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-CWP-R)

REVISED CAPITAL 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-CWP-R - GAS ENGINEERING

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Overall Summary For Exhibit No. SCG-07-CWP-R

Area:	GAS ENGINEERING
Witness:	Maria T. Martinez

		In 2021 \$ (000)	
		Adjusted-Forecast	
	2022	2023	2024
	1,693	1,773	2,193
	1,361	361	3,061
	15,899	15,899	18,899
I	18,953	18,033	24,153

A. Engineering Tools and Equipment

B. Land Rights

C. Supervision and Engineering Overhead Pool

Total

Area:	GAS ENGINEERING
Witness:	Maria T. Martinez
Category:	A. Engineering Tools and Equipment
Workpaper:	VARIOUS

Summary for Category: A. Engineering Tools and Equipment

	In 2021\$ (000)				
	Adjusted-Recorded		Adjusted-Forecast		
	2021	2022	2023	2024	
Labor	23	71	71	71	
Non-Labor	1,495	1,622	1,702	2,122	
NSE	0	0	0	0	
Total	1,518	1,693	1,773	2,193	
FTE	0.2	0.6	0.6	0.6	
007300 Laboratory Equ	lipment (BC730)				
Labor	23	71	71	71	
Non-Labor	1,495	1,622	1,622	1,622	
NSE	0	0	0	0	
Total	1,518	1,693	1,693	1,693	
FTE	0.2	0.6	0.6	0.6	
003430 Aviation Servic	es				
Labor	0	0	0	0	
Non-Labor	0	0	80	500	
NSE	0	0	0	0	
Total	0	0	80	500	
FTE	0.0	0.0	0.0	0.0	

Beginning of Workpaper Group 007300 - Laboratory Equipment (BC730)

Area:	GAS ENGINEERING
Witness:	Maria T. Martinez
Budget Code:	00730.0
Category:	A. Engineering Tools and Equipment
Category-Sub:	1. Laboratory Tools and Equipment
Workpaper Group:	007300 - Laboratory Equipment (BC730)

Summary of Results (Constant 2021 \$ in 000s):

Forecast	Method		Adjusted Recorded					Adjusted Forecast		
Years	Years		2017 2018 2019 2020 2021					2023	2024	
Labor	5-YR Average	120	64	152	-3	23	71	71	71	
Non-Labor	5-YR Average	1,352	1,489	1,927	1,846	1,495	1,622	1,622	1,622	
NSE	5-YR Average	0	0	0	0	0	0	0	0	
Tota	al	1,472	1,552	2,080	1,843	1,517	1,693	1,693	1,693	
FTE	5-YR Average	0.9	0.5	1.2	0.0	0.2	0.6	0.6	0.6	

Business Purpose:

This workpaper provides capital funding to equip the Engineering Analysis Center (EAC) with modern, state-of-the-art laboratory equipment necessary to maintain the Company's ability to perform necessary analysis and evaluation of materials, emissions and technology. In addition to the EAC, Capital funding is utilized to maintain, purchase or upgrade laboratory equipment for Air Quality and Compressor Services, Materials Quality Management, Chemical and Environmental Services, Non-Destructive Examination (NDE) Program, and Applied Technologies Lab.

Physical Description:

Tools used by laboratory personnel are frequently sensitive instruments for measuring a variety of materials, substances and gases including emissions. Other equipment may include ovens, burners, microscopes, scales, handling equipment, and tools for computed radiography.

Project Justification:

Existing regulations require equipment upgrades for both pipeline and engine monitoring. Equipment replacement schedules are developed based on equipment life and past practices driving the requirement to purchase new equipment. Laboratory grade equipment continues to evolve and become more costly. These investments also enhance the efficiency and responsiveness of our Gas Operations and maintains compliance with applicable regulatory and environmental regulations.

Area:	GAS ENGINEERING
Witness:	Maria T. Martinez
Budget Code:	00730.0
Category:	A. Engineering Tools and Equipment
Category-Sub:	1. Laboratory Tools and Equipment
Workpaper Group:	007300 - Laboratory Equipment (BC730)

Forecast Methodology:

Labor - 5-YR Average

The forecast method used is the 5 year average of recorded labor costs in this budget code. A 5 year average represents a reasonable basis to estimate operational needs for TY 2024 because Laboratory equipment costs are prone to fluctuations driven by supply and demand and changes in work activities that drive equipment needs. The 5 year average is both fair and conservative, and best represents the capital expenditures in this category.

Non-Labor - 5-YR Average

The forecast method used is the 5 year average of recorded non-labor costs in this budget code. A 5 year average represents a reasonable basis to estimate operational needs for TY 2024 because Laboratory equipment costs are prone to fluctuations driven by supply and demand and changes in work activities that drive equipment needs. The 5 year average is both fair and conservative, and best represents the capital expenditures in this category.

NSE - 5-YR Average

There are no non-standard escalation expenses in this workpaper.

Area:	GAS ENGINEERING
Witness:	Maria T. Martinez
Budget Code:	00730.0
Category:	A. Engineering Tools and Equipment
Category-Sub:	1. Laboratory Tools and Equipment
Workpaper Group:	007300 - Laboratory Equipment (BC730)

Summary of Adjustments to Forecast

				In 202 [,]	1 \$ (000)					
Forecast	Method	E	Base Forecast Forecast Adjustments			Ac	Adjusted-Forecast			
Years	•	2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	5-YR Average	71	71	71	0	0	0	71	71	71
Non-Labor	5-YR Average	1,622	1,622	1,622	0	0	0	1,622	1,622	1,622
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
Tota	l	1,693	1,693	1,693	0	0	0	1,693	1,693	1,693
FTE	5-YR Average	0.6	0.6	0.6	0.0	0.0	0.0	0.6	0.6	0.6

Forecast Adjustment Details

<u>Year</u>	Labor	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	
2022 Total	0	0	0	0	0.0	
2023 Total	0	0	0	0	0.0	
2024 Total	0	0	0	0	0.0	

GAS ENGINEERING
Maria T. Martinez
00730.0
A. Engineering Tools and Equipment
1. Laboratory Tools and Equipment
007300 - Laboratory Equipment (BC730)

Determination of Adjusted-Recorded:

Recorded (Nominal \$)* 1 <th1< th=""> <th1< th=""></th1<></th1<>	Determination of Aujuot	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
Non-Labor 1,009 1,177 1,596 1,605 1,495 NSE 0 0 0 0 0 0 0 Total 1,086 1,220 1,702 1,602 1,514 FTE 0.8 0.4 1.0 0.0 0.2 Adjustments (Nominal \$)**	Recorded (Nominal \$)*					
NSE 0 0 0 0 0 0 0 0 Total 1,086 1,220 1,702 1,602 1,514 FTE 0.8 0.4 1.0 0.0 0.2 Adjustments (Nominal \$) **	Labor	77	43	106	-2	19
Total 1,086 1,220 1,702 1,602 1,514 FTE 0.8 0.4 1.0 0.0 0.2 Adjustments (Nominal \$) **	Non-Labor	1,009	1,177	1,596	1,605	1,495
FTE 0.8 0.4 1.0 0.00 0.2 Adjustments (Nominal \$) **	NSE	0	0	0	0	0
Adjustments (Nominal \$) ** 0.0 0.1 1.0 0.0 0.0 Labor 0 0 0 0 0 0 0 Non-Labor 0 0 0 0 0 0 0 0 Total 0 0 0 0 0 0 0 0 Eabor 77 43 106 -2 19 Non-Labor 1,009 1,177 1,596 1,605 1,495 NSE 0 0 0 0 0 0 NSE 0 0 0 0 0 0 0 Vacation & Sick (Nominal \$) U U 0 0.0 0.2 0 0 0 Vacation & Sick (Nominal \$) U U 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		1,086	1,220	1,702	1,602	1,514
Labor 0 0 0 0 0 0 Non-Labor 0 0 0 0 0 0 NSE 0 0 0 0 0 0 0 Total 0 0 0 0 0 0 0 FTE 0.0 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Nominal \$) 1.009 1.177 1.596 1.605 1.495 NSE 0 0 0 0 0 0 0 NSE 0 0 0 0 0 0 0 0 Vacation & Sick (Nominal \$) Itabor 13 7 20 0 3 Non-Labor 0 0 0 0 0 0 0 Vacation & Sick (Nominal \$) Itabor 13 7 20 0 3 FTE 0.1 0.1 0.2 0.0	FTE	0.8	0.4	1.0	0.0	0.2
Non-Labor 0 0 0 0 0 0 0 NSE 0 0 0 0 0 0 0 0 Total 0 0 0 0 0 0 0 0 FTE 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Nominal \$) 77 43 106 -2 19 Non-Labor 1,009 1,177 1,596 1,605 1,495 NSE 0 0 0 0 0 0 Total 1,086 1,220 1,702 1,602 1,514 FTE 0.8 0.4 1.0 0.0 0.0 0 Vacation & Sick (Nominal \$) Itabor 13 7 20 0 3 Non-Labor 0 0 0 0 0 0 0 SE 0 0 0 0 0	Adjustments (Nominal \$)	**				
NSE 0	Labor	0	0	0	0	0
Total 0 <td>Non-Labor</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td>	Non-Labor	0	0	0	0	0
FTE 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Nominal \$) 1	NSE	0	0	0	0	0
Recorded-Adjusted (Nominal \$) 0.0 0.0 0.0 0.0 0.0 0.0 Labor 77 43 106 -2 19 Non-Labor 1,009 1,177 1,596 1,605 1,495 NSE 0 0 0 0 0 0 Total 1,066 1,220 1,702 1,602 1,514 FTE 0.8 0.4 1.0 0.0 0.2 Vacation & Sick (Nominal \$) Itabor 13 7 20 0 3 Labor 13 7 20 0 3 3 Non-Labor 0 0 0 0 0 0 NSE 0 0 0 0 3 3 3 3 3 2 3 3 3 3 3 3 2 3 3 2 3 3 3 3 3 3 3 3 3	Total	0	0	0	0	0
Labor 77 43 106 -2 19 Non-Labor 1,009 1,177 1,596 1,605 1,495 NSE 0 0 0 0 0 0 Total 1,086 1,220 1,702 1,602 1,514 FTE 0.8 0.4 1.0 0.0 0.2 Vacation & Sick (Nominal \$) U U 0<	FTE	0.0	0.0	0.0	0.0	0.0
Non-Labor 1.00 1.177 1.596 1.605 1.495 NSE 0 0 0 0 0 0 0 Total 1.086 1.220 1.702 1.602 1.514 FTE 0.8 0.4 1.0 0.0 0.2 Vacation & Sick (Nominal \$) Use Use 0 0 0 0 0 0 0.2 1.514 Labor 1.3 7 20 0 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 26 0	Recorded-Adjusted (Nom	inal \$)				
NSE 0		77	43	106	-2	19
Total 1,086 1,220 1,702 1,602 1,514 FTE 0.8 0.4 1.0 0.0 0.2 Vacation & Sick (Nominal \$)		1,009	1,177	1,596	1,605	1,495
FTE 0.8 0.4 1.0 0.0 0.2 Vacation & Sick (Nominal \$) Labor 13 7 20 0 3 Labor 13 7 20 0 3 3 Non-Labor 0 0 0 0 0 0 0 NSE 0 0 0 0 0 0 0 0 Total 13 7 20 0 0 0 0 FTE 0.1 0.1 0.2 0.0 0 0 0 FTE 0.1 0.1 0.2 0.0 0.0 0 0 Labor 31 13 26 0 0 0 0 NSE 0 0 0 0 0 0 0 0 FTE 0.0 0.0 0.0 0.0 0.0 0.0 0 FTE 0.0 0.0 0.0 <td>NSE</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td>	NSE	0	0	0	0	0
Vacation & Sick (Nominal \$) 0.0 0.0 0.0 0.0 Labor 13 7 20 0 3 Non-Labor 0 0 0 0 0 NSE 0 0 0 0 0 Total 13 7 20 0 3 FTE 0.1 0.1 0.2 0.0 0.0 Escalation to 2021\$ Escalation to 2021\$ 0 0 0 0 Labor 31 13 26 0 0 0 Non-Labor 343 312 331 241 0 NSE 0 0 0 0 0 0 NSE 0 0 0 0 0 0 0 FTE 0.0 0.0 0.0 0.0 0.0 0 0 FTE 0.0 0.0 0.0 0.0 0.0 0 0 FTE <td></td> <td>1,086</td> <td>1,220</td> <td>1,702</td> <td>1,602</td> <td>1,514</td>		1,086	1,220	1,702	1,602	1,514
Labor 13 7 20 0 3 Non-Labor 0 0 0 0 0 0 NSE 0 0 0 0 0 0 0 Total 13 7 20 0 0 0 0 FTE 0.1 0.1 0.2 0.0 0.0 0 0 Escalation to 2021\$ U U 0.1 0.2 0.0 0.0 Labor 31 13 26 0 0 0 Non-Labor 343 312 331 241 0 NSE 0 0 0 0 0 0 Total 374 326 358 241 0 FTE 0.0 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Constant 2021\$) U 464 152 -3 23 23 Non-Labor 1,352 <t< td=""><td></td><td></td><td>0.4</td><td>1.0</td><td>0.0</td><td>0.2</td></t<>			0.4	1.0	0.0	0.2
Non-Labor 0	Vacation & Sick (Nominal	\$)				
NSE 0		13	7	20	0	3
Total 13 7 20 0 3 FTE 0.1 0.1 0.2 0.0 0.0 Escalation to 2021\$		0	0	0	0	0
FTE 0.1 0.1 0.2 0.0 0.0 Escalation to 2021\$ Labor 31 13 26 0 0 Labor 31 13 26 0 0 0 Non-Labor 343 312 331 241 0 NSE 0 0 0 0 0 0 Total 374 326 358 241 0 FTE 0.0 0.0 0.0 0.0 0.0 FTE 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Constant 2021\$) E U U I.489 1.927 1.846 1.495 NSE 0 0 0 0 0 0 0 0 NSE 0 0 0 0 0 0 0 0 Total 1.472 1.552 2.080 1.843 1.517	NSE	0	0	0	0	0
Escalation to 2021\$ Image: Constraint of the		13	7	20	0	3
Labor 31 13 26 0 0 Non-Labor 343 312 331 241 0 NSE 0 0 0 0 0 0 Total 374 326 358 241 0 FTE 0.0 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Constant 2021\$) 120 64 152 -3 23 Non-Labor 1,352 1,489 1,927 1,846 1,495 NSE 0 0 0 0 0 0 Total 1,472 1,552 2,080 1,843 1,517		0.1	0.1	0.2	0.0	0.0
Non-Labor 343 312 331 241 0 NSE 0	Escalation to 2021\$					
NSE 0		31	13	26	0	0
Total 374 326 358 241 0 FTE 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Constant 2021\$) Labor 120 64 152 -3 23 Non-Labor 1,352 1,489 1,927 1,846 1,495 NSE 0 0 0 0 0 0 Total 1,472 1,552 2,080 1,843 1,517		343	312	331	241	0
FTE 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Constant 2021\$) Labor 120 64 152 -3 23 Non-Labor 1,352 1,489 1,927 1,846 1,495 NSE 0 0 0 0 0 0 0 Total 1,472 1,552 2,080 1,843 1,517		0	0	0	0	0
Recorded-Adjusted (Constant 2021\$) 64 152 -3 23 Labor 1,352 1,489 1,927 1,846 1,495 NSE 0 0 0 0 0 0 Total 1,472 1,552 2,080 1,843 1,517		374	326	358	241	0
Labor 120 64 152 -3 23 Non-Labor 1,352 1,489 1,927 1,846 1,495 NSE 0 0 0 0 0 0 0 0 0 0 0 1,517 Total 1,472 1,552 2,080 1,843 1,517 1,517	FTE	0.0	0.0	0.0	0.0	0.0
Non-Labor 1,352 1,489 1,927 1,846 1,495 NSE 0 0 0 0 0 0 0 0 0 0 0 0 1,552 2,080 1,843 1,517 1,5	Recorded-Adjusted (Cons	stant 2021\$)				
NSE 0		120	64	152	-3	23
Total 1,472 1,552 2,080 1,843 1,517		1,352	1,489	1,927	1,846	1,495
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		0	0	0	0	0
FTE 0.9 0.5 1.2 0.0 0.2		1,472	1,552	2,080	1,843	1,517
	FTE	0.9	0.5	1.2	0.0	0.2

