments to Forecast:**

In 2021 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	5-YR Average	3,035	3,035	3,035	0	0	0	3,035	3,035	3,035
Non-Labor	5-YR Average	1,677	1,677	1,677	0	0	0	1,677	1,677	1,677
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>4,711</b>	<b>4,711</b>	<b>4,711</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4,711</b>	<b>4,711</b>	<b>4,711</b>
FTE	5-YR Average	29.6	29.6	29.6	0.0	0.0	0.0	29.6	29.6	29.6

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

SCG/GAS ENGINEERING/Exh No:SCG-07-WP-R/Witness: M. Martinez

Southern California Gas Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: GAS ENGINEERING  
Witness: Maria T. Martinez  
Category: B. Measurement and Regulation  
Category-Sub: 1. Measurement and Regulation  
Workpaper: 2EN002.000 - NGV, Measurement, Instrument Shop

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

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	2,432	2,143	2,368	2,548	2,779
Non-Labor	1,597	1,169	1,678	1,797	1,588
NSE	0	0	0	0	0
<b>Total</b>	<b>4,028</b>	<b>3,312</b>	<b>4,046</b>	<b>4,345</b>	<b>4,367</b>
FTE	27.8	22.4	24.2	24.5	26.0
<b>Adjustments (Nominal \$) **</b>					
Labor	0	0	0	-36	-9
Non-Labor	0	0	3	-14	2
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>-50</b>	<b>-7</b>
FTE	0.0	0.0	0.0	-0.4	0.0
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	2,432	2,143	2,368	2,512	2,770
Non-Labor	1,597	1,169	1,681	1,782	1,591
NSE	0	0	0	0	0
<b>Total</b>	<b>4,028</b>	<b>3,312</b>	<b>4,049</b>	<b>4,295</b>	<b>4,361</b>
FTE	27.8	22.4	24.2	24.1	26.0
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	412	369	449	443	489
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>412</b>	<b>369</b>	<b>449</b>	<b>443</b>	<b>489</b>
FTE	5.0	4.0	4.7	4.8	4.9
<b>Escalation to 2021\$</b>					
Labor	328	214	158	88	0
Non-Labor	200	106	121	136	0
NSE	0	0	0	0	0
<b>Total</b>	<b>528</b>	<b>320</b>	<b>279</b>	<b>224</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2021\$)</b>					
Labor	3,171	2,726	2,975	3,043	3,259
Non-Labor	1,797	1,275	1,802	1,919	1,591
NSE	0	0	0	0	0
<b>Total</b>	<b>4,968</b>	<b>4,001</b>	<b>4,777</b>	<b>4,962</b>	<b>4,850</b>
FTE	32.8	26.4	28.9	28.9	30.9

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

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

Note: Totals may include rounding differences.

Southern California Gas Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: B. Measurement and Regulation  
 Category-Sub: 1. Measurement and Regulation  
 Workpaper: 2EN002.000 - NGV, Measurement, Instrument Shop

**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs					
Years	2017	2018	2019	2020	2021
Labor	0	0	0	-36	-9
Non-Labor	0	0	3	-14	2
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>-50</b>	<b>-7</b>
FTE	0.0	0.0	0.0	-0.4	0.0

**Detail of Adjustments to Recorded:**

Year	Labor	NLbr	NSE	FTE	Adj Type
<b>2017 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
<b>2018 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
2019	0	3	0	0.0	1-Sided Adj
<b>Explanation:</b>	Adjustment to remove non GRC non labor costs related to O&M New Compression				
<b>2019 Total</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0.0</b>	
2020	-11	-4	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-2	-1	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-11	-7	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-12	-2	0	-0.1	CCTR Transf To 2200-2011.000
<b>Explanation:</b>	Transfer costs to GOSI CC 2200-2011.000 related to SB1371 (BNE) Emissions Strategy Program				
<b>2020 Total</b>	<b>-36</b>	<b>-14</b>	<b>0</b>	<b>-0.4</b>	
2021	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				

Note: Totals may include rounding differences.

Southern California Gas Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: B. Measurement and Regulation  
 Category-Sub: 1. Measurement and Regulation  
 Workpaper: 2EN002.000 - NGV, Measurement, Instrument Shop

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
2021	0	1	0	0.1	CCTR Transf From 2200-2038.000
<b>Explanation:</b>	Transfer from FIMP WKP 2TD004 to base business WKP 2EN002; base O&M activity				
2021	0	-7	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	-10	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Adjustment to remove non-GRC costs related to the SB1371 Emissions Strategy Program that are being recovered through a separate regulatory process.				
2021	0	10	0	0.0	1-Sided Adj
<b>Explanation:</b>	Adjustment to remove non GRC non labor costs related to O&M New Compression				
<b>2021 Total</b>	<b>-9</b>	<b>2</b>	<b>0</b>	<b>0.0</b>	

*Note: Totals may include rounding differences.*

Southern California Gas Company  
 2024 GRC - REVISED  
 Non-Shared Service Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: C. Land and Right of Way  
 Workpaper: 2EN001.000

**Summary for Category: C. Land and Right of Way**

	In 2021\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	982	982	982	1,224
Non-Labor	2,707	2,707	2,707	2,707
NSE	0	0	0	0
<b>Total</b>	<b>3,689</b>	<b>3,689</b>	<b>3,689</b>	<b>3,931</b>
FTE	10.5	10.5	10.5	12.5

**Workpapers belonging to this Category:**

**2EN001.000 LROW/GIS**

Labor	982	982	982	1,224
Non-Labor	2,707	2,707	2,707	2,707
NSE	0	0	0	0
<b>Total</b>	<b>3,689</b>	<b>3,689</b>	<b>3,689</b>	<b>3,931</b>
FTE	10.5	10.5	10.5	12.5

*Note: Totals may include rounding differences.*

**Beginning of Workpaper  
2EN001.000 - LROW/GIS**

Southern California Gas Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: GAS ENGINEERING  
Witness: Maria T. Martinez  
Category: C. Land and Right of Way  
Category-Sub: 1. Land and Right of Way  
Workpaper: 2EN001.000 - LROW/GIS

**Activity Description:**

This workpaper includes labor and non-labor expenditures and captures activities performed by Land and Right of Way (2200-2368) and Geographic Analysis and Survey (2200-2472). Land and Right of Way manages and acquires the necessary property rights that allow for the access, construction, operation, and maintenance of pipeline infrastructure as well as provides land rights policy governance and support and governance of encroachment administration in compliance with GO- 112F Section 143.5. This workpaper also includes activities associated with lease administration including Right of Way lease payments. Geographic Analysis & Survey conducts survey related activities for the installation of pipelines in public right of way and private land.

**Forecast Explanations:**

**Labor - Base YR Rec**

The forecast was developed using a Base Year forecast method to capture current and future labor expense requirements. Base Year method was selected because the historical costs did not represent the current and anticipated labor expense requirements. The Land and Right of Way team has expanded over the last few years to provide centralized point of contact for Land and Right of Way support , and now includes labor activities that were within the Pipeline Safety Enhancement Plan (PSEP) in TY2019 GRC. Current activity levels and support functions are expected to continue moving forward. As such, the Base Year forecast is expected to meet future funding requirements and will provide the labor resources needed to allow for the continual land right management support to projects and activities related to construction and maintenance of SoCalGas pipelines system. In addition, incremental costs associated with Land and Right of Way labor expense requirements have been added to the Base Year forecast . This method is most appropriate to maintain the existing workforce while supporting a slight expansion to accommodate daily activities along with policy and procedure improvements.

**Non-Labor - Base YR Rec**

The forecast was developed for this cost category for labor using a Base Year methodology . Base Year was selected because the historical costs did not represent the current and anticipated non-labor expense requirements. The Land and Right of Way team has expanded over the last few years to provide centralized point of contact for Land and Right of Way support, and now includes non-labor activities that were within the Pipeline Safety Enhancement Plan (PSEP) in TY2019 GRC. Current activity levels and support functions are expected to continue moving forward. As such, the Base Year forecast is expected to meet future funding requirements and will provide the non-labor resources needed to allow for the continual land right management support to projects and activities related to construction and maintenance of SoCalGas pipelines system.

**NSE - Base YR Rec**

There are no Non-Standard Escalation expenses associated with this cost center.

*Note: Totals may include rounding differences.*

Southern California Gas Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: C. Land and Right of Way  
 Category-Sub: 1. Land and Right of Way  
 Workpaper: 2EN001.000 - LROW/GIS

**Summary of Results:**

		<b>In 2021\$ (000) Incurred Costs</b>								
		<b>Adjusted-Recorded</b>					<b>Adjusted-Forecast</b>			
<b>Years</b>		<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	
Labor		621	768	882	902	982	981	981	1,223	
Non-Labor		2,027	1,720	2,213	2,924	2,707	2,707	2,707	2,707	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>2,648</b>	<b>2,487</b>	<b>3,095</b>	<b>3,826</b>	<b>3,689</b>	<b>3,688</b>	<b>3,688</b>	<b>3,930</b>	
FTE		5.8	7.2	8.5	8.8	10.5	10.5	10.5	12.5	

*Note: Totals may include rounding differences.*

Southern California Gas Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: C. Land and Right of Way  
 Category-Sub: 1. Land and Right of Way  
 Workpaper: 2EN001.000 - LROW/GIS

**Summary of Adjustments to Forecast:**

In 2021 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	Base YR Rec	982	982	982	0	0	242	982	982	1,224
Non-Labor	Base YR Rec	2,707	2,707	2,707	0	0	0	2,707	2,707	2,707
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>3,689</b>	<b>3,689</b>	<b>3,689</b>	<b>0</b>	<b>0</b>	<b>242</b>	<b>3,689</b>	<b>3,689</b>	<b>3,931</b>
FTE	Base YR Rec	10.5	10.5	10.5	0.0	0.0	2.0	10.5	10.5	12.5

**Forecast Adjustment Details:**

Year	Labor	NLbr	NSE	Total	FTE	Adj Type
<b>2022 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
<b>2023 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
2024	242	0	0	242	2.0	1-Sided Adj
<b>Explanation:</b>	2024 Onboarding adjustment to cost center 2200-2368 to add 2 Land Advisors to address increase in projects.					
<b>2024 Total</b>	<b>242</b>	<b>0</b>	<b>0</b>	<b>242</b>	<b>2.0</b>	

Note: Totals may include rounding differences.

SCG/GAS ENGINEERING/Exh No:SCG-07-WP-R/Witness: M. Martinez

Southern California Gas Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: GAS ENGINEERING  
Witness: Maria T. Martinez  
Category: C. Land and Right of Way  
Category-Sub: 1. Land and Right of Way  
Workpaper: 2EN001.000 - LROW/GIS

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

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	476	604	702	745	824
Non-Labor	1,801	1,579	2,065	2,725	2,642
NSE	0	0	0	0	0
<b>Total</b>	<b>2,277</b>	<b>2,183</b>	<b>2,767</b>	<b>3,470</b>	<b>3,465</b>
FTE	5.0	6.2	7.1	7.5	8.3
<b>Adjustments (Nominal \$) **</b>					
Labor	0	0	0	0	11
Non-Labor	0	-2	0	-9	65
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>-2</b>	<b>0</b>	<b>-9</b>	<b>76</b>
FTE	0.0	-0.1	0.0	-0.2	0.5
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	476	604	702	745	835
Non-Labor	1,801	1,577	2,065	2,716	2,707
NSE	0	0	0	0	0
<b>Total</b>	<b>2,277</b>	<b>2,180</b>	<b>2,767</b>	<b>3,461</b>	<b>3,542</b>
FTE	4.9	6.1	7.1	7.3	8.9
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	81	104	133	131	147
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>81</b>	<b>104</b>	<b>133</b>	<b>131</b>	<b>147</b>
FTE	0.9	1.1	1.4	1.5	1.6
<b>Escalation to 2021\$</b>					
Labor	64	60	47	26	0
Non-Labor	226	143	149	208	0
NSE	0	0	0	0	0
<b>Total</b>	<b>290</b>	<b>203</b>	<b>196</b>	<b>234</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2021\$)</b>					
Labor	621	768	882	902	982
Non-Labor	2,027	1,720	2,213	2,924	2,707
NSE	0	0	0	0	0
<b>Total</b>	<b>2,648</b>	<b>2,487</b>	<b>3,095</b>	<b>3,826</b>	<b>3,689</b>
FTE	5.8	7.2	8.5	8.8	10.5

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

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

Note: Totals may include rounding differences.

Southern California Gas Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: GAS ENGINEERING  
Witness: Maria T. Martinez  
Category: C. Land and Right of Way  
Category-Sub: 1. Land and Right of Way  
Workpaper: 2EN001.000 - LROW/GIS

**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs					
Years	2017	2018	2019	2020	2021
Labor	0	-0.388	0	-0.002	11
Non-Labor	0	-2	0	-9	65
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>-2</b>	<b>0</b>	<b>-9</b>	<b>76</b>
FTE	0.0	-0.1	0.0	-0.2	0.5

**Detail of Adjustments to Recorded:**

Year	Labor	NLbr	NSE	FTE	Adj Type
<b>2017 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
2018	0	-2	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
<b>2018 Total</b>	<b>0</b>	<b>-2</b>	<b>0</b>	<b>-0.1</b>	
<b>2019 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
2020	0	-9	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	0	0	-0.2	1-Sided Adj
<b>Explanation:</b>	One sided adjustment to exclude non-GRC PSEP-Pipeline Safety Reliability Project.				
<b>2020 Total</b>	<b>0</b>	<b>-9</b>	<b>0</b>	<b>-0.2</b>	
2021	0	-7	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	6	36	0	0.2	1-Sided Adj
<b>Explanation:</b>	Adjustment to remove non GRC costs related to SEEBBA-P2				

Note: Totals may include rounding differences.

Southern California Gas Company  
 2024 GRC - REVISED  
 Non-Shared Service Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: C. Land and Right of Way  
 Category-Sub: 1. Land and Right of Way  
 Workpaper: 2EN001.000 - LROW/GIS

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
2021	2	28	0	0.1	1-Sided Adj
<b>Explanation:</b>	Adjustment to remove non GRC costs related to PSEP				
2021	4	9	0	0.2	1-Sided Adj
<b>Explanation:</b>	Adjustment to remove non GRC costs related to PSEP L235 - PL2				
<b>2021 Total</b>	<b>11</b>	<b>65</b>	<b>0</b>	<b>0.5</b>	

*Note: Totals may include rounding differences.*

Southern California Gas Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: D. Research, Plastic Material and Aviation  
 Workpaper: 2EN003.000

**Summary for Category: D. Research, Plastic Material and Aviation**

	In 2021\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	471	504	534	594
Non-Labor	126	126	186	126
NSE	0	0	0	0
<b>Total</b>	<b>597</b>	<b>630</b>	<b>720</b>	<b>720</b>
FTE	3.7	3.9	4.1	4.5

**Workpapers belonging to this Category:**

**2EN003.000 Aviation Services, RD&D Ops, RD&D Emissions, Plastic Piping Systems**

Labor	471	504	534	594
Non-Labor	126	126	186	126
NSE	0	0	0	0
<b>Total</b>	<b>597</b>	<b>630</b>	<b>720</b>	<b>720</b>
FTE	3.7	3.9	4.1	4.5

*Note: Totals may include rounding differences.*

**Beginning of Workpaper**

**2EN003.000 - Aviation Services, RD&D Ops, RD&D Emissions, Plastic Piping Systems**

Southern California Gas Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: GAS ENGINEERING  
Witness: Maria T. Martinez  
Category: D. Research, Plastic Material and Aviation  
Category-Sub: 1. Research, Plastic Material and Aviation Services  
Workpaper: 2EN003.000 - Aviation Services, RD&D Ops, RD&D Emissions, Plastic Piping Systems

**Activity Description:**

This workpaper includes labor and non-labor expenses and activities related to Gas Operations Research and Materials (2200-0323), Gas Operations Research, Development and Demonstration (RD&D) Program (2200-0324), Plastic Piping Systems (2200-2067), Aviation Services (2200-2283), and Gas Emissions RD&D (2200-2400). These workgroups participate in research projects related to environmental research with organizations such as Pipeline Research Council International (PRCI) and in Gas Operations RD&D projects such as methane detection using manned (helicopter) and un-manned aerial vehicles (drone). The Aviation Services team provides support and technical expertise to facilitate the advancement of aviation-based technology solutions for Gas Operations organizations. Activities provided by Aviation Services also enables development of safe and efficient aerial-based tools and technologies and provides oversight for aviation safety. These activities enhance the efficiency and responsiveness of Gas Operations.

**Forecast Explanations:**

**Labor - Base YR Rec**

The forecast was developed using a Base Year forecast method to capture future labor expense requirements. Base Year was selected because the historical costs did not represent the anticipated labor expense requirements. Current activity levels and support functions are expected to continue moving forward. As such, the Base Year forecast is expected to meet future funding requirements and will provide the labor resources needed to support changes in regulations, increase of safety activities or development of new processes and procedures to improve safety and system reliability and to improve operational efficiency. In addition, incremental costs associated with Gas Operations labor expense requirements have been added to the Base Year forecast.

**Non-Labor - Base YR Rec**

The forecast was developed using a Base Year forecast method to capture future non-labor expense requirements. Base Year was selected because the historical costs did not represent the anticipated non-labor expense requirements. Current activity levels and support functions are expected to continue moving forward. As such, the Base Year forecast is expected to meet future funding requirements and will provide the non-labor resources needed to support changes in regulations, increase of safety activities or development of new processes and procedures to improve safety and system reliability and to improve operational efficiency. In addition, incremental costs associated with Gas Operations non-labor expense requirements have been added to the Base Year forecast.

**NSE - Base YR Rec**

There are no Non-Standard Escalation expenses associated with this cost center.

