

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-14-WP-R)

REVISED WORKPAPERS TO  
PREPARED DIRECT TESTIMONY  
OF DANIEL J. RENDLER  
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-14-WP-R - CS - FIELD & ADVANCED METER OPERATIONS**

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**Overall Summary For Exhibit No. SCG-14-WP-R**

<b>Area:</b>	<b>CS - FIELD &amp; ADVANCED METER OPERATIONS</b>
<b>Witness:</b>	<b>Daniel J. Rendler</b>

Description	In 2021 \$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
<b>Non-Shared Services</b>	178,545	181,486	210,059	209,715
<b>Shared Services</b>	1,393	1,393	1,583	1,618
<b>Total</b>	<b>179,938</b>	<b>182,879</b>	<b>211,642</b>	<b>211,333</b>

*Note: Totals may include rounding differences.*

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler

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

Description	In 2021 \$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
A. Customer Services Field	178,545	181,486	210,059	209,715
<b>Total</b>	<b>178,545</b>	<b>181,486</b>	<b>210,059</b>	<b>209,715</b>

*Note: Totals may include rounding differences.*

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
Witness: Daniel J. Rendler  
Category: A. Customer Services Field  
Workpaper: VARIOUS

**Summary for Category: A. Customer Services Field**

	In 2021\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	166,280	169,002	192,538	191,511
Non-Labor	12,263	12,482	17,519	18,202
NSE	0	0	0	0
<b>Total</b>	<b>178,543</b>	<b>181,484</b>	<b>210,057</b>	<b>209,713</b>
FTE	1,735.3	1,757.5	1,998.1	1,976.4

**Workpapers belonging to this Category:**

**2FC001.000 Customer Services - Operations**

Labor	99,692	101,465	122,742	121,532
Non-Labor	6,431	6,469	7,825	7,689
NSE	0	0	0	0
<b>Total</b>	<b>106,123</b>	<b>107,934</b>	<b>130,567</b>	<b>129,221</b>
FTE	1,040.8	1,047.6	1,267.2	1,245.2

**2FC002.000 Customer Services - Supervision**

Labor	11,407	9,603	11,617	11,502
Non-Labor	599	506	613	602
NSE	0	0	0	0
<b>Total</b>	<b>12,006</b>	<b>10,109</b>	<b>12,230</b>	<b>12,104</b>
FTE	103.3	87.3	105.6	103.8

**2FC003.000 Customer Services - Support**

Labor	12,161	13,695	13,797	13,797
Non-Labor	545	588	588	588
NSE	0	0	0	0
<b>Total</b>	<b>12,706</b>	<b>14,283</b>	<b>14,385</b>	<b>14,385</b>
FTE	114.0	131.9	133.1	133.1

**2FC004.000 Customer Services - Dispatch**

Labor	13,922	13,922	13,922	13,922
Non-Labor	144	169	169	169
NSE	0	0	0	0
<b>Total</b>	<b>14,066</b>	<b>14,091</b>	<b>14,091</b>	<b>14,091</b>
FTE	127.9	127.9	127.9	127.9

**2FC005.000 Customer Services - MSA Inspection Program**

Labor	24,756	25,147	25,147	25,147
Non-Labor	563	563	563	563
NSE	0	0	0	0
<b>Total</b>	<b>25,319</b>	<b>25,710</b>	<b>25,710</b>	<b>25,710</b>
FTE	310.9	315.5	315.5	315.5

Note: Totals may include rounding differences.

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Workpaper: VARIOUS

In 2021\$ (000) Incurred Costs			
Adjusted-Recorded	Adjusted-Forecast		
2021	2022	2023	2024

**2FC006.000 Customer Services - Advanced Meter Operations**

Labor	4,342	5,170	5,313	5,611
Non-Labor	3,981	4,187	7,761	8,591
NSE	0	0	0	0
<b>Total</b>	<b>8,323</b>	<b>9,357</b>	<b>13,074</b>	<b>14,202</b>
FTE	38.4	47.3	48.8	50.9

*Note: Totals may include rounding differences.*

**Beginning of Workpaper**  
**2FC001.000 - Customer Services - Operations**

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
Witness: Daniel J. Rendler  
Category: A. Customer Services Field  
Category-Sub: 1. Customer Services Field  
Workpaper: 2FC001.000 - Customer Services - Operations

**Activity Description:**

The CSF Operations cost category consists of labor and non-labor expenses for field technicians to provide service at customer premises, including both customer and company-generated work orders. Examples of customer-generated work orders include requests to establish/ disconnect gas service, light gas pilots, check gas appliances, shut off and restore gas service for fumigation, investigate the potential causes of high gas bills, respond to emergency incidents, investigate potential gas leaks, and other services. Examples of company-generated work orders include orders to maintain or replace company assets, such as meters and regulators, and collecting customer payments for delinquent bills.

**Forecast Explanations:**

**Labor - Base YR Rec**

BY 2021 was selected as a starting point for the forecast. Using three, four and five year averages would not be an appropriate starting point as the Advanced Meter Infrastructure (AMI) system was put into place in 2019. AMI greatly decreased certain types of fielded orders as did the COVID-19 pandemic in 2020 and 2021.

CSF Operations costs are primarily driven by work order volumes. The COVID-19 pandemic affected multiple order types in 2020 and 2021. Both internal and external forces made these years unusual and not representative for forecasting TY 2024. COVID-19-impacted orders were forecasted using 2019 historical order volumes. Non-COVID-19-impacted orders were forecasted using BY 2021 historical order volumes.

Internally, some processes were temporarily modified or issued to support COVID-19 measures for social distancing and unnecessary contact. Externally, some orders were impacted by policy decisions, such as a moratorium on collection activity and disconnections, and by customers, who may not have called SoCalGas for routine service during the pandemic. As a result, 2020-21 activity was not included as part of SoCalGas's historically based forecast for some order types.

The Advanced Meter Infrastructure (AMI) allows certain customer transactions to be completed without making a field visit. The AMI system was put into place by 2019 and SoCalGas does not anticipate any further reduction in AMI impacted order volumes.

Please refer to SCG-14-WP-2FC001 CSF Operations Supplemental Workpaper 1 for calculation details of the Order Volume Based Costs.

**Non-Labor - Base YR Rec**

Non-labor costs include items such as uniform expenses, small tools and miscellaneous supplies used on the job. Non-labor cost is calculated by multiplying the non-labor cost per FTE by the forecasted number of FTEs. Please refer to SCG-14-WP-2FC001 CSF Operations Supplemental Workpaper 1, Customer Services Field Operations Order Volume Based Cost Model

**NSE - Base YR Rec**

NA

*Note: Totals may include rounding differences.*



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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC001.000 - Customer Services - Operations

**Summary of Results:**

		<b>In 2021\$ (000) Incurred Costs</b>								
		<b>Adjusted-Recorded</b>					<b>Adjusted-Forecast</b>			
<b>Years</b>		<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>	<b>2024</b>	
Labor		120,528	114,083	118,097	102,067	99,692	101,465	122,742	121,532	
Non-Labor		7,745	7,013	7,760	7,165	6,431	6,470	7,826	7,690	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>128,274</b>	<b>121,097</b>	<b>125,857</b>	<b>109,232</b>	<b>106,124</b>	<b>107,935</b>	<b>130,568</b>	<b>129,222</b>	
FTE		1,316.0	1,195.1	1,223.8	1,058.5	1,040.8	1,047.6	1,267.2	1,245.2	

*Note: Totals may include rounding differences.*

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
Witness: Daniel J. Rendler  
Category: A. Customer Services Field  
Category-Sub: 1. Customer Services Field  
Workpaper: 2FC001.000 - Customer Services - Operations

**Summary of Adjustments to Forecast:**

In 2021 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	Base YR Rec	99,692	99,692	99,692	1,773	23,050	21,840	101,465	122,742	121,532
Non-Labor	Base YR Rec	6,431	6,431	6,431	38	1,394	1,258	6,469	7,825	7,689
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>106,124</b>	<b>106,124</b>	<b>106,124</b>	<b>1,811</b>	<b>24,444</b>	<b>23,098</b>	<b>107,935</b>	<b>130,568</b>	<b>129,222</b>
FTE	Base YR Rec	1,040.8	1,040.8	1,040.8	6.8	226.4	204.4	1,047.6	1,267.2	1,245.2

**Forecast Adjustment Details:**

Year	Labor	NLbr	NSE	Total	FTE	Adj Type
2022	0	60	0	60	0.0	1-Sided Adj
<b>Explanation:</b>	Adjustment for Personal Protective Equipment (PPE) based on CS Operations Order Forecast Model. Please refer to SCG-14-WP-2FC001 CSF Operations Supplemental Workpaper 2 and Supplemental Workpaper 3 for calculations.					
2022	352	23	0	375	4.3	1-Sided Adj
<b>Explanation:</b>	Adjustment for CS Field Training based on CS Operations Order Forecast Model. Please refer to SCG-14-WP-2FC001 CSF Operations Supplemental Workpaper 2 and Supplemental Workpaper 3 for calculations.					
2022	5,090	293	0	5,383	54.7	1-Sided Adj
<b>Explanation:</b>	Safety Related Orders Adjustment based on CS Operations Order Forecast Model. Please refer to SCG-14-WP-2FC001 CSF Operations Supplemental Workpaper 2 and Supplemental Workpaper 3 for calculations.					
2022	-3,669	-338	0	-4,007	-52.2	1-Sided Adj
<b>Explanation:</b>	Non-RAMP Adjustment based on CS Operations Order Forecast Model. Please refer to SCG-14-WP-2FC001 CSF Operations Supplemental Workpaper 2 and Supplemental Workpaper 3 for calculations.					
<b>2022 Total</b>		<b>1,773</b>	<b>38</b>	<b>0</b>	<b>1,811</b>	<b>6.8</b>
2023	0	175	0	175	0.0	1-Sided Adj
<b>Explanation:</b>	Adjustment for Personal Protective Equipment (PPE) based on CS Operations Order Forecast Model. Please refer to SCG-14-WP-2FC001 CSF Operations Supplemental Workpaper 2 and Supplemental Workpaper 3 for calculations.					
2023	1,550	101	0	1,651	18.2	1-Sided Adj
<b>Explanation:</b>	Adjustment for CS Field Training based on CS Operations Order Forecast Model. Please refer to SCG-14-WP-2FC001 CSF Operations Supplemental Workpaper 2 and Supplemental Workpaper 3 for calculations.					
2023	13,687	791	0	14,478	142.8	1-Sided Adj

Note: Totals may include rounding differences.

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC001.000 - Customer Services - Operations

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj_Type</u>
<b>Explanation:</b>	Safety Related Orders Adjustment based on CS Operations Order Forecast Model . Please refer to SCG-14-WP-2FC001 CSF Operations Supplemental Workpaper 2 and Supplemental Workpaper 3 for calculations.					
2023	7,813	327	0	8,140	65.4	1-Sided Adj
<b>Explanation:</b>	Non-RAMP Adjustment based on CS Operations Order Forecast Model. Please refer to SCG-14-WP-2FC001 CSF Operations Supplemental Workpaper 2 and Supplemental Workpaper 3 for calculations.					
<b>2023 Total</b>	<b>23,050</b>	<b>1,394</b>	<b>0</b>	<b>24,444</b>	<b>226.4</b>	
2024	0	163	0	163	0.0	1-Sided Adj
<b>Explanation:</b>	Adjustment for Personal Protective Equipment (PPE) based on CS Operations Order Forecast Model. Please refer to SCG-14-WP-2FC001 CSF Operations Supplemental Workpaper 2 and Supplemental Workpaper 3 for calculations.					
2024	1,482	93	0	1,575	16.8	1-Sided Adj
<b>Explanation:</b>	Adjustment for CS Field Training based on CS Operations Order Forecast Model . Please refer to SCG-14-WP-2FC001 CSF Operations Supplemental Workpaper 2 and Supplemental Workpaper 3 for calculations.					
2024	13,903	769	0	14,672	138.9	1-Sided Adj
<b>Explanation:</b>	Safety Related Orders Adjustment based on CS Operations Order Forecast Model . Please refer to SCG-14-WP-2FC001 CSF Operations Supplemental Workpaper 2 and Supplemental Workpaper 3 for calculations.					
2024	6,455	233	0	6,688	48.7	1-Sided Adj
<b>Explanation:</b>	Non-RAMP Adjustment based on CS Operations Order Forecast Model. Please refer to SCG-14-WP-2FC001 CSF Operations Supplemental Workpaper 2 and Supplemental Workpaper 3 for calculations.					
<b>2024 Total</b>	<b>21,840</b>	<b>1,258</b>	<b>0</b>	<b>23,098</b>	<b>204.4</b>	

Note: Totals may include rounding differences.

SCG/CS - FIELD & ADVANCED METER OPERATIONS/Exh No:SCG-14-WP-R/Witness: D. Rendler

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
Witness: Daniel J. Rendler  
Category: A. Customer Services Field  
Category-Sub: 1. Customer Services Field  
Workpaper: 2FC001.000 - Customer Services - Operations

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

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	91,804	90,469	94,064	87,874	86,563
Non-Labor	6,889	6,488	7,240	7,525	7,209
NSE	0	0	0	0	0
<b>Total</b>	<b>98,693</b>	<b>96,957</b>	<b>101,304</b>	<b>95,399</b>	<b>93,771</b>
FTE	1,107.2	1,019.4	1,025.8	923.4	897.4
<b>Adjustments (Nominal \$) **</b>					
Labor	610	-786	-61	-3,604	-1,827
Non-Labor	-7	-58	-1	-869	-777
NSE	0	0	0	0	0
<b>Total</b>	<b>603</b>	<b>-845</b>	<b>-62</b>	<b>-4,473</b>	<b>-2,604</b>
FTE	10.7	-6.6	-0.9	-38.8	-21.6
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	92,414	89,682	94,003	84,269	84,736
Non-Labor	6,882	6,430	7,239	6,656	6,431
NSE	0	0	0	0	0
<b>Total</b>	<b>99,296</b>	<b>96,112</b>	<b>101,242</b>	<b>90,926</b>	<b>91,168</b>
FTE	1,117.9	1,012.8	1,024.9	884.6	875.8
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	15,664	15,434	17,823	14,848	14,956
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>15,664</b>	<b>15,434</b>	<b>17,823</b>	<b>14,848</b>	<b>14,956</b>
FTE	198.1	182.3	198.9	173.9	165.0
<b>Escalation to 2021\$</b>					
Labor	12,451	8,967	6,271	2,950	0
Non-Labor	863	583	521	509	0
NSE	0	0	0	0	0
<b>Total</b>	<b>13,313</b>	<b>9,550</b>	<b>6,792</b>	<b>3,458</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2021\$)</b>					
Labor	120,528	114,083	118,097	102,067	99,692
Non-Labor	7,745	7,013	7,760	7,165	6,431
NSE	0	0	0	0	0
<b>Total</b>	<b>128,274</b>	<b>121,097</b>	<b>125,857</b>	<b>109,232</b>	<b>106,124</b>
FTE	1,316.0	1,195.1	1,223.8	1,058.5	1,040.8

\* 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.

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
Witness: Daniel J. Rendler  
Category: A. Customer Services Field  
Category-Sub: 1. Customer Services Field  
Workpaper: 2FC001.000 - Customer Services - Operations

**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs					
Years	2017	2018	2019	2020	2021
Labor	610	-786	-61	-3,604	-1,827
Non-Labor	-7	-58	-0.722	-869	-777
NSE	0	0	0	0	0
<b>Total</b>	<b>603</b>	<b>-845</b>	<b>-62</b>	<b>-4,473</b>	<b>-2,604</b>
FTE	10.7	-6.6	-0.9	-38.8	-21.6

**Detail of Adjustments to Recorded:**

Year	Labor	NLbr	NSE	FTE	Adj Type
2017	-48	-3	0	-0.4	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	-1	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	-2	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	276	0	0	4.7	CCTR Transf From 2200-0506.000
<b>Explanation:</b>	Transfer CS Operations labor and/or non-labor expense associated with CCTR 2200-0506 from CS Dispatch Workpaper to CS Operations CCTR 2200-0449 in order to align historical costs with the workgroup in which the activity has been performed.				
2017	587	0	0	8.7	CCTR Transf From 2200-0551.000
<b>Explanation:</b>	Transfer of labor and non-labor expenses associated with CS represented field employees to CS Field Operations CCTRs from CS Supervision workpaper in order to align historical costs with the workgroup in which the activity has been performed.				
2017	-3	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	0	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	-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).				

*Note: Totals may include rounding differences.*

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC001.000 - Customer Services - Operations

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
2017	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	-14	-1	0	-0.1	CCTR Transf To 2200-2571.000
<b>Explanation:</b>	Transfer Meter Set Assembly Inspection (MSAI) labor and non-labor expense associated with IO FG893222200 & FG893232200 from CS Operations CCTRs to MSAI CCTR 2200-2571 in order to align historical costs with the workgroup in which the activity has been performed.				
2017	-182	-3	0	-1.7	CCTR Transf To 2200-0514.000
<b>Explanation:</b>	Transfer of labor and non-labor expenses associated with CS management, clerical and administrative employees from CS Field Operations CCTRs to CS Support workpaper in order to align historical costs with the workgroup in which the activity has been performed.				
<b>2017 Total</b>	<b>610</b>	<b>-7</b>	<b>0</b>	<b>10.7</b>	
2018	-6	-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).				
2018	-6	-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).				
2018	-7	-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).				
2018	-12	-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).				
2018	-7	-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).				
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	-20	-2	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	-9	-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).				

Note: Totals may include rounding differences.

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC001.000 - Customer Services - Operations

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
2018	-21	-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).				
2018	-19	-2	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	-62	-1	0	-0.4	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	-47	-18	0	-0.3	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	-33	-1	0	-0.2	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	-33	-2	0	-0.2	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	-17	-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).				
2018	-25	-1	0	-0.2	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	-31	-1	0	-0.2	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	-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	-17	-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).				
2018	-6	-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).				

Note: Totals may include rounding differences.

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC001.000 - Customer Services - Operations

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
2018	-7	-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).				
2018	-6	-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).				
2018	-6	-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).				
2018	-6	-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).				
2018	-6	-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).				
2018	-23	-2	0	-0.2	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	-19	-2	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	-14	-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).				
2018	-21	-1	0	-0.2	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	-24	-1	0	-0.2	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	-58	-2	0	-0.4	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	-13	-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).				

Note: Totals may include rounding differences.



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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC001.000 - Customer Services - Operations

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
2018	-21	-1	0	-0.2	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	-61	-2	0	-0.4	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	-4	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	-23	-2	0	-0.2	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	-2	-1	0	-0.1	CCTR Transf To 2200-2571.000
<b>Explanation:</b>	Transfer MSAI labor and non-labor expense from associated with IO FG893222200 & FG893232200 from CS Operations CCTRs to MSAI CCTR 2200-2571 in order to align historical costs with the workgroup in which the activity has been performed.				
2018	-87	-3	0	-0.9	CCTR Transf To 2200-0514.000
<b>Explanation:</b>	Transfer of labor and non-labor expenses associated with CS management, clerical/District Operations Clerks (DOCs) and administrative employees from CS Field Operations CCTRs to CS Support workpaper in order to align historical costs with the workgroup in which the activity has been performed.				
<b>2018 Total</b>	<b>-786</b>	<b>-58</b>	<b>0</b>	<b>-6.6</b>	
2019	0	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2019	0	1	0	0.0	CCTR Transf From 2200-0942.000
<b>Explanation:</b>	Transfer non-labor from Staff Manager 2200-0942 associated with CSF Operations 2FC001 workpaper area.				
2019	0	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2019	0	0	0	0.0	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	0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2019	0	0	0	0.1	1-Sided Adj

Note: Totals may include rounding differences.