* After company-wide exclusions of Non-GRC costs

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

Area:	GAS ENGINEERING
Witness:	Maria T. Martinez
Budget Code:	00730.0
Category:	A. Engineering Tools and Equipment
Category-Sub:	1. Laboratory Tools and Equipment
Workpaper Group:	007300 - Laboratory Equipment (BC730)

Summary of Adjustments to Recorded:

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

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

Beginning of Workpaper Sub Details for Workpaper Group 007300

Area:	GAS ENGINEERING
Witness:	Maria T. Martinez
Budget Code:	00730.0
Category:	A. Engineering Tools and Equipment
Category-Sub:	1. Laboratory Tools and Equipment
Workpaper Group:	007300 - Laboratory Equipment (BC730)
Workpaper Detail:	007300.001 - Capital funding is utilized to maintain, purchase or upgrade laboratory equipment.

In-Service Date: Not Applicable

Description:

Capital funding is utilized to maintain, purchase or upgrade laboratory equipment.

Forecast In 2021 \$(000)							
	Years	2022	2023	2024			
Labor		71	71	71			
Non-Labor		1,622	1,622	1,622			
NSE		0	0	0			
	Total	1,693	1,693	1,693			
FTE		0.6	0.6	0.6			

Beginning of Workpaper Group 003430 - Aviation Services

Area:	GAS ENGINEERING
Witness:	Maria T. Martinez
Budget Code:	00343.0
Category:	A. Engineering Tools and Equipment
Category-Sub:	2. Aviation Services
Workpaper Group:	003430 - Aviation Services

Summary of Results (Constant 2021 \$ in 000s):

Forecast	Method		Adjusted Forecast						
Years	s	2017	2018	2019	2020	2021	2022 2023 2024		
Labor	Zero-Based	0	0	0	0	0	0	0	0
Non-Labor	Zero-Based	0	0	0	0	0	0	80	500
NSE	Zero-Based	0	0	0	0	0	0	0	0
Tota	al	0	0	0	0	0	0	80	500
FTE	Zero-Based	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0

Business Purpose:

This workpaper provides capital funding to the Aviation Services Program for purchase of aerial based tools such as unmanned aircraft and ancillary equipment required to support Gas Operations organizations conduct inspections of remote and difficult to access areas for pipeline patrol and leak survey in compliance with GO-112F.

Physical Description:

Unmanned Aerial Technology- Unmanned Aerial Vehicles (UAVs) used to obtain aerial imagery, videography, identify leaks, quantify emissions, perform inspections and emergency response. Drones are used for inspection of remote and difficult to access facilities, such as bridge and spans and inaccessible customer meters for GO- 112F compliance. These aircraft are flown by a certified pilot remotely on the ground.

Project Justification:

Advancement of aviation-based technology solutions supports SoCalGas and its Gas Operations organizations by providing aviation-related expertise and technical knowledge enabling development of safe and efficient aerial-based tools and technologies and provides for greater oversight for aviation safety. These investments also enhance the efficiency and responsiveness of our Gas Operations and maintains compliance with applicable regulatory and environmental regulations.

Area:	GAS ENGINEERING
Witness:	Maria T. Martinez
Budget Code:	00343.0
Category:	A. Engineering Tools and Equipment
Category-Sub:	2. Aviation Services
Workpaper Group:	003430 - Aviation Services

Forecast Methodology:

Labor - Zero-Based

The forecast used a zero-based methodology because historical spending is not reflective of future labor costs required for the administration of the unmanned aerial technology equipment purchases. This Budget Code is planned to Capital in 2023, 2024, 2025 and 2026. Other forecast methodologies, such as the 5 year average methodology are not appropriate because they do not take into account the future purchases of Unmanned Aerial Vehicles (UAVs) and ancillary equipment.

Non-Labor - Zero-Based

See Supplemental Workpaper SCG-07EN-CAP BC 003430. The forecast used a zero-based methodology because historical spending is not reflective of future non-labor costs to purchase the unmanned aerial technology equipment. This Budget Code is planned to Capital in 2023, 2024, 2025 and 2026. Other forecast methodologies, such as the 5 year average methodology are not appropriate because they do not take into account the future purchase of Unmanned Aerial Vehicles (UAVs) and ancillary equipment.

NSE - Zero-Based

There are no non-standard escalation expenses in this workpaper.