*Note: Totals may include rounding differences.*

Southern California Gas Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: D. Research, Plastic Material and Aviation  
 Category-Sub: 1. Research, Plastic Material and Aviation Services  
 Workpaper: 2EN003.000 - Aviation Services, RD&D Ops, RD&D Emissions, Plastic Piping Systems

**Summary of Results:**

		<b>In 2021\$ (000) Incurred Costs</b>								
		<b>Adjusted-Recorded</b>					<b>Adjusted-Forecast</b>			
<b>Years</b>		<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	
Labor		92	62	40	155	471	504	534	594	
Non-Labor		26	25	2	20	126	126	186	126	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>118</b>	<b>87</b>	<b>43</b>	<b>174</b>	<b>598</b>	<b>630</b>	<b>720</b>	<b>720</b>	
FTE		1.0	0.6	0.4	0.9	3.7	3.9	4.1	4.5	

*Note: Totals may include rounding differences.*

Southern California Gas Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: D. Research, Plastic Material and Aviation  
 Category-Sub: 1. Research, Plastic Material and Aviation Services  
 Workpaper: 2EN003.000 - Aviation Services, RD&D Ops, RD&D Emissions, Plastic Piping Systems

**Summary of Adjustments to Forecast:**

In 2021 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	Base YR Rec	471	471	471	33	63	123	504	534	594
Non-Labor	Base YR Rec	126	126	126	0	60	0	126	186	126
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>598</b>	<b>598</b>	<b>598</b>	<b>33</b>	<b>123</b>	<b>123</b>	<b>631</b>	<b>721</b>	<b>721</b>
FTE	Base YR Rec	3.7	3.7	3.7	0.2	0.4	0.8	3.9	4.1	4.5

**Forecast Adjustment Details:**

Year	Labor	NLbr	NSE	Total	FTE	Adj Type
2022	33	0	0	33	0.2	1-Sided Adj
<b>Explanation:</b>	2022 onboarding adjustment in cost center 2200-2067 to add 1 Project Manager to support growth in work and increased activities.					
<b>2022 Total</b>	<b>33</b>	<b>0</b>	<b>0</b>	<b>33</b>	<b>0.2</b>	
2023	33	0	0	33	0.2	1-Sided Adj
<b>Explanation:</b>	2022 Onboarding adjustment in cost center 2200-2067 to add 1 Project Manager to support growth in work and increased activities.					
2023	30	0	0	30	0.2	1-Sided Adj
<b>Explanation:</b>	2023 Onboarding adjustment in cost center 2200-2283 to add 1 Technical Advisor (sUAS) for increase in project volume and aerial survey.					
2023	0	60	0	60	0.0	1-Sided Adj
<b>Explanation:</b>	Upward adjustment 2022 for cost center 2200-2067 of \$60K non-labor costs for equipment and operating expenses for Aviation programs.					
<b>2023 Total</b>	<b>63</b>	<b>60</b>	<b>0</b>	<b>123</b>	<b>0.4</b>	
2024	60	0	0	60	0.4	1-Sided Adj
<b>Explanation:</b>	2024 Onboarding adjustment in cost center 2200-2283 to add 2 Aviation Services Technicians (sUAS) for increase in project volume and aerial survey.					
2024	33	0	0	33	0.2	1-Sided Adj
<b>Explanation:</b>	2024 Onboarding adjustment in cost center 2200-2067 to add 1 Project Manager to support growth in work and increased activities.					
2024	30	0	0	30	0.2	1-Sided Adj
<b>Explanation:</b>	2024 Onboarding adjustment in cost center 2200-2283 to add 1 Technical Advisor (sUAS) for increase in project volume and aerial survey.					
<b>2024 Total</b>	<b>123</b>	<b>0</b>	<b>0</b>	<b>123</b>	<b>0.8</b>	

Note: Totals may include rounding differences.

SCG/GAS ENGINEERING/Exh No:SCG-07-WP-R/Witness: M. Martinez

Southern California Gas Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: D. Research, Plastic Material and Aviation  
 Category-Sub: 1. Research, Plastic Material and Aviation Services  
 Workpaper: 2EN003.000 - Aviation Services, RD&D Ops, RD&D Emissions, Plastic Piping Systems

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

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	71	52	32	208	449
Non-Labor	23	24	2	186	336
NSE	0	0	0	0	0
<b>Total</b>	<b>94</b>	<b>75</b>	<b>34</b>	<b>394</b>	<b>784</b>
FTE	0.8	0.6	0.3	1.8	3.7
<b>Adjustments (Nominal \$) **</b>					
Labor	0	-3	0	-81	-48
Non-Labor	0	-1	0	-168	-209
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>-4</b>	<b>0</b>	<b>-248</b>	<b>-257</b>
FTE	0.0	-0.1	0.0	-1.3	-0.5
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	71	49	32	128	401
Non-Labor	23	23	2	18	126
NSE	0	0	0	0	0
<b>Total</b>	<b>94</b>	<b>72</b>	<b>34</b>	<b>146</b>	<b>527</b>
FTE	0.9	0.5	0.3	0.6	3.1
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	12	8	6	23	71
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>12</b>	<b>8</b>	<b>6</b>	<b>23</b>	<b>71</b>
FTE	0.1	0.1	0.1	0.3	0.6
<b>Escalation to 2021\$</b>					
Labor	10	5	2	4	0
Non-Labor	3	2	0	1	0
NSE	0	0	0	0	0
<b>Total</b>	<b>12</b>	<b>7</b>	<b>2</b>	<b>6</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2021\$)</b>					
Labor	92	62	40	155	471
Non-Labor	26	25	2	20	126
NSE	0	0	0	0	0
<b>Total</b>	<b>118</b>	<b>87</b>	<b>43</b>	<b>174</b>	<b>598</b>
FTE	1.0	0.6	0.4	0.9	3.7

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

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

Note: Totals may include rounding differences.

Southern California Gas Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: D. Research, Plastic Material and Aviation  
 Category-Sub: 1. Research, Plastic Material and Aviation Services  
 Workpaper: 2EN003.000 - Aviation Services, RD&D Ops, RD&D Emissions, Plastic Piping Systems

**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs					
Years	2017	2018	2019	2020	2021
Labor	0	-3	0	-81	-48
Non-Labor	0	-0.991	0	-168	-209
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>-4</b>	<b>0</b>	<b>-248</b>	<b>-257</b>
FTE	0.0	-0.1	0.0	-1.3	-0.5

**Detail of Adjustments to Recorded:**

Year	Labor	NLbr	NSE	FTE	Adj Type
<b>2017 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
2018	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	-3	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
<b>2018 Total</b>	<b>-3</b>	<b>-1</b>	<b>0</b>	<b>-0.1</b>	
<b>2019 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
2020	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-2	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				

*Note: Totals may include rounding differences.*

Southern California Gas Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: D. Research, Plastic Material and Aviation  
 Category-Sub: 1. Research, Plastic Material and Aviation Services  
 Workpaper: 2EN003.000 - Aviation Services, RD&D Ops, RD&D Emissions, Plastic Piping Systems

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
2020	-1	0	0	-0.1	CCTR Transf To 2200-2011.001
<b>Explanation:</b>	Transfer costs to GOSI CC 2200-2011.001 related to SB1371 (BLP) Emissions Strategy Program				
2020	-19	-57	0	-0.2	CCTR Transf To 2200-2011.001
<b>Explanation:</b>	Transfer costs to GOSI CC 2200-2011.001 related to SB1371 (BLP) Emissions Strategy Program				
2020	-11	0	0	-0.1	CCTR Transf To 2200-2011.001
<b>Explanation:</b>	Transfer costs to GOSI CC 2200-2011.001 related to SB1371 (BLP) Emissions Strategy Program				
2020	-3	-2	0	-0.1	CCTR Transf To 2200-2011.001
<b>Explanation:</b>	Transfer costs to GOSI CC 2200-2011.001 related to SB1371 (BLP) Emissions Strategy Program				
2020	-42	-91	0	-0.5	CCTR Transf To 2200-2011.001
<b>Explanation:</b>	Transfer costs to GOSI CC 2200-2011.001 related to SB1371 (BLP) Emissions Strategy Program				
2020	-3	0	0	-0.1	CCTR Transf To 2200-2011.002
<b>Explanation:</b>	Transfer costs to GOSI CC 2200-2011.002 related to SB1371 (BLM) Emissions Strategy Program				
2020	-1	0	0	-0.1	CCTR Transf To 2200-2011.002
<b>Explanation:</b>	Transfer costs to GOSI CC 2200-2011.002 related to SB1371 (BLM) Emissions Strategy Program				
2020	-1	-13	0	-0.1	CCTR Transf To 2200-2011.002
<b>Explanation:</b>	Transfer costs to GOSI CC 2200-2011.002 related to SB1371 (BLM) Emissions Strategy Program				
<b>2020 Total</b>	<b>-81</b>	<b>-168</b>	<b>0</b>	<b>-1.3</b>	
2021	0	-2	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-3	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-5	0	0.0	1-Sided Adj
<b>Explanation:</b>	Adjustment to remove non-GRC costs related to the SB1371 Emissions Strategy Program that are being recovered through a separate regulatory process.				
2021	-48	-197	0	-0.5	1-Sided Adj

Note: Totals may include rounding differences.

Southern California Gas Company  
 2024 GRC - REVISED  
 Non-Shared Service Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: D. Research, Plastic Material and Aviation  
 Category-Sub: 1. Research, Plastic Material and Aviation Services  
 Workpaper: 2EN003.000 - Aviation Services, RD&D Ops, RD&D Emissions, Plastic Piping Systems

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Adjustment to remove non-GRC costs related to the SB1371 Emissions Strategy Program that are being recovered through a separate regulatory process.				
<b>2021 Total</b>	<b>-48</b>	<b>-209</b>	<b>0</b>	<b>-0.5</b>	

*Note: Totals may include rounding differences.*

Southern California Gas Company  
 2024 GRC - REVISED  
 Shared Services Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez

**Summary of Shared Services Workpapers:**

Description	In 2021 \$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
A. Analysis, Testing, and Materials	2,211	2,350	2,532	2,662
B. Measurement and Regulation	3,818	3,658	3,953	3,997
D. Research, Plastics and Aviation	91	67	78	78
E. Engineering Design and Management	5,951	5,716	6,023	6,218
F. Director of GE, VP GE/SI and Hydrogen	2,606	2,752	2,818	3,643
<b>Total</b>	<b>14,677</b>	<b>14,543</b>	<b>15,404</b>	<b>16,598</b>

*Note: Totals may include rounding differences.*

Southern California Gas Company  
2024 GRC - REVISED  
Shared Services Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: A. Analysis, Testing, and Materials  
 Cost Center: 2200-1178.000

**Summary for Category: A. Analysis, Testing, and Materials**

	In 2021\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	1,602	1,699	1,800	1,850
Non-Labor	609	651	732	812
NSE	0	0	0	0
<b>Total</b>	<b>2,211</b>	<b>2,350</b>	<b>2,532</b>	<b>2,662</b>
FTE	14.8	15.3	16.2	16.5

**Cost Centers belonging to this Category:**

**2200-1178.000 Engineering Analysis Center (Chemical)**

Labor	1,602	1,699	1,800	1,850
Non-Labor	609	651	732	812
NSE	0	0	0	0
<b>Total</b>	<b>2,211</b>	<b>2,350</b>	<b>2,532</b>	<b>2,662</b>
FTE	14.8	15.3	16.2	16.5

*Note: Totals may include rounding differences.*

**Beginning of Workpaper**  
**2200-1178.000 - Engineering Analysis Center (Chemical)**

Southern California Gas Company  
2024 GRC - REVISED  
Shared Services Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: A. Analysis, Testing, and Materials  
 Category-Sub: 1. Analysis, Testing, and Materials  
 Cost Center: 2200-1178.000 - Engineering Analysis Center (Chemical)

**Activity Description:**

The activities provided in this workpaper include labor and non-labor expenses and shared services functions provided by the Engineering Analysis Center Chemical section. The Engineering Analysis Center Chemical section provides environmental, gas operation, and British Thermal Unit (BTU) measurement related analytical services to the operation and customer services organizations and activities include: Polychlorinated biphenyl (PCB) analysis and sample management, hazardous material, gas quality policy and operating procedures, gas composition, odorization management and test development, gas line odor seasoning management and training, gas quality testing, BTU measurement, fugitive and leakage gas identification and verification.

**Forecast Explanations:**

**Labor - 5-YR Linear**

The forecast method developed for this cost activity is the 5 year linear method. This method is most appropriate because the historical data indicate the nature of work performed by the Engineering Analysis Center Chemical section has been increasing in volume and complexity to support growth of Renewable Natural Gas (RNG) projects, gas analysis, environmental requirements, and leak investigations. Gas Engineering Analysis Center Chemical section anticipates this work to continue to increase and that the 5-Year linear method will provide the labor resources needed to support changes in regulations, increase of safety activities or development of new processes and procedures to improve safety. In addition, incremental costs associated with Engineering Analysis Center Chemical section labor expense requirements have been added to the 5 year linear method forecast.

**Non-Labor - 5-YR Linear**

The forecast method developed for this cost activity is the 5 year linear method. This method is most appropriate because the historical data indicate the nature of work performed by the Engineering Analysis Center Chemical section has been steadily increasing in volume and complexity. Gas Engineering Analysis Center Chemical section anticipates this work to continue to increase and that the 5 year linear method will provide the non-labor resources needed to support changes in regulations, increase of safety activities or development of new processes and procedures to improve safety.

**NSE - 5-YR Linear**

There are no Non-Standard Escalation expenses associated with this cost center.

**Summary of Results:**

		In 2021\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2017	2018	2019	2020	2021	2022	2023	2024	
Labor		1,471	1,507	1,700	1,631	1,602	1,699	1,800	1,850	
Non-Labor		287	310	376	470	609	652	732	812	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>1,757</b>	<b>1,816</b>	<b>2,076</b>	<b>2,101</b>	<b>2,211</b>	<b>2,351</b>	<b>2,532</b>	<b>2,662</b>	
FTE		13.8	13.7	15.3	14.5	14.8	15.3	16.2	16.5	

*Note: Totals may include rounding differences.*

Southern California Gas Company  
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Shared Services Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: A. Analysis, Testing, and Materials  
 Category-Sub: 1. Analysis, Testing, and Materials  
 Cost Center: 2200-1178.000 - Engineering Analysis Center (Chemical)

**Cost Center Allocations (Incurred Costs):**

	2021 Adjusted-Recorded					2022 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	435	65	0	500	4.2	418	75	0	493	3.7
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	1,168	544	0	1,712	10.6	1,281	577	0	1,858	11.6
<b>Total Incurred</b>	<b>1,603</b>	<b>609</b>	<b>0</b>	<b>2,212</b>	<b>14.8</b>	<b>1,699</b>	<b>652</b>	<b>0</b>	<b>2,351</b>	<b>15.3</b>
<b>% Allocation</b>										
Retained	95.75%	95.75%				95.75%	95.75%			
SEU	4.25%	4.25%				4.25%	4.25%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

	2023 Adjusted-Forecast					2024 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	490	89	0	579	4.4	562	103	0	665	5.0
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	1,310	643	0	1,953	11.8	1,288	709	0	1,997	11.5
<b>Total Incurred</b>	<b>1,800</b>	<b>732</b>	<b>0</b>	<b>2,532</b>	<b>16.2</b>	<b>1,850</b>	<b>812</b>	<b>0</b>	<b>2,662</b>	<b>16.5</b>
<b>% Allocation</b>										
Retained	95.75%	95.75%				95.75%	95.75%			
SEU	4.25%	4.25%				4.25%	4.25%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

Note: Totals may include rounding differences.

Southern California Gas Company  
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Area: GAS ENGINEERING  
Witness: Maria T. Martinez  
Category: A. Analysis, Testing, and Materials  
Category-Sub: 1. Analysis, Testing, and Materials  
Cost Center: 2200-1178.000 - Engineering Analysis Center (Chemical)

**Cost Center Allocation Percentage Drivers/Methodology:**

**Cost Center Allocation Percentage for 2021**

Labor and non-labor estimated budgeted activities are based on an average salary per hour and time spent historically. To derive the SDG&E % allocation utilize a ratio of the calculated SDG&E cost allocation to the total annual cost (labor & nonlabor expenditures less V&S). The SoCalGas allocation will be the remaining portion (1 minus SDG&E % allocation).

**Cost Center Allocation Percentage for 2022**

Labor and non-labor estimated budgeted activities are based on an average salary per hour and time spent historically. To derive the SDG&E % allocation utilize a ratio of the calculated SDG&E cost allocation to the total annual cost (labor & nonlabor expenditures less V&S). The SoCalGas allocation will be the remaining portion (1 minus SDG&E % allocation).

**Cost Center Allocation Percentage for 2023**

Labor and non-labor estimated budgeted activities are based on an average salary per hour and time spent historically. To derive the SDG&E % allocation utilize a ratio of the calculated SDG&E cost allocation to the total annual cost (labor & nonlabor expenditures less V&S). The SoCalGas allocation will be the remaining portion (1 minus SDG&E % allocation).

**Cost Center Allocation Percentage for 2024**

Labor and non-labor estimated budgeted activities are based on an average salary per hour and time spent historically. To derive the SDG&E % allocation utilize a ratio of the calculated SDG&E cost allocation to the total annual cost (labor & nonlabor expenditures less V&S). The SoCalGas allocation will be the remaining portion (1 minus SDG&E % allocation).

*Note: Totals may include rounding differences.*

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Shared Services Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: A. Analysis, Testing, and Materials  
 Category-Sub: 1. Analysis, Testing, and Materials  
 Cost Center: 2200-1178.000 - Engineering Analysis Center (Chemical)

**Summary of Adjustments to Forecast:**

In 2021 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	5-YR Linear	1,699	1,737	1,776	0	63	74	1,699	1,800	1,850
Non-Labor	5-YR Linear	651	732	812	0	0	0	651	732	812
NSE	5-YR Linear	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>2,350</b>	<b>2,469</b>	<b>2,588</b>	<b>0</b>	<b>63</b>	<b>74</b>	<b>2,350</b>	<b>2,532</b>	<b>2,662</b>
FTE	5-YR Linear	15.3	15.6	15.8	0.0	0.6	0.7	15.3	16.2	16.5

**Forecast Adjustment Details:**

Year	Labor	NLbr	NSE	Total	FTE	Adj Type
<b>2022 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
2023	63	0	0	63	0.6	1-Sided Adj
<b>Explanation:</b>	2023 Onboarding adjustment to cost center 2200-1178 to add 1 Associate Engineer to support Hydrogen (H2) and Renewable Natural Gas (RNG) and increased field testing support due to Rule 30/Rule 45 compliance.					
<b>2023 Total</b>	<b>63</b>	<b>0</b>	<b>0</b>	<b>63</b>	<b>0.6</b>	
2024	63	0	0	63	0.6	1-Sided Adj
<b>Explanation:</b>	2024 Onboarding adjustment to cost center 2200-1178 to add 1 Associate Engineer to support Hydrogen (H2) and Renewable Natural Gas (RNG) and increased field testing support due to Rule 30/Rule 45 compliance.					
2024	11	0	0	11	0.1	1-Sided Adj
<b>Explanation:</b>	2024 Onboarding adjustment to cost center 2200-1178 to add 1 Project Manager to support Water Quality Program.					
<b>2024 Total</b>	<b>74</b>	<b>0</b>	<b>0</b>	<b>74</b>	<b>0.7</b>	

Note: Totals may include rounding differences.

SCG/GAS ENGINEERING/Exh No:SCG-07-WP-R/Witness: M. Martinez

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Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: A. Analysis, Testing, and Materials  
 Category-Sub: 1. Analysis, Testing, and Materials  
 Cost Center: 2200-1178.000 - Engineering Analysis Center (Chemical)

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

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	1,136	1,189	1,352	1,339	1,433
Non-Labor	259	287	356	470	613
NSE	0	0	0	0	0
<b>Total</b>	<b>1,396</b>	<b>1,475</b>	<b>1,708</b>	<b>1,809</b>	<b>2,046</b>
FTE	11.7	11.7	12.9	12.4	12.9
<b>Adjustments (Nominal \$) **</b>					
Labor	0	0	0	-9	-71
Non-Labor	0	-1	-1	-19	-4
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>-1</b>	<b>-1</b>	<b>-28</b>	<b>-75</b>
FTE	0.0	-0.1	-0.1	-0.4	-0.5
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	1,136	1,188	1,352	1,330	1,362
Non-Labor	259	286	355	451	609
NSE	0	0	0	0	0
<b>Total</b>	<b>1,396</b>	<b>1,475</b>	<b>1,707</b>	<b>1,781</b>	<b>1,971</b>
FTE	11.7	11.6	12.8	12.0	12.4
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	193	205	256	234	240
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>193</b>	<b>205</b>	<b>256</b>	<b>234</b>	<b>240</b>
FTE	2.1	2.1	2.5	2.5	2.4
<b>Escalation to 2021\$</b>					
Labor	141	114	92	67	0
Non-Labor	28	23	20	19	0
NSE	0	0	0	0	0
<b>Total</b>	<b>169</b>	<b>137</b>	<b>112</b>	<b>86</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2021\$)</b>					
Labor	1,471	1,507	1,700	1,631	1,602
Non-Labor	287	310	376	470	609
NSE	0	0	0	0	0
<b>Total</b>	<b>1,757</b>	<b>1,816</b>	<b>2,076</b>	<b>2,101</b>	<b>2,211</b>
FTE	13.8	13.7	15.3	14.5	14.8

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

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

Note: Totals may include rounding differences.