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC001.000 - Customer Services - Operations

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2019	-22	0	0	-0.2	CCTR Transf To 2200-2571.000
<b>Explanation:</b>	Transfer MSAI labor and non-labor expense associated with IO FG893222200 & FG893232200 from CS Operations CCTRs to MSAI CCTR 2200-2571 in order to align historical costs with the workgroup in which the activity has been performed.				
2019	-39	-1	0	-0.7	1-Sided Adj
<b>Explanation:</b>	Transfer of labor and non-labor expenses associated with CS management, clerical/DOCs and administrative employees from CS Field Operations CCTRs to CS Support workpaper in order to align historical costs with the workgroup in which the activity has been performed.				
<b>2019 Total</b>	<b>-61</b>	<b>-1</b>	<b>0</b>	<b>-0.9</b>	
2020	-23	-58	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-26	-36	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-11	-10	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 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	CCTR Transf From 2200-0506.000
<b>Explanation:</b>	Transfer CS Operations non-labor expense from CCTR 2200-0506 CS Dispatch Workpaper to CS Operations CCTR 2200-0449 in order to align historical costs with the workgroup in which the activity has been performed.				
2020	-23	-24	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-12	-12	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-18	-22	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-6	-4	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC001.000 - Customer Services - Operations

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
2020	-3	-4	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-14	-14	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-15	-26	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-10	-22	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-18	-25	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-24	-20	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-10	-9	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-11	-4	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-9	-16	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-17	-20	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-8	-9	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-17	-43	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 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: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC001.000 - Customer Services - Operations

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
2020	-11	-10	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-21	-23	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-15	-14	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-22	-27	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-11	-24	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-15	-28	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-21	-26	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-19	-14	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-17	-29	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-15	-18	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-28	-28	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-23	-16	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 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: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC001.000 - Customer Services - Operations

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
2020	-29	-21	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-15	-13	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-13	-21	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-18	-28	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-16	-17	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-22	-17	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-22	-20	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-26	-27	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-21	-21	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-16	-14	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-28	-11	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-12	-8	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
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 Workpaper: 2FC001.000 - Customer Services - Operations

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
2020	-4	1	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-22	-8	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-3	-2	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-2,769	-1	0	33.4	CCTR Transf To 2200-2571.000
<b>Explanation:</b>	Transfer MSAI labor and non-labor expense associated with IO FG893222200 & FG893232200 from CS Operations CCTRs to MSAI CCTR 2200-2571 in order to align historical costs with the workgroup in which the activity has been performed.				
2020	-71	-6	0	-0.7	CCTR Transf To 2200-0514.000
<b>Explanation:</b>	Transfer of labor and non-labor expenses associated with CS management, clerical/DOCs and administrative employees from CS Field Operations CCTRs to CS Support workpaper in order to align historical costs with the workgroup in which the activity has been performed.				
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				
<b>2020 Total</b>	<b>-3,604</b>	<b>-869</b>	<b>0</b>	<b>-38.8</b>	
2021	0	-22	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-38	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	-1	0	0	-0.1	CCTR Transf From 2200-2296.001
<b>Explanation:</b>	Transfer in from CSFC for DIMP CPD orders.				
2021	0	-17	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-11	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-12	0	0.0	1-Sided Adj

Note: Totals may include rounding differences.

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC001.000 - Customer Services - Operations

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	2	0	0	0.1	CCTR Transf From 2200-2567.000
<b>Explanation:</b>	Transfer Labor expenses from MSAI 2FC005 to Operations 2FC001 to align historical costs with the workgroup in which the activity was performed.				
2021	0	-17	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 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-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-5	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-18	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-21	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	-1	-17	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-21	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-16	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-6	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-6	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-9	0	0.0	1-Sided Adj

Note: Totals may include rounding differences.

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC001.000 - Customer Services - Operations

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-11	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-11	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-35	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-9	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-24	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-18	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-30	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-15	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-20	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-14	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-17	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-14	0	0.0	1-Sided Adj

Note: Totals may include rounding differences.



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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC001.000 - Customer Services - Operations

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-20	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-26	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-20	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-26	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-21	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-12	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-38	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-18	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-23	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-15	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-22	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-28	0	0.0	1-Sided Adj

Note: Totals may include rounding differences.

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC001.000 - Customer Services - Operations

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-10	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-7	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-7	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-9	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-9	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 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-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	-1,826	0	0	.21.3	CCTR Transf To 2200-2567.000
<b>Explanation:</b>	Transfer Labor & Non-Labor expenses from Operations 2FC001 to MSAI 2FC005 to align historical costs with the workgroup in which the activity was performed.				
<b>2021 Total</b>	<b>-1,827</b>	<b>-777</b>	<b>0</b>	<b>.21.6</b>	

Note: Totals may include rounding differences.

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC001.000 - Customer Services - Operations

**RAMP Item # 1**

**RAMP Activity**

RAMP Chapter: SCG-Risk-3 Incident Related to the Medium Pressure System (Excluding Dig-in)

RAMP Line Item ID: C31

RAMP Line Item Name: Personal Protective Equipment (PPE)

Tranche(/s): Tranche1: Meter and Beyond the Meter

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

	2021 Historical Embedded Cost (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2024 RAMP Range (2020 Incurred \$)	
					Low	High
Tranche 1 Cost Estimate	488	547	663	651	160	193

**Cost Estimate Changes from RAMP:**

The TY 2024 GRC forecasted dollars is greater than the 2021 RAMP filing low/high threshold. The RAMP filing did not include uniform costs. The GRC forecast includes all uniform costs and recognized an increase in the boot allowance as a result of the new 3-year collective bargaining agreement (CBA) effective in 2022.

**GRC Work Unit/Activity Level Estimates**

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2024 RAMP Range Activities	
					Low	High
Tranche 1 FTE	1,040.90	1,047.60	1,267.20	1,245.20	1,879.00	2,275.00

**Work Unit Changes from RAMP:**

The TY 2024 GRC forecasted units is less than the 2021 RAMP filing low/high threshold. The RAMP filing assumed a higher quantity of field orders. Field orders determine the total quantity of FTEs. The GRC forecast forecasted fewer field orders and utilized updated assumptions.

**Risk Spend Efficiency (RSE)**

	GRC RSE	RAMP RSE
Tranche 1	0.000	0.000

**RSE Changes from RAMP:**

An RSE was not calculated for this activity.

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC001.000 - Customer Services - Operations

**RAMP Item # 2**

**RAMP Activity**

RAMP Chapter: SCG-Risk-3 Incident Related to the Medium Pressure System (Excluding Dig-in)

RAMP Line Item ID: C25

RAMP Line Item Name: Field Employee Skills Training

Tranche(/s): Tranche1: Meter and Beyond the Meter

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

	2021 Historical Embedded Cost (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2024 RAMP Range (2020 Incurred \$)	
					Low	High
Tranche 1 Cost Estimate	5,713	6,087	7,364	7,288	9,904	11,989

**Cost Estimate Changes from RAMP:**

2024 GRC Forecasted cost is less than the 2024 RAMP Range. The GRC filing forecasted fewer orders and utilized updated assumptions.

**GRC Work Unit/Activity Level Estimates**

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2024 RAMP Range Activities	
					Low	High
Tranche 1 FTE	61.90	66.30	80.10	78.80	110.00	133.00

**Work Unit Changes from RAMP:**

The TY 2024 GRC forecasted units is less than the 2021 RAMP filing low/high threshold. The RAMP filing assumed a higher quantity of FTEs. The GRC filing forecasted fewer FTEs and utilized updated assumptions.

**Risk Spend Efficiency (RSE)**

	GRC RSE	RAMP RSE
Tranche 1	0.070	0.400

**RSE Changes from RAMP:**

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

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC001.000 - Customer Services - Operations

**RAMP Item # 3**

**RAMP Activity**

RAMP Chapter: SCG-Risk-3 Incident Related to the Medium Pressure System (Excluding Dig-in)

RAMP Line Item ID: C32

RAMP Line Item Name: Safety Related Field Orders

Tranche(/s): Tranche1: Meter and Beyond the Meter

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

	2021 Historical Embedded Cost (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2024 RAMP Range (2020 Incurred \$)	
					Low	High
Tranche 1 Cost Estimate	68,895	74,278	83,373	83,567	90,198	109,187

**Cost Estimate Changes from RAMP:**

The TY 2024 GRC forecasted dollars is less than the 2021 RAMP filing low/high threshold. The GRC filing utilized updated assumptions.

**GRC Work Unit/Activity Level Estimates**

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2024 RAMP Range Activities	
					Low	High
Tranche 1 Orders	1,179,402.00	1,381,893.00	1,505,394.00	1,507,949.00	1,514,143.00	1,832,910.00

**Work Unit Changes from RAMP:**

2024 GRC forecasted unit is less than the 2021 RAMP filing low/high threshold. The GRC filing utilized updated assumptions.

**Risk Spend Efficiency (RSE)**

	GRC RSE	RAMP RSE
Tranche 1	0.800	3.000

**RSE Changes from RAMP:**

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

**Supplemental Workpapers for Workpaper 2FC001.000**

SCG-14-WP-2FC001 CSF Operations  
 Supplemental Workpaper 1 (1 of 36)  
 Customer Services Field Operations Order Volume Based Cost Model

<b>CSF Operations Order Volume Based Cost Model</b>		<b>Order Volume</b>			
<b>Calculation Steps ---&gt;&gt;&gt;</b>		<b>A</b>			
<b>Line #</b>	<b>Order Types</b>	<b>BY 2021</b>	<b>2022 Estimated</b>	<b>2023 Estimated</b>	<b>TY 2024 Estimated</b>
1	Change of Account - Turn On (Not Entered)	6,903	15,653	15,653	15,653
2	Change of Account - Close (Soft)	1,579	2,107	2,107	2,107
3	Change of Account - Hang Tag	230,278	251,462	251,462	251,462
4	Credit/Collections - 48 Hour (1st Call)	-	23,254	77,514	77,514
5	Credit/Collections - Collect/Close (2nd Call)	1	80,066	266,886	266,886
6	Credit/Collections - Returned Check	-	113	378	378
7	Credit/Collections - Tenant Notification	-	3,647	12,156	12,156
8	Credit/Collections - Other	-	22	72	72
9	CSO - CSO	168,125	188,898	222,233	222,233
10	CSO - CO-Test	7,246	7,246	7,246	7,246
11	CSO - No Gas	16,066	16,225	16,225	16,225
12	CSO - Seasonal Off	3,351	4,765	4,765	4,765
13	CSO - Seasonal On	40,538	46,779	46,779	46,779
14	Gas Leak - CSO Leak	230,179	230,179	230,179	230,179
15	Gas Leak - Pilot Out Only	11,481	11,481	11,481	11,481
16	Gas Leak - Leak Investigation (Step2)	11,958	11,958	11,958	11,958
17	Fumigation - Turn On	64,812	64,812	64,812	64,812
18	Fumigation - Close	73,089	73,089	73,089	73,089
19	HBI - Entered	860	1,947	1,947	1,947
20	HBI - Not Entered	395	1,300	1,300	1,300
21	Meter Work (Capital) - Meter Set - Turn On	27,245	31,080	-	-
22	Meter Work (Capital) - Meter Set - Left Off	2,326	4,214	-	-
23	Meter Work (Capital) - Meter Set (PSI)	682	2,613	-	-
24	Meter Work (Capital) - Meter Set - Turn On (USM)	-	1,432	35,666	36,647
25	Meter Work (Capital) - Meter Set - Left Off (USM)	-	194	4,836	4,969
26	Meter Work (Capital) - Meter Set (PSI) (USM)	-	120	2,998	3,081
27	AMM CSO (Residential/Commercial)	-	6,500	6,500	6,500
28	AMM ISO	-	1,000	1,000	1,000
29	Meter Work (O&M) - Meter Reset - Turn On	929	929	929	929
30	Meter Work (O&M) - Meter Reset - Left Off	266	266	266	266
31	Meter Work (O&M) - Meter Change (Entered)	2,008	2,491	2,761	2,691
32	Meter Work (O&M) - Meter Change (Not Entered)	33,524	39,217	43,468	42,380

SCG-14-WP-2FC001 CSF Operations  
 Supplemental Workpaper 1 (2 of 36)  
 Customer Services Field Operations Order Volume Based Cost Model

<b>CSF Operations Order Volume Based Cost Model</b>		<b>Order Volume</b>			
<b>Calculation Steps ----&gt;&gt;&gt;</b>		<b>A</b>			
<b>Line #</b>	<b>Order Types</b>	<b>BY 2021</b>	<b>2022 Estimated</b>	<b>2023 Estimated</b>	<b>TY 2024 Estimated</b>
33	Meter Work (O&M) - Meter Change (Size)	7,850	6,145	6,811	6,640
34	Meter Work (O&M) - Meter Remove	5,237	5,237	5,237	5,237
35	NonPay Turn On - Turn On	11	25,171	83,904	83,904
36	Read/Verify - Verify	75,139	76,864	76,864	76,864
37	Read/Verify - Verify - Soft Close	290	24,462	24,462	24,462
38	Read/Verify - Verify - Soft Close - 180 Days	1	22,456	22,456	22,456
39	Read/Verify - Load Survey - Res	8,207	6,663	6,663	6,663
40	Read - Read Bill	155,421	180,000	180,000	180,000
41	TurnOn/ShutOff - Turn On (Entered)	30,079	73,543	86,521	86,521
42	TurnOn/ShutOff - Turn On Entered (Gas On)	8,905	12,224	14,381	14,381
43	TurnOn/ShutOff - Turn On (Back On/Restore)	46,139	49,245	57,936	57,936
44	TurnOn/ShutOff - Turn On (PSI)	-	-	-	-
45	TurnOn/ShutOff - Close (Hard)	32,203	38,583	38,583	38,583
46	Miscellaneous - Service Order (MSO)	12,096	10,886	12,096	12,096
47	Miscellaneous - Meter & Reg (MMR)	56,779	51,101	56,779	56,779
48	Miscellaneous - Meter Remediation Order (MRO)	35,036	31,532	35,036	35,036
49	Miscellaneous - Assist	38,311	24,242	24,242	24,242
50	Food Industry - Turn On (Entered)	2,204	2,452	2,885	2,885
51	Food Industry - CSO	54,091	56,745	66,759	66,759
52	Food Industry - CSO Leak	5,403	9,300	9,300	9,300
53	Commercial/Industrial - ISO	17,796	17,796	17,796	17,796
54	Commercial/Industrial - Load Survey- I/C	6,487	6,487	6,487	6,487
55	Commercial/Industrial - CSO	7,497	6,928	8,150	8,150
56	Commercial/Industrial - Turn On (Entered)	6,427	7,610	8,953	8,953
57	Cust/Comp Work - Other	506	506	506	506
58	Advanced Meter - MTU Activate	5,753	5,753	5,753	5,753
59	Advanced Meter - MTU Deactivate	554	554	554	554
60	Advanced Meter - MTU Change	36,034	45,900	91,567	74,553
61	Advanced Meter - MTU Remove	95	95	95	95
62	Advanced Meter - MTU SET	2,294	2,294	2,294	2,294
63	Advanced Meter - MTU Other	2,054	2,054	2,054	2,054
64	Incomplete - Incomplete	120,910	140,188	172,467	171,220
	<b>TOTAL</b>	1,713,650	2,068,076	2,544,255	2,525,864



SCG-14-WP-2FC001 CSF Operations  
 Supplemental Workpaper 1 (3 of 36)  
 Customer Services Field Operations Order Volume Based Cost Model

<b>CSF Operations Order Volume Based Cost Model</b>		<b>On-Premises Time (On-Prem) (Hours)</b>			
<b>Calculation Steps ---&gt;&gt;&gt;</b>		<b>B</b>	<b>C = A x B / 60</b>		
<b>Line #</b>	<b>Order Types</b>	<b>2019</b>	<b>2022 Estimated</b>	<b>2023 Estimated</b>	<b>TY 2024 Estimated</b>
1	Change of Account - Turn On (Not Entered)	15.7	4,089	4,089	4,089
2	Change of Account - Close (Soft)	9.2	323	323	323
3	Change of Account - Hang Tag	4.4	18,560	18,560	18,560
4	Credit/Collections - 48 Hour (1st Call)	6.2	2,388	7,959	7,959
5	Credit/Collections - Collect/Close (2nd Call)	10.2	13,678	45,592	45,592
6	Credit/Collections - Returned Check	14.3	27	90	90
7	Credit/Collections - Tenant Notification	8.1	494	1,646	1,646
8	Credit/Collections - Other	9.9	4	12	12
9	CSO - CSO	31.4	98,715	116,136	116,136
10	CSO - CO-Test	43.4	5,245	5,245	5,245
11	CSO - No Gas	35.6	9,637	9,637	9,637
12	CSO - Seasonal Off	19.7	1,568	1,568	1,568
13	CSO - Seasonal On	27.2	21,203	21,203	21,203
14	Gas Leak - CSO Leak	39.4	151,270	151,270	151,270
15	Gas Leak - Pilot Out Only	28.5	5,447	5,447	5,447
16	Gas Leak - Leak Investigation (Step2)	72.5	14,443	14,443	14,443
17	Fumigation - Turn On	48.6	52,527	52,527	52,527
18	Fumigation - Close	26.3	32,055	32,055	32,055
19	HBI - Entered	65.3	2,121	2,121	2,121
20	HBI - Not Entered	35.2	763	763	763
21	Meter Work (Capital) - Meter Set - Turn On	87.0	45,060	-	-
22	Meter Work (Capital) - Meter Set - Left Off	81.3	5,710	-	-
23	Meter Work (Capital) - Meter Set (PSI)	56.4	2,454	-	-
24	Meter Work (Capital) - Meter Set - Turn On (USM)	101.0	2,411	60,030	61,682
25	Meter Work (Capital) - Meter Set - Left Off (USM)	95.3	308	7,681	7,892
26	Meter Work (Capital) - Meter Set (PSI) (USM)	70.4	141	3,516	3,612
27	AMM CSO (Residential/Commercial)	72.4	7,838	7,838	7,838
28	AMM ISO	180.0	3,000	3,000	3,000
29	Meter Work (O&M) - Meter Reset - Turn On	112.0	1,734	1,734	1,734
30	Meter Work (O&M) - Meter Reset - Left Off	98.8	438	438	438
31	Meter Work (O&M) - Meter Change (Entered)	70.3	2,920	3,236	3,155
32	Meter Work (O&M) - Meter Change (Not Entered)	46.6	30,436	33,735	32,891

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 Supplemental Workpaper 1 (4 of 36)  
 Customer Services Field Operations Order Volume Based Cost Model