GAS ENGINEERING
Maria T. Martinez
00343.0
A. Engineering Tools and Equipment
2. Aviation Services
003430 - Aviation Services

Summary of Adjustments to Forecast

In 2021 \$ (000)										
Forecast	Method	E	Base Fore	cast	For	ecast Adjı	ast Adjustments Adjusted-Forecas		orecast	
Years	5	2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	Zero-Based	0	0	0	0	0	0	0	0	0
Non-Labor	Zero-Based	0	80	500	0	0	0	0	80	500
NSE	Zero-Based	0	0	0	0	0	0	0	0	0
Tota	I	0	80	500	0	0	0	0	80	500
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Forecast Adjustment Details

<u>Year</u>	Labor	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	
2022 Total	0	0	0	0	0.0	
2023 Total	0	0	0	0	0.0	
2024 Total	0	0	0	0	0.0	

GAS ENGINEERING
Maria T. Martinez
00343.0
A. Engineering Tools and Equipment
2. Aviation Services
003430 - Aviation Services

Determination of Adjusted-Recorded:

, , , , , , , , , , , , , , , , , , ,	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
Recorded (Nominal \$)*					
Labor	191	107	-1,445	3	0
Non-Labor	0	100	171	0	0
NSE	0	0	0	0	0
Total	191	207	-1,273	3	0
FTE	1.6	1.1	-11.5	0.0	0.0
Adjustments (Nominal \$)	**				
Labor	-191	-107	1,445	-3	0
Non-Labor	0	-100	-171	0	0
NSE	0	0	0	0	0
Total	-191	-207	1,273	-3	0
FTE	-1.6	-1.1	11.5	-0.1	0.0
Recorded-Adjusted (Nom	ninal \$)				
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	0	0
FTE	0.0	0.0	0.0	-0.1	0.0
Vacation & Sick (Nominal	l \$)				
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	0	0
FTE	0.0	0.0	0.0	0.0	0.0
Escalation to 2021\$					
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	0	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Con	stant 2021\$)				
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	0	0
FTE	0.0	0.0	0.0	-0.1	0.0

* After company-wide exclusions of Non-GRC costs

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

GAS ENGINEERING
Maria T. Martinez
00343.0
A. Engineering Tools and Equipment
2. Aviation Services
003430 - Aviation Services

Summary of Adjustments to Recorded:

			In Nominal \$(00	00)		
	Years	2017	2018	2019	2020	2021
Labor		-191	-107	1,445	-3	0
Non-Labor		0	-100	-171	0	0
NSE		0	0	0	0	0
	Total	-191	-207	1,273	-3	0
FTE		-1.6	-1.1	11.5	-0.1	0.0

Detail of Adjustments to Recorded in Nominal \$:

Year	Labor	<u>NLbr</u>	NSE	<u>Total</u>	FTE
2017	-191	0.087	0	-191	-1.6
Explanation:	One sided adjustment to exclude	de non-GRC Pipeline	Safety & Reliability Pr	oject costs	
2017 Total	-191	0.087	0	-191	-1.6
2018	-107	-100	0	-207	-1.1
Explanation:	One sided adjustment to exclue	de non-GRC Pipeline	Safety & Reliability Pr	oject costs	
2018 Total	-107	-100	0	-207	-1.1
2019	1,445	-171	0	1,273	11.5
Explanation:	One sided adjustment to exclue	de non-GRC Pipeline	Safety & Reliability Pr	oject costs	
2019 Total	1,445	-171	0	1,273	11.5
2020	-3	0	0	-3	-0.1
Explanation:	One sided adjustment to exclue	de non-GRC Pipeline	Safety & Reliability Pr	oject costs	
2020 Total	-3	0	0	-3	-0.1
2021 Total	0	0	0	0	0.0

Beginning of Workpaper Sub Details for Workpaper Group 003430

Area:	GAS ENGINEERING
Witness:	Maria T. Martinez
Budget Code:	00343.0
Category:	A. Engineering Tools and Equipment
Category-Sub:	2. Aviation Services
Workpaper Group:	003430 - Aviation Services
Workpaper Detail:	003430.001 - Aviation Services

In-Service Date: 10/31/2024

Description:

Unmanned Aerial Technology- SoCalGas usesd unmanned Aerial Vehicles (UAVs) used to obtain aerial imagery, videography, identify leaks, quantify emissions, perform inspections and emergency response. Drones are used for inspection of remote and difficult to access facilities, such as bridge and spans and inaccessible customer meters for GO-112F compliance. These aircraft are flown by a certified pilot remotely on the ground.

Forecast In 2021 \$(000)							
	Years 2022 2023 2024						
Labor		0	0	0			
Non-Labor		0	80	500			
NSE		0	0	0			
	Total	0	80	500			
FTE		0.0	0.0	0.0			

Supplemental Workpapers for Workpaper Group 003430

SCG-07-EN-CAP SUP BC 003430 Southern California Gas Company – Gas Engineering – Witness Maria Martinez Supplemental Capital Workpaper For Zero-Base Forecast Aviation Services

ITEMS	ITEMS 2023 C		2024 COST		2025 COST		2026 COST	
	(1	L sUAS ¹)		(5 sUAS)		(4 sUAS)		(2 sUAS)
Drone, (Batteries (2) Battery Station (1), Controller (1))	\$	10.9	\$	68.3	\$	54.7	\$	27.3
U10 UAV Based Laser Methane Leak Detector	\$	53.6	\$	335.0	\$	268.0	\$	134.0
Zenmusse P1	\$	5.0	\$	31.3	\$	25.0	\$	12.5
Software subscription (perpetual per drone)	\$	3.2	\$	20.0	\$	16.0	\$	8.0
Extra batteries	\$	4.5	\$	28.0	\$	22.4	\$	11.2
Computer	\$	1.6	\$	10.0	\$	8.0	\$	4.0
Tablet	\$	0.8	\$	5.0	\$	4.0	\$	2.0
Charger Kit	\$	0.2	\$	1.0	\$	0.8	\$	0.4
SD Cards	\$	0.2	\$	1.0	\$	0.8	\$	0.4
Hard Case	\$	0.1	\$	0.8	\$	0.6	\$	0.3
Landing Pad	\$	0.1	\$	0.8	\$	0.6	\$	0.3
Connection Wires	\$	0.0	\$	0.1	\$	0.1	\$	0.0
Strobe (Night Flying)	\$	0.1	\$	0.5	\$	0.4	\$	0.2
Total Cost by Year	\$	80	\$	500	\$	401	\$	201
¹ Potential to be discounted by manufacturer as RD&D								

Constant 2021 \$ in 000s

Assumptions:

1. The costs occur one time for each year

2. The items per Small Unmanned Aerial Systems (sUAS)

Area:GAS ENGINEERINGWitness:Maria T. MartinezCategory:B. Land RightsWorkpaper:006170

Summary for Category: B. Land Rights

	In 2021\$ (000)				
	Adjusted-Recorded	Adjusted-Recorded Adjusted-Forecast			
	2021	2022	2023	2024	
Labor	29	83	83	83	
Non-Labor	170	1,278	278	2,978	
NSE	0	0	0	0	
Total	199	1,361	361	3,061	
FTE	0.2	0.6	0.6	0.6	
006170 Land Rights					
Labor	29	83	83	83	
Non-Labor	170	1,278	278	2,978	
NSE	0	0	0	0	
Total	199	1,361	361	3,061	
FTE	0.2	0.6	0.6	0.6	

Beginning of Workpaper Group 006170 - Land Rights

Area:	GAS ENGINEERING
Witness:	Maria T. Martinez
Budget Code:	00617.0
Category:	B. Land Rights
Category-Sub:	1. Land Rights
Workpaper Group:	006170 - Land Rights

Summary of Results (Constant 2021 \$ in 000s):

Forecast	Method	Adjusted Recorded				Adju	sted Forec	ast	
Years	S	2017	2018	2019	2020	2021	2022	2023	2024
Labor	5-YR Average	146	110	97	32	29	83	83	83
Non-Labor	5-YR Average	31	373	486	328	170	1,278	278	2,978
NSE	5-YR Average	0	0	0	0	0	0	0	0
Tota	I	178	484	583	360	200	1,361	361	3,061
FTE	5-YR Average	1.1	0.8	0.7	0.2	0.2	0.6	0.6	0.6

Business Purpose:

This Capital Budget Code 617 provides capital funding for acquisition of land or land rights interests necessary to allow for the access, construction, operation and maintenance of pipeline infrastructure on public and private properties.