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Shared Services Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: A. Analysis, Testing, and Materials  
 Category-Sub: 1. Analysis, Testing, and Materials  
 Cost Center: 2200-1178.000 - Engineering Analysis Center (Chemical)

**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs					
Years	2017	2018	2019	2020	2021
Labor	0	-0.215	-0.223	-9	-71
Non-Labor	0	-0.712	-0.691	-19	-4
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>-0.927</b>	<b>-0.914</b>	<b>-28</b>	<b>-75</b>
FTE	0.0	-0.1	-0.1	-0.4	-0.5

**Detail of Adjustments to Recorded:**

Year	Labor	NLbr	NSE	FTE	Adj Type
<b>2017 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
2018	0	-1	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
<b>2018 Total</b>	<b>0</b>	<b>-1</b>	<b>0</b>	<b>-0.1</b>	
2019	0	-1	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
<b>2019 Total</b>	<b>0</b>	<b>-1</b>	<b>0</b>	<b>-0.1</b>	
2020	-1	-5	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-8	-14	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	0	0	-0.1	CCTR Transf To 2200-2011.001
<b>Explanation:</b>	Transfer costs to GOSI CC 2200-2011.001 related to SB1371 (BLP) Emissions Strategy Program				
2020	0	0	0	-0.1	CCTR Transf To 2200-2011.002
<b>Explanation:</b>	Transfer costs to GOSI CC 2200-2011.002 related to SB1371 (BLM) Emissions Strategy Program				
<b>2020 Total</b>	<b>-9</b>	<b>-19</b>	<b>0</b>	<b>-0.4</b>	
2021	0	-6	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				

*Note: Totals may include rounding differences.*

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Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: A. Analysis, Testing, and Materials  
 Category-Sub: 1. Analysis, Testing, and Materials  
 Cost Center: 2200-1178.000 - Engineering Analysis Center (Chemical)

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
2021	-72	0	0	-0.7	1-Sided Adj
<b>Explanation:</b>	Adjustment to remove non-GRC costs related to the SB1371 Emissions Strategy Program that are being recovered through a separate regulatory process.				
2021	0	0	0	0.1	CCTR Transf From 2200-2038.000
<b>Explanation:</b>	Transfer from FIMP WKP 2TD004 to cost center 2200-1178 in order to align historical expenses with the workgroup in which the activity will be forecasted				
2021	1	2	0	0.1	1-Sided Adj
<b>Explanation:</b>	Adjustment to remove non GRC costs related to SEEBA-P2				
<b>2021 Total</b>	<b>-71</b>	<b>-4</b>	<b>0</b>	<b>-0.5</b>	

*Note: Totals may include rounding differences.*

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Area: GAS ENGINEERING  
Witness: Maria T. Martinez  
Category: B. Measurement and Regulation  
Cost Center: VARIOUS

**Summary for Category: B. Measurement and Regulation**

	In 2021\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	3,521	3,358	3,653	3,697
Non-Labor	297	300	300	300
NSE	0	0	0	0
<b>Total</b>	<b>3,818</b>	<b>3,658</b>	<b>3,953</b>	<b>3,997</b>
FTE	30.7	30.1	32.3	32.6

**Cost Centers belonging to this Category:**

**2200-0309.000 Measurement and Regulation**

Labor	1,866	1,804	2,066	2,110
Non-Labor	211	200	200	200
NSE	0	0	0	0
<b>Total</b>	<b>2,077</b>	<b>2,004</b>	<b>2,266</b>	<b>2,310</b>
FTE	16.0	16.5	18.5	18.8

**2200-2627.000 Metrology**

Labor	215	243	243	243
Non-Labor	28	31	31	31
NSE	0	0	0	0
<b>Total</b>	<b>243</b>	<b>274</b>	<b>274</b>	<b>274</b>
FTE	2.0	2.2	2.2	2.2

**2200-0311.000 Measurement**

Labor	1,440	1,311	1,344	1,344
Non-Labor	58	69	69	69
NSE	0	0	0	0
<b>Total</b>	<b>1,498</b>	<b>1,380</b>	<b>1,413</b>	<b>1,413</b>
FTE	12.7	11.4	11.6	11.6

*Note: Totals may include rounding differences.*

**Beginning of Workpaper**  
**2200-0309.000 - Measurement and Regulation**

Southern California Gas Company  
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Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: B. Measurement and Regulation  
 Category-Sub: 1. MRC Management and Design  
 Cost Center: 2200-0309.000 - Measurement and Regulation

**Activity Description:**

This workpaper includes labor and non-labor expenses and shared services related to Measurement and Regulation. Measurement, Regulation and Control oversight (2200-0309) provides general management and administrative support and provides engineering policy, design, material selection, gas regulation, automated control systems for pipelines and compressor stations and other instrumentation. Measurement & Design (2200-0310) provides engineering, commissioning, and design solutions for large meter and regulator stations, pipeline valve automation and system integration, optical pipeline monitoring assets, pressure relief valves, and pressure regulation control and monitoring. Measurement Field Support (2200-0312) provides planning, field support, technical guidance policy, procedures, and training in the areas of automated control for gas compressor stations, pipelines, California and Renewable Natural Gas producers, metering and regulation stations and ancillary equipment. Measurement, Regulation and Control Projects (2200-2248) includes activities to develop material specification and technical standards for small and medium-sized meter and regulator stations and the management of policy, standards and planning for the measurement of British Thermal Unit (BTU) gas heating value or composition needed for special reporting and planning.

**Forecast Explanations:**

**Labor - 5-YR Average**

The 5 year average was selected as the foundation for future labor expense requirements. The nature of work performed under this organization has proven to be consistent over time, as evidenced by historical record costs in this workpaper. Current activity levels and support functions are expected to continue moving forward. In addition, incremental costs associated with Measurement and Regulation labor expense requirements have been added to the 5 year average forecast.

**Non-Labor - 5-YR Average**

The 5 year average was selected as the foundation for future non-labor expense requirements. The nature of work performed under this organization has proven to be consistent over time, as evidenced by historical record costs in this cost center. Current activity levels and support functions are expected to continue moving forward.

**NSE - 5-YR Average**

There are no Non-Standard Escalation expenses associated with this cost center.

**Summary of Results:**

		In 2021\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2017	2018	2019	2020	2021	2022	2023	2024	
Labor		2,105	1,758	1,625	1,561	1,866	1,803	2,065	2,109	
Non-Labor		257	190	171	171	211	201	201	201	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>2,362</b>	<b>1,948</b>	<b>1,796</b>	<b>1,732</b>	<b>2,077</b>	<b>2,004</b>	<b>2,266</b>	<b>2,310</b>	
FTE		19.3	16.6	15.2	14.5	16.0	16.5	18.5	18.8	

*Note: Totals may include rounding differences.*

Southern California Gas Company  
2024 GRC - REVISED  
Shared Services Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: B. Measurement and Regulation  
 Category-Sub: 1. MRC Management and Design  
 Cost Center: 2200-0309.000 - Measurement and Regulation

**Cost Center Allocations (Incurred Costs):**

	2021 Adjusted-Recorded					2022 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	368	77	0	445	1.9	87	19	0	106	0.4
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	1,497	134	0	1,631	14.1	1,716	182	0	1,898	16.1
<b>Total Incurred</b>	<b>1,865</b>	<b>211</b>	<b>0</b>	<b>2,076</b>	<b>16.0</b>	<b>1,803</b>	<b>201</b>	<b>0</b>	<b>2,004</b>	<b>16.5</b>
<b>% Allocation</b>										
Retained	87.12%	87.12%				87.12%	87.12%			
SEU	12.88%	12.88%				12.88%	12.88%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

	2023 Adjusted-Forecast					2024 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	87	19	0	106	0.4	87	19	0	106	0.4
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	1,978	182	0	2,160	18.1	2,022	182	0	2,204	18.4
<b>Total Incurred</b>	<b>2,065</b>	<b>201</b>	<b>0</b>	<b>2,266</b>	<b>18.5</b>	<b>2,109</b>	<b>201</b>	<b>0</b>	<b>2,310</b>	<b>18.8</b>
<b>% Allocation</b>										
Retained	87.12%	87.12%				87.12%	87.12%			
SEU	12.88%	12.88%				12.88%	12.88%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

**Cost Center Allocation Percentage Drivers/Methodology:**

**Cost Center Allocation Percentage for 2021**

Allocations are based on the ratio calculations of SDG&E gas meters to SoCalGas gas meters.

**Cost Center Allocation Percentage for 2022**

Allocations are based on the ratio calculations of SDG&E gas meters to SoCalGas gas meters.

**Cost Center Allocation Percentage for 2023**

Allocations are based on the ratio calculations of SDG&E gas meters to SoCalGas gas meters.

**Cost Center Allocation Percentage for 2024**

Allocations are based on the ratio calculations of SDG&E gas meters to SoCalGas gas meters.

Note: Totals may include rounding differences.

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Shared Services Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: B. Measurement and Regulation  
 Category-Sub: 1. MRC Management and Design  
 Cost Center: 2200-0309.000 - Measurement and Regulation

**Summary of Adjustments to Forecast:**

In 2021 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	5-YR Average	1,783	1,783	1,783	21	283	327	1,804	2,066	2,110
Non-Labor	5-YR Average	200	200	200	0	0	0	200	200	200
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>1,983</b>	<b>1,983</b>	<b>1,983</b>	<b>21</b>	<b>283</b>	<b>327</b>	<b>2,004</b>	<b>2,266</b>	<b>2,310</b>
FTE	5-YR Average	16.3	16.3	16.3	0.2	2.2	2.5	16.5	18.5	18.8

**Forecast Adjustment Details:**

Year	Labor	NLbr	NSE	Total	FTE	Adj Type
2022	21	0	0	21	0.2	1-Sided Adj
<b>Explanation:</b>	2022 Onboarding adjustment to cost center 2200-0310 to add 1 Designer to address increase in work to support Control Center Modernization (CCM).					
<b>2022 Total</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>21</b>	<b>0.2</b>	
2023	21	0	0	21	0.2	1-Sided Adj
<b>Explanation:</b>	2023 Onboarding adjustment to cost center 2200-0310 to add 1 Designer to address increase in work to support Control Center Modernization (CCM).					
2023	220	0	0	220	1.8	1-Sided Adj
<b>Explanation:</b>	2023 Onboarding adjustment in cost center 2200-0309 to add 2 Engineers to address increase in material specifications.					
2023	20	0	0	20	0.1	1-Sided Adj
<b>Explanation:</b>	2023 Onboarding adjustment for cost center 2200-0312 to add 1 Technical Advisor to address increase in work to support CCM.					
2023	22	0	0	22	0.1	1-Sided Adj
<b>Explanation:</b>	2023 Onboarding adjustment to cost center 2200-2248 to add 1 Engineer to address increase in work to support CCM optical pipeline monitoring and methane projects.					
<b>2023 Total</b>	<b>283</b>	<b>0</b>	<b>0</b>	<b>283</b>	<b>2.2</b>	
2024	20	0	0	20	0.1	1-Sided Adj
<b>Explanation:</b>	2024 Onboarding adjustment for cost center 2200-0312 to add 1 Technical Advisor to address increase in work to support CCM.					
2024	22	0	0	22	0.1	1-Sided Adj
<b>Explanation:</b>	2024 Onboarding adjustment to cost center 2200-2248 to add 1 Engineer to address increase in work to support CCM optical pipeline monitoring and methane projects.					
2024	21	0	0	21	0.2	1-Sided Adj
<b>Explanation:</b>	2024 Onboarding adjustment to cost center 2200-0310 to add 1 Designer to address increase in work to support Control Center Modernization (CCM).					

Note: Totals may include rounding differences.

SCG/GAS ENGINEERING/Exh No:SCG-07-WP-R/Witness: M. Martinez

Southern California Gas Company  
2024 GRC - REVISED  
Shared Services Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: B. Measurement and Regulation  
 Category-Sub: 1. MRC Management and Design  
 Cost Center: 2200-0309.000 - Measurement and Regulation

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj_Type</u>
2024	220	0	0	220	1.8	1-Sided Adj
<b>Explanation:</b>	2024 Onboarding adjustment in cost center 2200-0309 to add 2 Engineers to address increase in material specifications.					
2024	44	0	0	44	0.3	1-Sided Adj
<b>Explanation:</b>	2024 Onboarding adjustment for cost center 2200-0310 to add 1 Engineer to address increase in work to support (CCM).					
<b>2024 Total</b>	<b>327</b>	<b>0</b>	<b>0</b>	<b>327</b>	<b>2.5</b>	

*Note: Totals may include rounding differences.*

Southern California Gas Company  
2024 GRC - REVISED  
Shared Services Workpapers

Area: GAS ENGINEERING  
Witness: Maria T. Martinez  
Category: B. Measurement and Regulation  
Category-Sub: 1. MRC Management and Design  
Cost Center: 2200-0309.000 - Measurement and Regulation

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

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	1,627	1,387	1,292	1,273	1,605
Non-Labor	233	179	162	176	247
NSE	0	0	0	0	0
<b>Total</b>	<b>1,859</b>	<b>1,566</b>	<b>1,454</b>	<b>1,449</b>	<b>1,852</b>
FTE	16.4	14.1	12.7	12.3	13.7
<b>Adjustments (Nominal \$) **</b>					
Labor	0	0	0	0	-19
Non-Labor	0	-4	0	-12	-36
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>-4</b>	<b>0</b>	<b>-12</b>	<b>-55</b>
FTE	0.0	0.0	0.0	-0.2	-0.2
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	1,627	1,387	1,292	1,272	1,586
Non-Labor	233	175	162	164	211
NSE	0	0	0	0	0
<b>Total</b>	<b>1,859</b>	<b>1,562</b>	<b>1,454</b>	<b>1,437</b>	<b>1,797</b>
FTE	16.4	14.1	12.7	12.1	13.5
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	276	239	245	224	280
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>276</b>	<b>239</b>	<b>245</b>	<b>224</b>	<b>280</b>
FTE	2.9	2.5	2.5	2.4	2.5
<b>Escalation to 2021\$</b>					
Labor	202	133	88	64	0
Non-Labor	25	14	9	7	0
NSE	0	0	0	0	0
<b>Total</b>	<b>227</b>	<b>147</b>	<b>97</b>	<b>71</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2021\$)</b>					
Labor	2,105	1,758	1,625	1,561	1,866
Non-Labor	257	190	171	171	211
NSE	0	0	0	0	0
<b>Total</b>	<b>2,362</b>	<b>1,948</b>	<b>1,796</b>	<b>1,732</b>	<b>2,077</b>
FTE	19.3	16.6	15.2	14.5	16.0

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

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

Note: Totals may include rounding differences.

Southern California Gas Company  
2024 GRC - REVISED  
Shared Services Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: B. Measurement and Regulation  
 Category-Sub: 1. MRC Management and Design  
 Cost Center: 2200-0309.000 - Measurement and Regulation

**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs					
Years	2017	2018	2019	2020	2021
Labor	0	0	0	-0.438	-19
Non-Labor	0	-4	-0.001	-12	-36
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>-4</b>	<b>-0.001</b>	<b>-12</b>	<b>-55</b>
FTE	0.0	0.0	0.0	-0.2	-0.2

**Detail of Adjustments to Recorded:**

Year	Labor	NLbr	NSE	FTE	Adj_Type
<b>2017 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
2018	0	-4	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
<b>2018 Total</b>	<b>0</b>	<b>-4</b>	<b>0</b>	<b>0.0</b>	
2019	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	One sided adjustment to exclude non-GRC PSEP-Pipeline Safety Reliability Project.				
<b>2019 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
2020	0	-12	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	0	0	-0.1	CCTR Transf To 2200-2011.001
<b>Explanation:</b>	Transfer costs to GOSI CC 2200-2011.001 related to SB1371 (BLP) Emissions Strategy Program				
2020	0	0	0	-0.1	CCTR Transf To 2200-2011.002
<b>Explanation:</b>	Transfer costs to GOSI CC 2200-2011.002 related to SB1371 (BLM) Emissions Strategy Program				
<b>2020 Total</b>	<b>0</b>	<b>-12</b>	<b>0</b>	<b>-0.2</b>	
2021	0	-11	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	-19	-25	0	-0.2	1-Sided Adj
<b>Explanation:</b>	Adjustment to remove non-GRC costs related to the SB1371 Emissions Strategy Program that are being recovered through a separate regulatory process.				
<b>2021 Total</b>	<b>-19</b>	<b>-36</b>	<b>0</b>	<b>-0.2</b>	

Note: Totals may include rounding differences.

**Beginning of Workpaper  
2200-2627.000 - Metrology**

Southern California Gas Company  
2024 GRC - REVISED  
Shared Services Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: B. Measurement and Regulation  
 Category-Sub: 2. Metrology  
 Cost Center: 2200-2627.000 - Metrology

**Activity Description:**

This workpaper includes labor and non-labor expense requirements and captures activities performed by Measurement Metrology. Measurement Metrology is responsible for calibration of primary and secondary standards used by field measurement groups and tracks measurement assets. This work is conducted on behalf of both SDG&E and SoCalGas.

**Forecast Explanations:**

**Labor - 5-YR Average**

The forecast method developed for this cost activity is the 5 year average. The nature of work performed under this organization has primarily been consistent over time with minor fluctuations, as evidenced by historical recorded costs in this cost center. The 5 year average also reflects recent efficiencies by the team in recent years, due to technological advancements and streamlined quality assurance processes. Current activity levels and support functions are expected to continue moving forward. The 5 year average serves as the best indication of the ongoing requirements for this organization and is expected to meet future funding requirements.

**Non-Labor - 5-YR Average**

The forecast method developed for this cost activity is the 5 year average. The nature of work performed under this organization has primarily been consistent over time with minor fluctuations, as evidenced by historical recorded costs in this cost center. The 5 year average also reflects recent efficiencies by the team in recent years, due to technological advancements and streamlined quality assurance processes. Current activity levels and support functions are expected to continue moving forward. The 5 year average serves as the best indication of the ongoing requirements for this organization and is expected to meet future funding requirements.

**NSE - 5-YR Average**

There are no Non-Standard Escalation expenses associated with this cost center.