<b>CSF Operations Order Volume Based Cost Model</b>		<b>On-Premises Time (On-Prem) (Hours)</b>			
<b>Calculation Steps ---&gt;&gt;&gt;</b>		<b>B</b>	<b>C = A x B / 60</b>		
<b>Line #</b>	<b>Order Types</b>	<b>2019</b>	<b>2022 Estimated</b>	<b>2023 Estimated</b>	<b>TY 2024 Estimated</b>
33	Meter Work (O&M) - Meter Change (Size)	90.2	9,239	10,241	9,984
34	Meter Work (O&M) - Meter Remove	19.9	1,734	1,734	1,734
35	NonPay Turn On - Turn On	42.4	17,785	59,285	59,285
36	Read/Verify - Verify	13.4	17,222	17,222	17,222
37	Read/Verify - Verify - Soft Close	10.0	4,068	4,068	4,068
38	Read/Verify - Verify - Soft Close - 180 Days	10.3	3,873	3,873	3,873
39	Read/Verify - Load Survey - Res	42.5	4,719	4,719	4,719
40	Read - Read Bill	2.3	7,035	7,035	7,035
41	TurnOn/ShutOff - Turn On (Entered)	59.3	72,707	85,538	85,538
42	TurnOn/ShutOff - Turn On Entered (Gas On)	40.9	8,326	9,796	9,796
43	TurnOn/ShutOff - Turn On (Back On/Restore)	50.0	41,047	48,291	48,291
44	TurnOn/ShutOff - Turn On (PSI)	69.8	-	-	-
45	TurnOn/ShutOff - Close (Hard)	5.2	3,352	3,352	3,352
46	Miscellaneous - Service Order (MSO)	39.0	7,081	7,868	7,868
47	Miscellaneous - Meter & Reg (MMR)	43.7	37,245	41,383	41,383
48	Miscellaneous - Meter Remediation Order (MRO)	24.2	12,737	14,152	14,152
49	Miscellaneous - Assist	47.0	19,009	19,009	19,009
50	Food Industry - Turn On (Entered)	89.6	3,663	4,310	4,310
51	Food Industry - CSO	62.5	59,107	69,538	69,538
52	Food Industry - CSO Leak	52.1	8,080	8,080	8,080
53	Commercial/Industrial - ISO	78.6	23,299	23,299	23,299
54	Commercial/Industrial - Load Survey- I/C	62.7	6,776	6,776	6,776
55	Commercial/Industrial - CSO	48.1	5,554	6,534	6,534
56	Commercial/Industrial - Turn On (Entered)	63.8	8,089	9,516	9,516
57	Cust/Comp Work - Other	43.8	369	369	369
58	Advanced Meter - MTU Activate	12.8	1,231	1,231	1,231
59	Advanced Meter - MTU Deactivate	9.6	89	89	89
60	Advanced Meter - MTU Change	39.2	29,990	59,829	48,712
61	Advanced Meter - MTU Remove	42.0	66	66	66
62	Advanced Meter - MTU SET	30.2	1,156	1,156	1,156
63	Advanced Meter - MTU Other	27.5	941	941	941
64	Incomplete - Incomplete	17.5	40,820	50,219	49,856
	<b>TOTAL</b>		993,418	1,191,412	1,180,711

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

SCG-14-WP-2FC001 CSF Operations  
 Supplemental Workpaper 1 (5 of 36)  
 Customer Services Field Operations Order Volume Based Cost Model

CSF Operations Order Volume Based Cost Model		Average Drive Time Per Order (Minutes)			
Calculation Steps ---->>>		D = 2019 Actuals & 0% Increase			
Line #	Order Types	2019	2022 Estimated	2023 Estimated	TY 2024 Estimated
1	Change of Account - Turn On (Not Entered)	14.2	14.2	14.2	14.2
2	Change of Account - Close (Soft)	14.2	14.2	14.2	14.2
3	Change of Account - Hang Tag	14.2	14.2	14.2	14.2
4	Credit/Collections - 48 Hour (1st Call)	14.2	14.2	14.2	14.2
5	Credit/Collections - Collect/Close (2nd Call)	14.2	14.2	14.2	14.2
6	Credit/Collections - Returned Check	14.2	14.2	14.2	14.2
7	Credit/Collections - Tenant Notification	14.2	14.2	14.2	14.2
8	Credit/Collections - Other	14.2	14.2	14.2	14.2
9	CSO - CSO	14.2	14.2	14.2	14.2
10	CSO - CO-Test	14.2	14.2	14.2	14.2
11	CSO - No Gas	14.2	14.2	14.2	14.2
12	CSO - Seasonal Off	14.2	14.2	14.2	14.2
13	CSO - Seasonal On	14.2	14.2	14.2	14.2
14	Gas Leak - CSO Leak	14.2	14.2	14.2	14.2
15	Gas Leak - Pilot Out Only	14.2	14.2	14.2	14.2
16	Gas Leak - Leak Investigation (Step2)	14.2	14.2	14.2	14.2
17	Fumigation - Turn On	14.2	14.2	14.2	14.2
18	Fumigation - Close	14.2	14.2	14.2	14.2
19	HBI - Entered	14.2	14.2	14.2	14.2
20	HBI - Not Entered	14.2	14.2	14.2	14.2
21	Meter Work (Capital) - Meter Set - Turn On	14.2	14.2	14.2	14.2
22	Meter Work (Capital) - Meter Set - Left Off	14.2	14.2	14.2	14.2
23	Meter Work (Capital) - Meter Set (PSI)	14.2	14.2	14.2	14.2
24	Meter Work (Capital) - Meter Set - Turn On (USM)	14.2	14.2	14.2	14.2
25	Meter Work (Capital) - Meter Set - Left Off (USM)	14.2	14.2	14.2	14.2
26	Meter Work (Capital) - Meter Set (PSI) (USM)	14.2	14.2	14.2	14.2
27	AMM CSO (Residential/Commercial)	14.2	14.2	14.2	14.2
28	AMM ISO	14.2	14.2	14.2	14.2
29	Meter Work (O&M) - Meter Reset - Turn On	14.2	14.2	14.2	14.2
30	Meter Work (O&M) - Meter Reset - Left Off	14.2	14.2	14.2	14.2
31	Meter Work (O&M) - Meter Change (Entered)	14.2	14.2	14.2	14.2
32	Meter Work (O&M) - Meter Change (Not Entered)	14.2	14.2	14.2	14.2

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 Customer Services Field Operations Order Volume Based Cost Model

CSF Operations Order Volume Based Cost Model		Average Drive Time Per Order (Minutes)			
Calculation Steps ---->>>		D = 2019 Actuals & 0% Increase			
Line #	Order Types	2019	2022 Estimated	2023 Estimated	TY 2024 Estimated
33	Meter Work (O&M) - Meter Change (Size)	14.2	14.2	14.2	14.2
34	Meter Work (O&M) - Meter Remove	14.2	14.2	14.2	14.2
35	NonPay Turn On - Turn On	14.2	14.2	14.2	14.2
36	Read/Verify - Verify	14.2	14.2	14.2	14.2
37	Read/Verify - Verify - Soft Close	14.2	14.2	14.2	14.2
38	Read/Verify - Verify - Soft Close - 180 Days	14.2	14.2	14.2	14.2
39	Read/Verify - Load Survey - Res	14.2	14.2	14.2	14.2
40	Read - Read Bill	14.2	14.2	14.2	14.2
41	TurnOn/ShutOff - Turn On (Entered)	14.2	14.2	14.2	14.2
42	TurnOn/ShutOff - Turn On Entered (Gas On)	14.2	14.2	14.2	14.2
43	TurnOn/ShutOff - Turn On (Back On/Restore)	14.2	14.2	14.2	14.2
44	TurnOn/ShutOff - Turn On (PSI)	14.2	14.2	14.2	14.2
45	TurnOn/ShutOff - Close (Hard)	14.2	14.2	14.2	14.2
46	Miscellaneous - Service Order (MSO)	14.2	14.2	14.2	14.2
47	Miscellaneous - Meter & Reg (MMR)	14.2	14.2	14.2	14.2
48	Miscellaneous - Meter Remediation Order (MRO)	14.2	14.2	14.2	14.2
49	Miscellaneous - Assist	14.2	14.2	14.2	14.2
50	Food Industry - Turn On (Entered)	14.2	14.2	14.2	14.2
51	Food Industry - CSO	14.2	14.2	14.2	14.2
52	Food Industry - CSO Leak	14.2	14.2	14.2	14.2
53	Commercial/Industrial - ISO	14.2	14.2	14.2	14.2
54	Commercial/Industrial - Load Survey- I/C	14.2	14.2	14.2	14.2
55	Commercial/Industrial - CSO	14.2	14.2	14.2	14.2
56	Commercial/Industrial - Turn On (Entered)	14.2	14.2	14.2	14.2
57	Cust/Comp Work - Other	14.2	14.2	14.2	14.2
58	Advanced Meter - MTU Activate	14.2	14.2	14.2	14.2
59	Advanced Meter - MTU Deactivate	14.2	14.2	14.2	14.2
60	Advanced Meter - MTU Change	14.2	14.2	14.2	14.2
61	Advanced Meter - MTU Remove	14.2	14.2	14.2	14.2
62	Advanced Meter - MTU SET	14.2	14.2	14.2	14.2
63	Advanced Meter - MTU Other	14.2	14.2	14.2	14.2
64	Incomplete - Incomplete	14.2	14.2	14.2	14.2
<b>TOTAL</b>					

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 Supplemental Workpaper 1 (7 of 36)  
 Customer Services Field Operations Order Volume Based Cost Model

<b>CSF Operations Order Volume Based Cost Model</b>		<b>Drive Time (Hours)</b>		
<b>Calculation Steps ----&gt;&gt;&gt;</b>		<b>E = A x D / 60</b>		
<b>Line #</b>	<b>Order Types</b>	<b>2022 Estimated</b>	<b>2023 Estimated</b>	<b>TY 2024 Estimated</b>
1	Change of Account - Turn On (Not Entered)	3,704	3,704	3,704
2	Change of Account - Close (Soft)	499	499	499
3	Change of Account - Hang Tag	59,513	59,513	59,513
4	Credit/Collections - 48 Hour (1st Call)	5,503	18,345	18,345
5	Credit/Collections - Collect/Close (2nd Call)	18,949	63,163	63,163
6	Credit/Collections - Returned Check	27	89	89
7	Credit/Collections - Tenant Notification	863	2,877	2,877
8	Credit/Collections - Other	5	17	17
9	CSO - CSO	44,706	52,595	52,595
10	CSO - CO-Test	1,715	1,715	1,715
11	CSO - No Gas	3,840	3,840	3,840
12	CSO - Seasonal Off	1,128	1,128	1,128
13	CSO - Seasonal On	11,071	11,071	11,071
14	Gas Leak - CSO Leak	54,476	54,476	54,476
15	Gas Leak - Pilot Out Only	2,717	2,717	2,717
16	Gas Leak - Leak Investigation (Step2)	2,830	2,830	2,830
17	Fumigation - Turn On	15,339	15,339	15,339
18	Fumigation - Close	17,298	17,298	17,298
19	HBI - Entered	461	461	461
20	HBI - Not Entered	308	308	308
21	Meter Work (Capital) - Meter Set - Turn On	7,356	-	-
22	Meter Work (Capital) - Meter Set - Left Off	997	-	-
23	Meter Work (Capital) - Meter Set (PSI)	618	-	-
24	Meter Work (Capital) - Meter Set - Turn On (USM)	339	8,441	8,673
25	Meter Work (Capital) - Meter Set - Left Off (USM)	46	1,145	1,176
26	Meter Work (Capital) - Meter Set (PSI) (USM)	28	710	729
27	AMM CSO (Residential/Commercial)	1,538	1,538	1,538
28	AMM ISO	237	237	237
29	Meter Work (O&M) - Meter Reset - Turn On	220	220	220
30	Meter Work (O&M) - Meter Reset - Left Off	63	63	63
31	Meter Work (O&M) - Meter Change (Entered)	589	653	637
32	Meter Work (O&M) - Meter Change (Not Entered)	9,281	10,287	10,030

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 Customer Services Field Operations Order Volume Based Cost Model

<b>CSF Operations Order Volume Based Cost Model</b>		<b>Drive Time (Hours)</b>		
<b>Calculation Steps ----&gt;&gt;&gt;</b>		<b>E = A x D / 60</b>		
<b>Line #</b>	<b>Order Types</b>	<b>2022 Estimated</b>	<b>2023 Estimated</b>	<b>TY 2024 Estimated</b>
33	Meter Work (O&M) - Meter Change (Size)	1,454	1,612	1,572
34	Meter Work (O&M) - Meter Remove	1,239	1,239	1,239
35	NonPay Turn On - Turn On	5,957	19,857	19,857
36	Read/Verify - Verify	18,191	18,191	18,191
37	Read/Verify - Verify - Soft Close	5,789	5,789	5,789
38	Read/Verify - Verify - Soft Close - 180 Days	5,315	5,315	5,315
39	Read/Verify - Load Survey - Res	1,577	1,577	1,577
40	Read - Read Bill	42,600	42,600	42,600
41	TurnOn/ShutOff - Turn On (Entered)	17,405	20,477	20,477
42	TurnOn/ShutOff - Turn On Entered (Gas On)	2,893	3,404	3,404
43	TurnOn/ShutOff - Turn On (Back On/Restore)	11,655	13,711	13,711
44	TurnOn/ShutOff - Turn On (PSI)	-	-	-
45	TurnOn/ShutOff - Close (Hard)	9,131	9,131	9,131
46	Miscellaneous - Service Order (MSO)	2,576	2,863	2,863
47	Miscellaneous - Meter & Reg (MMR)	12,094	13,438	13,438
48	Miscellaneous - Meter Remediation Order (MRO)	7,463	8,292	8,292
49	Miscellaneous - Assist	5,737	5,737	5,737
50	Food Industry - Turn On (Entered)	580	683	683
51	Food Industry - CSO	13,430	15,800	15,800
52	Food Industry - CSO Leak	2,201	2,201	2,201
53	Commercial/Industrial - ISO	4,212	4,212	4,212
54	Commercial/Industrial - Load Survey- I/C	1,535	1,535	1,535
55	Commercial/Industrial - CSO	1,640	1,929	1,929
56	Commercial/Industrial - Turn On (Entered)	1,801	2,119	2,119
57	Cust/Comp Work - Other	120	120	120
58	Advanced Meter - MTU Activate	1,362	1,362	1,362
59	Advanced Meter - MTU Deactivate	131	131	131
60	Advanced Meter - MTU Change	10,863	21,671	17,644
61	Advanced Meter - MTU Remove	22	22	22
62	Advanced Meter - MTU SET	543	543	543
63	Advanced Meter - MTU Other	486	486	486
64	Incomplete - Incomplete	33,178	40,817	40,522
	<b>TOTAL</b>	-	-	-

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 Supplemental Workpaper 1 (9 of 36)  
 Customer Services Field Operations Order Volume Based Cost Model

<b>CSF Operations Order Volume Based Cost Model</b>		<b>Productive Time = On-Prem Time + Drive Time (Hours)</b>		
<b>Calculation Steps ---&gt;&gt;&gt;</b>		<b>F = C + E</b>		
<b>Line #</b>	<b>Order Types</b>	<b>2022 Estimated</b>	<b>2023 Estimated</b>	<b>TY 2024 Estimated</b>
1	Change of Account - Turn On (Not Entered)	7,793	7,793	7,793
2	Change of Account - Close (Soft)	822	822	822
3	Change of Account - Hang Tag	78,073	78,073	78,073
4	Credit/Collections - 48 Hour (1st Call)	7,891	26,303	26,303
5	Credit/Collections - Collect/Close (2nd Call)	32,627	108,755	108,755
6	Credit/Collections - Returned Check	54	179	179
7	Credit/Collections - Tenant Notification	1,357	4,523	4,523
8	Credit/Collections - Other	9	29	29
9	CSO - CSO	143,421	168,731	168,731
10	CSO - CO-Test	6,960	6,960	6,960
11	CSO - No Gas	13,476	13,476	13,476
12	CSO - Seasonal Off	2,695	2,695	2,695
13	CSO - Seasonal On	32,274	32,274	32,274
14	Gas Leak - CSO Leak	205,746	205,746	205,746
15	Gas Leak - Pilot Out Only	8,164	8,164	8,164
16	Gas Leak - Leak Investigation (Step2)	17,273	17,273	17,273
17	Fumigation - Turn On	67,865	67,865	67,865
18	Fumigation - Close	49,353	49,353	49,353
19	HBI - Entered	2,582	2,582	2,582
20	HBI - Not Entered	1,071	1,071	1,071
21	Meter Work (Capital) - Meter Set - Turn On	52,416	-	-
22	Meter Work (Capital) - Meter Set - Left Off	6,708	-	-
23	Meter Work (Capital) - Meter Set (PSI)	3,072	-	-
24	Meter Work (Capital) - Meter Set - Turn On (USM)	2,750	68,471	70,356
25	Meter Work (Capital) - Meter Set - Left Off (USM)	354	8,826	9,068
26	Meter Work (Capital) - Meter Set (PSI) (USM)	170	4,225	4,342
27	AMM CSO (Residential/Commercial)	9,377	9,377	9,377
28	AMM ISO	3,237	3,237	3,237
29	Meter Work (O&M) - Meter Reset - Turn On	1,954	1,954	1,954
30	Meter Work (O&M) - Meter Reset - Left Off	501	501	501
31	Meter Work (O&M) - Meter Change (Entered)	3,509	3,889	3,792
32	Meter Work (O&M) - Meter Change (Not Entered)	39,717	44,022	42,921

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 Customer Services Field Operations Order Volume Based Cost Model

<b>CSF Operations Order Volume Based Cost Model</b>		<b>Productive Time = On-Prem Time + Drive Time (Hours)</b>		
<b>Calculation Steps ---&gt;&gt;&gt;</b>		<b>F = C + E</b>		
<b>Line #</b>	<b>Order Types</b>	<b>2022 Estimated</b>	<b>2023 Estimated</b>	<b>TY 2024 Estimated</b>
33	Meter Work (O&M) - Meter Change (Size)	10,693	11,852	11,556
34	Meter Work (O&M) - Meter Remove	2,973	2,973	2,973
35	NonPay Turn On - Turn On	23,743	79,142	79,142
36	Read/Verify - Verify	35,413	35,413	35,413
37	Read/Verify - Verify - Soft Close	9,857	9,857	9,857
38	Read/Verify - Verify - Soft Close - 180 Days	9,188	9,188	9,188
39	Read/Verify - Load Survey - Res	6,295	6,295	6,295
40	Read - Read Bill	49,635	49,635	49,635
41	TurnOn/ShutOff - Turn On (Entered)	90,112	106,014	106,014
42	TurnOn/ShutOff - Turn On Entered (Gas On)	11,219	13,199	13,199
43	TurnOn/ShutOff - Turn On (Back On/Restore)	52,702	62,002	62,002
44	TurnOn/ShutOff - Turn On (PSI)	-	-	-
45	TurnOn/ShutOff - Close (Hard)	12,484	12,484	12,484
46	Miscellaneous - Service Order (MSO)	9,658	10,731	10,731
47	Miscellaneous - Meter & Reg (MMR)	49,339	54,821	54,821
48	Miscellaneous - Meter Remediation Order (MRO)	20,200	22,444	22,444
49	Miscellaneous - Assist	24,746	24,746	24,746
50	Food Industry - Turn On (Entered)	4,244	4,992	4,992
51	Food Industry - CSO	72,537	85,338	85,338
52	Food Industry - CSO Leak	10,281	10,281	10,281
53	Commercial/Industrial - ISO	27,511	27,511	27,511
54	Commercial/Industrial - Load Survey- I/C	8,312	8,312	8,312
55	Commercial/Industrial - CSO	7,194	8,463	8,463
56	Commercial/Industrial - Turn On (Entered)	9,890	11,635	11,635
57	Cust/Comp Work - Other	489	489	489
58	Advanced Meter - MTU Activate	2,593	2,593	2,593
59	Advanced Meter - MTU Deactivate	220	220	220
60	Advanced Meter - MTU Change	40,853	81,499	66,356
61	Advanced Meter - MTU Remove	89	89	89
62	Advanced Meter - MTU SET	1,699	1,699	1,699
63	Advanced Meter - MTU Other	1,427	1,427	1,427
64	Incomplete - Incomplete	73,998	91,036	90,378
	<b>TOTAL</b>	<b>993,418</b>	<b>1,191,412</b>	<b>1,180,711</b>