Physical Description:

Pipeline rights of way physical dimensions vary in width depending on the diameter of the pipelines and allows pipeline infrastructure to traverse both public and private properties.

Project Justification:

Federal law requires public utility lines occupying private or public lands to be protected by acquisition of appropriate land rights. Compensation for the property interests needed is provided according to specific provisions of the contractual arrangements that allow for access, operation, and maintenance of our pipeline infrastructure traversing public and private properties.

GAS ENGINEERING
Maria T. Martinez
00617.0
B. Land Rights
1. Land Rights
006170 - Land Rights

Forecast Methodology:

Labor - 5-YR Average

The forecast was developed using the five-year average method to capture labor expense requirements for this cost category. This method is most appropriate because the historical data accounts for fluctuations in acquisition support costs driven by market conditions and negotiated terms based on contractual arrangements. Current acquisition activity levels and support functions are expected to continue moving forward therefore the 5 year average forecast is expected to meet future funding requirements.

Non-Labor - 5-YR Average

The forecast was developed using the five-year average method to capture non-labor expense requirements for this cost category. This method is most appropriate because the historical data accounts for fluctuations in acquisition costs driven by market conditions and negotiated terms based on contractual arrangements and published rent schedules for public lands under federal jurisdiction. Current acquisition activity levels and support functions are expected to continue moving forward therefore the 5 year average forecast is expected to meet future funding requirements. In addition, incremental one-time adjustments have been added to the 5 year average.

NSE - 5-YR Average

There are no non-standard escalation expenses in this workpaper.

Area:	GAS ENGINEERING
Witness:	Maria T. Martinez
Budget Code:	00617.0
Category:	B. Land Rights
Category-Sub:	1. Land Rights
Workpaper Group:	006170 - Land Rights

Summary of Adjustments to Forecast

	In 2021 \$ (000)									
Forecast Method Base Forecast Forecast Adjustments Adjusted-Forecast						orecast				
Years	5	2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	5-YR Average	83	83	83	0	0	0	83	83	83
Non-Labor	5-YR Average	278	278	278	1,000	0	2,700	1,278	278	2,978
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
Tota	I	361	361	361	1,000	0	2,700	1,361	361	3,061
FTE	5-YR Average	0.6	0.6	0.6	0.0	0.0	0.0	0.6	0.6	0.6

Forecast Adjustment Details

<u>Year</u>		<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>
2022		0	1,000	0	1,000	0.0
Explanation:			with a one time adjustm	-	s payment for the L50	000 Bureau
	Land Management (BLM) Serial Gr	ant renewal on public la	nds.		
2022 To	otal	0	1,000	0	1,000	0.0
2023 To	otal	0	0	0	0	0.0
2024		0	2,700	0	2,700	0.0
Explanation:	ation: These activities establish Forest Service Master Special Use (MSUP) Programmatic Permits (including a new access road MSUP to provide safe, efficient access to pipeline facilities within the Angeles National Forest), Los Padres National Forest, San Bernardino National Forest Service.					
2024 To	otal	0	2,700	0	2,700	0.0

Area:	GAS ENGINEERING
Witness:	Maria T. Martinez
Budget Code:	00617.0
Category:	B. Land Rights
Category-Sub:	1. Land Rights
Workpaper Group:	006170 - Land Rights

Determination of Adjusted-Recorded:

Recorded (Nominal \$)* Product of the second of	Botominiation of Aujuot	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
Non-Labor 24 295 402 100.285 170 NSE 0 0 0 0 0 0 0 Total 117 370 470 100.399 195 195 FTE 0.9 0.7 0.6 0.2 0.2 0 Adjustments (Nominal \$)**	Recorded (Nominal \$)*					
NSE 0 0 0 0 0 0 0 Total 117 370 470 100,309 195 FTE 0.9 0.7 0.6 0.2 0.2 Adjustments (Nominal \$) **	Labor	93	74	68	23	25
Total 117 370 470 100,309 195 FTE 0.9 0.7 0.6 0.2 0.2 Adjustments (Nominal \$) **	Non-Labor	24	295	402	100,285	170
FTE 0.9 0.7 0.6 0.2 0.2 Adjustments (Nominal \$) ** Labor 0 0 0 0 0 0 Non-Labor 0 0 0 -0 0 0 0 NSE 0 0 0 0 -0 0 0 0 Recorded-Adjusted (Nominal \$) Labor 93 74 68 23 25 </td <td>NSE</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td>	NSE	0	0	0	0	0
Adjustments (Nominal \$) ** 0.0 0.1 0.0 0.1 0.0 0.1 0.0 0.1 0.0 0.1 0.0 </td <td></td> <td>117</td> <td>370</td> <td>470</td> <td>100,309</td> <td>195</td>		117	370	470	100,309	195
Labor 0 0 0 0 0 0 Non-Labor 0 0 0 -100,000 0 NSE 0 0 0 0 0 0 Total 0 0 0 0 0 0 FTE 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Nominal \$) 24 295 402 285 170 NSE 0 0 0 0 0 0 0 NSE 0 0 0 0 0 0 0 Total 117 370 470 309 195 FTE 0.9 0.7 0.6 0.2 0.2 Vacation & Sick (Nominal \$) 117 370 40 0 Non-Labor 16 13 13 4 4 Non-Labor 37 23 17 4 0 Non-Labor	FTE	0.9	0.7	0.6	0.2	0.2
Non-Labor 0 0 0 -100,000 0 NSE 0 0 0 0 0 0 0 0 Total 0 0 0 0 0 0 0 0 0 FTE 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Nominal \$) 3 74 68 23 25 Non-Labor 93 74 68 23 25 Non-Labor 24 295 4002 285 170 NSE 0 0 0 0 0 0 0 FTE 0.9 0.7 0.6 0.2 0.2 192 Vacation & Sick (Nominal \$) Itabor 16 13 13 4 4 4 Non-Labor 0 0 0 0 0 0 0 SE 0 0 0 0 0<	Adjustments (Nominal \$)	**				
NSE 0	Labor	0	0	0	0	0
Total 0 0 -100,000 0 FTE 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Nominal \$)		0	0	0	-100,000	0
FTE 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Nominal \$) 1 <th1< th=""></th1<>	NSE	0	0	0	0	0
Recorded-Adjusted (Nominal \$) 0.0 0.		0	0	0	-100,000	0
Labor 93 74 68 23 25 Non-Labor 24 295 402 285 170 NSE 0 0 0 0 0 0 Total 117 370 470 309 195 FTE 0.9 0.7 0.6 0.2 0.2 Vacation & Sick (Nominal \$) U U U U U Labor 16 13 13 4 4 Non-Labor 0 0 0 0 0 NSE 0 0 0 0 0 0 NSE 0 0 0 0 0 0 NSE 0 0 0 0 0 0 Ecalation to 2021\$ E 0 0 0 0 0 Recorded-Adjusted (Constant 2021\$) E 0 0 0 0 0 0 Non-Labor<	FTE	0.0	0.0	0.0	0.0	0.0
Non-Labor 24 295 402 285 170 NSE 0 0 0 0 0 0 Total 117 370 470 309 195 FTE 0.9 0.7 0.6 0.2 0.2 Vacation & Sick (Nominal \$) Use	Recorded-Adjusted (Nom	inal \$)				
NSE 0		93	74	68	23	25
Total 117 370 470 309 195 FTE 0.9 0.7 0.6 0.2 0.2 Vacation & Sick (Nominal \$) Labor 16 13 13 4 4 Non-Labor 0 0 0 0 0 0 NSE 0 0 0 0 0 0 0 Total 16 13 13 4 4 4 Non-Labor 0 0 0 0 0 0 Total 16 13 13 4 4 FTE 0.2 0.1 0.1 0.0 0.0 Escalation to 2021\$ Labor 37 23 17 4 0 Non-Labor 8 78 84 43 0 NSE 0 0 0 0 0 0 FTE 0.0 0.0 0.0 0.0 0.0 0.0		24	295	402	285	170
FTE 0.9 0.7 0.6 0.2 0.2 Vacation & Sick (Nominal \$) Labor 16 13 13 4 4 Non-Labor 0 0 0 0 0 0 0 NSE 0 0 0 0 0 0 0 Total 16 13 13 4 4 FTE 0.2 0.1 0.1 0.0 0 NSE 0 0 0 0 0 0 Isolation to 2021\$ E 0 0 0 0 0 Labor 37 23 17 4 0 0 Non-Labor 8 78 84 43 0 NSE 0 0 0 0 0 0 FTE 0.0 0.0 0.0 0.0 0.0 0.0 0.0 FTE 0.0 0.0 0.0 0.0 <td>NSE</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td>	NSE	0	0	0	0	0
Vacation & Sick (Nominal \$) 0.0 0.0 0.0 0.0 Labor 16 13 13 4 4 Non-Labor 0 0 0 0 0 NSE 0 0 0 0 0 Total 16 13 13 4 4 FTE 0.2 0.1 0.1 0.0 0.0 Escalation to 2021\$ 1 0.1 0.0 0.0 Labor 37 23 17 4 0 Non-Labor 8 78 84 43 0 NSE 0 0 0 0 0 0 NSE 0 0 0 0 0 0 0 FTE 0.0 0.0 0.0 0.0 0.0 0.0 0 FTE 0.0 0.0 0.0 0.0 0.0 0.0 0 Labor 146		117	370	470	309	195
Labor 16 13 13 4 4 Non-Labor 0 0 0 0 0 0 NSE 0 0 0 0 0 0 0 0 Total 16 13 13 4 4 FTE 0.2 0.1 0.1 0.0 0.0 Escalation to 2021\$ 17 4 0 Labor 37 23 17 4 0 Non-Labor 8 78 84 43 0 NSE 0 0 0 0 0 0 0 FTE 0.0 0.0 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Constant 2021\$) U U 97 32 29 170 NSE 0 0 0 0 0 0 0 0 NSE 0 0 0	FTE	0.9	0.7	0.6	0.2	0.2
Non-Labor 0		\$)				
NSE 0		16	13	13	4	4
Total 16 13 13 4 4 FTE 0.2 0.1 0.1 0.0 0.0 Escalation to 2021\$		0	0	0	0	0
FTE 0.2 0.1 0.1 0.0 0.0 Escalation to 2021\$ Labor 37 23 17 4 0 Non-Labor 8 78 84 43 0 NSE 0 0 0 0 0 0 Total 45 101 100 47 0 0 0 FTE 0.0 0.0 0.0 0.0 0.0 0.0 0 0 NSE 0	NSE	0	0	0	0	0
Escalation to 2021\$ Information Information <thinformation< td="" th<=""><td></td><td>16</td><td>13</td><td>13</td><td>4</td><td>4</td></thinformation<>		16	13	13	4	4
Labor 37 23 17 4 0 Non-Labor 8 78 84 43 0 NSE 0 0 0 0 0 0 Total 45 101 100 47 0 FTE 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Constant 2021\$) U U 100 97 32 29 Non-Labor 31 373 486 328 170 NSE 0 0 0 0 0 0 NSE 0 0 0 0 0 0 NSE 0 0 0 0 0 0 NSE 0 0 0 0 0 0 0 Total 178 484 583 360 200	FTE	0.2	0.1	0.1	0.0	0.0
Non-Labor 8 78 84 43 0 NSE 0	Escalation to 2021\$					
NSE 0		37	23	17	4	0
Total 45 101 100 47 0 FTE 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Constant 2021\$) Labor 146 110 97 32 29 Non-Labor 31 373 486 328 170 NSE 0 0 0 0 0 0 Total 178 484 583 360 200		8	78	84	43	0
FTE 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Constant 2021\$) Labor 146 110 97 32 29 Non-Labor 31 373 486 328 170 NSE 0 0 0 0 0 0 0 0 0 200		0	0	0	0	0
Recorded-Adjusted (Constant 2021\$) 0.0 0.0 0.0 0.0 0.0 Labor 146 110 97 32 29 Non-Labor 31 373 486 328 170 NSE 0 0 0 0 0 0 0 Total 178 484 583 360 200		45	101	100	47	0
Labor 146 110 97 32 29 Non-Labor 31 373 486 328 170 NSE 0 </td <td>FTE</td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td>0.0</td>	FTE	0.0	0.0	0.0	0.0	0.0
Non-Labor 31 373 486 328 170 NSE 0	Recorded-Adjusted (Cons	stant 2021\$)				
NSE 0	Labor	146	110	97	32	29
Total 178 484 583 360 200		31	373	486	328	170
	NSE	0	0	0	0	0
FTE 1.1 0.8 0.7 0.2 0.2		178	484	583	360	200
	FTE	1.1	0.8	0.7	0.2	0.2

* After company-wide exclusions of Non-GRC costs

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

Area:	GAS ENGINEERING
Witness:	Maria T. Martinez
Budget Code:	00617.0
Category:	B. Land Rights
Category-Sub:	1. Land Rights
Workpaper Group:	006170 - Land Rights

Summary of Adjustments to Recorded:

			In Nominal \$(00	0)		
	Years	2017	2018	2019	2020	2021
Labor		0	0	0	0	0
Non-Labor		0	0	0	-100,000	0
NSE		0	0	0	0	0
	Total	0	0	0	-100,000	0
FTE		0.0	0.0	0.0	0.0	0.0

Detail of Adjustments to Recorded in Nominal \$:

<u>Year</u>	Labor	<u>NLbr</u>	<u>NSE</u>	Total	FTE
2017 Total	0	0	0	0	0.0
2018 Total	0	0	0	0	0.0
2019 Total	0	0	0	0	0.0
2020	0	-100,000	0	-100,000	0.0
Explanation:	One time downward adjustmer MROWMA	t to remove non-labor	easement costs from	2020 in order to track	k/recover in
2020 Total	0	-100,000	0	-100,000	0.0
2021 Total	0	0	0	0	0.0

Beginning of Workpaper Sub Details for Workpaper Group 006170

Area:	GAS ENGINEERING
Witness:	Maria T. Martinez
Budget Code:	00617.0
Category:	B. Land Rights
Category-Sub:	1. Land Rights
Workpaper Group:	006170 - Land Rights
Workpaper Detail:	006170.001 - Acquisition of land rights

In-Service Date: Not Applicable

Description:

BC 617 activities include the acquisition of land or land rights interests necessary to allow for the access, construction, operation, and maintenance of pipeline infrastructure on public and private properties.

Forecast In 2021 \$(000)						
Years 2022 2023 2024						
Labor		83	83	83		
Non-Labor		1,278	278	2,978		
NSE		0	0	0		
	Total	1,361	361	3,061		
FTE		0.6	0.6	0.6		

Area:	GAS ENGINEERING
Witness:	Maria T. Martinez
Category:	C. Supervision and Engineering Overhead Pool
Workpaper:	009080

Summary for Category: C. Supervision and Engineering Overhead Pool

	In 2021\$ (000)						
	Adjusted-Recorded		Adjusted-Forecast				
	2021	2022 2023 2024					
Labor	12,525	10,746	10,746	10,746			
Non-Labor	6,938	5,153	5,153	8,153			
NSE	0	0	0	0			
Total	19,463	15,899	15,899	18,899			
FTE	114.3	90.3	90.3	90.3			

009080 Supervision and Engineering Overhead Pool

Labor	12,525	10,746	10,746	10,746
Non-Labor	6,938	5,153	5,153	8,153
NSE	0	0	0	0
Total	19,463	15,899	15,899	18,899
FTE	114.3	90.3	90.3	90.3

Beginning of Workpaper Group 009080 - Supervision and Engineering Overhead Pool

Area:	GAS ENGINEERING
Witness:	Maria T. Martinez
Budget Code:	00908.0
Category:	C. Supervision and Engineering Overhead Pool
Category-Sub:	1. Supervision and Engineering Overhead Pool
Workpaper Group:	009080 - Supervision and Engineering Overhead Pool

Summary of Results (Constant 2021 \$ in 000s):

Forecast I	Method		Adjusted Recorded						Adjusted Forecast		
Years	S	2017 2018 2019 2020 2021			2022	2023	2024				
Labor	3-YR Average	5,223	6,504	8,037	11,676	12,525	10,746	10,746	10,746		
Non-Labor	3-YR Average	1,031	1,729	2,890	5,632	6,938	5,153	5,153	8,153		
NSE	3-YR Average	0	0	0	0	0	0	0	0		
Tota	I	6,254	8,233	10,927	17,308	19,463	15,899	15,899	18,899		
FTE	3-YR Average	37.1	48.2	62.7	93.8	114.3	90.3	90.3	90.3		

Business Purpose:

This Capital Budget Code 908 provides a pool for overhead charges that will be reassigned to the various budget categories on a direct basis. Charges reside in this Budget Category temporarily and are reassigned on a monthly basis.

Physical Description:

Supervision and Engineering Overhead charges stemming from labor spend on Capital projects and reassigned to Capital budget categories specific to Gas Transmission projects.

Project Justification:

Continues an established accounting procedure for making charges to overheads on a direct basis to Gas Transmission's budget categories.

Area:	GAS ENGINEERING
Witness:	Maria T. Martinez
Budget Code:	00908.0
Category:	C. Supervision and Engineering Overhead Pool
Category-Sub:	1. Supervision and Engineering Overhead Pool
Workpaper Group:	009080 - Supervision and Engineering Overhead Pool

Forecast Methodology:

Labor - 3-YR Average

The forecast was developed using the 3 year average method to capture labor expense requirements for this cost category. This method is most appropriate because the historical data indicates that activities and number of capital projects in scope of SoCalGas and staffing levels have been steadily increasing. This method along with an adjustment in 2024 is most appropriate to reflect future needs and the settling of the cost related to the Construction organization that began in 2020.

Non-Labor - 3-YR Average

The forecast was developed using the 3 year average method to capture non-labor expense requirements for this cost category. This method is most appropriate because the historical data indicates that activities and number of capital projects in scope of SoCalGas and staffing levels have been steadily increasing. This method along with an adjustment in 2024 is most appropriate to reflect future needs and the settling of the cost related to the Construction organization that began in 2020.

NSE - 3-YR Average

There are no non-standard escalation expenses in this workpaper.

Area:	GAS ENGINEERING
Witness:	Maria T. Martinez
Budget Code:	00908.0
Category:	C. Supervision and Engineering Overhead Pool
Category-Sub:	1. Supervision and Engineering Overhead Pool
Workpaper Group:	009080 - Supervision and Engineering Overhead Pool

Summary of Adjustments to Forecast

In 2021 \$ (000)										
Forecast Method Base Forecast			For	Forecast Adjustments			Adjusted-Forecast			
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	3-YR Average	10,746	10,746	10,746	0	0	0	10,746	10,746	10,746
Non-Labor	3-YR Average	5,153	5,153	5,153	0	0	3,000	5,153	5,153	8,153
NSE	3-YR Average	0	0	0	0	0	0	0	0	0
Total	l	15,899	15,899	15,899	0	0	3,000	15,899	15,899	18,899
FTE	3-YR Average	90.3	90.3	90.3	0.0	0.0	0.0	90.3	90.3	90.3

Forecast Adjustment Details

Year		<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>
2022 To	otal	0	0	0	0	0.0
2023 To	otal	0	0	0	0	0.0
2024		0	3,000	0	3,000	0.0
Explanation:	Upward adjustment t infrastructure project		on-labor consultant cos	ts to address incre	eased volume of capit	tal
2024 To	otal	0	3,000	0	3,000	0.0

Area:	GAS ENGINEERING
Witness:	Maria T. Martinez
Budget Code:	00908.0
Category:	C. Supervision and Engineering Overhead Pool
Category-Sub:	1. Supervision and Engineering Overhead Pool
Workpaper Group:	009080 - Supervision and Engineering Overhead Pool

Determination of Adjusted-Recorded:

2017 (\$000) 2018 (\$000) 2019 (\$000) 2020 (\$000) Recorded (Nominal \$)*	2021 (\$000) 10,646 6,938 0 17,584 96.2 0 0 0 0 0 0 0 0 0 0 0 0 0
Non-Labor 769 1,366 2,393 4,896 NSE 0 0 0 0 0 Total 4,102 5,752 7,987 13,525 FTE 31.5 40.9 52.5 78.5 Adjustments (Nominal \$) ** Labor 0 0 0 0 Labor 0 0 0 0 0 0 NSE 0 0 0 0 0 0 Non-Labor 0 0 0 0 0 0 NSE 0 0 0 0 0 0 FTE 0.0 0.0 0.0 0.0 0 Labor 3,333 4,385 5,594 8,630 Non-Labor 769 1,366 2,393 4,896 NSE 0 0 0 0 Total 4,102 5,752 7,987 13,525 FTE 31.5	6,938 0 17,584 96.2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
NSE 0 0 0 0 0 Total 4,102 5,752 7,987 13,525 FTE 31.5 40.9 52.5 78.5 Adjustments (Nominal \$) ** Labor 0 0 0 0 Labor 0 0 0 0 0 NSE 0 0 0 0 0 FTE 0.0 0.0 0.0 0.0 0 Labor 3,333 4,385 5,594 8,630 Non-Labor 769 1,366 2,393 4,896 NSE 0 0 0 0 0 FTE 31.5 40.9 52.5 78.5 </td <td>0 17,584 96.2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0</td>	0 17,584 96.2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
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FTE 31.5 40.9 52.5 78.5 Adjustments (Nominal \$) **	96.2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Adjustments (Nominal \$) **	0 0 0 0 0.0 10,646 6,938 0
Labor 0 0 0 0 0 Non-Labor 0 0 0 0 0 NSE 0 0 0 0 0 0 Total 0 0 0 0 0 0 0 FTE 0.0 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Nominal \$) I Labor 3,333 4,385 5,594 8,630 Non-Labor 769 1,366 2,393 4,896 0 0 0 NSE 0 0 0 0 0 0 0 0 0 Vacation & Sick (Nominal \$) I Labor 565 755 1,061 1,521 Non-Labor 0 0 0 0 0 0 0 NSE 0 0 0 0 0 0 0 0 0 Labor 565 755 <	0 0 0.0 10,646 6,938 0
Non-Labor 0 0 0 0 0 NSE 0 0 0 0 0 0 Total 0 0 0 0 0 0 0 FTE 0.0 0.0 0.0 0.0 0.0 0.0 Recorded-Adjusted (Nominal \$) U U U U 0 0 0 0 0 0 Labor 3,333 4,385 5,594 8,630 0	0 0 0.0 10,646 6,938 0
NSE 0	0 0.0 10,646 6,938 0
Total 0 <td>0 0.0 10,646 6,938 0</td>	0 0.0 10,646 6,938 0
FTE 0.0 0.0 0.0 0.0 Recorded-Adjusted (Nominal \$)	0.0 10,646 6,938 0
Recorded-Adjusted (Nominal \$) Image: constraint of the c	10,646 6,938 0
Labor 3,333 4,385 5,594 8,630 Non-Labor 769 1,366 2,393 4,896 NSE 0 0 0 0 Total 4,102 5,752 7,987 13,525 FTE 31.5 40.9 52.5 78.5 Vacation & Sick (Nominal \$) Use Use Use Use Labor 565 755 1,061 1,521 Non-Labor 0 0 0 0 Vacation & Sick (Nominal \$) Use Use Use Use Labor 565 755 1,061 1,521 Non-Labor 0 0 0 0 NSE 0 0 0 0 Total 565 755 1,061 1,521 FTE 5.6 7.3 10.2 15.3 Escalation to 2021\$ Use Use Use Use	6,938 0
Non-Labor 769 1,366 2,393 4,896 NSE 0 <td>6,938 0</td>	6,938 0
NSE 0 13,525 78.5	0
Total 4,102 5,752 7,987 13,525 FTE 31.5 40.9 52.5 78.5 Vacation & Sick (Nominal \$) 200 0 </td <td></td>	
FTE 31.5 40.9 52.5 78.5 Vacation & Sick (Nominal \$) Labor 565 755 1,061 1,521 Non-Labor 0 0 0 0 NSE 0 0 0 0 Total 565 755 1,061 1,521 FTE 5.6 7.3 10.2 15.3	17 58/
Vacation & Sick (Nominal \$) 10.0 0 10.0 Labor 565 755 1,061 1,521 Non-Labor 0 0 0 0 NSE 0 0 0 0 Total 565 755 1,061 1,521 FTE 5.6 7.3 10.2 15.3	17,004
Labor 565 755 1,061 1,521 Non-Labor 0 0 0 0 NSE 0 0 0 0 Total 565 755 1,061 1,521 FTE 5.6 755 1,061 1,521 Escalation to 2021\$ Escalation to 2021\$	96.2
Non-Labor 0 0 0 0 0 NSE 0 <th< td=""><td></td></th<>	
NSE 0	1,879
Total 565 755 1,061 1,521 FTE 5.6 7.3 10.2 15.3 Escalation to 2021\$ 5.6 5.6 10.2 15.3	0
FTE 5.6 7.3 10.2 15.3 Escalation to 2021\$	0
Escalation to 2021\$	1,879
	18.1
Labor 1,326 1,364 1,382 1,526	
	0
Non-Labor 262 363 497 736	0
NSE <u>0 0 0</u> <u>0</u>	0
Total 1,587 1,726 1,879 2,262	0
FTE 0.0 0.0 0.0 0.0	0.0
Recorded-Adjusted (Constant 2021\$)	
Labor 5,223 6,504 8,037 11,676	12,525
Non-Labor 1,031 1,729 2,890 5,632	6,938
NSE <u>0</u> <u>0</u> <u>0</u>	0
Total 6,254 8,233 10,927 17,308	19,463
FTE 37.1 48.2 62.7 93.8	10,400

* After company-wide exclusions of Non-GRC costs

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

Area:	GAS ENGINEERING
Witness:	Maria T. Martinez
Budget Code:	00908.0
Category:	C. Supervision and Engineering Overhead Pool
Category-Sub:	1. Supervision and Engineering Overhead Pool
Workpaper Group:	009080 - Supervision and Engineering Overhead Pool

Summary of Adjustments to Recorded:

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

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

Beginning of Workpaper Sub Details for Workpaper Group 009080

Area:	GAS ENGINEERING
Witness:	Maria T. Martinez
Budget Code:	00908.0
Category:	C. Supervision and Engineering Overhead Pool
Category-Sub:	1. Supervision and Engineering Overhead Pool
Workpaper Group:	009080 - Supervision and Engineering Overhead Pool
Workpaper Detail:	009080.001 - Supervision and Engineering Overhead Pool
	1 0 0

In-Service Date: Not Applicable

Description:

Capital Expenditures that will be reassigned to the various budget categories on a direct basis. Charges reside in this budget category temporarily and are reassigned on a monthly basis.

Forecast In 2021 \$(000)					
	Years	2022	2023	2024	
Labor		10,746	10,746	10,746	
Non-Labor		5,153	5,153	8,153	
NSE		0	0	0	
	Total	15,899	15,899	18,899	
FTE		90.3	90.3	90.3	