**Summary of Results:**

		In 2021\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2017	2018	2019	2020	2021	2022	2023	2024	
Labor		0	293	327	378	215	243	243	243	
Non-Labor		0	61	35	34	28	31	31	31	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>0</b>	<b>354</b>	<b>361</b>	<b>411</b>	<b>243</b>	<b>274</b>	<b>274</b>	<b>274</b>	
FTE		0.0	2.7	3.1	3.2	2.0	2.2	2.2	2.2	

*Note: Totals may include rounding differences.*

Southern California Gas Company  
2024 GRC - REVISED  
Shared Services Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: B. Measurement and Regulation  
 Category-Sub: 2. Metrology  
 Cost Center: 2200-2627.000 - Metrology

**Cost Center Allocations (Incurred Costs):**

	2021 Adjusted-Recorded					2022 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	41	0	0	41	0.3	42	0	0	42	0.3
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	175	28	0	203	1.7	201	31	0	232	1.9
<b>Total Incurred</b>	<b>216</b>	<b>28</b>	<b>0</b>	<b>244</b>	<b>2.0</b>	<b>243</b>	<b>31</b>	<b>0</b>	<b>274</b>	<b>2.2</b>
<b>% Allocation</b>										
Retained	89.60%	89.60%				89.60%	89.60%			
SEU	10.40%	10.40%				10.40%	10.40%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

	2023 Adjusted-Forecast					2024 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	42	0	0	42	0.3	42	0	0	42	0.3
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	201	31	0	232	1.9	201	31	0	232	1.9
<b>Total Incurred</b>	<b>243</b>	<b>31</b>	<b>0</b>	<b>274</b>	<b>2.2</b>	<b>243</b>	<b>31</b>	<b>0</b>	<b>274</b>	<b>2.2</b>
<b>% Allocation</b>										
Retained	89.60%	89.60%				89.60%	89.60%			
SEU	10.40%	10.40%				10.40%	10.40%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

**Cost Center Allocation Percentage Drivers/Methodology:**

**Cost Center Allocation Percentage for 2021**

Allocation is based on the ratio of the number of SDG&E gas meters to the number of SoCalGas gas meters applied to the estimated salary for five technicians charged to this cost center minus V&S.

**Cost Center Allocation Percentage for 2022**

Allocation is based on the ratio of the number of SDG&E gas meters to the number of SoCalGas gas meters applied to the estimated salary for five technicians charged to this cost center minus V&S.

**Cost Center Allocation Percentage for 2023**

Allocation is based on the ratio of the number of SDG&E gas meters to the number of SoCalGas gas meters applied to the estimated salary for five technicians charged to this cost center minus V&S.

**Cost Center Allocation Percentage for 2024**

Allocation is based on the ratio of the number of SDG&E gas meters to the number of SoCalGas gas meters applied to the estimated salary for five technicians charged to this cost center minus V&S.

Note: Totals may include rounding differences.

Southern California Gas Company  
2024 GRC - REVISED  
Shared Services Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: B. Measurement and Regulation  
 Category-Sub: 2. Metrology  
 Cost Center: 2200-2627.000 - Metrology

**Summary of Adjustments to Forecast:**

In 2021 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	5-YR Average	243	243	243	0	0	0	243	243	243
Non-Labor	5-YR Average	31	31	31	0	0	0	31	31	31
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>274</b>	<b>274</b>	<b>274</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>274</b>	<b>274</b>	<b>274</b>
FTE	5-YR Average	2.2	2.2	2.2	0.0	0.0	0.0	2.2	2.2	2.2

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

Southern California Gas Company  
2024 GRC - REVISED  
Shared Services Workpapers

Area: GAS ENGINEERING  
Witness: Maria T. Martinez  
Category: B. Measurement and Regulation  
Category-Sub: 2. Metrology  
Cost Center: 2200-2627.000 - Metrology

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

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	0	231	260	312	183
Non-Labor	0	56	33	32	28
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>287</b>	<b>292</b>	<b>345</b>	<b>211</b>
FTE	0.0	2.3	2.6	2.8	1.7
<b>Adjustments (Nominal \$) **</b>					
Labor	0	0	0	-4	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>-5</b>	<b>0</b>
FTE	0.0	0.0	0.0	-0.2	-0.1
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	0	231	260	308	183
Non-Labor	0	56	33	32	28
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>287</b>	<b>292</b>	<b>340</b>	<b>211</b>
FTE	0.0	2.3	2.6	2.7	1.6
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	0	40	49	54	32
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>40</b>	<b>49</b>	<b>54</b>	<b>32</b>
FTE	0.0	0.4	0.5	0.5	0.4
<b>Escalation to 2021\$</b>					
Labor	0	22	18	15	0
Non-Labor	0	5	2	1	0
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>27</b>	<b>20</b>	<b>17</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2021\$)</b>					
Labor	0	293	327	378	215
Non-Labor	0	61	35	34	28
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>354</b>	<b>361</b>	<b>411</b>	<b>243</b>
FTE	0.0	2.7	3.1	3.2	2.0

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

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

Note: Totals may include rounding differences.

Southern California Gas Company  
2024 GRC - REVISED  
Shared Services Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: B. Measurement and Regulation  
 Category-Sub: 2. Metrology  
 Cost Center: 2200-2627.000 - Metrology

**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs					
Years	2017	2018	2019	2020	2021
Labor	0	0	0	-4	-0.076
Non-Labor	0	0	0	-0.250	0
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>-5</b>	<b>-0.076</b>
FTE	0.0	0.0	0.0	-0.2	-0.1

**Detail of Adjustments to Recorded:**

Year	Labor	NLbr	NSE	FTE	Adj Type
<b>2017 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
<b>2018 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
<b>2019 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
2020	-4	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	0	0	-0.1	CCTR Transf To 2200-2011.001
<b>Explanation:</b>	Transfer costs to GOSI CC 2200-2011.001 related to SB1371 (BLP) Emissions Strategy Program				
<b>2020 Total</b>	<b>-4</b>	<b>0</b>	<b>0</b>	<b>-0.2</b>	
2021	0	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Adjustment to remove non-GRC costs related to the SB1371 Emissions Strategy Program that are being recovered through a separate regulatory process.				
<b>2021 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>-0.1</b>	

*Note: Totals may include rounding differences.*

**Beginning of Workpaper**  
**2200-0311.000 - Measurement**

Southern California Gas Company  
2024 GRC - REVISED  
Shared Services Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: B. Measurement and Regulation  
 Category-Sub: 3. Measurement  
 Cost Center: 2200-0311.000 - Measurement

**Activity Description:**

The labor and non-labor expenses and shared services activities provided in this workpaper are related to Measurement Technologies and administrative support of Measurement Metrology. Measurement Technologies is responsible for testing, evaluation, selection, and deployment of strategic planning and policies and practices associated with gas metering equipment and managing meter and regulator maintenance and inspection scheduling and reporting system. This work is conducted on behalf of both SDG&E and SoCalGas.

**Forecast Explanations:**

**Labor - 4-YR Average**

The forecast method developed for this cost activity in labor is the 4 year average. The nature of work performed under this organization has primarily been consistent over time with minor fluctuations, as evidenced by historical recorded costs in this cost center. The 4 year average also reflects recent efficiencies by the team in recent years, including reducing the number of support trips to the field by creating job aides to address frequently asked questions. Current activity levels and support functions are expected to continue moving forward. The 4 year average serves as the best indication of the ongoing requirements for this organization and is expected to meet future funding requirements.

**Non-Labor - 4-YR Average**

The forecast method developed for this cost activity in non-labor is the 4 year average. The nature of work performed under this organization has primarily been consistent over time with minor fluctuations, as evidenced by historical recorded costs in this cost center. The 4 year average also reflects recent efficiencies by the team in recent years, including reducing the number of support trips to the field by creating job aides to address frequently asked questions. Current activity levels and support functions are expected to continue moving forward. The 4 year average serves as the best indication of the ongoing requirements for this organization and is expected to meet future funding requirements.

**NSE - 4-YR Average**

There are no Non-Standard Escalation expenses associated with this cost center.

**Summary of Results:**

		In 2021\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2017	2018	2019	2020	2021	2022	2023	2024	
Labor		1,026	1,310	936	1,277	1,440	1,310	1,343	1,343	
Non-Labor		149	88	74	57	58	70	70	70	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>1,175</b>	<b>1,398</b>	<b>1,010</b>	<b>1,333</b>	<b>1,498</b>	<b>1,380</b>	<b>1,413</b>	<b>1,413</b>	
FTE		9.6	11.8	8.0	10.9	12.7	11.4	11.6	11.6	

*Note: Totals may include rounding differences.*

Southern California Gas Company  
2024 GRC - REVISED  
Shared Services Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: B. Measurement and Regulation  
 Category-Sub: 3. Measurement  
 Cost Center: 2200-0311.000 - Measurement

**Cost Center Allocations (Incurred Costs):**

	2021 Adjusted-Recorded					2022 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	6	9	0	15	0.0	9	4	0	13	0.0
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	1,434	50	0	1,484	12.7	1,301	66	0	1,367	11.4
<b>Total Incurred</b>	<b>1,440</b>	<b>59</b>	<b>0</b>	<b>1,499</b>	<b>12.7</b>	<b>1,310</b>	<b>70</b>	<b>0</b>	<b>1,380</b>	<b>11.4</b>
<b>% Allocation</b>										
Retained	87.12%	87.12%				87.12%	87.12%			
SEU	12.88%	12.88%				12.88%	12.88%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

	2023 Adjusted-Forecast					2024 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	9	4	0	13	0.0	9	4	0	13	0.0
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	1,334	66	0	1,400	11.6	1,334	66	0	1,400	11.6
<b>Total Incurred</b>	<b>1,343</b>	<b>70</b>	<b>0</b>	<b>1,413</b>	<b>11.6</b>	<b>1,343</b>	<b>70</b>	<b>0</b>	<b>1,413</b>	<b>11.6</b>
<b>% Allocation</b>										
Retained	87.12%	87.12%				87.12%	87.12%			
SEU	12.88%	12.88%				12.88%	12.88%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

**Cost Center Allocation Percentage Drivers/Methodology:**

**Cost Center Allocation Percentage for 2021**

Allocations are based on the ratio calculations of SDG&E gas meters to SoCalGas gas meters.

**Cost Center Allocation Percentage for 2022**

Allocations are based on the ratio calculations of SDG&E gas meters to SoCalGas gas meters.

**Cost Center Allocation Percentage for 2023**

Allocations are based on the ratio calculations of SDG&E gas meters to SoCalGas gas meters.

**Cost Center Allocation Percentage for 2024**

Allocations are based on the ratio calculations of SDG&E gas meters to SoCalGas gas meters.

Note: Totals may include rounding differences.

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Shared Services Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: B. Measurement and Regulation  
 Category-Sub: 3. Measurement  
 Cost Center: 2200-0311.000 - Measurement

**Summary of Adjustments to Forecast:**

In 2021 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	4-YR Average	1,241	1,241	1,241	70	103	103	1,311	1,344	1,344
Non-Labor	4-YR Average	69	69	69	0	0	0	69	69	69
NSE	4-YR Average	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>1,310</b>	<b>1,310</b>	<b>1,310</b>	<b>70</b>	<b>103</b>	<b>103</b>	<b>1,380</b>	<b>1,413</b>	<b>1,413</b>
FTE	4-YR Average	10.8	10.8	10.8	0.6	0.8	0.8	11.4	11.6	11.6

**Forecast Adjustment Details:**

Year	Labor	NLbr	NSE	Total	FTE	Adj Type
2022	70	0	0	70	0.6	1-Sided Adj
<b>Explanation:</b>	2022 Onboarding adjustment to cost center 2200-0311 to add 1 Tech Advisor to address increase in support to Control Center Modernization (CCM).					
<b>2022 Total</b>	<b>70</b>	<b>0</b>	<b>0</b>	<b>70</b>	<b>0.6</b>	
2023	33	0	0	33	0.2	1-Sided Adj
<b>Explanation:</b>	2023 Onboarding adjustment to cost center 2200-0311 to add 1 to address increase in support to CCM.					
2023	70	0	0	70	0.6	1-Sided Adj
<b>Explanation:</b>	2023 Onboarding adjustment to cost center 2200-0311 to add 1 Tech Advisor to address increase in support to Control Center Modernization (CCM).					
<b>2023 Total</b>	<b>103</b>	<b>0</b>	<b>0</b>	<b>103</b>	<b>0.8</b>	
2024	33	0	0	33	0.2	1-Sided Adj
<b>Explanation:</b>	2024 Onboarding adjustment to cost center 2200-0311 to add 1 Engineer to address increase in support to CCM.					
2024	70	0	0	70	0.6	1-Sided Adj
<b>Explanation:</b>	2024 Onboarding adjustment to cost center 2200-0311 to add 1 Tech Advisor to address increase in support to Control Center Modernization (CCM).					
<b>2024 Total</b>	<b>103</b>	<b>0</b>	<b>0</b>	<b>103</b>	<b>0.8</b>	

Note: Totals may include rounding differences.

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Area: GAS ENGINEERING  
Witness: Maria T. Martinez  
Category: B. Measurement and Regulation  
Category-Sub: 3. Measurement  
Cost Center: 2200-0311.000 - Measurement

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

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	793	1,033	744	1,045	1,224
Non-Labor	135	87	70	61	64
NSE	0	0	0	0	0
<b>Total</b>	<b>928</b>	<b>1,120</b>	<b>814</b>	<b>1,106</b>	<b>1,288</b>
FTE	8.2	10.0	6.7	9.3	10.7
<b>Adjustments (Nominal \$) **</b>					
Labor	0	0	0	-4	0
Non-Labor	0	-5	0	-7	-5
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>-5</b>	<b>0</b>	<b>-10</b>	<b>-5</b>
FTE	0.0	0.0	0.0	-0.2	0.0
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	793	1,033	744	1,041	1,224
Non-Labor	135	82	70	54	58
NSE	0	0	0	0	0
<b>Total</b>	<b>928</b>	<b>1,115</b>	<b>814</b>	<b>1,095</b>	<b>1,282</b>
FTE	8.2	10.0	6.7	9.1	10.7
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	134	178	141	183	216
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>134</b>	<b>178</b>	<b>141</b>	<b>183</b>	<b>216</b>
FTE	1.4	1.8	1.3	1.8	2.0
<b>Escalation to 2021\$</b>					
Labor	99	99	51	52	0
Non-Labor	14	7	4	2	0
NSE	0	0	0	0	0
<b>Total</b>	<b>113</b>	<b>106</b>	<b>55</b>	<b>55</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2021\$)</b>					
Labor	1,026	1,310	936	1,277	1,440
Non-Labor	149	88	74	57	58
NSE	0	0	0	0	0
<b>Total</b>	<b>1,175</b>	<b>1,398</b>	<b>1,010</b>	<b>1,333</b>	<b>1,498</b>
FTE	9.6	11.8	8.0	10.9	12.7

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

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

Note: Totals may include rounding differences.

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Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: B. Measurement and Regulation  
 Category-Sub: 3. Measurement  
 Cost Center: 2200-0311.000 - Measurement

**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs					
Years	2017	2018	2019	2020	2021
Labor	0	0	0	-4	0
Non-Labor	0	-5	0	-7	-5
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>-5</b>	<b>0</b>	<b>-10</b>	<b>-5</b>
FTE	0.0	0.0	0.0	-0.2	0.0

**Detail of Adjustments to Recorded:**

Year	Labor	NLbr	NSE	FTE	Adj Type
<b>2017 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
2018	0	-5	0	0.0	1-Sided Adj
<b>2018 Total</b>	<b>0</b>	<b>-5</b>	<b>0</b>	<b>0.0</b>	
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
<b>2019 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
2020	0	-7	0	0.0	1-Sided Adj
<b>2020 Total</b>	<b>-4</b>	<b>-7</b>	<b>0</b>	<b>-0.2</b>	
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-1	0	0	-0.1	CCTR Transf To 2200-2011.001
<b>Explanation:</b>	Transfer costs to GOSI CC 2200-2011.001 related to SB1371 (BLP) Emissions Strategy Program				
2020	-2	0	0	-0.1	CCTR Transf To 2200-2011.002
<b>Explanation:</b>	Transfer costs to GOSI CC 2200-2011.002 related to SB1371 (BLM) Emissions Strategy Program				
<b>2020 Total</b>	<b>-4</b>	<b>-7</b>	<b>0</b>	<b>-0.2</b>	
2021	0	-5	0	0.0	1-Sided Adj
<b>2021 Total</b>	<b>0</b>	<b>-5</b>	<b>0</b>	<b>0.0</b>	
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				

Note: Totals may include rounding differences.

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Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: D. Research, Plastics and Aviation  
 Cost Center: 2200-0320.000

**Summary for Category: D. Research, Plastics and Aviation**

	In 2021\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	5	26	37	37
Non-Labor	86	42	42	42
NSE	0	0	0	0
<b>Total</b>	<u>91</u>	<u>68</u>	<u>79</u>	<u>79</u>
FTE	0.0	0.3	0.3	0.3

**Cost Centers belonging to this Category:**

**2200-0320.000 Research, Plastics, and Aviation**

Labor	5	26	37	37
Non-Labor	86	42	42	42
NSE	0	0	0	0
<b>Total</b>	<u>91</u>	<u>68</u>	<u>79</u>	<u>79</u>
FTE	0.0	0.3	0.3	0.3

*Note: Totals may include rounding differences.*

**Beginning of Workpaper**  
**2200-0320.000 - Research, Plastics, and Aviation**

Southern California Gas Company  
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Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: D. Research, Plastics and Aviation  
 Category-Sub: 1. Research, Plastic and Aviation  
 Cost Center: 2200-0320.000 - Research, Plastics, and Aviation

**Activity Description:**

This workpaper includes labor and non-labor expenses for associated with Gas Engineering Programs Management. Gas Engineering Programs Management includes activities related to the program management of Environmental Research, Gas Operations Research, Development and Demonstrations (RD&D). Activities in this workpaper also includes participation in research projects related to environmental research with organizations such as Pipeline Research Council International (PRCI) and in Gas Operations RD&D projects such as methane detection using an un-manned aerial vehicle drone.

**Forecast Explanations:**

**Labor - 5-YR Average**

The 5 year average was chosen as the foundation for future labor expense requirements. The nature of work performed under this organization has proven to be consistent over time, as evidenced by historical record costs in this cost center. Current activity levels and support functions are expected to continue moving forward. In addition, a slight incremental cost associated with Gas Engineering Programs Management labor expense requirements have been added to the 5 year average forecast.

**Non-Labor - 5-YR Average**

The 5 year average was chosen as the foundation for future non- labor expense requirements. The nature of work performed under this organization has proven to be consistent over time, as evidenced by historical record costs in this cost center. Current activity levels and support functions are expected to continue moving forward. The 5 year average serves as the best indication of the ongoing requirements for this organization and is expected to meet future funding requirements.

**NSE - 5-YR Average**

There are no Non-Standard Escalation expenses associated with this cost center.