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 Supplemental Workpaper 1 (11 of 36)  
 Customer Services Field Operations Order Volume Based Cost Model

<b>CSF Operations Order Volume Based Cost Model</b>		<b>Productive Time + Non Job Time (NJT) (Hours)</b>			
<b>Calculation Steps ---&gt;&gt;&gt;</b>		<b>G</b>	<b>H = F x ( 1 + G )</b>		
<b>Line #</b>	<b>Order Types</b>	<b>2019 Non-Job Time Rate Factor</b>	<b>2022 Estimated</b>	<b>2023 Estimated</b>	<b>TY 2024 Estimated</b>
1	Change of Account - Turn On (Not Entered)	21.09%	9,437	9,437	9,437
2	Change of Account - Close (Soft)	21.09%	995	995	995
3	Change of Account - Hang Tag	21.09%	94,540	94,540	94,540
4	Credit/Collections - 48 Hour (1st Call)	21.09%	9,555	31,851	31,851
5	Credit/Collections - Collect/Close (2nd Call)	21.09%	39,508	131,694	131,694
6	Credit/Collections - Returned Check	21.09%	65	217	217
7	Credit/Collections - Tenant Notification	21.09%	1,643	5,476	5,476
8	Credit/Collections - Other	21.09%	10	35	35
9	CSO - CSO	21.09%	173,672	204,320	204,320
10	CSO - CO-Test	21.09%	8,428	8,428	8,428
11	CSO - No Gas	21.09%	16,319	16,319	16,319
12	CSO - Seasonal Off	21.09%	3,264	3,264	3,264
13	CSO - Seasonal On	21.09%	39,081	39,081	39,081
14	Gas Leak - CSO Leak	21.09%	249,142	249,142	249,142
15	Gas Leak - Pilot Out Only	21.09%	9,886	9,886	9,886
16	Gas Leak - Leak Investigation (Step2)	21.09%	20,917	20,917	20,917
17	Fumigation - Turn On	21.09%	82,180	82,180	82,180
18	Fumigation - Close	21.09%	59,763	59,763	59,763
19	HBI - Entered	21.09%	3,126	3,126	3,126
20	HBI - Not Entered	21.09%	1,297	1,297	1,297
21	Meter Work (Capital) - Meter Set - Turn On	21.09%	63,471	-	-
22	Meter Work (Capital) - Meter Set - Left Off	21.09%	8,122	-	-
23	Meter Work (Capital) - Meter Set (PSI)	21.09%	3,720	-	-
24	Meter Work (Capital) - Meter Set - Turn On (USM)	21.09%	3,330	82,913	85,195
25	Meter Work (Capital) - Meter Set - Left Off (USM)	21.09%	429	10,687	10,981
26	Meter Work (Capital) - Meter Set (PSI) (USM)	21.09%	205	5,116	5,257
27	AMM CSO (Residential/Commercial)	21.09%	11,354	11,354	11,354
28	AMM ISO	21.09%	3,919	3,919	3,919
29	Meter Work (O&M) - Meter Reset - Turn On	21.09%	2,366	2,366	2,366
30	Meter Work (O&M) - Meter Reset - Left Off	21.09%	607	607	607
31	Meter Work (O&M) - Meter Change (Entered)	21.09%	4,249	4,710	4,592
32	Meter Work (O&M) - Meter Change (Not Entered)	21.09%	48,094	53,307	51,974

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 Supplemental Workpaper 1 (12 of 36)  
 Customer Services Field Operations Order Volume Based Cost Model

<b>CSF Operations Order Volume Based Cost Model</b>		<b>Productive Time + Non Job Time (NJT) (Hours)</b>			
<b>Calculation Steps ---&gt;&gt;&gt;</b>		<b>G</b>	<b>H = F x ( 1 + G )</b>		
<b>Line #</b>	<b>Order Types</b>	<b>2019 Non-Job Time Rate Factor</b>	<b>2022 Estimated</b>	<b>2023 Estimated</b>	<b>TY 2024 Estimated</b>
33	Meter Work (O&M) - Meter Change (Size)	21.09%	12,949	14,352	13,993
34	Meter Work (O&M) - Meter Remove	21.09%	3,601	3,601	3,601
35	NonPay Turn On - Turn On	21.09%	28,751	95,835	95,835
36	Read/Verify - Verify	21.09%	42,883	42,883	42,883
37	Read/Verify - Verify - Soft Close	21.09%	11,936	11,936	11,936
38	Read/Verify - Verify - Soft Close - 180 Days	21.09%	11,126	11,126	11,126
39	Read/Verify - Load Survey - Res	21.09%	7,623	7,623	7,623
40	Read - Read Bill	21.09%	60,104	60,104	60,104
41	TurnOn/ShutOff - Turn On (Entered)	21.09%	109,119	128,375	128,375
42	TurnOn/ShutOff - Turn On Entered (Gas On)	21.09%	13,586	15,983	15,983
43	TurnOn/ShutOff - Turn On (Back On/Restore)	21.09%	63,818	75,080	75,080
44	TurnOn/ShutOff - Turn On (PSI)	21.09%	-	-	-
45	TurnOn/ShutOff - Close (Hard)	21.09%	15,117	15,117	15,117
46	Miscellaneous - Service Order (MSO)	21.09%	11,695	12,994	12,994
47	Miscellaneous - Meter & Reg (MMR)	21.09%	59,745	66,384	66,384
48	Miscellaneous - Meter Remediation Order (MRO)	21.09%	24,460	27,178	27,178
49	Miscellaneous - Assist	21.09%	29,966	29,966	29,966
50	Food Industry - Turn On (Entered)	21.09%	5,139	6,045	6,045
51	Food Industry - CSO	21.09%	87,836	103,337	103,337
52	Food Industry - CSO Leak	21.09%	12,449	12,449	12,449
53	Commercial/Industrial - ISO	21.09%	33,314	33,314	33,314
54	Commercial/Industrial - Load Survey- I/C	21.09%	10,065	10,065	10,065
55	Commercial/Industrial - CSO	21.09%	8,711	10,248	10,248
56	Commercial/Industrial - Turn On (Entered)	21.09%	11,975	14,089	14,089
57	Cust/Comp Work - Other	21.09%	592	592	592
58	Advanced Meter - MTU Activate	21.09%	3,139	3,139	3,139
59	Advanced Meter - MTU Deactivate	21.09%	266	266	266
60	Advanced Meter - MTU Change	21.09%	49,470	98,689	80,352
61	Advanced Meter - MTU Remove	21.09%	108	108	108
62	Advanced Meter - MTU SET	21.09%	2,057	2,057	2,057
63	Advanced Meter - MTU Other	21.09%	1,729	1,729	1,729
64	Incomplete - Incomplete	21.09%	89,606	110,237	109,441
<b>TOTAL</b>			<b>1,795,630</b>	<b>2,171,851</b>	<b>2,153,623</b>

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 Supplemental Workpaper 1 (13 of 36)  
 Customer Services Field Operations Order Volume Based Cost Model

<b>CSF Operations Order Volume Based Cost Model</b>		<b>Meter Work Capital On-Prem Adjustment (Hours) <sup>1</sup></b>		
<b>Calculation Steps ---&gt;&gt;&gt;</b>		<b>I = H - Meter Work Capital On-Premises Time</b>		
<b>Line #</b>	<b>Order Types</b>	<b>2022 Estimated</b>	<b>2023 Estimated</b>	<b>TY 2024 Estimated</b>
1	Change of Account - Turn On (Not Entered)	9,437	9,437	9,437
2	Change of Account - Close (Soft)	995	995	995
3	Change of Account - Hang Tag	94,540	94,540	94,540
4	Credit/Collections - 48 Hour (1st Call)	9,555	31,851	31,851
5	Credit/Collections - Collect/Close (2nd Call)	39,508	131,694	131,694
6	Credit/Collections - Returned Check	65	217	217
7	Credit/Collections - Tenant Notification	1,643	5,476	5,476
8	Credit/Collections - Other	10	35	35
9	CSO - CSO	173,672	204,320	204,320
10	CSO - CO-Test	8,428	8,428	8,428
11	CSO - No Gas	16,319	16,319	16,319
12	CSO - Seasonal Off	3,264	3,264	3,264
13	CSO - Seasonal On	39,081	39,081	39,081
14	Gas Leak - CSO Leak	249,142	249,142	249,142
15	Gas Leak - Pilot Out Only	9,886	9,886	9,886
16	Gas Leak - Leak Investigation (Step2)	20,917	20,917	20,917
17	Fumigation - Turn On	82,180	82,180	82,180
18	Fumigation - Close	59,763	59,763	59,763
19	HBI - Entered	3,126	3,126	3,126
20	HBI - Not Entered	1,297	1,297	1,297
21	Meter Work (Capital) - Meter Set - Turn On	11,056	-	-
22	Meter Work (Capital) - Meter Set - Left Off	1,415	-	-
23	Meter Work (Capital) - Meter Set (PSI)	648	-	-
24	Meter Work (Capital) - Meter Set - Turn On (USM)	580	14,442	14,839
25	Meter Work (Capital) - Meter Set - Left Off (USM)	75	1,862	1,913
26	Meter Work (Capital) - Meter Set (PSI) (USM)	36	891	916
27	AMM CSO (Residential/Commercial)	1,978	1,978	1,978
28	AMM ISO	683	683	683
29	Meter Work (O&M) - Meter Reset - Turn On	2,366	2,366	2,366
30	Meter Work (O&M) - Meter Reset - Left Off	607	607	607
31	Meter Work (O&M) - Meter Change (Entered)	4,249	4,710	4,592
32	Meter Work (O&M) - Meter Change (Not Entered)	48,094	53,307	51,974

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 Supplemental Workpaper 1 (14 of 36)  
 Customer Services Field Operations Order Volume Based Cost Model

<b>CSF Operations Order Volume Based Cost Model</b>		<b>Meter Work Capital On-Prem Adjustment (Hours) <sup>1</sup></b>		
<b>Calculation Steps ---&gt;&gt;&gt;</b>		<b>I = H - Meter Work Capital On-Premises Time</b>		
<b>Line #</b>	<b>Order Types</b>	<b>2022 Estimated</b>	<b>2023 Estimated</b>	<b>TY 2024 Estimated</b>
33	Meter Work (O&M) - Meter Change (Size)	12,949	14,352	13,993
34	Meter Work (O&M) - Meter Remove	3,601	3,601	3,601
35	NonPay Turn On - Turn On	28,751	95,835	95,835
36	Read/Verify - Verify	42,883	42,883	42,883
37	Read/Verify - Verify - Soft Close	11,936	11,936	11,936
38	Read/Verify - Verify - Soft Close - 180 Days	11,126	11,126	11,126
39	Read/Verify - Load Survey - Res	7,623	7,623	7,623
40	Read - Read Bill	60,104	60,104	60,104
41	TurnOn/ShutOff - Turn On (Entered)	109,119	128,375	128,375
42	TurnOn/ShutOff - Turn On Entered (Gas On)	13,586	15,983	15,983
43	TurnOn/ShutOff - Turn On (Back On/Restore)	63,818	75,080	75,080
44	TurnOn/ShutOff - Turn On (PSI)	-	-	-
45	TurnOn/ShutOff - Close (Hard)	15,117	15,117	15,117
46	Miscellaneous - Service Order (MSO)	11,695	12,994	12,994
47	Miscellaneous - Meter & Reg (MMR)	59,745	66,384	66,384
48	Miscellaneous - Meter Remediation Order (MRO)	24,460	27,178	27,178
49	Miscellaneous - Assist	29,966	29,966	29,966
50	Food Industry - Turn On (Entered)	5,139	6,045	6,045
51	Food Industry - CSO	87,836	103,337	103,337
52	Food Industry - CSO Leak	12,449	12,449	12,449
53	Commercial/Industrial - ISO	33,314	33,314	33,314
54	Commercial/Industrial - Load Survey- I/C	10,065	10,065	10,065
55	Commercial/Industrial - CSO	8,711	10,248	10,248
56	Commercial/Industrial - Turn On (Entered)	11,975	14,089	14,089
57	Cust/Comp Work - Other	592	592	592
58	Advanced Meter - MTU Activate	3,139	3,139	3,139
59	Advanced Meter - MTU Deactivate	266	266	266
60	Advanced Meter - MTU Change	49,470	98,689	80,352
61	Advanced Meter - MTU Remove	108	108	108
62	Advanced Meter - MTU SET	2,057	2,057	2,057
63	Advanced Meter - MTU Other	1,729	1,729	1,729
64	Incomplete - Incomplete	89,606	110,237	109,441
	<b>TOTAL</b>	<b>1,717,548</b>	<b>2,077,716</b>	<b>2,057,244</b>

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

SCG-14-WP-2FC001 CSF Operations  
 Supplemental Workpaper 1 (15 of 36)  
 Customer Services Field Operations Order Volume Based Cost Model

<b>CSF Operations Order Volume Based Cost Model</b>		<b>Productive Time + NJT + Vacation &amp; Sick (V&amp;S) (Hours)</b>			
<b>Calculation Steps ----&gt;&gt;&gt;</b>		<b>J</b>	<b>K = I x ( 1 + J )</b>		
<b>Line #</b>	<b>Order Types</b>	<b>BY 2021 V&amp;S Factor</b>	<b>2022 Estimated</b>	<b>2023 Estimated</b>	<b>TY 2024 Estimated</b>
1	Change of Account - Turn On (Not Entered)	18.84%	11,215	11,215	11,215
2	Change of Account - Close (Soft)	18.84%	1,182	1,182	1,182
3	Change of Account - Hang Tag	18.84%	112,351	112,351	112,351
4	Credit/Collections - 48 Hour (1st Call)	18.84%	11,356	37,852	37,852
5	Credit/Collections - Collect/Close (2nd Call)	18.84%	46,952	156,505	156,505
6	Credit/Collections - Returned Check	18.84%	77	258	258
7	Credit/Collections - Tenant Notification	18.84%	1,952	6,508	6,508
8	Credit/Collections - Other	18.84%	12	41	41
9	CSO - CSO	18.84%	206,391	242,813	242,813
10	CSO - CO-Test	18.84%	10,016	10,016	10,016
11	CSO - No Gas	18.84%	19,393	19,393	19,393
12	CSO - Seasonal Off	18.84%	3,879	3,879	3,879
13	CSO - Seasonal On	18.84%	46,444	46,444	46,444
14	Gas Leak - CSO Leak	18.84%	296,080	296,080	296,080
15	Gas Leak - Pilot Out Only	18.84%	11,749	11,749	11,749
16	Gas Leak - Leak Investigation (Step2)	18.84%	24,857	24,857	24,857
17	Fumigation - Turn On	18.84%	97,662	97,662	97,662
18	Fumigation - Close	18.84%	71,022	71,022	71,022
19	HBI - Entered	18.84%	3,715	3,715	3,715
20	HBI - Not Entered	18.84%	1,541	1,541	1,541
21	Meter Work (Capital) - Meter Set - Turn On	18.84%	13,138	-	-
22	Meter Work (Capital) - Meter Set - Left Off	18.84%	1,681	-	-
23	Meter Work (Capital) - Meter Set (PSI)	18.84%	770	-	-
24	Meter Work (Capital) - Meter Set - Turn On (USM)	18.84%	689	17,163	17,635
25	Meter Work (Capital) - Meter Set - Left Off (USM)	18.84%	89	2,212	2,273
26	Meter Work (Capital) - Meter Set (PSI) (USM)	18.84%	43	1,059	1,088
27	AMM CSO (Residential/Commercial)	18.84%	2,350	2,350	2,350
28	AMM ISO	18.84%	811	811	811
29	Meter Work (O&M) - Meter Reset - Turn On	18.84%	2,812	2,812	2,812
30	Meter Work (O&M) - Meter Reset - Left Off	18.84%	721	721	721
31	Meter Work (O&M) - Meter Change (Entered)	18.84%	5,050	5,597	5,457
32	Meter Work (O&M) - Meter Change (Not Entered)	18.84%	57,155	63,350	61,765

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 Customer Services Field Operations Order Volume Based Cost Model

<b>CSF Operations Order Volume Based Cost Model</b>		<b>Productive Time + NJT + Vacation &amp; Sick (V&amp;S) (Hours)</b>			
<b>Calculation Steps ----&gt;&gt;&gt;</b>		<b>J</b>	<b>K = I x ( 1 + J )</b>		
<b>Line #</b>	<b>Order Types</b>	<b>BY 2021 V&amp;S Factor</b>	<b>2022 Estimated</b>	<b>2023 Estimated</b>	<b>TY 2024 Estimated</b>
33	Meter Work (O&M) - Meter Change (Size)	18.84%	15,388	17,056	16,630
34	Meter Work (O&M) - Meter Remove	18.84%	4,279	4,279	4,279
35	NonPay Turn On - Turn On	18.84%	34,167	113,891	113,891
36	Read/Verify - Verify	18.84%	50,962	50,962	50,962
37	Read/Verify - Verify - Soft Close	18.84%	14,185	14,185	14,185
38	Read/Verify - Verify - Soft Close - 180 Days	18.84%	13,222	13,222	13,222
39	Read/Verify - Load Survey - Res	18.84%	9,059	9,059	9,059
40	Read - Read Bill	18.84%	71,427	71,427	71,427
41	TurnOn/ShutOff - Turn On (Entered)	18.84%	129,677	152,561	152,561
42	TurnOn/ShutOff - Turn On Entered (Gas On)	18.84%	16,145	18,995	18,995
43	TurnOn/ShutOff - Turn On (Back On/Restore)	18.84%	75,841	89,225	89,225
44	TurnOn/ShutOff - Turn On (PSI)	18.84%	-	-	-
45	TurnOn/ShutOff - Close (Hard)	18.84%	17,965	17,965	17,965
46	Miscellaneous - Service Order (MSO)	18.84%	13,898	15,442	15,442
47	Miscellaneous - Meter & Reg (MMR)	18.84%	71,002	78,891	78,891
48	Miscellaneous - Meter Remediation Order (MRO)	18.84%	29,069	32,298	32,298
49	Miscellaneous - Assist	18.84%	35,611	35,611	35,611
50	Food Industry - Turn On (Entered)	18.84%	6,107	7,184	7,184
51	Food Industry - CSO	18.84%	104,385	122,806	122,806
52	Food Industry - CSO Leak	18.84%	14,795	14,795	14,795
53	Commercial/Industrial - ISO	18.84%	39,590	39,590	39,590
54	Commercial/Industrial - Load Survey- I/C	18.84%	11,961	11,961	11,961
55	Commercial/Industrial - CSO	18.84%	10,352	12,179	12,179
56	Commercial/Industrial - Turn On (Entered)	18.84%	14,232	16,743	16,743
57	Cust/Comp Work - Other	18.84%	704	704	704
58	Advanced Meter - MTU Activate	18.84%	3,731	3,731	3,731
59	Advanced Meter - MTU Deactivate	18.84%	317	317	317
60	Advanced Meter - MTU Change	18.84%	58,791	117,283	95,490
61	Advanced Meter - MTU Remove	18.84%	128	128	128
62	Advanced Meter - MTU SET	18.84%	2,445	2,445	2,445
63	Advanced Meter - MTU Other	18.84%	2,054	2,054	2,054
64	Incomplete - Incomplete	18.84%	106,487	131,006	130,059
<b>TOTAL</b>			2,041,134	2,469,157	2,444,829

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 Supplemental Workpaper 1 (17 of 36)  
 Customer Services Field Operations Order Volume Based Cost Model

<b>CSF Operations Order Volume Based Cost Model</b>		<b>Productive Time + NJT + V&amp;S Labor Cost</b>			
<b>Calculation Steps ---&gt;&gt;&gt;</b>		<b>L</b>	<b>M = K x L</b>		
<b>Line #</b>	<b>Order Types</b>	<b>BY 2021 Blended Wage Rate</b>	<b>2022 Estimated</b>	<b>2023 Estimated</b>	<b>TY 2024 Estimated</b>
1	Change of Account - Turn On (Not Entered)	\$ 46.91	\$ 526,088	\$ 526,088	\$ 526,088
2	Change of Account - Close (Soft)	\$ 46.91	\$ 55,462	\$ 55,462	\$ 55,462
3	Change of Account - Hang Tag	\$ 46.91	\$ 5,270,331	\$ 5,270,331	\$ 5,270,331
4	Credit/Collections - 48 Hour (1st Call)	\$ 46.91	\$ 532,688	\$ 1,775,625	\$ 1,775,625
5	Credit/Collections - Collect/Close (2nd Call)	\$ 46.91	\$ 2,202,473	\$ 7,341,578	\$ 7,341,578
6	Credit/Collections - Returned Check	\$ 46.91	\$ 3,633	\$ 12,111	\$ 12,111
7	Credit/Collections - Tenant Notification	\$ 46.91	\$ 91,588	\$ 305,293	\$ 305,293
8	Credit/Collections - Other	\$ 46.91	\$ 583	\$ 1,943	\$ 1,943
9	CSO - CSO	\$ 46.91	\$ 9,681,698	\$ 11,390,233	\$ 11,390,233
10	CSO - CO-Test	\$ 46.91	\$ 469,845	\$ 469,845	\$ 469,845
11	CSO - No Gas	\$ 46.91	\$ 909,730	\$ 909,730	\$ 909,730
12	CSO - Seasonal Off	\$ 46.91	\$ 181,942	\$ 181,942	\$ 181,942
13	CSO - Seasonal On	\$ 46.91	\$ 2,178,658	\$ 2,178,658	\$ 2,178,658
14	Gas Leak - CSO Leak	\$ 46.91	\$ 13,888,945	\$ 13,888,945	\$ 13,888,945
15	Gas Leak - Pilot Out Only	\$ 46.91	\$ 551,142	\$ 551,142	\$ 551,142
16	Gas Leak - Leak Investigation (Step2)	\$ 46.91	\$ 1,166,037	\$ 1,166,037	\$ 1,166,037
17	Fumigation - Turn On	\$ 46.91	\$ 4,581,282	\$ 4,581,282	\$ 4,581,282
18	Fumigation - Close	\$ 46.91	\$ 3,331,598	\$ 3,331,598	\$ 3,331,598
19	HBI - Entered	\$ 46.91	\$ 174,271	\$ 174,271	\$ 174,271
20	HBI - Not Entered	\$ 46.91	\$ 72,300	\$ 72,300	\$ 72,300
21	Meter Work (Capital) - Meter Set - Turn On	\$ 46.91	\$ 616,317	\$ -	\$ -
22	Meter Work (Capital) - Meter Set - Left Off	\$ 46.91	\$ 78,869	\$ -	\$ -
23	Meter Work (Capital) - Meter Set (PSI)	\$ 46.91	\$ 36,126	\$ -	\$ -
24	Meter Work (Capital) - Meter Set - Turn On (USM)	\$ 46.91	\$ 32,334	\$ 805,105	\$ 827,259
25	Meter Work (Capital) - Meter Set - Left Off (USM)	\$ 46.91	\$ 4,168	\$ 103,774	\$ 106,629
26	Meter Work (Capital) - Meter Set (PSI) (USM)	\$ 46.91	\$ 1,995	\$ 49,681	\$ 51,049
27	AMM CSO (Residential/Commercial)	\$ 46.91	\$ 110,252	\$ 110,252	\$ 110,252
28	AMM ISO	\$ 46.91	\$ 38,058	\$ 38,058	\$ 38,058
29	Meter Work (O&M) - Meter Reset - Turn On	\$ 46.91	\$ 131,899	\$ 131,899	\$ 131,899
30	Meter Work (O&M) - Meter Reset - Left Off	\$ 46.91	\$ 33,830	\$ 33,830	\$ 33,830
31	Meter Work (O&M) - Meter Change (Entered)	\$ 46.91	\$ 236,876	\$ 262,552	\$ 255,983
32	Meter Work (O&M) - Meter Change (Not Entered)	\$ 46.91	\$ 2,681,108	\$ 2,971,731	\$ 2,897,381

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 Supplemental Workpaper 1 (18 of 36)  
 Customer Services Field Operations Order Volume Based Cost Model

<b>CSF Operations Order Volume Based Cost Model</b>		<b>Productive Time + NJT + V&amp;S Labor Cost</b>			
<b>Calculation Steps ---&gt;&gt;&gt;</b>		<b>L</b>	<b>M = K x L</b>		
<b>Line #</b>	<b>Order Types</b>	<b>BY 2021 Blended Wage Rate</b>	<b>2022 Estimated</b>	<b>2023 Estimated</b>	<b>TY 2024 Estimated</b>
33	Meter Work (O&M) - Meter Change (Size)	\$ 46.91	\$ 721,855	\$ 800,101	\$ 780,083
34	Meter Work (O&M) - Meter Remove	\$ 46.91	\$ 200,723	\$ 200,723	\$ 200,723
35	NonPay Turn On - Turn On	\$ 46.91	\$ 1,602,761	\$ 5,342,536	\$ 5,342,536
36	Read/Verify - Verify	\$ 46.91	\$ 2,390,600	\$ 2,390,600	\$ 2,390,600
37	Read/Verify - Verify - Soft Close	\$ 46.91	\$ 665,424	\$ 665,424	\$ 665,424
38	Read/Verify - Verify - Soft Close - 180 Days	\$ 46.91	\$ 620,243	\$ 620,243	\$ 620,243
39	Read/Verify - Load Survey - Res	\$ 46.91	\$ 424,974	\$ 424,974	\$ 424,974
40	Read - Read Bill	\$ 46.91	\$ 3,350,608	\$ 3,350,608	\$ 3,350,608
41	TurnOn/ShutOff - Turn On (Entered)	\$ 46.91	\$ 6,083,052	\$ 7,156,531	\$ 7,156,531
42	TurnOn/ShutOff - Turn On Entered (Gas On)	\$ 46.91	\$ 757,372	\$ 891,026	\$ 891,026
43	TurnOn/ShutOff - Turn On (Back On/Restore)	\$ 46.91	\$ 3,557,669	\$ 4,185,493	\$ 4,185,493
44	TurnOn/ShutOff - Turn On (PSI)	\$ 46.91	\$ -	\$ -	\$ -
45	TurnOn/ShutOff - Close (Hard)	\$ 46.91	\$ 842,708	\$ 842,708	\$ 842,708
46	Miscellaneous - Service Order (MSO)	\$ 46.91	\$ 651,946	\$ 724,385	\$ 724,385
47	Miscellaneous - Meter & Reg (MMR)	\$ 46.91	\$ 3,330,639	\$ 3,700,710	\$ 3,700,710
48	Miscellaneous - Meter Remediation Order (MRO)	\$ 46.91	\$ 1,363,586	\$ 1,515,096	\$ 1,515,096
49	Miscellaneous - Assist	\$ 46.91	\$ 1,670,498	\$ 1,670,498	\$ 1,670,498
50	Food Industry - Turn On (Entered)	\$ 46.91	\$ 286,462	\$ 337,014	\$ 337,014
51	Food Industry - CSO	\$ 46.91	\$ 4,896,631	\$ 5,760,743	\$ 5,760,743
52	Food Industry - CSO Leak	\$ 46.91	\$ 694,013	\$ 694,013	\$ 694,013
53	Commercial/Industrial - ISO	\$ 46.91	\$ 1,857,132	\$ 1,857,132	\$ 1,857,132
54	Commercial/Industrial - Load Survey- I/C	\$ 46.91	\$ 561,079	\$ 561,079	\$ 561,079
55	Commercial/Industrial - CSO	\$ 46.91	\$ 485,619	\$ 571,316	\$ 571,316
56	Commercial/Industrial - Turn On (Entered)	\$ 46.91	\$ 667,599	\$ 785,411	\$ 785,411
57	Cust/Comp Work - Other	\$ 46.91	\$ 33,027	\$ 33,027	\$ 33,027
58	Advanced Meter - MTU Activate	\$ 46.91	\$ 175,016	\$ 175,016	\$ 175,016
59	Advanced Meter - MTU Deactivate	\$ 46.91	\$ 14,856	\$ 14,856	\$ 14,856
60	Advanced Meter - MTU Change	\$ 46.91	\$ 2,757,828	\$ 5,501,656	\$ 4,479,397
61	Advanced Meter - MTU Remove	\$ 46.91	\$ 6,002	\$ 6,002	\$ 6,002
62	Advanced Meter - MTU SET	\$ 46.91	\$ 114,688	\$ 114,688	\$ 114,688
63	Advanced Meter - MTU Other	\$ 46.91	\$ 96,360	\$ 96,360	\$ 96,360
64	Incomplete - Incomplete	\$ 46.91	\$ 4,995,250	\$ 6,145,417	\$ 6,100,996
	<b>TOTAL</b>	TOTAL	\$ 95,748,344	\$ 115,826,682	\$ 114,685,442



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 Customer Services Field Operations Order Volume Based Cost Model

<b>CSF Operations Order Volume Based Cost Model</b>		<b>Productive Time + NJT + V&amp;S Labor FTE</b>		
<b>Calculation Steps ----&gt;&gt;&gt;</b>		<b>N = K / Annual Paid Hours</b>		
<b>Line #</b>	<b>Order Types</b>	<b>2022 Estimated</b>	<b>2023 Estimated</b>	<b>TY 2024 Estimated</b>
1	Change of Account - Turn On (Not Entered)	5.4	5.4	5.4
2	Change of Account - Close (Soft)	0.6	0.6	0.6
3	Change of Account - Hang Tag	54.0	54.0	53.6
4	Credit/Collections - 48 Hour (1st Call)	5.5	18.2	18.1
5	Credit/Collections - Collect/Close (2nd Call)	22.6	75.2	74.7
6	Credit/Collections - Returned Check	0.0	0.1	0.1
7	Credit/Collections - Tenant Notification	0.9	3.1	3.1
8	Credit/Collections - Other	0.0	0.0	0.0
9	CSO - CSO	99.2	116.7	115.8
10	CSO - CO-Test	4.8	4.8	4.8
11	CSO - No Gas	9.3	9.3	9.3
12	CSO - Seasonal Off	1.9	1.9	1.9
13	CSO - Seasonal On	22.3	22.3	22.2
14	Gas Leak - CSO Leak	142.3	142.3	141.3
15	Gas Leak - Pilot Out Only	5.6	5.6	5.6
16	Gas Leak - Leak Investigation (Step2)	12.0	12.0	11.9
17	Fumigation - Turn On	47.0	47.0	46.6
18	Fumigation - Close	34.1	34.1	33.9
19	HBI - Entered	1.8	1.8	1.8
20	HBI - Not Entered	0.7	0.7	0.7
21	Meter Work (Capital) - Meter Set - Turn On	6.3	-	-
22	Meter Work (Capital) - Meter Set - Left Off	0.8	-	-
23	Meter Work (Capital) - Meter Set (PSI)	0.4	-	-
24	Meter Work (Capital) - Meter Set - Turn On (USM)	0.3	8.3	8.4
25	Meter Work (Capital) - Meter Set - Left Off (USM)	0.0	1.1	1.1
26	Meter Work (Capital) - Meter Set (PSI) (USM)	0.0	0.5	0.5
27	AMM CSO (Residential/Commercial)	1.1	1.1	1.1
28	AMM ISO	0.4	0.4	0.4
29	Meter Work (O&M) - Meter Reset - Turn On	1.4	1.4	1.3
30	Meter Work (O&M) - Meter Reset - Left Off	0.3	0.3	0.3
31	Meter Work (O&M) - Meter Change (Entered)	2.4	2.7	2.6
32	Meter Work (O&M) - Meter Change (Not Entered)	27.5	30.5	29.5

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 Customer Services Field Operations Order Volume Based Cost Model

<b>CSF Operations Order Volume Based Cost Model</b>		<b>Productive Time + NJT + V&amp;S Labor FTE</b>		
<b>Calculation Steps ----&gt;&gt;&gt;</b>		<b>N = K / Annual Paid Hours</b>		
<b>Line #</b>	<b>Order Types</b>	<b>2022 Estimated</b>	<b>2023 Estimated</b>	<b>TY 2024 Estimated</b>
33	Meter Work (O&M) - Meter Change (Size)	7.4	8.2	7.9
34	Meter Work (O&M) - Meter Remove	2.1	2.1	2.0
35	NonPay Turn On - Turn On	16.4	54.8	54.3
36	Read/Verify - Verify	24.5	24.5	24.3
37	Read/Verify - Verify - Soft Close	6.8	6.8	6.8
38	Read/Verify - Verify - Soft Close - 180 Days	6.4	6.4	6.3
39	Read/Verify - Load Survey - Res	4.4	4.4	4.3
40	Read - Read Bill	34.3	34.3	34.1
41	TurnOn/ShutOff - Turn On (Entered)	62.3	73.3	72.8
42	TurnOn/ShutOff - Turn On Entered (Gas On)	7.8	9.1	9.1
43	TurnOn/ShutOff - Turn On (Back On/Restore)	36.5	42.9	42.6
44	TurnOn/ShutOff - Turn On (PSI)	-	-	-
45	TurnOn/ShutOff - Close (Hard)	8.6	8.6	8.6
46	Miscellaneous - Service Order (MSO)	6.7	7.4	7.4
47	Miscellaneous - Meter & Reg (MMR)	34.1	37.9	37.6
48	Miscellaneous - Meter Remediation Order (MRO)	14.0	15.5	15.4
49	Miscellaneous - Assist	17.1	17.1	17.0
50	Food Industry - Turn On (Entered)	2.9	3.5	3.4
51	Food Industry - CSO	50.2	59.0	58.6
52	Food Industry - CSO Leak	7.1	7.1	7.1
53	Commercial/Industrial - ISO	19.0	19.0	18.9
54	Commercial/Industrial - Load Survey- I/C	5.8	5.8	5.7
55	Commercial/Industrial - CSO	5.0	5.9	5.8
56	Commercial/Industrial - Turn On (Entered)	6.8	8.0	8.0
57	Cust/Comp Work - Other	0.3	0.3	0.3
58	Advanced Meter - MTU Activate	1.8	1.8	1.8
59	Advanced Meter - MTU Deactivate	0.2	0.2	0.2
60	Advanced Meter - MTU Change	28.3	56.4	45.6
61	Advanced Meter - MTU Remove	0.1	0.1	0.1
62	Advanced Meter - MTU SET	1.2	1.2	1.2
63	Advanced Meter - MTU Other	1.0	1.0	1.0
64	Incomplete - Incomplete	51.2	63.0	62.1
<b>TOTAL</b>				

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 Customer Services Field Operations Order Volume Based Cost Model

<b>CSF Operations Order Volume Based Cost Model</b>		<b>Productive Time + NJT + V&amp;S Non-Labor Cost</b>			
<b>Calculation Steps ----&gt;&gt;&gt;</b>		<b>O</b>	<b>P = O x N</b>		
<b>Line #</b>	<b>Order Types</b>	<b>BY 2021 Non-Labor Per FTE</b>	<b>2022 Estimated</b>	<b>2023 Estimated</b>	<b>TY 2024 Estimated</b>
1	Change of Account - Turn On (Not Entered)	\$ 6,179	\$ 33,315	\$ 33,315	\$ 33,060
2	Change of Account - Close (Soft)	\$ 6,179	\$ 3,512	\$ 3,512	\$ 3,485
3	Change of Account - Hang Tag	\$ 6,179	\$ 333,744	\$ 333,744	\$ 331,196
4	Credit/Collections - 48 Hour (1st Call)	\$ 6,179	\$ 33,732	\$ 112,441	\$ 111,583
5	Credit/Collections - Collect/Close (2nd Call)	\$ 6,179	\$ 139,472	\$ 464,905	\$ 461,357
6	Credit/Collections - Returned Check	\$ 6,179	\$ 230	\$ 767	\$ 761
7	Credit/Collections - Tenant Notification	\$ 6,179	\$ 5,800	\$ 19,333	\$ 19,185
8	Credit/Collections - Other	\$ 6,179	\$ 37	\$ 123	\$ 122
9	CSO - CSO	\$ 6,179	\$ 613,094	\$ 721,287	\$ 715,781
10	CSO - CO-Test	\$ 6,179	\$ 29,753	\$ 29,753	\$ 29,526
11	CSO - No Gas	\$ 6,179	\$ 57,609	\$ 57,609	\$ 57,169
12	CSO - Seasonal Off	\$ 6,179	\$ 11,521	\$ 11,521	\$ 11,434
13	CSO - Seasonal On	\$ 6,179	\$ 137,964	\$ 137,964	\$ 136,910
14	Gas Leak - CSO Leak	\$ 6,179	\$ 879,518	\$ 879,518	\$ 872,804
15	Gas Leak - Pilot Out Only	\$ 6,179	\$ 34,901	\$ 34,901	\$ 34,635
16	Gas Leak - Leak Investigation (Step2)	\$ 6,179	\$ 73,839	\$ 73,839	\$ 73,276
17	Fumigation - Turn On	\$ 6,179	\$ 290,110	\$ 290,110	\$ 287,895
18	Fumigation - Close	\$ 6,179	\$ 210,973	\$ 210,973	\$ 209,363
19	HBI - Entered	\$ 6,179	\$ 11,036	\$ 11,036	\$ 10,951
20	HBI - Not Entered	\$ 6,179	\$ 4,578	\$ 4,578	\$ 4,543
21	Meter Work (Capital) - Meter Set - Turn On	\$ 6,179	\$ 39,028	\$ -	\$ -
22	Meter Work (Capital) - Meter Set - Left Off	\$ 6,179	\$ 4,994	\$ -	\$ -
23	Meter Work (Capital) - Meter Set (PSI)	\$ 6,179	\$ 2,288	\$ -	\$ -
24	Meter Work (Capital) - Meter Set - Turn On (USM)	\$ 6,179	\$ 2,048	\$ 50,983	\$ 51,986
25	Meter Work (Capital) - Meter Set - Left Off (USM)	\$ 6,179	\$ 264	\$ 6,571	\$ 6,701
26	Meter Work (Capital) - Meter Set (PSI) (USM)	\$ 6,179	\$ 126	\$ 3,146	\$ 3,208
27	AMM CSO (Residential/Commercial)	\$ 6,179	\$ 6,982	\$ 6,982	\$ 6,928
28	AMM ISO	\$ 6,179	\$ 2,410	\$ 2,410	\$ 2,392
29	Meter Work (O&M) - Meter Reset - Turn On	\$ 6,179	\$ 8,352	\$ 8,352	\$ 8,289
30	Meter Work (O&M) - Meter Reset - Left Off	\$ 6,179	\$ 2,142	\$ 2,142	\$ 2,126
31	Meter Work (O&M) - Meter Change (Entered)	\$ 6,179	\$ 15,000	\$ 16,626	\$ 16,086
32	Meter Work (O&M) - Meter Change (Not Entered)	\$ 6,179	\$ 169,781	\$ 188,185	\$ 182,076

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 Customer Services Field Operations Order Volume Based Cost Model