**Summary of Results:**

		In 2021\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2017	2018	2019	2020	2021	2022	2023	2024	
Labor		38	28	10	-7	5	26	37	37	
Non-Labor		12	47	16	48	86	41	41	41	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>49</b>	<b>74</b>	<b>27</b>	<b>41</b>	<b>91</b>	<b>67</b>	<b>78</b>	<b>78</b>	
FTE		0.2	0.2	0.1	0.1	0.0	0.3	0.3	0.3	

*Note: Totals may include rounding differences.*

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Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: D. Research, Plastics and Aviation  
 Category-Sub: 1. Research, Plastic and Aviation  
 Cost Center: 2200-0320.000 - Research, Plastics, and Aviation

**Cost Center Allocations (Incurred Costs):**

	2021 Adjusted-Recorded					2022 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	4	1	0	5	0.0	3	0	0	3	0.1
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	1	85	0	86	0.0	23	41	0	64	0.2
<b>Total Incurred</b>	<b>5</b>	<b>86</b>	<b>0</b>	<b>91</b>	<b>0.0</b>	<b>26</b>	<b>41</b>	<b>0</b>	<b>67</b>	<b>0.3</b>
<b>% Allocation</b>										
Retained	87.61%	87.61%				87.61%	87.61%			
SEU	12.39%	12.39%				12.39%	12.39%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

	2023 Adjusted-Forecast					2024 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	3	0	0	3	0.1	3	0	0	3	0.1
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	34	41	0	75	0.2	34	41	0	75	0.2
<b>Total Incurred</b>	<b>37</b>	<b>41</b>	<b>0</b>	<b>78</b>	<b>0.3</b>	<b>37</b>	<b>41</b>	<b>0</b>	<b>78</b>	<b>0.3</b>
<b>% Allocation</b>										
Retained	87.61%	87.61%				87.61%	87.61%			
SEU	12.39%	12.39%				12.39%	12.39%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

**Cost Center Allocation Percentage Drivers/Methodology:**

**Cost Center Allocation Percentage for 2021**

Ratio allocation for shared services and expenditures are based on miles of pipe in each utility.

**Cost Center Allocation Percentage for 2022**

Ratio allocation for shared services and expenditures are based on miles of pipe in each utility.

**Cost Center Allocation Percentage for 2023**

Ratio allocation for shared services and expenditures are based on miles of pipe in each utility.

**Cost Center Allocation Percentage for 2024**

Ratio allocation for shared services and expenditures are based on miles of pipe in each utility.

Note: Totals may include rounding differences.

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Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: D. Research, Plastics and Aviation  
 Category-Sub: 1. Research, Plastic and Aviation  
 Cost Center: 2200-0320.000 - Research, Plastics, and Aviation

**Summary of Adjustments to Forecast:**

In 2021 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	5-YR Average	15	15	15	11	22	22	26	37	37
Non-Labor	5-YR Average	42	42	42	0	0	0	42	42	42
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>56</b>	<b>56</b>	<b>56</b>	<b>11</b>	<b>22</b>	<b>22</b>	<b>67</b>	<b>78</b>	<b>78</b>
FTE	5-YR Average	0.2	0.2	0.2	0.1	0.1	0.1	0.3	0.3	0.3

**Forecast Adjustment Details:**

Year	Labor	NLbr	NSE	Total	FTE	Adj Type
2022	11	0	0	11	0.1	1-Sided Adj
<b>Explanation:</b>	2022 Onboarding adjustment in cost center 2200-0320 to add 1 Project Manager to support growth in work and increased activities.					
<b>2022 Total</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>0.1</b>	
2023	22	0	0	22	0.1	1-Sided Adj
<b>Explanation:</b>	2023 Onboarding adjustment in cost center 2200-0320 to add 1 Project Manager to support growth in work and increased activities.					
<b>2023 Total</b>	<b>22</b>	<b>0</b>	<b>0</b>	<b>22</b>	<b>0.1</b>	
2024	22	0	0	22	0.1	1-Sided Adj
<b>Explanation:</b>	2024 Onboarding adjustment in cost center 2200-0320 to add 1 Project Manager to support growth in work and increased activities.					
<b>2024 Total</b>	<b>22</b>	<b>0</b>	<b>0</b>	<b>22</b>	<b>0.1</b>	

Note: Totals may include rounding differences.

SCG/GAS ENGINEERING/Exh No:SCG-07-WP-R/Witness: M. Martinez

Southern California Gas Company  
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Area: GAS ENGINEERING  
Witness: Maria T. Martinez  
Category: D. Research, Plastics and Aviation  
Category-Sub: 1. Research, Plastic and Aviation  
Cost Center: 2200-0320.000 - Research, Plastics, and Aviation

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

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	29	22	8	26	70
Non-Labor	10	68	15	83	97
NSE	0	0	0	0	0
<b>Total</b>	<b>40</b>	<b>90</b>	<b>24</b>	<b>109</b>	<b>167</b>
FTE	0.2	0.2	0.1	0.2	0.4
<b>Adjustments (Nominal \$) **</b>					
Labor	0	0	0	-32	-66
Non-Labor	0	-25	0	-37	-11
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>-25</b>	<b>0</b>	<b>-68</b>	<b>-77</b>
FTE	0.0	0.0	0.0	-0.2	-0.4
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	29	22	8	-6	4
Non-Labor	10	43	15	46	86
NSE	0	0	0	0	0
<b>Total</b>	<b>40</b>	<b>65</b>	<b>24</b>	<b>40</b>	<b>90</b>
FTE	0.2	0.2	0.1	0.0	0.0
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	5	4	2	-1	1
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>5</b>	<b>4</b>	<b>2</b>	<b>-1</b>	<b>1</b>
FTE	0.0	0.0	0.0	0.1	0.0
<b>Escalation to 2021\$</b>					
Labor	4	2	1	0	0
Non-Labor	1	4	1	2	0
NSE	0	0	0	0	0
<b>Total</b>	<b>5</b>	<b>6</b>	<b>1</b>	<b>2</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2021\$)</b>					
Labor	38	28	10	-7	5
Non-Labor	12	47	16	48	86
NSE	0	0	0	0	0
<b>Total</b>	<b>49</b>	<b>74</b>	<b>27</b>	<b>41</b>	<b>91</b>
FTE	0.2	0.2	0.1	0.1	0.0

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

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

Note: Totals may include rounding differences.

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Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: D. Research, Plastics and Aviation  
 Category-Sub: 1. Research, Plastic and Aviation  
 Cost Center: 2200-0320.000 - Research, Plastics, and Aviation

**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs					
Years	2017	2018	2019	2020	2021
Labor	0	0	0	-32	-66
Non-Labor	0	-25	0	-37	-11
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>-25</b>	<b>0</b>	<b>-68</b>	<b>-77</b>
FTE	0.0	0.0	0.0	-0.2	-0.4

**Detail of Adjustments to Recorded:**

Year	Labor	NLbr	NSE	FTE	Adj Type
<b>2017 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
2018	0	-25	0	0.0	1-Sided Adj
<b>2018 Total</b>	<b>0</b>	<b>-25</b>	<b>0</b>	<b>0.0</b>	
2019 Total	0	0	0	0.0	
2020	0	-2	0	0.0	1-Sided Adj
<b>2020 Total</b>	<b>-32</b>	<b>-37</b>	<b>0</b>	<b>-0.2</b>	
2021	0	-1	0	0.0	1-Sided Adj
2020	-18	-34	0	-0.1	CCTR Transf To 2200-2011.001
<b>2020 Total</b>	<b>-32</b>	<b>-37</b>	<b>0</b>	<b>-0.2</b>	
2020	-13	-1	0	-0.1	CCTR Transf To 2200-2011.002
<b>2020 Total</b>	<b>-32</b>	<b>-37</b>	<b>0</b>	<b>-0.2</b>	
2021	-66	-10	0	-0.4	1-Sided Adj
<b>2021 Total</b>	<b>-66</b>	<b>-11</b>	<b>0</b>	<b>-0.4</b>	

Note: Totals may include rounding differences.

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Area: GAS ENGINEERING  
Witness: Maria T. Martinez  
Category: E. Engineering Design and Management  
Cost Center: VARIOUS

**Summary for Category: E. Engineering Design and Management**

	In 2021\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	3,177	3,285	3,592	3,787
Non-Labor	2,773	2,431	2,431	2,431
NSE	0	0	0	0
<b>Total</b>	<b>5,950</b>	<b>5,716</b>	<b>6,023</b>	<b>6,218</b>
FTE	27.2	26.9	29.2	30.7

**Cost Centers belonging to this Category:**

**2200-0026.000 Electrical, Process, Mechanical Engineering, Info Tech, and Instrument & Control**

Labor	1,182	1,325	1,385	1,415
Non-Labor	1,016	1,016	1,016	1,016
NSE	0	0	0	0
<b>Total</b>	<b>2,198</b>	<b>2,341</b>	<b>2,401</b>	<b>2,431</b>
FTE	9.2	10.3	10.7	10.9

**2200-0318.000 Pipeline Engineering Manager**

Labor	95	154	154	154
Non-Labor	7	49	49	49
NSE	0	0	0	0
<b>Total</b>	<b>102</b>	<b>203</b>	<b>203</b>	<b>203</b>
FTE	0.8	1.3	1.3	1.3

**2200-0322.000 Pipeline Engineering Design**

Labor	1,788	1,529	1,683	1,782
Non-Labor	1,739	1,355	1,355	1,355
NSE	0	0	0	0
<b>Total</b>	<b>3,527</b>	<b>2,884</b>	<b>3,038</b>	<b>3,137</b>
FTE	16.4	13.5	14.8	15.7

**2200-1096.000 Project Management and Engineering**

Labor	112	277	370	436
Non-Labor	11	11	11	11
NSE	0	0	0	0
<b>Total</b>	<b>123</b>	<b>288</b>	<b>381</b>	<b>447</b>
FTE	0.8	1.8	2.4	2.8

Note: Totals may include rounding differences.

**Beginning of Workpaper**  
**2200-0026.000 - Electrical, Process, Mechanical Engineering, Info Tech, and**  
**Instrument & Control**

Southern California Gas Company  
2024 GRC - REVISED  
Shared Services Workpapers

Area: GAS ENGINEERING  
Witness: Maria T. Martinez  
Category: E. Engineering Design and Management  
Category-Sub: 1. Engineering Design, Instrumentation & Control  
Cost Center: 2200-0026.000 - Electrical, Process, Mechanical Engineering, Info Tech, and Instrument & Control

**Activity Description:**

This workpaper includes labor and non-labor expenses and activities of shared services in Gas Engineering including Engineering Information Technology, Gas Process Engineering, Electrical Design and Engineering, Mechanical Design, and Measurement, Regulation and Control (MRC) Instrumentation and Control. Engineering Information Technology (2200-0026) is responsible for engineering data management, implementation, integration, and administration of data driven design tools supporting capital facility projects and the integrity management programs. Gas Process Engineering (2200-0316) group is responsible for supporting operations and projects related to storage and complex facilities. Electrical Design (2200-2487) is responsible for designing and producing documents and design drawings associated with electrical components such as meters, control valves, and monitoring equipment. The activities provided by the Mechanical Design (2200-0321) group include the technical expertise needed to develop and implement mechanical engineering strategies and designs related to transmission and storage facilities, including compressor stations, instrument air systems, exhaust systems, pressure vessels, field piping, fire protection systems, and gas processing facilities. Measurement, Regulation and Control (2200-2488) provides engineering, technical support for Instrumentation and Control assets, commissioning, and design solutions for instrumentation and control systems.

**Forecast Explanations:**

**Labor - Base YR Rec**

The forecast method developed for this cost category for labor is the Base Year method. This method is most appropriate because activities and staffing levels have increased in volume. Historical costs did not represent the current and anticipated labor expense requirements. Gas Engineering anticipates this work will continue to increase and that the Base Year method will provide the labor resources needed to support changes in State, Federal and CPUC regulations. Incremental FTEs were authorized in TY 2019 GRC to support RNG and these FTEs continue onboarding in 2022 and 2023. In addition, incremental costs associated with the increase of safety activities such as CCM or development of new processes and procedures to improve safety have been added to the Base Year forecast.

**Non-Labor - Base YR Rec**

The forecast method developed for this cost category for non-labor is the Base Year method. This method is most appropriate because activities and staffing levels have increased in volume. Historical costs did not represent the current and anticipated non-labor expense requirements. Gas Engineering anticipates this work to continue and that the Base Year method will provide the non-labor resources needed to support changes in State, Federal and CPUC regulations.

**NSE - Base YR Rec**

There are no Non-Standard Escalation expenses associated with this cost center

*Note: Totals may include rounding differences.*

Southern California Gas Company  
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Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: E. Engineering Design and Management  
 Category-Sub: 1. Engineering Design, Instrumentation & Control  
 Cost Center: 2200-0026.000 - Electrical, Process, Mechanical Engineering, Info Tech, and Instrument & Control

**Summary of Results:**

		<b>In 2021\$ (000) Incurred Costs</b>								
		<b>Adjusted-Recorded</b>					<b>Adjusted-Forecast</b>			
<b>Years</b>		<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	
Labor		588	721	765	818	1,182	1,325	1,385	1,415	
Non-Labor		149	281	375	327	1,016	1,017	1,017	1,017	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>738</b>	<b>1,001</b>	<b>1,140</b>	<b>1,145</b>	<b>2,198</b>	<b>2,342</b>	<b>2,402</b>	<b>2,432</b>	
FTE		5.1	6.2	6.2	6.5	9.2	10.3	10.7	10.9	

*Note: Totals may include rounding differences.*

Southern California Gas Company  
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Shared Services Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: E. Engineering Design and Management  
 Category-Sub: 1. Engineering Design, Instrumentation & Control  
 Cost Center: 2200-0026.000 - Electrical, Process, Mechanical Engineering, Info Tech, and Instrument & Contrc

**Cost Center Allocations (Incurred Costs):**

	2021 Adjusted-Recorded					2022 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	365	621	0	986	2.5	365	621	0	986	2.5
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	817	396	0	1,213	6.7	960	396	0	1,356	7.8
<b>Total Incurred</b>	<b>1,182</b>	<b>1,017</b>	<b>0</b>	<b>2,199</b>	<b>9.2</b>	<b>1,325</b>	<b>1,017</b>	<b>0</b>	<b>2,342</b>	<b>10.3</b>
<b>% Allocation</b>										
Retained	93.09%	93.09%				93.09%	93.09%			
SEU	6.91%	6.91%				6.91%	6.91%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

	2023 Adjusted-Forecast					2024 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	365	621	0	986	2.5	365	621	0	986	2.5
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	1,020	396	0	1,416	8.2	1,050	396	0	1,446	8.4
<b>Total Incurred</b>	<b>1,385</b>	<b>1,017</b>	<b>0</b>	<b>2,402</b>	<b>10.7</b>	<b>1,415</b>	<b>1,017</b>	<b>0</b>	<b>2,432</b>	<b>10.9</b>
<b>% Allocation</b>										
Retained	93.09%	93.09%				93.09%	93.09%			
SEU	6.91%	6.91%				6.91%	6.91%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

**Cost Center Allocation Percentage Drivers/Methodology:**

**Cost Center Allocation Percentage for 2021**

Ratio of a calculated Horsepower (HP) allocation of services and expenditures between SDG&E and SoCalGas are based on an analysis of the compressor and engine Horsepower (HP) at each utility.

**Cost Center Allocation Percentage for 2022**

Ratio of a calculated Horsepower (HP) allocation of services and expenditures between SDG&E and SoCalGas are based on an analysis of the compressor and engine Horsepower (HP) at each utility.

**Cost Center Allocation Percentage for 2023**

Ratio of a calculated Horsepower (HP) allocation of services and expenditures between SDG&E and SoCalGas are based on an analysis of the compressor and engine Horsepower (HP) at each utility.

**Cost Center Allocation Percentage for 2024**

Ratio of a calculated Horsepower (HP) allocation of services and expenditures between SDG&E and SoCalGas are based on an analysis of the compressor and engine Horsepower (HP) at each utility.

Note: Totals may include rounding differences.

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Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: E. Engineering Design and Management  
 Category-Sub: 1. Engineering Design, Instrumentation & Control  
 Cost Center: 2200-0026.000 - Electrical, Process, Mechanical Engineering, Info Tech, and Instrument & Control

**Summary of Adjustments to Forecast:**

In 2021 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	Base YR Rec	1,182	1,182	1,182	143	203	233	1,325	1,385	1,415
Non-Labor	Base YR Rec	1,016	1,016	1,016	0	0	0	1,016	1,016	1,016
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>2,198</b>	<b>2,198</b>	<b>2,198</b>	<b>143</b>	<b>203</b>	<b>233</b>	<b>2,341</b>	<b>2,401</b>	<b>2,431</b>
FTE	Base YR Rec	9.2	9.2	9.2	1.1	1.5	1.7	10.3	10.7	10.9

**Forecast Adjustment Details:**

Year	Labor	NLbr	NSE	Total	FTE	Adj_Type
2022	33	0	0	33	0.2	1-Sided Adj
<b>Explanation:</b>	2022 Onboarding adjustment in cost center 2200-0026 to add 1 Project Manager to address increase in volume of projects in data driven design tool software.					
2022	110	0	0	110	0.9	1-Sided Adj
<b>Explanation:</b>	2022 Onboarding adjustment in cost center 2200-2487 to add 1 Engineer to address increased work associated with Automated Meter Infrastructure (AMI) Data Collection Units.					
<b>2022 Total</b>	<b>143</b>	<b>0</b>	<b>0</b>	<b>143</b>	<b>1.1</b>	
2023	110	0	0	110	0.9	1-Sided Adj
<b>Explanation:</b>	2023 Onboarding adjustment in cost center 2200-2487 to add 1 Engineer to address increased work associated with Automated Meter Infrastructure (AMI) Data Collection Units.					
2023	33	0	0	33	0.2	1-Sided Adj
<b>Explanation:</b>	2023 Onboarding adjustment in cost center 2200-0026 to add 1 Project Manager to address increase in volume of projects in data driven design tool software.					
2023	60	0	0	60	0.4	1-Sided Adj
<b>Explanation:</b>	2023 Onboarding adjustment in cost center 2200-0026 to add 2 Technical Advisors to address increase in volume of projects in data driven design tool software.					
<b>2023 Total</b>	<b>203</b>	<b>0</b>	<b>0</b>	<b>203</b>	<b>1.5</b>	
2024	110	0	0	110	0.9	1-Sided Adj
<b>Explanation:</b>	2024 Onboarding adjustment in cost center 2200-2487 to add 1 Engineer to address increased work associated with Automated Meter Infrastructure (AMI) Data Collection Units.					
2024	33	0	0	33	0.2	1-Sided Adj
<b>Explanation:</b>	2024 Onboarding adjustment in cost center 2200-0026 to add 1 Project Manager to address increase in volume of projects in data driven design tool software.					
2024	60	0	0	60	0.4	1-Sided Adj
<b>Explanation:</b>	2023 Onboarding adjustment in cost center 2200-0026 to add 2 Technical Advisors to address increase in volume of projects in data driven design tool software.					

Note: Totals may include rounding differences.