<b>CSF Operations Order Volume Based Cost Model</b>		<b>Productive Time + NJT + V&amp;S Non-Labor Cost</b>			
<b>Calculation Steps ----&gt;&gt;&gt;</b>		<b>O</b>	<b>P = O x N</b>		
<b>Line #</b>	<b>Order Types</b>	<b>BY 2021 Non-Labor Per FTE</b>	<b>2022 Estimated</b>	<b>2023 Estimated</b>	<b>TY 2024 Estimated</b>
33	Meter Work (O&M) - Meter Change (Size)	\$ 6,179	\$ 45,711	\$ 50,666	\$ 49,022
34	Meter Work (O&M) - Meter Remove	\$ 6,179	\$ 12,711	\$ 12,711	\$ 12,614
35	NonPay Turn On - Turn On	\$ 6,179	\$ 101,495	\$ 338,316	\$ 335,734
36	Read/Verify - Verify	\$ 6,179	\$ 151,385	\$ 151,385	\$ 150,229
37	Read/Verify - Verify - Soft Close	\$ 6,179	\$ 42,138	\$ 42,138	\$ 41,816
38	Read/Verify - Verify - Soft Close - 180 Days	\$ 6,179	\$ 39,277	\$ 39,277	\$ 38,977
39	Read/Verify - Load Survey - Res	\$ 6,179	\$ 26,911	\$ 26,911	\$ 26,706
40	Read - Read Bill	\$ 6,179	\$ 212,177	\$ 212,177	\$ 210,558
41	TurnOn/ShutOff - Turn On (Entered)	\$ 6,179	\$ 385,209	\$ 453,187	\$ 449,728
42	TurnOn/ShutOff - Turn On Entered (Gas On)	\$ 6,179	\$ 47,961	\$ 56,424	\$ 55,994
43	TurnOn/ShutOff - Turn On (Back On/Restore)	\$ 6,179	\$ 225,289	\$ 265,046	\$ 263,023
44	TurnOn/ShutOff - Turn On (PSI)	\$ 6,179	\$ -	\$ -	\$ -
45	TurnOn/ShutOff - Close (Hard)	\$ 6,179	\$ 53,365	\$ 53,365	\$ 52,957
46	Miscellaneous - Service Order (MSO)	\$ 6,179	\$ 41,285	\$ 45,872	\$ 45,522
47	Miscellaneous - Meter & Reg (MMR)	\$ 6,179	\$ 210,913	\$ 234,348	\$ 232,559
48	Miscellaneous - Meter Remediation Order (MRO)	\$ 6,179	\$ 86,349	\$ 95,943	\$ 95,211
49	Miscellaneous - Assist	\$ 6,179	\$ 105,784	\$ 105,784	\$ 104,977
50	Food Industry - Turn On (Entered)	\$ 6,179	\$ 18,140	\$ 21,341	\$ 21,178
51	Food Industry - CSO	\$ 6,179	\$ 310,079	\$ 364,799	\$ 362,014
52	Food Industry - CSO Leak	\$ 6,179	\$ 43,948	\$ 43,948	\$ 43,613
53	Commercial/Industrial - ISO	\$ 6,179	\$ 117,603	\$ 117,603	\$ 116,705
54	Commercial/Industrial - Load Survey- I/C	\$ 6,179	\$ 35,530	\$ 35,530	\$ 35,259
55	Commercial/Industrial - CSO	\$ 6,179	\$ 30,752	\$ 36,179	\$ 35,902
56	Commercial/Industrial - Turn On (Entered)	\$ 6,179	\$ 42,276	\$ 49,736	\$ 49,356
57	Cust/Comp Work - Other	\$ 6,179	\$ 2,091	\$ 2,091	\$ 2,075
58	Advanced Meter - MTU Activate	\$ 6,179	\$ 11,083	\$ 11,083	\$ 10,998
59	Advanced Meter - MTU Deactivate	\$ 6,179	\$ 941	\$ 941	\$ 934
60	Advanced Meter - MTU Change	\$ 6,179	\$ 174,639	\$ 348,392	\$ 281,493
61	Advanced Meter - MTU Remove	\$ 6,179	\$ 380	\$ 380	\$ 377
62	Advanced Meter - MTU SET	\$ 6,179	\$ 7,263	\$ 7,263	\$ 7,207
63	Advanced Meter - MTU Other	\$ 6,179	\$ 6,102	\$ 6,102	\$ 6,055
64	Incomplete - Incomplete	\$ 6,179	\$ 316,324	\$ 389,159	\$ 383,396
	<b>TOTAL</b>		\$ 6,063,265	\$ 7,334,726	\$ 7,207,018

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 Customer Services Field Operations Order Volume Based Cost Model

Line #	CSF Operations Order Volume Based Cost Model		Training Labor FTE		
	Calculation Steps ---->>>	Q	R = N x Q		
	Order Types	BY 2021 Training Factor	2022 Estimated	2023 Estimated	TY 2024 Estimated
1	Change of Account - Turn On (Not Entered)	6.75%	0.4	0.4	0.4
2	Change of Account - Close (Soft)	6.75%	0.0	0.0	0.0
3	Change of Account - Hang Tag	6.75%	3.6	3.6	3.6
4	Credit/Collections - 48 Hour (1st Call)	6.75%	0.4	1.2	1.2
5	Credit/Collections - Collect/Close (2nd Call)	6.75%	1.5	5.1	5.0
6	Credit/Collections - Returned Check	6.75%	0.0	0.0	0.0
7	Credit/Collections - Tenant Notification	6.75%	0.1	0.2	0.2
8	Credit/Collections - Other	6.75%	0.0	0.0	0.0
9	CSO - CSO	6.75%	6.7	7.9	7.8
10	CSO - CO-Test	6.75%	0.3	0.3	0.3
11	CSO - No Gas	6.75%	0.6	0.6	0.6
12	CSO - Seasonal Off	6.75%	0.1	0.1	0.1
13	CSO - Seasonal On	6.75%	1.5	1.5	1.5
14	Gas Leak - CSO Leak	6.75%	9.6	9.6	9.5
15	Gas Leak - Pilot Out Only	6.75%	0.4	0.4	0.4
16	Gas Leak - Leak Investigation (Step2)	6.75%	0.8	0.8	0.8
17	Fumigation - Turn On	6.75%	3.2	3.2	3.1
18	Fumigation - Close	6.75%	2.3	2.3	2.3
19	HBI - Entered	6.75%	0.1	0.1	0.1
20	HBI - Not Entered	6.75%	0.1	0.1	0.0
21	Meter Work (Capital) - Meter Set - Turn On	6.75%	0.4	-	-
22	Meter Work (Capital) - Meter Set - Left Off	6.75%	0.1	-	-
23	Meter Work (Capital) - Meter Set (PSI)	6.75%	0.0	-	-
24	Meter Work (Capital) - Meter Set - Turn On (USM)	6.75%	0.0	0.6	0.6
25	Meter Work (Capital) - Meter Set - Left Off (USM)	6.75%	0.0	0.1	0.1
26	Meter Work (Capital) - Meter Set (PSI) (USM)	6.75%	0.0	0.0	0.0
27	AMM CSO (Residential/Commercial)	6.75%	0.1	0.1	0.1
28	AMM ISO	6.75%	0.0	0.0	0.0
29	Meter Work (O&M) - Meter Reset - Turn On	6.75%	0.1	0.1	0.1
30	Meter Work (O&M) - Meter Reset - Left Off	6.75%	0.0	0.0	0.0
31	Meter Work (O&M) - Meter Change (Entered)	6.75%	0.2	0.2	0.2
32	Meter Work (O&M) - Meter Change (Not Entered)	6.75%	1.9	2.1	2.0

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 Customer Services Field Operations Order Volume Based Cost Model

<b>CSF Operations Order Volume Based Cost Model</b>		<b>Training Labor FTE</b>			
<b>Calculation Steps ----&gt;&gt;&gt;</b>		<b>Q</b>	<b>R = N x Q</b>		
<b>Line #</b>	<b>Order Types</b>	<b>BY 2021 Training Factor</b>	<b>2022 Estimated</b>	<b>2023 Estimated</b>	<b>TY 2024 Estimated</b>
33	Meter Work (O&M) - Meter Change (Size)	6.75%	0.5	0.6	0.5
34	Meter Work (O&M) - Meter Remove	6.75%	0.1	0.1	0.1
35	NonPay Turn On - Turn On	6.75%	1.1	3.7	3.7
36	Read/Verify - Verify	6.75%	1.7	1.7	1.6
37	Read/Verify - Verify - Soft Close	6.75%	0.5	0.5	0.5
38	Read/Verify - Verify - Soft Close - 180 Days	6.75%	0.4	0.4	0.4
39	Read/Verify - Load Survey - Res	6.75%	0.3	0.3	0.3
40	Read - Read Bill	6.75%	2.3	2.3	2.3
41	TurnOn/ShutOff - Turn On (Entered)	6.75%	4.2	5.0	4.9
42	TurnOn/ShutOff - Turn On Entered (Gas On)	6.75%	0.5	0.6	0.6
43	TurnOn/ShutOff - Turn On (Back On/Restore)	6.75%	2.5	2.9	2.9
44	TurnOn/ShutOff - Turn On (PSI)	6.75%	-	-	-
45	TurnOn/ShutOff - Close (Hard)	6.75%	0.6	0.6	0.6
46	Miscellaneous - Service Order (MSO)	6.75%	0.5	0.5	0.5
47	Miscellaneous - Meter & Reg (MMR)	6.75%	2.3	2.6	2.5
48	Miscellaneous - Meter Remediation Order (MRO)	6.75%	0.9	1.0	1.0
49	Miscellaneous - Assist	6.75%	1.2	1.2	1.1
50	Food Industry - Turn On (Entered)	6.75%	0.2	0.2	0.2
51	Food Industry - CSO	6.75%	3.4	4.0	4.0
52	Food Industry - CSO Leak	6.75%	0.5	0.5	0.5
53	Commercial/Industrial - ISO	6.75%	1.3	1.3	1.3
54	Commercial/Industrial - Load Survey- I/C	6.75%	0.4	0.4	0.4
55	Commercial/Industrial - CSO	6.75%	0.3	0.4	0.4
56	Commercial/Industrial - Turn On (Entered)	6.75%	0.5	0.5	0.5
57	Cust/Comp Work - Other	6.75%	0.0	0.0	0.0
58	Advanced Meter - MTU Activate	6.75%	0.1	0.1	0.1
59	Advanced Meter - MTU Deactivate	6.75%	0.0	0.0	0.0
60	Advanced Meter - MTU Change	6.75%	1.9	3.8	3.1
61	Advanced Meter - MTU Remove	6.75%	0.0	0.0	0.0
62	Advanced Meter - MTU SET	6.75%	0.1	0.1	0.1
63	Advanced Meter - MTU Other	6.75%	0.1	0.1	0.1
64	Incomplete - Incomplete	6.75%	3.5	4.3	4.2
<b>TOTAL</b>			66.3	80.1	78.8

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 Supplemental Workpaper 1 (25 of 36)  
 Customer Services Field Operations Order Volume Based Cost Model

<b>CSF Operations Order Volume Based Cost Model</b>		<b>Training Labor Cost</b>			
<b>Calculation Steps ---&gt;&gt;&gt;</b>		<b>S</b>	<b>T = R x S x Annual Paid Hours</b>		
<b>Line #</b>	<b>Order Types</b>	<b>BY 2021 Training Wage Rate</b>	<b>2022 Estimated</b>	<b>2023 Estimated</b>	<b>TY 2024 Estimated</b>
1	Change of Account - Turn On (Not Entered)	\$ 41.48	\$ 31,409	\$ 31,409	\$ 31,409
2	Change of Account - Close (Soft)	\$ 41.48	\$ 3,311	\$ 3,311	\$ 3,311
3	Change of Account - Hang Tag	\$ 41.48	\$ 314,658	\$ 314,658	\$ 314,658
4	Credit/Collections - 48 Hour (1st Call)	\$ 41.48	\$ 31,803	\$ 106,011	\$ 106,011
5	Credit/Collections - Collect/Close (2nd Call)	\$ 41.48	\$ 131,496	\$ 438,318	\$ 438,318
6	Credit/Collections - Returned Check	\$ 41.48	\$ 217	\$ 723	\$ 723
7	Credit/Collections - Tenant Notification	\$ 41.48	\$ 5,468	\$ 18,227	\$ 18,227
8	Credit/Collections - Other	\$ 41.48	\$ 35	\$ 116	\$ 116
9	CSO - CSO	\$ 41.48	\$ 578,032	\$ 680,038	\$ 680,038
10	CSO - CO-Test	\$ 41.48	\$ 28,051	\$ 28,051	\$ 28,051
11	CSO - No Gas	\$ 41.48	\$ 54,314	\$ 54,314	\$ 54,314
12	CSO - Seasonal Off	\$ 41.48	\$ 10,863	\$ 10,863	\$ 10,863
13	CSO - Seasonal On	\$ 41.48	\$ 130,074	\$ 130,074	\$ 130,074
14	Gas Leak - CSO Leak	\$ 41.48	\$ 829,220	\$ 829,220	\$ 829,220
15	Gas Leak - Pilot Out Only	\$ 41.48	\$ 32,905	\$ 32,905	\$ 32,905
16	Gas Leak - Leak Investigation (Step2)	\$ 41.48	\$ 69,617	\$ 69,617	\$ 69,617
17	Fumigation - Turn On	\$ 41.48	\$ 273,519	\$ 273,519	\$ 273,519
18	Fumigation - Close	\$ 41.48	\$ 198,908	\$ 198,908	\$ 198,908
19	HBI - Entered	\$ 41.48	\$ 10,405	\$ 10,405	\$ 10,405
20	HBI - Not Entered	\$ 41.48	\$ 4,317	\$ 4,317	\$ 4,317
21	Meter Work (Capital) - Meter Set - Turn On	\$ 41.48	\$ 36,796	\$ -	\$ -
22	Meter Work (Capital) - Meter Set - Left Off	\$ 41.48	\$ 4,709	\$ -	\$ -
23	Meter Work (Capital) - Meter Set (PSI)	\$ 41.48	\$ 2,157	\$ -	\$ -
24	Meter Work (Capital) - Meter Set - Turn On (USM)	\$ 41.48	\$ 1,930	\$ 48,068	\$ 49,390
25	Meter Work (Capital) - Meter Set - Left Off (USM)	\$ 41.48	\$ 249	\$ 6,196	\$ 6,366
26	Meter Work (Capital) - Meter Set (PSI) (USM)	\$ 41.48	\$ 119	\$ 2,966	\$ 3,048
27	AMM CSO (Residential/Commercial)	\$ 41.48	\$ 6,582	\$ 6,582	\$ 6,582
28	AMM ISO	\$ 41.48	\$ 2,272	\$ 2,272	\$ 2,272
29	Meter Work (O&M) - Meter Reset - Turn On	\$ 41.48	\$ 7,875	\$ 7,875	\$ 7,875
30	Meter Work (O&M) - Meter Reset - Left Off	\$ 41.48	\$ 2,020	\$ 2,020	\$ 2,020
31	Meter Work (O&M) - Meter Change (Entered)	\$ 41.48	\$ 14,142	\$ 15,675	\$ 15,283
32	Meter Work (O&M) - Meter Change (Not Entered)	\$ 41.48	\$ 160,072	\$ 177,423	\$ 172,984

SCG-14-WP-2FC001 CSF Operations  
 Supplemental Workpaper 1 (26 of 36)  
 Customer Services Field Operations Order Volume Based Cost Model

Line #	CSF Operations Order Volume Based Cost Model		Training Labor Cost			
	Calculation Steps --->>>		S	T = R x S x Annual Paid Hours		
	Order Types	BY 2021 Training Wage Rate	2022 Estimated	2023 Estimated	TY 2024 Estimated	
33	Meter Work (O&M) - Meter Change (Size)	\$ 41.48	\$ 43,097	\$ 47,769	\$ 46,574	
34	Meter Work (O&M) - Meter Remove	\$ 41.48	\$ 11,984	\$ 11,984	\$ 11,984	
35	NonPay Turn On - Turn On	\$ 41.48	\$ 95,691	\$ 318,968	\$ 318,968	
36	Read/Verify - Verify	\$ 41.48	\$ 142,727	\$ 142,727	\$ 142,727	
37	Read/Verify - Verify - Soft Close	\$ 41.48	\$ 39,728	\$ 39,728	\$ 39,728	
38	Read/Verify - Verify - Soft Close - 180 Days	\$ 41.48	\$ 37,031	\$ 37,031	\$ 37,031	
39	Read/Verify - Load Survey - Res	\$ 41.48	\$ 25,372	\$ 25,372	\$ 25,372	
40	Read - Read Bill	\$ 41.48	\$ 200,043	\$ 200,043	\$ 200,043	
41	TurnOn/ShutOff - Turn On (Entered)	\$ 41.48	\$ 363,180	\$ 427,270	\$ 427,270	
42	TurnOn/ShutOff - Turn On Entered (Gas On)	\$ 41.48	\$ 45,218	\$ 53,197	\$ 53,197	
43	TurnOn/ShutOff - Turn On (Back On/Restore)	\$ 41.48	\$ 212,406	\$ 249,889	\$ 249,889	
44	TurnOn/ShutOff - Turn On (PSI)	\$ 41.48	\$ -	\$ -	\$ -	
45	TurnOn/ShutOff - Close (Hard)	\$ 41.48	\$ 50,313	\$ 50,313	\$ 50,313	
46	Miscellaneous - Service Order (MSO)	\$ 41.48	\$ 38,924	\$ 43,248	\$ 43,248	
47	Miscellaneous - Meter & Reg (MMR)	\$ 41.48	\$ 198,851	\$ 220,946	\$ 220,946	
48	Miscellaneous - Meter Remediation Order (MRO)	\$ 41.48	\$ 81,411	\$ 90,457	\$ 90,457	
49	Miscellaneous - Assist	\$ 41.48	\$ 99,735	\$ 99,735	\$ 99,735	
50	Food Industry - Turn On (Entered)	\$ 41.48	\$ 17,103	\$ 20,121	\$ 20,121	
51	Food Industry - CSO	\$ 41.48	\$ 292,346	\$ 343,937	\$ 343,937	
52	Food Industry - CSO Leak	\$ 41.48	\$ 41,435	\$ 41,435	\$ 41,435	
53	Commercial/Industrial - ISO	\$ 41.48	\$ 110,877	\$ 110,877	\$ 110,877	
54	Commercial/Industrial - Load Survey- I/C	\$ 41.48	\$ 33,498	\$ 33,498	\$ 33,498	
55	Commercial/Industrial - CSO	\$ 41.48	\$ 28,993	\$ 34,110	\$ 34,110	
56	Commercial/Industrial - Turn On (Entered)	\$ 41.48	\$ 39,858	\$ 46,892	\$ 46,892	
57	Cust/Comp Work - Other	\$ 41.48	\$ 1,972	\$ 1,972	\$ 1,972	
58	Advanced Meter - MTU Activate	\$ 41.48	\$ 10,449	\$ 10,449	\$ 10,449	
59	Advanced Meter - MTU Deactivate	\$ 41.48	\$ 887	\$ 887	\$ 887	
60	Advanced Meter - MTU Change	\$ 41.48	\$ 164,652	\$ 328,468	\$ 267,436	
61	Advanced Meter - MTU Remove	\$ 41.48	\$ 358	\$ 358	\$ 358	
62	Advanced Meter - MTU SET	\$ 41.48	\$ 6,847	\$ 6,847	\$ 6,847	
63	Advanced Meter - MTU Other	\$ 41.48	\$ 5,753	\$ 5,753	\$ 5,753	
64	Incomplete - Incomplete	\$ 41.48	\$ 298,234	\$ 366,903	\$ 364,251	
	<b>TOTAL</b>		\$ 5,716,518	\$ 6,915,266	\$ 6,847,130	