Southern California Gas Company  
 2024 GRC - REVISED  
 Shared Services Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: E. Engineering Design and Management  
 Category-Sub: 1. Engineering Design, Instrumentation & Control  
 Cost Center: 2200-0026.000 - Electrical, Process, Mechanical Engineering, Info Tech, and Instrument & Control

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj_Type</u>
2024	30	0	0	30	0.2	1-Sided Adj
<b>Explanation:</b>	2024 Onboarding adjustment in cost center 2200-0026 to add 1 Technical Advisor for data driven design tool software administration					
<b>2024 Total</b>	<b>233</b>	<b>0</b>	<b>0</b>	<b>233</b>	<b>1.7</b>	

*Note: Totals may include rounding differences.*

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Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: E. Engineering Design and Management  
 Category-Sub: 1. Engineering Design, Instrumentation & Control  
 Cost Center: 2200-0026.000 - Electrical, Process, Mechanical Engineering, Info Tech, and Instrument & Control

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

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	455	568	608	667	1,418
Non-Labor	135	285	355	330	2,253
NSE	0	0	0	0	0
<b>Total</b>	<b>590</b>	<b>853</b>	<b>963</b>	<b>997</b>	<b>3,670</b>
FTE	4.3	5.2	5.2	5.7	11.9
<b>Adjustments (Nominal \$) **</b>					
Labor	0	0	0	0	-413
Non-Labor	0	-25	0	-16	-1,237
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>-25</b>	<b>0</b>	<b>-16</b>	<b>-1,650</b>
FTE	0.0	0.0	0.0	-0.3	-4.1
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	455	568	608	667	1,005
Non-Labor	135	260	355	314	1,016
NSE	0	0	0	0	0
<b>Total</b>	<b>590</b>	<b>828</b>	<b>963</b>	<b>981</b>	<b>2,020</b>
FTE	4.3	5.2	5.2	5.4	7.8
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	77	98	115	118	177
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>77</b>	<b>98</b>	<b>115</b>	<b>118</b>	<b>177</b>
FTE	0.8	1.0	1.0	1.1	1.4
<b>Escalation to 2021\$</b>					
Labor	57	54	41	33	0
Non-Labor	14	21	20	13	0
NSE	0	0	0	0	0
<b>Total</b>	<b>71</b>	<b>76</b>	<b>62</b>	<b>47</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2021\$)</b>					
Labor	588	721	765	818	1,182
Non-Labor	149	281	375	327	1,016
NSE	0	0	0	0	0
<b>Total</b>	<b>738</b>	<b>1,001</b>	<b>1,140</b>	<b>1,145</b>	<b>2,198</b>
FTE	5.1	6.2	6.2	6.5	9.2

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

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

Note: Totals may include rounding differences.

Southern California Gas Company  
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Shared Services Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: E. Engineering Design and Management  
 Category-Sub: 1. Engineering Design, Instrumentation & Control  
 Cost Center: 2200-0026.000 - Electrical, Process, Mechanical Engineering, Info Tech, and Instrument & Control

**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs					
Years	2017	2018	2019	2020	2021
Labor	0	0	0	-0.170	-413
Non-Labor	0	-25	-0.037	-16	-1,237
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>-25</b>	<b>-0.037</b>	<b>-16</b>	<b>-1,650</b>
FTE	0.0	0.0	0.0	-0.3	-4.1

**Detail of Adjustments to Recorded:**

Year	Labor	NLbr	NSE	FTE	Adj Type
<b>2017 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
2018	0	-25	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	Adjustment to remove non GRC non-labor costs related to O&M New Biogas				
<b>2018 Total</b>	<b>0</b>	<b>-25</b>	<b>0</b>	<b>0.0</b>	
2019	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2019	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	One sided adjustment to exclude non-GRC PSEP-Pipeline Safety Reliability Project.				
<b>2019 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
2020	0	-16	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	0	0	-0.1	CCTR Transf To 2200-2011.000
<b>Explanation:</b>	Transfer costs to GOSI CC 2200-2011.000 related to SB1371 (BNE) Emissions Strategy Program				
2020	0	0	0	-0.1	CCTR Transf To 2200-2011.001
<b>Explanation:</b>	Transfer costs to GOSI CC 2200-2011.001 related to SB1371 (BLP) Emissions Strategy Program				
2020	0	0	0	-0.1	CCTR Transf To 2200-2011.002
<b>Explanation:</b>	Transfer costs to GOSI CC 2200-2011.002 related to SB1371 (BLM) Emissions Strategy Program				
<b>2020 Total</b>	<b>0</b>	<b>-16</b>	<b>0</b>	<b>-0.3</b>	

Note: Totals may include rounding differences.

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Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: E. Engineering Design and Management  
 Category-Sub: 1. Engineering Design, Instrumentation & Control  
 Cost Center: 2200-0026.000 - Electrical, Process, Mechanical Engineering, Info Tech, and Instrument & Control

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
2021	0	-19	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	-433	-1,219	0	-4.3	1-Sided Adj
<b>Explanation:</b>	Adjustment to remove non-GRC costs related to the SB1371 Emissions Strategy Program that are being recovered through a separate regulatory process.				
2021	20	1	0	0.2	CCTR Transf From 2200-2038.000
<b>Explanation:</b>	Transfer from FIMP WKP 2TD004 to WKP 2200-0026 in order to align the historical expenses with the workgroup in which the activity will be forecasted.				
<b>2021 Total</b>	<b>-413</b>	<b>-1,237</b>	<b>0</b>	<b>-4.1</b>	

*Note: Totals may include rounding differences.*

**Beginning of Workpaper**  
**2200-0318.000 - Pipeline Engineering Manager**

Southern California Gas Company  
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Shared Services Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: E. Engineering Design and Management  
 Category-Sub: 1. Engineering Design, Instrumentation & Control  
 Cost Center: 2200-0318.000 - Pipeline Engineering Manager

**Activity Description:**

This workpaper includes labor and non-labor expenses for Engineering Design administrative and managerial activities that support core engineering activities. These managerial activities include engineering problem resolution and decision making, hiring new staff, training, mentoring, knowledge transfer, performance evaluations, and leading the direction for the teams within Engineering Design which include mechanical, electrical, civil/structural/geotechnical/architectural, system design, and process engineering for both SDG&E and SoCalGas utilities.

**Forecast Explanations:**

**Labor - 5-YR Average**

The 5 year average was chosen as the foundation for future labor expense requirements. The overall structure and existing oversight provided by Engineering Design manager is adequate and will not require further expansion at this time. The core engineering functions have remained consistent, as evidenced in the historical record costs in this workpaper. The 5 year average serves as the best indication of the ongoing requirements for this organization and is expected to meet future labor funding requirements.

**Non-Labor - 5-YR Average**

The 5 year average was chosen as the foundation for future non-labor expense requirements. The nature of work performed under this organization has proven to be consistent over time, as evidenced by historical record costs in this workpaper. Current activity levels and support functions are expected to continue moving forward. The 5 year average serves as the best indication of the ongoing requirements for this organization and is expected to meet future non-labor funding requirements.

**NSE - 5-YR Average**

There are no Non-Standard Escalation expenses associated with this cost center.

**Summary of Results:**

		In 2021\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2017	2018	2019	2020	2021	2022	2023	2024	
Labor		129	137	222	186	95	154	154	154	
Non-Labor		89	99	34	18	7	50	50	50	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>219</b>	<b>236</b>	<b>256</b>	<b>204</b>	<b>102</b>	<b>204</b>	<b>204</b>	<b>204</b>	
FTE		0.9	1.3	1.8	1.8	0.8	1.3	1.3	1.3	

*Note: Totals may include rounding differences.*

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Shared Services Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: E. Engineering Design and Management  
 Category-Sub: 1. Engineering Design, Instrumentation & Control  
 Cost Center: 2200-0318.000 - Pipeline Engineering Manager

**Cost Center Allocations (Incurred Costs):**

	2021 Adjusted-Recorded					2022 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	2	2	0	4	0.0	0	2	0	2	0.0
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	94	6	0	100	0.8	154	48	0	202	1.3
<b>Total Incurred</b>	<b>96</b>	<b>8</b>	<b>0</b>	<b>104</b>	<b>0.8</b>	<b>154</b>	<b>50</b>	<b>0</b>	<b>204</b>	<b>1.3</b>
<b>% Allocation</b>										
Retained	85.91%	85.91%				85.91%	85.91%			
SEU	14.09%	14.09%				14.09%	14.09%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

	2023 Adjusted-Forecast					2024 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	0	2	0	2	0.0	0	2	0	2	0.0
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	154	48	0	202	1.3	154	48	0	202	1.3
<b>Total Incurred</b>	<b>154</b>	<b>50</b>	<b>0</b>	<b>204</b>	<b>1.3</b>	<b>154</b>	<b>50</b>	<b>0</b>	<b>204</b>	<b>1.3</b>
<b>% Allocation</b>										
Retained	85.91%	85.91%				85.91%	85.91%			
SEU	14.09%	14.09%				14.09%	14.09%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

Note: Totals may include rounding differences.

Southern California Gas Company  
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Area: GAS ENGINEERING  
Witness: Maria T. Martinez  
Category: E. Engineering Design and Management  
Category-Sub: 1. Engineering Design, Instrumentation & Control  
Cost Center: 2200-0318.000 - Pipeline Engineering Manager

**Cost Center Allocation Percentage Drivers/Methodology:**

**Cost Center Allocation Percentage for 2021**

Allocation is based on the ratio of SDG&E gas miles to SoCalGas miles of pipe applied to the estimated salary of one manager and one admin associate productive time charged to this cost center minus V&S

**Cost Center Allocation Percentage for 2022**

Allocation is based on the ratio of SDG&E gas miles to SoCalGas miles of pipe applied to the estimated salary of one manager and one admin associate productive time charged to this cost center minus V&S

**Cost Center Allocation Percentage for 2023**

Allocation is based on the ratio of SDG&E gas miles to SoCalGas miles of pipe applied to the estimated salary of one manager and one admin associate productive time charged to this cost center minus V&S

**Cost Center Allocation Percentage for 2024**

Allocation is based on the ratio of SDG&E gas miles to SoCalGas miles of pipe applied to the estimated salary of one manager and one admin associate productive time charged to this cost center minus V&S

*Note: Totals may include rounding differences.*

Southern California Gas Company  
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Shared Services Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: E. Engineering Design and Management  
 Category-Sub: 1. Engineering Design, Instrumentation & Control  
 Cost Center: 2200-0318.000 - Pipeline Engineering Manager

**Summary of Adjustments to Forecast:**

In 2021 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	5-YR Average	154	154	154	0	0	0	154	154	154
Non-Labor	5-YR Average	49	49	49	0	0	0	49	49	49
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>203</b>	<b>203</b>	<b>203</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>203</b>	<b>203</b>	<b>203</b>
FTE	5-YR Average	1.3	1.3	1.3	0.0	0.0	0.0	1.3	1.3	1.3

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

SCG/GAS ENGINEERING/Exh No:SCG-07-WP-R/Witness: M. Martinez

Southern California Gas Company  
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Shared Services Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: E. Engineering Design and Management  
 Category-Sub: 1. Engineering Design, Instrumentation & Control  
 Cost Center: 2200-0318.000 - Pipeline Engineering Manager

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

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	100	108	177	152	98
Non-Labor	81	91	32	19	67
NSE	0	0	0	0	0
<b>Total</b>	<b>181</b>	<b>200</b>	<b>209</b>	<b>171</b>	<b>165</b>
FTE	0.8	1.1	1.5	1.5	0.9
<b>Adjustments (Nominal \$) **</b>					
Labor	0	0	0	0	-17
Non-Labor	0	0	0	-2	-60
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>-2</b>	<b>-77</b>
FTE	0.0	0.0	0.0	0.0	-0.2
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	100	108	177	152	81
Non-Labor	81	91	32	17	7
NSE	0	0	0	0	0
<b>Total</b>	<b>181</b>	<b>200</b>	<b>209</b>	<b>169</b>	<b>88</b>
FTE	0.8	1.1	1.5	1.5	0.7
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	17	19	34	27	14
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>17</b>	<b>19</b>	<b>34</b>	<b>27</b>	<b>14</b>
FTE	0.1	0.2	0.3	0.3	0.1
<b>Escalation to 2021\$</b>					
Labor	12	10	12	8	0
Non-Labor	9	7	2	1	0
NSE	0	0	0	0	0
<b>Total</b>	<b>21</b>	<b>18</b>	<b>14</b>	<b>8</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2021\$)</b>					
Labor	129	137	222	186	95
Non-Labor	89	99	34	18	7
NSE	0	0	0	0	0
<b>Total</b>	<b>219</b>	<b>236</b>	<b>256</b>	<b>204</b>	<b>102</b>
FTE	0.9	1.3	1.8	1.8	0.8

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

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

Note: Totals may include rounding differences.

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Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: E. Engineering Design and Management  
 Category-Sub: 1. Engineering Design, Instrumentation & Control  
 Cost Center: 2200-0318.000 - Pipeline Engineering Manager

**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs					
Years	2017	2018	2019	2020	2021
Labor	0	0	0	0	-17
Non-Labor	0	0.112	0	-2	-60
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0.112</b>	<b>0</b>	<b>-2</b>	<b>-77</b>
FTE	0.0	0.0	0.0	0.0	-0.2

**Detail of Adjustments to Recorded:**

Year	Labor	NLbr	NSE	FTE	Adj Type
<b>2017 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
2018	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	Adjustment to remove non GRC non-labor costs related to O&M New Biogas				
<b>2018 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
<b>2019 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
2020	0	-2	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
<b>2020 Total</b>	<b>0</b>	<b>-2</b>	<b>0</b>	<b>0.0</b>	
2021	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	-17	-59	0	-0.2	1-Sided Adj
<b>Explanation:</b>	Adjustment to remove non-GRC costs related to the SB1371 Emissions Strategy Program that are being recovered through a separate regulatory process.				
<b>2021 Total</b>	<b>-17</b>	<b>-60</b>	<b>0</b>	<b>-0.2</b>	

*Note: Totals may include rounding differences.*

**Beginning of Workpaper**  
**2200-0322.000 - Pipeline Engineering Design**

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Shared Services Workpapers

Area: GAS ENGINEERING  
Witness: Maria T. Martinez  
Category: E. Engineering Design and Management  
Category-Sub: 1. Engineering Design, Instrumentation & Control  
Cost Center: 2200-0322.000 - Pipeline Engineering Design

**Activity Description:**

This workpaper includes labor and non-labor expenses and activities of shared services in Gas Engineering including Pipeline Engineering, Distribution System Engineering Support, Civil/Structural Engineering, and Design Drafting. Pipeline Engineering (2200-0322) establishes engineering gas standards and procedures for Transmission, Storage and Customer Service Operations, sets material specifications/traceability and quality control, and consists of a variety of activities involving assessments of pipelines including pressure testing, surface loading calculations, span integrity evaluations, piping vibration assessment and designs for ground movement impacts. Distribution System Engineering Support (2200-2377) creates computer hydraulic models of medium and high-pressure pipe Distribution networks used by Operations to design pipe networks and meter customer demands, manages pressure monitoring programs, provides guidance and system analysis training to Distribution Engineering employees, manages Distribution pipeline system design standards and best practices, and provides engineering data analytics. The Civil/Structural Engineering (2200-2271) group in Gas Engineering performs activities associated with geological hazard mitigation engineering, civil engineering analysis and structural design. The Design Drafting (2200-1335) group is responsible for policies and design requirements for as-builts of pipeline and facility projects. In addition, this team provides drafting for engineering designs, document control, and supports data driven design tools.

**Forecast Explanations:**

**Labor - 3-YR Average**

The forecast method developed for this cost category for labor is the 3 year average method. This method is most appropriate because the historical data indicates that activities and staffing levels have increased. The 3 year average will provide the current and future labor expense requirements. Current activity levels and support functions are expected to continue moving forward. In addition, incremental labor costs to support changes in federal and state regulations such as stamping of drawings by Professional Licensed Engineers, increase of safety activities such as CCM or development of new processes and procedures to improve safety have been added to the 3 year average forecast.

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

The forecast method developed for this cost category for non-labor is the 3 year average method. This method is most appropriate because the historical data indicates that activities and staffing levels have increased. The 3 year average will provide the current and future non-labor expense requirements. Current activity levels and support functions are expected to continue moving forward.

**NSE - 3-YR Average**

There are no Non-Standard Escalation expenses associated with this cost center.

*Note: Totals may include rounding differences.*

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Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: E. Engineering Design and Management  
 Category-Sub: 1. Engineering Design, Instrumentation & Control  
 Cost Center: 2200-0322.000 - Pipeline Engineering Design

**Summary of Results:**

		<b>In 2021\$ (000) Incurred Costs</b>								
		<b>Adjusted-Recorded</b>					<b>Adjusted-Forecast</b>			
<b>Years</b>		<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	
Labor		1,256	1,261	1,101	1,223	1,788	1,529	1,683	1,782	
Non-Labor		479	345	1,215	1,110	1,739	1,355	1,355	1,355	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>1,736</b>	<b>1,606</b>	<b>2,316</b>	<b>2,333</b>	<b>3,528</b>	<b>2,884</b>	<b>3,038</b>	<b>3,137</b>	
FTE		11.5	11.7	10.2	11.0	16.4	13.5	14.8	15.7	

*Note: Totals may include rounding differences.*

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Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: E. Engineering Design and Management  
 Category-Sub: 1. Engineering Design, Instrumentation & Control  
 Cost Center: 2200-0322.000 - Pipeline Engineering Design

**Cost Center Allocations (Incurred Costs):**

	2021 Adjusted-Recorded					2022 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	507	1,299	0	1,806	4.5	220	728	0	948	1.9
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	1,282	440	0	1,722	11.9	1,309	627	0	1,936	11.6
<b>Total Incurred</b>	<b>1,789</b>	<b>1,739</b>	<b>0</b>	<b>3,528</b>	<b>16.4</b>	<b>1,529</b>	<b>1,355</b>	<b>0</b>	<b>2,884</b>	<b>13.5</b>
<b>% Allocation</b>										
Retained	87.15%	87.15%				87.15%	87.15%			
SEU	12.85%	12.85%				12.85%	12.85%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

	2023 Adjusted-Forecast					2024 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	220	728	0	948	1.9	220	728	0	948	1.9
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	1,463	627	0	2,090	12.9	1,562	627	0	2,189	13.8
<b>Total Incurred</b>	<b>1,683</b>	<b>1,355</b>	<b>0</b>	<b>3,038</b>	<b>14.8</b>	<b>1,782</b>	<b>1,355</b>	<b>0</b>	<b>3,137</b>	<b>15.7</b>
<b>% Allocation</b>										
Retained	87.15%	87.15%				87.15%	87.15%			
SEU	12.85%	12.85%				12.85%	12.85%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

**Cost Center Allocation Percentage Drivers/Methodology:**

**Cost Center Allocation Percentage for 2021**

Allocation is based on the ratio of SDG&E gas miles to SoCalGas miles of pipe.

**Cost Center Allocation Percentage for 2022**

Allocation is based on the ratio of SDG&E gas miles to SoCalGas miles of pipe.

**Cost Center Allocation Percentage for 2023**

Allocation is based on the ratio of SDG&E gas miles to SoCalGas miles of pipe.

**Cost Center Allocation Percentage for 2024**

Allocation is based on the ratio of SDG&E gas miles to SoCalGas miles of pipe.

Note: Totals may include rounding differences.

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Shared Services Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: E. Engineering Design and Management  
 Category-Sub: 1. Engineering Design, Instrumentation & Control  
 Cost Center: 2200-0322.000 - Pipeline Engineering Design

**Summary of Adjustments to Forecast:**

In 2021 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	3-YR Average	1,371	1,371	1,371	158	312	411	1,529	1,683	1,782
Non-Labor	3-YR Average	1,355	1,355	1,355	0	0	0	1,355	1,355	1,355
NSE	3-YR Average	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>2,726</b>	<b>2,726</b>	<b>2,726</b>	<b>158</b>	<b>312</b>	<b>411</b>	<b>2,884</b>	<b>3,038</b>	<b>3,137</b>
FTE	3-YR Average	12.5	12.5	12.5	1.0	2.3	3.2	13.5	14.8	15.7

**Forecast Adjustment Details:**

Year	Labor	NLbr	NSE	Total	FTE	Adj Type
2022	122	0	0	122	0.8	1-Sided Adj
<b>Explanation:</b>	2022 Onboarding adjustment in cost center 2200-2377 to add 1 Supervisor to address increase in volume of projects.					
2022	36	0	0	36	0.2	1-Sided Adj
<b>Explanation:</b>	2022 Onboarding adjustment in cost center 2200-1335 to add 2 Designers for increased project reconciliation work.					
<b>2022 Total</b>	<b>158</b>	<b>0</b>	<b>0</b>	<b>158</b>	<b>1.0</b>	
2023	33	0	0	33	0.2	1-Sided Adj
<b>Explanation:</b>	2023 Onboarding adjustment in cost center 2200-2271 to add 1 Engineer to address increase in projects for CCM.					
2023	36	0	0	36	0.2	1-Sided Adj
<b>Explanation:</b>	2023 Onboarding adjustment in cost center 2200-1335 to add 2 Designers for increased project reconciliation work.					
2023	121	0	0	121	1.1	1-Sided Adj
<b>Explanation:</b>	2023 Onboarding adjustment in cost center 2200-2377 to add 1 Engineer to address increase in projects for Control Center Modernization and 1 Project Specialist to address increase in hydraulic modeling complexity.					
2023	122	0	0	122	0.8	1-Sided Adj
<b>Explanation:</b>	2023 Onboarding adjustment in cost center 2200-2377 to add 1 Supervisor to address increase in volume of projects.					
<b>2023 Total</b>	<b>312</b>	<b>0</b>	<b>0</b>	<b>312</b>	<b>2.3</b>	
2024	36	0	0	36	0.1	1-Sided Adj
<b>Explanation:</b>	2024 Onboarding adjustment in cost center 2200-1335 to add 2 Designers for increased project reconciliation work.					
2024	122	0	0	122	0.8	1-Sided Adj
<b>Explanation:</b>	2024 Onboarding adjustment in cost center 2200-2377 to add 1 Supervisor to address increase in volume of projects.					

Note: Totals may include rounding differences.

SCG/GAS ENGINEERING/Exh No:SCG-07-WP-R/Witness: M. Martinez

Southern California Gas Company  
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Shared Services Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: E. Engineering Design and Management  
 Category-Sub: 1. Engineering Design, Instrumentation & Control  
 Cost Center: 2200-0322.000 - Pipeline Engineering Design

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj_Type</u>
2024	33	0	0	33	0.2	1-Sided Adj
<b>Explanation:</b>	2024 Onboarding adjustment in cost center 2200-2271 to add 1 Engineer to address increase in projects for CCM.					
2024	121	0	0	121	1.1	1-Sided Adj
<b>Explanation:</b>	2024 Onboarding adjustment in cost center 2200-2377 to add 1 Engineer to address increase in projects for Control Center Modernization and 1 Project Specialist to address increase in hydraulic modeling complexity.					
2024	99	0	0	99	1.0	1-Sided Adj
<b>Explanation:</b>	2024 Onboarding adjustment to cost center 2200-2377 to add 1 Project Specialist to address increase in hydraulic modeling complexity.					
<b>2024 Total</b>	<b>411</b>	<b>0</b>	<b>0</b>	<b>411</b>	<b>3.2</b>	

Note: Totals may include rounding differences.

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Area: GAS ENGINEERING  
Witness: Maria T. Martinez  
Category: E. Engineering Design and Management  
Category-Sub: 1. Engineering Design, Instrumentation & Control  
Cost Center: 2200-0322.000 - Pipeline Engineering Design

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

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	971	995	875	1,004	1,802
Non-Labor	433	364	1,148	1,080	11,058
NSE	0	0	0	0	0
<b>Total</b>	<b>1,404</b>	<b>1,358</b>	<b>2,024</b>	<b>2,084</b>	<b>12,861</b>
FTE	9.9	9.8	8.4	9.3	16.9
<b>Adjustments (Nominal \$) **</b>					
Labor	0	0	0	-6	-282
Non-Labor	0	-45	1	-16	-9,319
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>-45</b>	<b>1</b>	<b>-22</b>	<b>-9,601</b>
FTE	0.0	0.0	0.0	-0.2	-3.0
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	971	995	875	998	1,520
Non-Labor	433	319	1,149	1,064	1,739
NSE	0	0	0	0	0
<b>Total</b>	<b>1,404</b>	<b>1,313</b>	<b>2,025</b>	<b>2,062</b>	<b>3,259</b>
FTE	9.8	9.9	8.5	9.1	13.8
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	165	171	166	176	268
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>165</b>	<b>171</b>	<b>166</b>	<b>176</b>	<b>268</b>
FTE	1.7	1.8	1.7	1.9	2.6
<b>Escalation to 2021\$</b>					
Labor	121	95	59	50	0
Non-Labor	46	26	66	45	0
NSE	0	0	0	0	0
<b>Total</b>	<b>167</b>	<b>121</b>	<b>125</b>	<b>95</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2021\$)</b>					
Labor	1,256	1,261	1,101	1,223	1,788
Non-Labor	479	345	1,215	1,110	1,739
NSE	0	0	0	0	0
<b>Total</b>	<b>1,736</b>	<b>1,606</b>	<b>2,316</b>	<b>2,333</b>	<b>3,528</b>
FTE	11.5	11.7	10.2	11.0	16.4

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

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

Note: Totals may include rounding differences.

Southern California Gas Company  
2024 GRC - REVISED  
Shared Services Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: E. Engineering Design and Management  
 Category-Sub: 1. Engineering Design, Instrumentation & Control  
 Cost Center: 2200-0322.000 - Pipeline Engineering Design

**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs					
Years	2017	2018	2019	2020	2021
Labor	0	0	0	-6	-282
Non-Labor	0	-45	0.880	-16	-9,319
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>-45</b>	<b>0.880</b>	<b>-22</b>	<b>-9,601</b>
FTE	0.0	0.0	0.0	-0.2	-3.0

**Detail of Adjustments to Recorded:**

Year	Labor	NLbr	NSE	FTE	Adj Type
<b>2017 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
2018	0	-45	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
<b>2018 Total</b>	<b>0</b>	<b>-45</b>	<b>0</b>	<b>0.0</b>	
2019	0	1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Adjustment to remove non GRC non-labor costs related to O&M New Biogas				
<b>2019 Total</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0.0</b>	
2020	0	-16	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-6	0	0	-0.1	CCTR Transf To 2200-2011.000
<b>Explanation:</b>	Transfer costs to GOSI CC 2200-2011.000 related to SB1371 (BNE) Emissions Strategy Program				
2020	0	0	0	-0.1	CCTR Transf To 2200-2011.002
<b>Explanation:</b>	Transfer costs to GOSI CC 2200-2011.002 related to SB1371 (BLM) Emissions Strategy Program				
<b>2020 Total</b>	<b>-6</b>	<b>-16</b>	<b>0</b>	<b>-0.2</b>	
2021	0	-17	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	-296	-8,052	0	-3.2	1-Sided Adj
<b>Explanation:</b>	Adjustment to remove non-GRC costs related to the SB1371 Emissions Strategy Program that are being recovered through a separate regulatory process.				
2021	2	0	0	0.1	CCTR Transf From 2200-2038.000

Note: Totals may include rounding differences.

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Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: E. Engineering Design and Management  
 Category-Sub: 1. Engineering Design, Instrumentation & Control  
 Cost Center: 2200-0322.000 - Pipeline Engineering Design

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Transfer from FIMP WKP 2TD004 to WKP 2200-0322 in order to align historical expenses with the workgroup in which the activity will be forecasted				
2021	12	0	0	0.1	1-Sided Adj
<b>Explanation:</b>	Adjustment to remove non-GRC costs related to SEEBA-P2				
2021	0	-1,000	0	0.0	1-Sided Adj
<b>Explanation:</b>	2021 adjustment to remove one time expense from CC 2200-2271 for \$1M non-labor expenditures related to geohazard mitigation & seismic engineering study that will not be seen in future years,				
2021	0	-250	0	0.0	1-Sided Adj
<b>Explanation:</b>	2021 non-labor adjustment associated with contract labor to remove a one time cost from cost center 2200-2377 that will not be seen in future years.				
<b>2021 Total</b>	<b>-282</b>	<b>-9,319</b>	<b>0</b>	<b>-3.0</b>	

*Note: Totals may include rounding differences.*

**Beginning of Workpaper**  
**2200-1096.000 - Project Management and Engineering**

Southern California Gas Company  
2024 GRC - REVISED  
Shared Services Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: E. Engineering Design and Management  
 Category-Sub: 2. Project Engineering  
 Cost Center: 2200-1096.000 - Project Management and Engineering

**Activity Description:**

This workpaper includes labor and non-labor expenditures and captures activities performed by Project Engineering. Project Engineering receives project requests; manages, monitors, and implements engineering governance; and provides professional engineering oversight of project execution from initiation to close-out, including development of project scopes, schedules technical deliverables, document control and project status reporting. This group also interfaces with and manages engineering consultants. Project Engineering provides support to a variety of project types including but not limited to major compressor station modernization, renewable natural gas, control center modernization (CCM) and traditional Gas Transmission and Gas Storage projects.

**Forecast Explanations:**

**Labor - Base YR Rec**

The forecast was developed for this cost category using a Base Year methodology . This method is most appropriate because the historical costs did not have sufficient history because the group was newly formed in 2021 and therefore does not represent the anticipated labor expense requirements. Current activity levels and support functions are expected to continue moving forward. As such, the Base Year forecast is expected to meet future funding requirements and will provide the labor resources needed to support changes in regulations, increase of safety activities or development of new processes and procedures to improve safety. Incremental costs associated with the Project Engineering activities were added to the Base Year forecast to reflect future labor expense requirements .

**Non-Labor - Base YR Rec**

The forecast was developed for this cost category using a Base Year methodology . This method is most appropriate because the historical costs did not have sufficient history because the group was newly formed in 2021 and therefore does not represent the anticipated labor expense requirements. Current activity levels and support functions are expected to continue moving forward. As such, the Base Year forecast is expected to meet future funding requirements and will provide the non-labor resources needed to support changes in regulations, increase of safety activities or development of new processes and procedures to improve safety.

**NSE - Base YR Rec**

There are no Non-Standard Escalation expenses associated with this cost center.

**Summary of Results:**

		In 2021\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2017	2018	2019	2020	2021	2022	2023	2024	
Labor		0	0	0	0	112	277	370	436	
Non-Labor		0	0	0	0	11	10	10	10	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>123</b>	<b>287</b>	<b>380</b>	<b>446</b>	
FTE		0.0	0.0	0.0	0.0	0.8	1.8	2.4	2.8	

*Note: Totals may include rounding differences.*

Southern California Gas Company  
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Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: E. Engineering Design and Management  
 Category-Sub: 2. Project Engineering  
 Cost Center: 2200-1096.000 - Project Management and Engineering

**Cost Center Allocations (Incurred Costs):**

	2021 Adjusted-Recorded					2022 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	27	1	0	28	0.1	27	1	0	28	0.1
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	85	9	0	94	0.7	250	9	0	259	1.7
<b>Total Incurred</b>	<b>112</b>	<b>10</b>	<b>0</b>	<b>122</b>	<b>0.8</b>	<b>277</b>	<b>10</b>	<b>0</b>	<b>287</b>	<b>1.8</b>
<b>% Allocation</b>										
Retained	93.09%	93.09%				93.09%	93.09%			
SEU	6.91%	6.91%				6.91%	6.91%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

	2023 Adjusted-Forecast					2024 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	27	1	0	28	0.1	27	1	0	28	0.1
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	343	9	0	352	2.3	409	9	0	418	2.7
<b>Total Incurred</b>	<b>370</b>	<b>10</b>	<b>0</b>	<b>380</b>	<b>2.4</b>	<b>436</b>	<b>10</b>	<b>0</b>	<b>446</b>	<b>2.8</b>
<b>% Allocation</b>										
Retained	93.09%	93.09%				93.09%	93.09%			
SEU	6.91%	6.91%				6.91%	6.91%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

**Cost Center Allocation Percentage Drivers/Methodology:**

**Cost Center Allocation Percentage for 2021**

Ratio of a calculated Horsepower (HP) allocation of services and expenditures between SDG&E and SoCalGas are based on an analysis of the compressor and engine Horsepower (HP) at each utility.

**Cost Center Allocation Percentage for 2022**

Ratio of a calculated Horsepower (HP) allocation of services and expenditures between SDG&E and SoCalGas are based on an analysis of the compressor and engine Horsepower (HP) at each utility.

**Cost Center Allocation Percentage for 2023**

Ratio of a calculated Horsepower (HP) allocation of services and expenditures between SDG&E and SoCalGas are based on an analysis of the compressor and engine Horsepower (HP) at each utility.

**Cost Center Allocation Percentage for 2024**

Ratio of a calculated Horsepower (HP) allocation of services and expenditures between SDG&E and SoCalGas are based on an analysis of the compressor and engine Horsepower (HP) at each utility.

Note: Totals may include rounding differences.

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Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: E. Engineering Design and Management  
 Category-Sub: 2. Project Engineering  
 Cost Center: 2200-1096.000 - Project Management and Engineering

**Summary of Adjustments to Forecast:**

In 2021 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	Base YR Rec	112	112	112	165	258	324	277	370	436
Non-Labor	Base YR Rec	11	11	11	0	0	0	11	11	11
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>123</b>	<b>123</b>	<b>123</b>	<b>165</b>	<b>258</b>	<b>324</b>	<b>288</b>	<b>381</b>	<b>447</b>
FTE	Base YR Rec	0.8	0.8	0.8	1.0	1.6	2.0	1.8	2.4	2.8

**Forecast Adjustment Details:**

Year	Labor	NLbr	NSE	Total	FTE	Adj Type
2022	66	0	0	66	0.4	1-Sided Adj
<b>Explanation:</b>	2022 Onboarding adjustment in cost center 2200-1096 to add 2 Engineers for compressor station projects.					
2022	33	0	0	33	0.2	1-Sided Adj
<b>Explanation:</b>	2022 Onboarding adjustment in cost center 2200-1096 to add 1 Engineer to address increase in project volume for Control Center Modernization (CCM).					
2022	33	0	0	33	0.2	1-Sided Adj
<b>Explanation:</b>	2022 Onboarding adjustment in cost center 2200-1096 to add 1 Engineer to address increase in project volume for NGV and Renewable Gas.					
2022	33	0	0	33	0.2	1-Sided Adj
<b>Explanation:</b>	2022 Onboarding adjustment in cost center 2200-1096 to add 1 Engineer for project intake to address increase in project volume.					
<b>2022 Total</b>	<b>165</b>	<b>0</b>	<b>0</b>	<b>165</b>	<b>1.0</b>	
2023	66	0	0	66	0.4	1-Sided Adj
<b>Explanation:</b>	2023 Onboarding adjustment in cost center 2200-1096 to add 2 Engineers for compressor station projects.					
2023	33	0	0	33	0.2	1-Sided Adj
<b>Explanation:</b>	2023 Onboarding adjustment in cost center 2200-1096 to add 1 Engineer to address increase in project volume for Control Center Modernization (CCM).					
2023	33	0	0	33	0.2	1-Sided Adj
<b>Explanation:</b>	2023 Onboarding adjustment in cost center 2200-1096 to add 1 Engineer to address increase in project volume for NGV and Renewable Gas.					
2023	33	0	0	33	0.2	1-Sided Adj
<b>Explanation:</b>	2023 Onboarding adjustment in cost center 2200-1096 to add 1 Engineer for project intake to address increase in project volume.					
2023	60	0	0	60	0.4	1-Sided Adj

Note: Totals may include rounding differences.

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Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: E. Engineering Design and Management  
 Category-Sub: 2. Project Engineering  
 Cost Center: 2200-1096.000 - Project Management and Engineering

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj_Type</u>
<b>Explanation:</b>	2023 Onboarding adjustment in cost center 2200-1096 to add 1 Engineer and 1 Project Advisor to address increase in project volume.					
2023	33	0	0	33	0.2	1-Sided Adj
<b>Explanation:</b>	2023 Onboarding adjustment in cost center 2200-1096 to add 1 Engineer to address increase in compressor station projects.					
<b>2023 Total</b>	<b>258</b>	<b>0</b>	<b>0</b>	<b>258</b>	<b>1.6</b>	
2024	66	0	0	66	0.4	1-Sided Adj
<b>Explanation:</b>	2024 Onboarding adjustment in cost center 2200-1096 to add 2 Engineers for compressor station projects.					
2024	33	0	0	33	0.2	1-Sided Adj
<b>Explanation:</b>	2024 Onboarding adjustment in cost center 2200-1096 to add 1 Engineer to address increase in project volume for Control Center Modernization (CCM).					
2024	33	0	0	33	0.2	1-Sided Adj
<b>Explanation:</b>	2024 Onboarding adjustment in cost center 2200-1096 to add 1 Engineer to address increase in project volume for NGV and Renewable Gas.					
2024	33	0	0	33	0.2	1-Sided Adj
<b>Explanation:</b>	2024 Onboarding adjustment in cost center 2200-1096 to add 1 Engineer for project intake to address increase in project volume.					
2024	60	0	0	60	0.4	1-Sided Adj
<b>Explanation:</b>	2024 Onboarding adjustment in cost center 2200-1096 to add 1 Engineer and 1 Project Advisor to address increase in project volume.					
2024	33	0	0	33	0.2	1-Sided Adj
<b>Explanation:</b>	2024 Onboarding adjustment in cost center 2200-1096 to add 1 Engineer to address increase in compressor station projects.					
2024	33	0	0	33	0.2	1-Sided Adj
<b>Explanation:</b>	2024 Onboarding adjustment in cost center 2200-1096 at add 1 Engineer for increase in project volume.					
2024	33	0	0	33	0.2	1-Sided Adj
<b>Explanation:</b>	2024 Onboarding adjustment in cost center 2200-1096 to add 1 Engineer to address increase in project volume for CCM.					
<b>2024 Total</b>	<b>324</b>	<b>0</b>	<b>0</b>	<b>324</b>	<b>2.0</b>	

Note: Totals may include rounding differences.