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 Supplemental Workpaper 1 (27 of 36)  
 Customer Services Field Operations Order Volume Based Cost Model

<b>CSF Operations Order Volume Based Cost Model</b>		<b>Training Non-Labor Cost</b>			
<b>Calculation Steps ---&gt;&gt;&gt;</b>		<b>U</b>	<b>V = U x R</b>		
<b>Line #</b>	<b>Order Types</b>	<b>BY 2021 Non-Labor Per FTE</b>	<b>2022 Estimated</b>	<b>2023 Estimated</b>	<b>TY 2024 Estimated</b>
1	Change of Account - Turn On (Not Entered)	\$ 6,118	\$ 2,227	\$ 2,227	\$ 2,210
2	Change of Account - Close (Soft)	\$ 6,118	\$ 235	\$ 235	\$ 233
3	Change of Account - Hang Tag	\$ 6,118	\$ 22,312	\$ 22,312	\$ 22,141
4	Credit/Collections - 48 Hour (1st Call)	\$ 6,118	\$ 2,255	\$ 7,517	\$ 7,460
5	Credit/Collections - Collect/Close (2nd Call)	\$ 6,118	\$ 9,324	\$ 31,080	\$ 30,843
6	Credit/Collections - Returned Check	\$ 6,118	\$ 15	\$ 51	\$ 51
7	Credit/Collections - Tenant Notification	\$ 6,118	\$ 388	\$ 1,292	\$ 1,283
8	Credit/Collections - Other	\$ 6,118	\$ 2	\$ 8	\$ 8
9	CSO - CSO	\$ 6,118	\$ 40,987	\$ 48,220	\$ 47,852
10	CSO - CO-Test	\$ 6,118	\$ 1,989	\$ 1,989	\$ 1,974
11	CSO - No Gas	\$ 6,118	\$ 3,851	\$ 3,851	\$ 3,822
12	CSO - Seasonal Off	\$ 6,118	\$ 770	\$ 770	\$ 764
13	CSO - Seasonal On	\$ 6,118	\$ 9,223	\$ 9,223	\$ 9,153
14	Gas Leak - CSO Leak	\$ 6,118	\$ 58,798	\$ 58,798	\$ 58,349
15	Gas Leak - Pilot Out Only	\$ 6,118	\$ 2,333	\$ 2,333	\$ 2,315
16	Gas Leak - Leak Investigation (Step2)	\$ 6,118	\$ 4,936	\$ 4,936	\$ 4,899
17	Fumigation - Turn On	\$ 6,118	\$ 19,395	\$ 19,395	\$ 19,247
18	Fumigation - Close	\$ 6,118	\$ 14,104	\$ 14,104	\$ 13,996
19	HBI - Entered	\$ 6,118	\$ 738	\$ 738	\$ 732
20	HBI - Not Entered	\$ 6,118	\$ 306	\$ 306	\$ 304
21	Meter Work (Capital) - Meter Set - Turn On	\$ 6,118	\$ 2,609	\$ -	\$ -
22	Meter Work (Capital) - Meter Set - Left Off	\$ 6,118	\$ 334	\$ -	\$ -
23	Meter Work (Capital) - Meter Set (PSI)	\$ 6,118	\$ 153	\$ -	\$ -
24	Meter Work (Capital) - Meter Set - Turn On (USM)	\$ 6,118	\$ 137	\$ 3,408	\$ 3,475
25	Meter Work (Capital) - Meter Set - Left Off (USM)	\$ 6,118	\$ 18	\$ 439	\$ 448
26	Meter Work (Capital) - Meter Set (PSI) (USM)	\$ 6,118	\$ 8	\$ 210	\$ 214
27	AMM CSO (Residential/Commercial)	\$ 6,118	\$ 467	\$ 467	\$ 463
28	AMM ISO	\$ 6,118	\$ 161	\$ 161	\$ 160
29	Meter Work (O&M) - Meter Reset - Turn On	\$ 6,118	\$ 558	\$ 558	\$ 554
30	Meter Work (O&M) - Meter Reset - Left Off	\$ 6,118	\$ 143	\$ 143	\$ 142
31	Meter Work (O&M) - Meter Change (Entered)	\$ 6,118	\$ 1,003	\$ 1,112	\$ 1,075
32	Meter Work (O&M) - Meter Change (Not Entered)	\$ 6,118	\$ 11,350	\$ 12,581	\$ 12,172

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 Supplemental Workpaper 1 (28 of 36)  
 Customer Services Field Operations Order Volume Based Cost Model

<b>CSF Operations Order Volume Based Cost Model</b>		<b>Training Non-Labor Cost</b>			
<b>Calculation Steps ---&gt;&gt;&gt;</b>		<b>U</b>	<b>V = U x R</b>		
<b>Line #</b>	<b>Order Types</b>	<b>BY 2021 Non-Labor Per FTE</b>	<b>2022 Estimated</b>	<b>2023 Estimated</b>	<b>TY 2024 Estimated</b>
33	Meter Work (O&M) - Meter Change (Size)	\$ 6,118	\$ 3,056	\$ 3,387	\$ 3,277
34	Meter Work (O&M) - Meter Remove	\$ 6,118	\$ 850	\$ 850	\$ 843
35	NonPay Turn On - Turn On	\$ 6,118	\$ 6,785	\$ 22,617	\$ 22,445
36	Read/Verify - Verify	\$ 6,118	\$ 10,120	\$ 10,120	\$ 10,043
37	Read/Verify - Verify - Soft Close	\$ 6,118	\$ 2,817	\$ 2,817	\$ 2,796
38	Read/Verify - Verify - Soft Close - 180 Days	\$ 6,118	\$ 2,626	\$ 2,626	\$ 2,606
39	Read/Verify - Load Survey - Res	\$ 6,118	\$ 1,799	\$ 1,799	\$ 1,785
40	Read - Read Bill	\$ 6,118	\$ 14,185	\$ 14,185	\$ 14,076
41	TurnOn/ShutOff - Turn On (Entered)	\$ 6,118	\$ 25,752	\$ 30,297	\$ 30,066
42	TurnOn/ShutOff - Turn On Entered (Gas On)	\$ 6,118	\$ 3,206	\$ 3,772	\$ 3,743
43	TurnOn/ShutOff - Turn On (Back On/Restore)	\$ 6,118	\$ 15,061	\$ 17,719	\$ 17,584
44	TurnOn/ShutOff - Turn On (PSI)	\$ 6,118	\$ -	\$ -	\$ -
45	TurnOn/ShutOff - Close (Hard)	\$ 6,118	\$ 3,568	\$ 3,568	\$ 3,540
46	Miscellaneous - Service Order (MSO)	\$ 6,118	\$ 2,760	\$ 3,067	\$ 3,043
47	Miscellaneous - Meter & Reg (MMR)	\$ 6,118	\$ 14,100	\$ 15,667	\$ 15,547
48	Miscellaneous - Meter Remediation Order (MRO)	\$ 6,118	\$ 5,773	\$ 6,414	\$ 6,365
49	Miscellaneous - Assist	\$ 6,118	\$ 7,072	\$ 7,072	\$ 7,018
50	Food Industry - Turn On (Entered)	\$ 6,118	\$ 1,213	\$ 1,427	\$ 1,416
51	Food Industry - CSO	\$ 6,118	\$ 20,730	\$ 24,388	\$ 24,202
52	Food Industry - CSO Leak	\$ 6,118	\$ 2,938	\$ 2,938	\$ 2,916
53	Commercial/Industrial - ISO	\$ 6,118	\$ 7,862	\$ 7,862	\$ 7,802
54	Commercial/Industrial - Load Survey- I/C	\$ 6,118	\$ 2,375	\$ 2,375	\$ 2,357
55	Commercial/Industrial - CSO	\$ 6,118	\$ 2,056	\$ 2,419	\$ 2,400
56	Commercial/Industrial - Turn On (Entered)	\$ 6,118	\$ 2,826	\$ 3,325	\$ 3,300
57	Cust/Comp Work - Other	\$ 6,118	\$ 140	\$ 140	\$ 139
58	Advanced Meter - MTU Activate	\$ 6,118	\$ 741	\$ 741	\$ 735
59	Advanced Meter - MTU Deactivate	\$ 6,118	\$ 63	\$ 63	\$ 62
60	Advanced Meter - MTU Change	\$ 6,118	\$ 11,675	\$ 23,291	\$ 18,819
61	Advanced Meter - MTU Remove	\$ 6,118	\$ 25	\$ 25	\$ 25
62	Advanced Meter - MTU SET	\$ 6,118	\$ 486	\$ 486	\$ 482
63	Advanced Meter - MTU Other	\$ 6,118	\$ 408	\$ 408	\$ 405
64	Incomplete - Incomplete	\$ 6,118	\$ 21,147	\$ 26,016	\$ 25,631
<b>TOTAL</b>			\$ 405,346	\$ 490,346	\$ 481,809

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 Supplemental Workpaper 1 (29 of 36)  
 Customer Services Field Operations Order Volume Based Cost Model

<b>CSF Operations Order Volume Based Cost Model</b>		<b>Total Labor Cost</b>		
<b>Calculation Steps ---&gt;&gt;&gt;</b>		<b>W = M + T</b>		
<b>Line #</b>	<b>Order Types</b>	<b>2022 Estimated</b>	<b>2023 Estimated</b>	<b>TY 2024 Estimated</b>
1	Change of Account - Turn On (Not Entered)	\$ 557,498	\$ 557,498	\$ 557,498
2	Change of Account - Close (Soft)	\$ 58,774	\$ 58,774	\$ 58,774
3	Change of Account - Hang Tag	\$ 5,584,988	\$ 5,584,988	\$ 5,584,988
4	Credit/Collections - 48 Hour (1st Call)	\$ 564,491	\$ 1,881,636	\$ 1,881,636
5	Credit/Collections - Collect/Close (2nd Call)	\$ 2,333,969	\$ 7,779,896	\$ 7,779,896
6	Credit/Collections - Returned Check	\$ 3,850	\$ 12,834	\$ 12,834
7	Credit/Collections - Tenant Notification	\$ 97,056	\$ 323,521	\$ 323,521
8	Credit/Collections - Other	\$ 618	\$ 2,059	\$ 2,059
9	CSO - CSO	\$ 10,259,730	\$ 12,070,270	\$ 12,070,270
10	CSO - CO-Test	\$ 497,896	\$ 497,896	\$ 497,896
11	CSO - No Gas	\$ 964,044	\$ 964,044	\$ 964,044
12	CSO - Seasonal Off	\$ 192,804	\$ 192,804	\$ 192,804
13	CSO - Seasonal On	\$ 2,308,732	\$ 2,308,732	\$ 2,308,732
14	Gas Leak - CSO Leak	\$ 14,718,164	\$ 14,718,164	\$ 14,718,164
15	Gas Leak - Pilot Out Only	\$ 584,047	\$ 584,047	\$ 584,047
16	Gas Leak - Leak Investigation (Step2)	\$ 1,235,653	\$ 1,235,653	\$ 1,235,653
17	Fumigation - Turn On	\$ 4,854,800	\$ 4,854,800	\$ 4,854,800
18	Fumigation - Close	\$ 3,530,506	\$ 3,530,506	\$ 3,530,506
19	HBI - Entered	\$ 184,676	\$ 184,676	\$ 184,676
20	HBI - Not Entered	\$ 76,616	\$ 76,616	\$ 76,616
21	Meter Work (Capital) - Meter Set - Turn On	\$ 653,114	\$ -	\$ -
22	Meter Work (Capital) - Meter Set - Left Off	\$ 83,578	\$ -	\$ -
23	Meter Work (Capital) - Meter Set (PSI)	\$ 38,282	\$ -	\$ -
24	Meter Work (Capital) - Meter Set - Turn On (USM)	\$ 34,264	\$ 853,173	\$ 876,649
25	Meter Work (Capital) - Meter Set - Left Off (USM)	\$ 4,416	\$ 109,969	\$ 112,995
26	Meter Work (Capital) - Meter Set (PSI) (USM)	\$ 2,114	\$ 52,648	\$ 54,096
27	AMM CSO (Residential/Commercial)	\$ 116,835	\$ 116,835	\$ 116,835
28	AMM ISO	\$ 40,330	\$ 40,330	\$ 40,330
29	Meter Work (O&M) - Meter Reset - Turn On	\$ 139,774	\$ 139,774	\$ 139,774
30	Meter Work (O&M) - Meter Reset - Left Off	\$ 35,849	\$ 35,849	\$ 35,849
31	Meter Work (O&M) - Meter Change (Entered)	\$ 251,018	\$ 278,228	\$ 271,267
32	Meter Work (O&M) - Meter Change (Not Entered)	\$ 2,841,180	\$ 3,149,154	\$ 3,070,365

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 Supplemental Workpaper 1 (30 of 36)  
 Customer Services Field Operations Order Volume Based Cost Model

<b>CSF Operations Order Volume Based Cost Model</b>		<b>Total Labor Cost</b>		
<b>Calculation Steps ---&gt;&gt;&gt;</b>		<b>W = M + T</b>		
<b>Line #</b>	<b>Order Types</b>	<b>2022 Estimated</b>	<b>2023 Estimated</b>	<b>TY 2024 Estimated</b>
33	Meter Work (O&M) - Meter Change (Size)	\$ 764,952	\$ 847,870	\$ 826,657
34	Meter Work (O&M) - Meter Remove	\$ 212,707	\$ 212,707	\$ 212,707
35	NonPay Turn On - Turn On	\$ 1,698,451	\$ 5,661,505	\$ 5,661,505
36	Read/Verify - Verify	\$ 2,533,328	\$ 2,533,328	\$ 2,533,328
37	Read/Verify - Verify - Soft Close	\$ 705,152	\$ 705,152	\$ 705,152
38	Read/Verify - Verify - Soft Close - 180 Days	\$ 657,274	\$ 657,274	\$ 657,274
39	Read/Verify - Load Survey - Res	\$ 450,346	\$ 450,346	\$ 450,346
40	Read - Read Bill	\$ 3,550,652	\$ 3,550,652	\$ 3,550,652
41	TurnOn/ShutOff - Turn On (Entered)	\$ 6,446,231	\$ 7,583,802	\$ 7,583,802
42	TurnOn/ShutOff - Turn On Entered (Gas On)	\$ 802,590	\$ 944,224	\$ 944,224
43	TurnOn/ShutOff - Turn On (Back On/Restore)	\$ 3,770,074	\$ 4,435,382	\$ 4,435,382
44	TurnOn/ShutOff - Turn On (PSI)	\$ -	\$ -	\$ -
45	TurnOn/ShutOff - Close (Hard)	\$ 893,021	\$ 893,021	\$ 893,021
46	Miscellaneous - Service Order (MSO)	\$ 690,870	\$ 767,633	\$ 767,633
47	Miscellaneous - Meter & Reg (MMR)	\$ 3,529,490	\$ 3,921,656	\$ 3,921,656
48	Miscellaneous - Meter Remediation Order (MRO)	\$ 1,444,997	\$ 1,605,552	\$ 1,605,552
49	Miscellaneous - Assist	\$ 1,770,233	\$ 1,770,233	\$ 1,770,233
50	Food Industry - Turn On (Entered)	\$ 303,564	\$ 357,134	\$ 357,134
51	Food Industry - CSO	\$ 5,188,978	\$ 6,104,680	\$ 6,104,680
52	Food Industry - CSO Leak	\$ 735,448	\$ 735,448	\$ 735,448
53	Commercial/Industrial - ISO	\$ 1,968,010	\$ 1,968,010	\$ 1,968,010
54	Commercial/Industrial - Load Survey- I/C	\$ 594,578	\$ 594,578	\$ 594,578
55	Commercial/Industrial - CSO	\$ 514,612	\$ 605,426	\$ 605,426
56	Commercial/Industrial - Turn On (Entered)	\$ 707,457	\$ 832,303	\$ 832,303
57	Cust/Comp Work - Other	\$ 34,999	\$ 34,999	\$ 34,999
58	Advanced Meter - MTU Activate	\$ 185,465	\$ 185,465	\$ 185,465
59	Advanced Meter - MTU Deactivate	\$ 15,743	\$ 15,743	\$ 15,743
60	Advanced Meter - MTU Change	\$ 2,922,480	\$ 5,830,124	\$ 4,746,833
61	Advanced Meter - MTU Remove	\$ 6,360	\$ 6,360	\$ 6,360
62	Advanced Meter - MTU SET	\$ 121,535	\$ 121,535	\$ 121,535
63	Advanced Meter - MTU Other	\$ 102,113	\$ 102,113	\$ 102,113
64	Incomplete - Incomplete	\$ 5,293,484	\$ 6,512,320	\$ 6,465,247
	<b>TOTAL</b>	<b>\$ 101,464,862</b>	<b>\$ 122,741,948</b>	<b>\$ 121,532,572</b>

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 Customer Services Field Operations Order Volume Based Cost Model

<b>CSF Operations Order Volume Based Cost Model</b>		<b>Total Non-Labor Cost</b>		
<b>Calculation Steps ---&gt;&gt;&gt;</b>		<b>X = P + V</b>		
<b>Line #</b>	<b>Order Types</b>	<b>2022 Estimated</b>	<b>2023 Estimated</b>	<b>TY 2024 Estimated</b>
1	Change of Account - Turn On (Not Entered)	\$ 35,542	\$ 35,542	\$ 35,270
2	Change of Account - Close (Soft)	\$ 3,747	\$ 3,747	\$ 3,718
3	Change of Account - Hang Tag	\$ 356,055	\$ 356,055	\$ 353,337
4	Credit/Collections - 48 Hour (1st Call)	\$ 35,988	\$ 119,959	\$ 119,043
5	Credit/Collections - Collect/Close (2nd Call)	\$ 148,796	\$ 495,986	\$ 492,200
6	Credit/Collections - Returned Check	\$ 245	\$ 818	\$ 812
7	Credit/Collections - Tenant Notification	\$ 6,188	\$ 20,625	\$ 20,468
8	Credit/Collections - Other	\$ 39	\$ 131	\$ 130
9	CSO - CSO	\$ 654,081	\$ 769,507	\$ 763,632
10	CSO - CO-Test	\$ 31,742	\$ 31,742	\$ 31,500
11	CSO - No Gas	\$ 61,460	\$ 61,460	\$ 60,991
12	CSO - Seasonal Off	\$ 12,292	\$ 12,292	\$ 12,198
13	CSO - Seasonal On	\$ 147,187	\$ 147,187	\$ 146,063
14	Gas Leak - CSO Leak	\$ 938,316	\$ 938,316	\$ 931,153
15	Gas Leak - Pilot Out Only	\$ 37,234	\$ 37,234	\$ 36,950
16	Gas Leak - Leak Investigation (Step2)	\$ 78,776	\$ 78,776	\$ 78,174
17	Fumigation - Turn On	\$ 309,504	\$ 309,504	\$ 307,142
18	Fumigation - Close	\$ 225,078	\$ 225,078	\$ 223,359
19	HBI - Entered	\$ 11,773	\$ 11,773	\$ 11,684
20	HBI - Not Entered	\$ 4,884	\$ 4,884	\$ 4,847
21	Meter Work (Capital) - Meter Set - Turn On	\$ 41,637	\$ -	\$ -
22	Meter Work (Capital) - Meter Set - Left Off	\$ 5,328	\$ -	\$ -
23	Meter Work (Capital) - Meter Set (PSI)	\$ 2,441	\$ -	\$ -
24	Meter Work (Capital) - Meter Set - Turn On (USM)	\$ 2,184	\$ 54,392	\$ 55,462
25	Meter Work (Capital) - Meter Set - Left Off (USM)	\$ 282	\$ 7,011	\$ 7,149
26	Meter Work (Capital) - Meter Set (PSI) (USM)	\$ 135	\$ 3,356	\$ 3,422
27	AMM CSO (Residential/Commercial)	\$ 7,448	\$ 7,448	\$ 7,392
28	AMM ISO	\$ 2,571	\$ 2,571	\$ 2,551
29	Meter Work (O&M) - Meter Reset - Turn On	\$ 8,911	\$ 8,911	\$ 8,843
30	Meter Work (O&M) - Meter Reset - Left Off	\$ 2,285	\$ 2,285	\$ 2,268
31	Meter Work (O&M) - Meter Change (Entered)	\$ 16,003	\$ 17,738	\$ 17,162
32	Meter Work (O&M) - Meter Change (Not Entered)	\$ 181,132	\$ 200,766	\$ 194,248