SCG/GAS ENGINEERING/Exh No:SCG-07-WP-R/Witness: M. Martinez

Southern California Gas Company  
2024 GRC - REVISED  
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Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: E. Engineering Design and Management  
 Category-Sub: 2. Project Engineering  
 Cost Center: 2200-1096.000 - Project Management and Engineering

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

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	0	0	0	0	95
Non-Labor	0	0	0	0	11
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>106</b>
FTE	0.0	0.0	0.0	0.0	0.6
<b>Adjustments (Nominal \$) **</b>					
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	-1
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>-1</b>
FTE	0.0	0.0	0.0	0.0	0.1
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	0	0	0	0	95
Non-Labor	0	0	0	0	11
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>106</b>
FTE	0.0	0.0	0.0	0.0	0.7
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	0	0	0	0	17
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>17</b>
FTE	0.0	0.0	0.0	0.0	0.1
<b>Escalation to 2021\$</b>					
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2021\$)</b>					
Labor	0	0	0	0	112
Non-Labor	0	0	0	0	11
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>123</b>
FTE	0.0	0.0	0.0	0.0	0.8

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

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

Note: Totals may include rounding differences.

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Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: E. Engineering Design and Management  
 Category-Sub: 2. Project Engineering  
 Cost Center: 2200-1096.000 - Project Management and Engineering

**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs					
Years	2017	2018	2019	2020	2021
Labor	0	0	0	0	0.142
Non-Labor	0	0	0	0	-0.675
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>-0.533</b>
FTE	0.0	0.0	0.0	0.0	0.1

**Detail of Adjustments to Recorded:**

Year	Labor	NLbr	NSE	FTE	Adj Type
<b>2017 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
<b>2018 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
<b>2019 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
<b>2020 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
2021	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	0	0	0.1	CCTR Transf From 2200-2038.000
<b>Explanation:</b>	Transfer from FIMP WKP 2TD004 to cost center 2200-1096 in order to align the historical expenses with the workgroup in which the activity will be forecasted.				
<b>2021 Total</b>	<b>0</b>	<b>-1</b>	<b>0</b>	<b>0.1</b>	

*Note: Totals may include rounding differences.*

Southern California Gas Company  
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Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: F. Director of GE, VP GE/SI and Hydrogen  
 Cost Center: 2200-0300.000

**Summary for Category: F. Director of GE, VP GE/SI and Hydrogen**

	In 2021\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	1,406	1,460	1,526	1,586
Non-Labor	1,201	1,293	1,293	2,058
NSE	0	0	0	0
<b>Total</b>	<b>2,607</b>	<b>2,753</b>	<b>2,819</b>	<b>3,644</b>
FTE	9.6	10.1	10.6	11.1

**Cost Centers belonging to this Category:**

**2200-0300.000 GE Director, GE/SI Vice President, and Hydrogen**

Labor	1,406	1,460	1,526	1,586
Non-Labor	1,201	1,293	1,293	2,058
NSE	0	0	0	0
<b>Total</b>	<b>2,607</b>	<b>2,753</b>	<b>2,819</b>	<b>3,644</b>
FTE	9.6	10.1	10.6	11.1

*Note: Totals may include rounding differences.*

**Beginning of Workpaper**  
**2200-0300.000 - GE Director, GE/SI Vice President, and Hydrogen**

Southern California Gas Company  
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Area: GAS ENGINEERING  
Witness: Maria T. Martinez  
Category: F. Director of GE, VP GE/SI and Hydrogen  
Category-Sub: 1. Director of GE, VP GE/SI and Hydrogen  
Cost Center: 2200-0300.000 - GE Director, GE/SI Vice President, and Hydrogen

**Activity Description:**

This cost category captures activities for Director of Gas Engineering (2200-0300), Vice President of Gas Engineering and System Integrity (2200-2391), and Hydrogen Blending team (2200-0333). The expenditures incurred by the Vice President and Director of Gas Engineering and System Integrity (2200-2391) are related to the setting goals and vision for the organization in alignment with company goals, financial support, and administrative functions. These roles provide governance, and technical and policy support for the various Operating groups for SoCalGas and SDG&E. The Hydrogen Blending team provides engineering analysis support, conducts pilot projects and research to introduce Hydrogen into the natural gas system. Non-labor expenses incurred will be for consulting services to support an increase of activity related to updating material specifications (pipe, valve, fittings), equipment specifications, gas standards and other policies. Activities also include development of new equipment specifications for hydrogen blending equipment that will include on-site storage, generation, and process equipment.

**Forecast Explanations:**

**Labor - Base YR Rec**

The forecast was developed for this cost category for labor using a Base Year methodology . A Base Year forecast best reflects the future labor expense requirements for this workpaper group to provide the resources to introduce Hydrogen into the natural gas system. Other forecasting methodologies, including a 5 year average are not appropriate because the Hydrogen Blending Strategy organization is a newly created function which did not occur in previous years and does not have a sufficient historical cost for a 5 year average. In addition, incremental adjustments associated with the Hydrogen Blending program labor expense requirements have been added to the Base Year forecast .

**Non-Labor - Base YR Rec**

The forecast was developed for this cost category for non-labor using a Base Year methodology . A Base Year forecast best reflects the future non-labor expense requirements for this workpaper group to provide the resources to introduce Hydrogen into the natural gas system. Other forecasting methodologies, including a 5 year average are not appropriate because the Hydrogen Blending Strategy organization is a newly created function which did not occur in previous years and does not have a sufficient historical cost for a 5 year average. In addition, incremental adjustments associated with the Hydrogen Blending program non-labor expense requirements for consulting services to support an increase of activity related to updating material specifications (pipe, valve, fittings), equipment specifications, gas standards and other policies have been added to the Base Year forecast .

**NSE - Base YR Rec**

There are no Non-Standard Escalation expenses associated with this cost center.

*Note: Totals may include rounding differences.*

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Shared Services Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: F. Director of GE, VP GE/SI and Hydrogen  
 Category-Sub: 1. Director of GE, VP GE/SI and Hydrogen  
 Cost Center: 2200-0300.000 - GE Director, GE/SI Vice President, and Hydrogen

**Summary of Results:**

		<b>In 2021\$ (000) Incurred Costs</b>								
		<b>Adjusted-Recorded</b>					<b>Adjusted-Forecast</b>			
<b>Years</b>		<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	
Labor		614	704	684	1,284	1,406	1,461	1,527	1,587	
Non-Labor		188	116	305	241	1,201	1,293	1,293	2,058	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>802</b>	<b>820</b>	<b>989</b>	<b>1,525</b>	<b>2,606</b>	<b>2,754</b>	<b>2,820</b>	<b>3,645</b>	
FTE		3.3	4.3	4.3	7.5	9.6	10.1	10.6	11.1	

*Note: Totals may include rounding differences.*

Southern California Gas Company  
2024 GRC - REVISED  
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Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: F. Director of GE, VP GE/SI and Hydrogen  
 Category-Sub: 1. Director of GE, VP GE/SI and Hydrogen  
 Cost Center: 2200-0300.000 - GE Director, GE/SI Vice President, and Hydrogen

**Cost Center Allocations (Incurred Costs):**

	2021 Adjusted-Recorded					2022 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	375	350	0	725	3.2	375	350	0	725	3.2
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	1,032	851	0	1,883	6.4	1,086	943	0	2,029	6.9
<b>Total Incurred</b>	<b>1,407</b>	<b>1,201</b>	<b>0</b>	<b>2,608</b>	<b>9.6</b>	<b>1,461</b>	<b>1,293</b>	<b>0</b>	<b>2,754</b>	<b>10.1</b>
<b>% Allocation</b>										
Retained	87.61%	87.61%				87.61%	87.61%			
SEU	12.39%	12.39%				12.39%	12.39%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

	2023 Adjusted-Forecast					2024 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	375	350	0	725	3.2	375	350	0	725	3.2
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	1,152	943	0	2,095	7.4	1,212	1,708	0	2,920	7.9
<b>Total Incurred</b>	<b>1,527</b>	<b>1,293</b>	<b>0</b>	<b>2,820</b>	<b>10.6</b>	<b>1,587</b>	<b>2,058</b>	<b>0</b>	<b>3,645</b>	<b>11.1</b>
<b>% Allocation</b>										
Retained	87.61%	87.61%				87.61%	87.61%			
SEU	12.39%	12.39%				12.39%	12.39%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

**Cost Center Allocation Percentage Drivers/Methodology:**

**Cost Center Allocation Percentage for 2021**

Ratio allocation for shared services and expenditures are based on miles of pipe in each utility.

**Cost Center Allocation Percentage for 2022**

Ratio allocation for shared services and expenditures are based on miles of pipe in each utility.

**Cost Center Allocation Percentage for 2023**

Ratio allocation for shared services and expenditures are based on miles of pipe in each utility.

**Cost Center Allocation Percentage for 2024**

Ratio allocation for shared services and expenditures are based on miles of pipe in each utility.

Note: Totals may include rounding differences.

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Shared Services Workpapers

Area: GAS ENGINEERING  
 Witness: Maria T. Martinez  
 Category: F. Director of GE, VP GE/SI and Hydrogen  
 Category-Sub: 1. Director of GE, VP GE/SI and Hydrogen  
 Cost Center: 2200-0300.000 - GE Director, GE/SI Vice President, and Hydrogen

**Summary of Adjustments to Forecast:**

In 2021 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	Base YR Rec	1,406	1,406	1,406	54	120	180	1,460	1,526	1,586
Non-Labor	Base YR Rec	1,201	1,201	1,201	92	92	857	1,293	1,293	2,058
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>2,606</b>	<b>2,606</b>	<b>2,606</b>	<b>146</b>	<b>212</b>	<b>1,037</b>	<b>2,752</b>	<b>2,818</b>	<b>3,643</b>
FTE	Base YR Rec	9.6	9.6	9.6	0.5	1.0	1.5	10.1	10.6	11.1

**Forecast Adjustment Details:**

Year	Labor	NLbr	NSE	Total	FTE	Adj Type
2022	54	0	0	54	0.5	1-Sided Adj
<b>Explanation:</b>	2022 Onboarding adjustment in cost center 2200-0333 to add 1 Engineer to address an increase in projects for Hydrogen and RNG.					
2022	0	92	0	92	0.0	1-Sided Adj
<b>Explanation:</b>	2022 Onboarding adjustment for \$92k non-labor expenses for the purchase of Computers/Equipment for Gas Engineering organization.					
<b>2022 Total</b>	<b>54</b>	<b>92</b>	<b>0</b>	<b>146</b>	<b>0.5</b>	
2023	66	0	0	66	0.5	1-Sided Adj
<b>Explanation:</b>	2023 Onboarding adjustment to cost center 2200-0333 to add 1 Engineer to address increase in projects for Hydrogen and RNG.					
2023	54	0	0	54	0.5	1-Sided Adj
<b>Explanation:</b>	2023 Onboarding adjustment in cost center 2200-0333 to add 1 Engineer to address increase in projects for Hydrogen and RNG.					
2023	0	92	0	92	0.0	1-Sided Adj
<b>Explanation:</b>	2023 Onboarding adjustment for \$92k non-labor expenses for the purchase of computers/equipment for Gas Engineering organization.					
<b>2023 Total</b>	<b>120</b>	<b>92</b>	<b>0</b>	<b>212</b>	<b>1.0</b>	
2024	54	0	0	54	0.5	1-Sided Adj
<b>Explanation:</b>	2024 Onboarding adjustment in cost center 2200-0333 to add 1 Engineer to address an increase in projects for Hydrogen and RNG.					
2024	0	500	0	500	0.0	1-Sided Adj
<b>Explanation:</b>	2024 Upward adjustment of \$500k O&M Non-labor O&M in cost center 2200-0333 for Contract labor expenses to support Hydrogen blending operational readiness including development of Material Specifications, update of Gas Engineering Company Operations Standards, general Hydrogen blending awareness efforts and the development of safety training for Operations and First Responders.					
2024	66	0	0	66	0.5	1-Sided Adj

Note: Totals may include rounding differences.

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 Cost Center: 2200-0300.000 - GE Director, GE/SI Vice President, and Hydrogen

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj_Type</u>
<b>Explanation:</b>	2024 Onboarding adjustment in cost center 2200-0333 to add 1 Engineer to address an increase in projects for Hydrogen and RNG.					
2024	0	92	0	92	0.0	1-Sided Adj
<b>Explanation:</b>	2024 Onboarding adjustment for \$92k non-labor expenses for the purchase of computers/equipment for Gas Engineering organization.					
2024	0	265	0	265	0.0	1-Sided Adj
<b>Explanation:</b>	2024 Upward pressure in cost center 2200-2391 of \$265k Non-labor expenses for Contract Labor					
2024	60	0	0	60	0.5	1-Sided Adj
<b>Explanation:</b>	2024 onboarding adjustment to cost center 2200-0333 to add 1 Technical Advisor to address increase in projects for Hydrogen and RNG					
<b>2024 Total</b>	<b>180</b>	<b>857</b>	<b>0</b>	<b>1,037</b>	<b>1.5</b>	

Note: Totals may include rounding differences.

SCG/GAS ENGINEERING/Exh No:SCG-07-WP-R/Witness: M. Martinez

Southern California Gas Company  
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 Cost Center: 2200-0300.000 - GE Director, GE/SI Vice President, and Hydrogen

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

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	475	557	544	1,049	1,195
Non-Labor	271	108	228	233	1,205
NSE	0	0	0	0	0
<b>Total</b>	<b>746</b>	<b>664</b>	<b>772</b>	<b>1,283</b>	<b>2,400</b>
FTE	2.9	3.8	3.8	6.4	8.2
<b>Adjustments (Nominal \$) **</b>					
Labor	0	-2	0	-2	0
Non-Labor	-101	0	61	-2	-4
NSE	0	0	0	0	0
<b>Total</b>	<b>-101</b>	<b>-2</b>	<b>60</b>	<b>-4</b>	<b>-5</b>
FTE	-0.1	-0.2	-0.2	-0.2	-0.1
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	475	555	544	1,047	1,195
Non-Labor	170	107	288	231	1,201
NSE	0	0	0	0	0
<b>Total</b>	<b>644</b>	<b>662</b>	<b>832</b>	<b>1,279</b>	<b>2,396</b>
FTE	2.8	3.6	3.6	6.2	8.1
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	80	96	103	184	211
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>80</b>	<b>96</b>	<b>103</b>	<b>184</b>	<b>211</b>
FTE	0.5	0.7	0.7	1.3	1.5
<b>Escalation to 2021\$</b>					
Labor	59	53	37	53	0
Non-Labor	18	9	16	10	0
NSE	0	0	0	0	0
<b>Total</b>	<b>77</b>	<b>62</b>	<b>53</b>	<b>62</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2021\$)</b>					
Labor	614	704	684	1,284	1,406
Non-Labor	188	116	305	241	1,201
NSE	0	0	0	0	0
<b>Total</b>	<b>802</b>	<b>820</b>	<b>989</b>	<b>1,525</b>	<b>2,606</b>
FTE	3.3	4.3	4.3	7.5	9.6

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

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

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 Cost Center: 2200-0300.000 - GE Director, GE/SI Vice President, and Hydrogen

**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs					
Years	2017	2018	2019	2020	2021
Labor	-0.317	-2	-0.338	-2	-0.196
Non-Labor	-101	-0.238	61	-2	-4
NSE	0	0	0	0	0
<b>Total</b>	<b>-101</b>	<b>-2</b>	<b>60</b>	<b>-4</b>	<b>-5</b>
FTE	-0.1	-0.2	-0.2	-0.2	-0.1

**Detail of Adjustments to Recorded:**

Year	Labor	NLbr	NSE	FTE	Adj Type
2017	0	-101	0	0.0	1-Sided Adj
<b>Explanation:</b>	One time accounting exclusion adjustment transferring sponsorship expenses from capital to O&M				
2017	0	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Exclude labor expenses associated with lobbying activities (FERC 426.4). This adjustment is in addition to other costs that have already been excluded based other specific accounting attributes.				
<b>2017 Total</b>	<b>0</b>	<b>-101</b>	<b>0</b>	<b>-0.1</b>	
2018	-1	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	0	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Exclude labor expenses associated with lobbying activities (FERC 426.4). This adjustment is in addition to other costs that have already been excluded based other specific accounting attributes.				
<b>2018 Total</b>	<b>-2</b>	<b>0</b>	<b>0</b>	<b>-0.2</b>	
2019	0	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	One sided adjustment to exclude non-GRC PSEP-Pipeline Safety Reliability Project.				
2019	0	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Exclude labor expenses associated with lobbying activities (FERC 426.4). This adjustment is in addition to other costs that have already been excluded based other specific accounting attributes.				
2019	0	61	0	0.0	CCTR Transf To 2200-8000.002
<b>Explanation:</b>	One time adjustment to remove LTIP from CC 2200-2391 to CC 2200-8000.02				
<b>2019 Total</b>	<b>0</b>	<b>61</b>	<b>0</b>	<b>-0.2</b>	
2020	0	-2	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				

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<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
2020	-2	0	0	-0.1	CCTR Transf To 2200-2011.002
<b>Explanation:</b>	Transfer costs to GOSI CC 2200-2011.002 related to SB1371 (BLM) Emissions Strategy Program				
2020	0	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Exclude labor expenses associated with lobbying activities (FERC 426.4). This adjustment is in addition to other costs that have already been excluded based other specific accounting attributes.				
<b>2020 Total</b>	<b>-2</b>	<b>-2</b>	<b>0</b>	<b>-0.2</b>	
2021	0	-4	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Exclude labor expenses associated with lobbying activities (FERC 426.4). This adjustment is in addition to other costs that have already been excluded based other specific accounting attributes.				
<b>2021 Total</b>	<b>0</b>	<b>-4</b>	<b>0</b>	<b>-0.1</b>	

*Note: Totals may include rounding differences.*

Southern California Gas Company  
2024 GRC - REVISED  
Non-Shared Service Workpapers

Area: GAS ENGINEERING  
Witness: Maria T. Martinez

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

<b>Cost Center</b>	<b>Sub</b>	<b>Description</b>
2200-0301	000	ENG ANALYSIS CTR MGR
2200-0314	000	GIS SUPERVISOR
2200-0315	000	LAND SERVICES
2200-0323	000	PLANNING & PROJECT DEVELOPMENT
2200-0324	000	OPS RD&D PROGRAM
2200-0798	000	METER SHOP & RECORDS
2200-0799	000	INSTR REPAIR & FIELD
2200-1106	000	EAC- MATERIALS LAB
2200-1107	000	EAC - NDE PROGRAM
2200-1179	000	EAC-MATERIAL AND EQUIPMENT
2200-1180	000	EAC-AIR QUALITY AND COMPRESSOR SERVICES
2200-1199	000	ENG ANALYSIS CENTER ADMIN
2200-1200	000	EAC-APPLIED TECHNOLOGIES
2200-2064	000	MEASUREMENT TECH RD&D
2200-2065	000	MATERIALS/CORROSION RD&D
2200-2066	000	PIPELINE DESIGN RD&D
2200-2067	000	FIELD TECHNOLOGIES
2200-2265	000	NGV & ELECT FLD MAINT
2200-2283	000	AVIATION SERVICES
2200-2300	000	MATERIALS & QUALITY
2200-2368	000	LAND AND RIGHT OF WAY
2200-2400	000	GAS EMISSIONS RD&D
2200-2472	000	GEO ANALYSIS & SURVEY