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 Customer Services Field Operations Order Volume Based Cost Model

<b>CSF Operations Order Volume Based Cost Model</b>		<b>Total Non-Labor Cost</b>		
<b>Calculation Steps ---&gt;&gt;&gt;</b>		<b>X = P + V</b>		
<b>Line #</b>	<b>Order Types</b>	<b>2022 Estimated</b>	<b>2023 Estimated</b>	<b>TY 2024 Estimated</b>
33	Meter Work (O&M) - Meter Change (Size)	\$ 48,767	\$ 54,054	\$ 52,299
34	Meter Work (O&M) - Meter Remove	\$ 13,561	\$ 13,561	\$ 13,457
35	NonPay Turn On - Turn On	\$ 108,280	\$ 360,934	\$ 358,178
36	Read/Verify - Verify	\$ 161,505	\$ 161,505	\$ 160,272
37	Read/Verify - Verify - Soft Close	\$ 44,955	\$ 44,955	\$ 44,612
38	Read/Verify - Verify - Soft Close - 180 Days	\$ 41,903	\$ 41,903	\$ 41,583
39	Read/Verify - Load Survey - Res	\$ 28,711	\$ 28,711	\$ 28,491
40	Read - Read Bill	\$ 226,362	\$ 226,362	\$ 224,634
41	TurnOn/ShutOff - Turn On (Entered)	\$ 410,962	\$ 483,484	\$ 479,794
42	TurnOn/ShutOff - Turn On Entered (Gas On)	\$ 51,167	\$ 60,196	\$ 59,737
43	TurnOn/ShutOff - Turn On (Back On/Restore)	\$ 240,351	\$ 282,765	\$ 280,607
44	TurnOn/ShutOff - Turn On (PSI)	\$ -	\$ -	\$ -
45	TurnOn/ShutOff - Close (Hard)	\$ 56,932	\$ 56,932	\$ 56,497
46	Miscellaneous - Service Order (MSO)	\$ 44,044	\$ 48,938	\$ 48,565
47	Miscellaneous - Meter & Reg (MMR)	\$ 225,013	\$ 250,014	\$ 248,106
48	Miscellaneous - Meter Remediation Order (MRO)	\$ 92,122	\$ 102,358	\$ 101,576
49	Miscellaneous - Assist	\$ 112,856	\$ 112,856	\$ 111,995
50	Food Industry - Turn On (Entered)	\$ 19,353	\$ 22,768	\$ 22,594
51	Food Industry - CSO	\$ 330,809	\$ 389,187	\$ 386,216
52	Food Industry - CSO Leak	\$ 46,886	\$ 46,886	\$ 46,529
53	Commercial/Industrial - ISO	\$ 125,465	\$ 125,465	\$ 124,507
54	Commercial/Industrial - Load Survey- I/C	\$ 37,906	\$ 37,906	\$ 37,616
55	Commercial/Industrial - CSO	\$ 32,808	\$ 38,597	\$ 38,303
56	Commercial/Industrial - Turn On (Entered)	\$ 45,102	\$ 53,061	\$ 52,656
57	Cust/Comp Work - Other	\$ 2,231	\$ 2,231	\$ 2,214
58	Advanced Meter - MTU Activate	\$ 11,824	\$ 11,824	\$ 11,734
59	Advanced Meter - MTU Deactivate	\$ 1,004	\$ 1,004	\$ 996
60	Advanced Meter - MTU Change	\$ 186,315	\$ 371,683	\$ 300,311
61	Advanced Meter - MTU Remove	\$ 405	\$ 405	\$ 402
62	Advanced Meter - MTU SET	\$ 7,748	\$ 7,748	\$ 7,689
63	Advanced Meter - MTU Other	\$ 6,510	\$ 6,510	\$ 6,460
64	Incomplete - Incomplete	\$ 337,471	\$ 415,175	\$ 409,027
	<b>TOTAL</b>	<b>\$ 6,468,611</b>	<b>\$ 7,825,072</b>	<b>\$ 7,688,827</b>

SCG-14-WP-2FC001 CSF Operations  
 Supplemental Workpaper 1 (33 of 36)  
 Customer Services Field Operations Order Volume Based Cost Model

<b>CSF Operations Order Volume Based Cost Model</b>		<b>Total Cost</b>		
<b>Calculation Steps ---&gt;&gt;&gt;</b>		<b>Y = W + X</b>		
<b>Line #</b>	<b>Order Types</b>	<b>2022 Estimated</b>	<b>2023 Estimated</b>	<b>TY 2024 Estimated</b>
1	Change of Account - Turn On (Not Entered)	\$ 593,039	\$ 593,039	\$ 592,768
2	Change of Account - Close (Soft)	\$ 62,521	\$ 62,521	\$ 62,492
3	Change of Account - Hang Tag	\$ 5,941,044	\$ 5,941,044	\$ 5,938,326
4	Credit/Collections - 48 Hour (1st Call)	\$ 600,478	\$ 2,001,595	\$ 2,000,679
5	Credit/Collections - Collect/Close (2nd Call)	\$ 2,482,764	\$ 8,275,882	\$ 8,272,095
6	Credit/Collections - Returned Check	\$ 4,096	\$ 13,652	\$ 13,646
7	Credit/Collections - Tenant Notification	\$ 103,244	\$ 344,146	\$ 343,988
8	Credit/Collections - Other	\$ 657	\$ 2,191	\$ 2,190
9	CSO - CSO	\$ 10,913,810	\$ 12,839,777	\$ 12,833,903
10	CSO - CO-Test	\$ 529,638	\$ 529,638	\$ 529,396
11	CSO - No Gas	\$ 1,025,504	\$ 1,025,504	\$ 1,025,035
12	CSO - Seasonal Off	\$ 205,096	\$ 205,096	\$ 205,002
13	CSO - Seasonal On	\$ 2,455,919	\$ 2,455,919	\$ 2,454,795
14	Gas Leak - CSO Leak	\$ 15,656,480	\$ 15,656,480	\$ 15,649,317
15	Gas Leak - Pilot Out Only	\$ 621,281	\$ 621,281	\$ 620,997
16	Gas Leak - Leak Investigation (Step2)	\$ 1,314,429	\$ 1,314,429	\$ 1,313,828
17	Fumigation - Turn On	\$ 5,164,305	\$ 5,164,305	\$ 5,161,942
18	Fumigation - Close	\$ 3,755,583	\$ 3,755,583	\$ 3,753,865
19	HBI - Entered	\$ 196,449	\$ 196,449	\$ 196,359
20	HBI - Not Entered	\$ 81,501	\$ 81,501	\$ 81,463
21	Meter Work (Capital) - Meter Set - Turn On	\$ 694,751	\$ -	\$ -
22	Meter Work (Capital) - Meter Set - Left Off	\$ 88,906	\$ -	\$ -
23	Meter Work (Capital) - Meter Set (PSI)	\$ 40,723	\$ -	\$ -
24	Meter Work (Capital) - Meter Set - Turn On (USM)	\$ 36,449	\$ 907,564	\$ 932,111
25	Meter Work (Capital) - Meter Set - Left Off (USM)	\$ 4,698	\$ 116,980	\$ 120,144
26	Meter Work (Capital) - Meter Set (PSI) (USM)	\$ 2,249	\$ 56,004	\$ 57,519
27	AMM CSO (Residential/Commercial)	\$ 124,283	\$ 124,283	\$ 124,226
28	AMM ISO	\$ 42,901	\$ 42,901	\$ 42,881
29	Meter Work (O&M) - Meter Reset - Turn On	\$ 148,685	\$ 148,685	\$ 148,617
30	Meter Work (O&M) - Meter Reset - Left Off	\$ 38,135	\$ 38,135	\$ 38,117
31	Meter Work (O&M) - Meter Change (Entered)	\$ 267,021	\$ 295,965	\$ 288,428
32	Meter Work (O&M) - Meter Change (Not Entered)	\$ 3,022,311	\$ 3,349,920	\$ 3,264,613

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 Customer Services Field Operations Order Volume Based Cost Model

<b>CSF Operations Order Volume Based Cost Model</b>		<b>Total Cost</b>		
<b>Calculation Steps ---&gt;&gt;&gt;</b>		<b>Y = W + X</b>		
<b>Line #</b>	<b>Order Types</b>	<b>2022 Estimated</b>	<b>2023 Estimated</b>	<b>TY 2024 Estimated</b>
33	Meter Work (O&M) - Meter Change (Size)	\$ 813,719	\$ 901,924	\$ 878,956
34	Meter Work (O&M) - Meter Remove	\$ 226,268	\$ 226,268	\$ 226,164
35	NonPay Turn On - Turn On	\$ 1,806,732	\$ 6,022,438	\$ 6,019,683
36	Read/Verify - Verify	\$ 2,694,833	\$ 2,694,833	\$ 2,693,600
37	Read/Verify - Verify - Soft Close	\$ 750,107	\$ 750,107	\$ 749,764
38	Read/Verify - Verify - Soft Close - 180 Days	\$ 699,177	\$ 699,177	\$ 698,857
39	Read/Verify - Load Survey - Res	\$ 479,057	\$ 479,057	\$ 478,837
40	Read - Read Bill	\$ 3,777,014	\$ 3,777,014	\$ 3,775,286
41	TurnOn/ShutOff - Turn On (Entered)	\$ 6,857,193	\$ 8,067,286	\$ 8,063,595
42	TurnOn/ShutOff - Turn On Entered (Gas On)	\$ 853,757	\$ 1,004,420	\$ 1,003,961
43	TurnOn/ShutOff - Turn On (Back On/Restore)	\$ 4,010,425	\$ 4,718,147	\$ 4,715,988
44	TurnOn/ShutOff - Turn On (PSI)	\$ -	\$ -	\$ -
45	TurnOn/ShutOff - Close (Hard)	\$ 949,953	\$ 949,953	\$ 949,519
46	Miscellaneous - Service Order (MSO)	\$ 734,914	\$ 816,571	\$ 816,198
47	Miscellaneous - Meter & Reg (MMR)	\$ 3,754,503	\$ 4,171,670	\$ 4,169,762
48	Miscellaneous - Meter Remediation Order (MRO)	\$ 1,537,119	\$ 1,707,910	\$ 1,707,128
49	Miscellaneous - Assist	\$ 1,883,089	\$ 1,883,089	\$ 1,882,228
50	Food Industry - Turn On (Entered)	\$ 322,917	\$ 379,903	\$ 379,729
51	Food Industry - CSO	\$ 5,519,787	\$ 6,493,867	\$ 6,490,896
52	Food Industry - CSO Leak	\$ 782,335	\$ 782,335	\$ 781,977
53	Commercial/Industrial - ISO	\$ 2,093,475	\$ 2,093,475	\$ 2,092,517
54	Commercial/Industrial - Load Survey- I/C	\$ 632,483	\$ 632,483	\$ 632,194
55	Commercial/Industrial - CSO	\$ 547,420	\$ 644,023	\$ 643,728
56	Commercial/Industrial - Turn On (Entered)	\$ 752,559	\$ 885,364	\$ 884,959
57	Cust/Comp Work - Other	\$ 37,230	\$ 37,230	\$ 37,213
58	Advanced Meter - MTU Activate	\$ 197,288	\$ 197,288	\$ 197,198
59	Advanced Meter - MTU Deactivate	\$ 16,746	\$ 16,746	\$ 16,739
60	Advanced Meter - MTU Change	\$ 3,108,794	\$ 6,201,808	\$ 5,047,144
61	Advanced Meter - MTU Remove	\$ 6,766	\$ 6,766	\$ 6,763
62	Advanced Meter - MTU SET	\$ 129,283	\$ 129,283	\$ 129,224
63	Advanced Meter - MTU Other	\$ 108,623	\$ 108,623	\$ 108,574
64	Incomplete - Incomplete	\$ 5,630,955	\$ 6,927,495	\$ 6,874,274
	<b>TOTAL</b>	<b>\$ 107,933,473</b>	<b>\$ 130,567,021</b>	<b>\$ 129,221,399</b>



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 Supplemental Workpaper 1 (35 of 36)  
 Customer Services Field Operations Order Volume Based Cost Model

<b>CSF Operations Order Volume Based Cost Model</b>		<b>Total FTEs</b>		
<b>Calculation Steps ---&gt;&gt;&gt;</b>		<b>Z = N + R</b>		
<b>Line #</b>	<b>Order Types</b>	<b>2022 Estimated</b>	<b>2023 Estimated</b>	<b>TY 2024 Estimated</b>
1	Change of Account - Turn On (Not Entered)	5.8	5.8	5.7
2	Change of Account - Close (Soft)	0.6	0.6	0.6
3	Change of Account - Hang Tag	57.7	57.7	57.2
4	Credit/Collections - 48 Hour (1st Call)	5.8	19.4	19.3
5	Credit/Collections - Collect/Close (2nd Call)	24.1	80.3	79.7
6	Credit/Collections - Returned Check	0.0	0.1	0.1
7	Credit/Collections - Tenant Notification	1.0	3.3	3.3
8	Credit/Collections - Other	0.0	0.0	0.0
9	CSO - CSO	105.9	124.6	123.7
10	CSO - CO-Test	5.1	5.1	5.1
11	CSO - No Gas	10.0	10.0	9.9
12	CSO - Seasonal Off	2.0	2.0	2.0
13	CSO - Seasonal On	23.8	23.8	23.7
14	Gas Leak - CSO Leak	152.0	152.0	150.8
15	Gas Leak - Pilot Out Only	6.0	6.0	6.0
16	Gas Leak - Leak Investigation (Step2)	12.8	12.8	12.7
17	Fumigation - Turn On	50.1	50.1	49.7
18	Fumigation - Close	36.5	36.5	36.2
19	HBI - Entered	1.9	1.9	1.9
20	HBI - Not Entered	0.8	0.8	0.8
21	Meter Work (Capital) - Meter Set - Turn On	6.7	-	-
22	Meter Work (Capital) - Meter Set - Left Off	0.9	-	-
23	Meter Work (Capital) - Meter Set (PSI)	0.4	-	-
24	Meter Work (Capital) - Meter Set - Turn On (USM)	0.4	8.8	9.0
25	Meter Work (Capital) - Meter Set - Left Off (USM)	0.0	1.1	1.2
26	Meter Work (Capital) - Meter Set (PSI) (USM)	0.0	0.5	0.6
27	AMM CSO (Residential/Commercial)	1.2	1.2	1.2
28	AMM ISO	0.4	0.4	0.4
29	Meter Work (O&M) - Meter Reset - Turn On	1.4	1.4	1.4
30	Meter Work (O&M) - Meter Reset - Left Off	0.4	0.4	0.4
31	Meter Work (O&M) - Meter Change (Entered)	2.6	2.9	2.8
32	Meter Work (O&M) - Meter Change (Not Entered)	29.3	32.5	31.5

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 Supplemental Workpaper 1 (36 of 36)  
 Customer Services Field Operations Order Volume Based Cost Model

<b>CSF Operations Order Volume Based Cost Model</b>		<b>Total FTEs</b>		
<b>Calculation Steps ---&gt;&gt;&gt;</b>		<b>Z = N + R</b>		
<b>Line #</b>	<b>Order Types</b>	<b>2022 Estimated</b>	<b>2023 Estimated</b>	<b>TY 2024 Estimated</b>
33	Meter Work (O&M) - Meter Change (Size)	7.9	8.8	8.5
34	Meter Work (O&M) - Meter Remove	2.2	2.2	2.2
35	NonPay Turn On - Turn On	17.5	58.5	58.0
36	Read/Verify - Verify	26.2	26.2	26.0
37	Read/Verify - Verify - Soft Close	7.3	7.3	7.2
38	Read/Verify - Verify - Soft Close - 180 Days	6.8	6.8	6.7
39	Read/Verify - Load Survey - Res	4.6	4.6	4.6
40	Read - Read Bill	36.7	36.7	36.4
41	TurnOn/ShutOff - Turn On (Entered)	66.6	78.3	77.7
42	TurnOn/ShutOff - Turn On Entered (Gas On)	8.3	9.7	9.7
43	TurnOn/ShutOff - Turn On (Back On/Restore)	38.9	45.8	45.4
44	TurnOn/ShutOff - Turn On (PSI)	-	-	-
45	TurnOn/ShutOff - Close (Hard)	9.2	9.2	9.1
46	Miscellaneous - Service Order (MSO)	7.1	7.9	7.9
47	Miscellaneous - Meter & Reg (MMR)	36.4	40.5	40.2
48	Miscellaneous - Meter Remediation Order (MRO)	14.9	16.6	16.4
49	Miscellaneous - Assist	18.3	18.3	18.1
50	Food Industry - Turn On (Entered)	3.1	3.7	3.7
51	Food Industry - CSO	53.6	63.0	62.5
52	Food Industry - CSO Leak	7.6	7.6	7.5
53	Commercial/Industrial - ISO	20.3	20.3	20.2
54	Commercial/Industrial - Load Survey- I/C	6.1	6.1	6.1
55	Commercial/Industrial - CSO	5.3	6.3	6.2
56	Commercial/Industrial - Turn On (Entered)	7.3	8.6	8.5
57	Cust/Comp Work - Other	0.4	0.4	0.4
58	Advanced Meter - MTU Activate	1.9	1.9	1.9
59	Advanced Meter - MTU Deactivate	0.2	0.2	0.2
60	Advanced Meter - MTU Change	30.2	60.2	48.6
61	Advanced Meter - MTU Remove	0.1	0.1	0.1
62	Advanced Meter - MTU SET	1.3	1.3	1.2
63	Advanced Meter - MTU Other	1.1	1.1	1.0
64	Incomplete - Incomplete	54.7	67.2	66.2
	<b>TOTAL</b>	<b>1,047.6</b>	<b>1,267.2</b>	<b>1,245.2</b>

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 Supplemental Workpaper 2 (1 of 17)  
 Customer Services Field Operations Estimated RAMP Costs Summary

Line#	Calculation Steps	CS - Field Operations PPE & Boot Allowance Estimated RAMP Cost	BY 2021	2022 Estimated	2023 Estimated	TY 2024 Estimated
1	A <sup>1</sup>	CS - Field Operations FTE	1,041.3	1,047.6	1,267.2	1,245.2
2	B <sup>2</sup>	Annual Boot Allowance Per Employee	\$ 85	\$ 110	\$ 110	\$ 110
3	C = A x B	Estimated Boot Allowance Cost	\$ 83,245	\$ 115,232	\$ 139,397	\$ 136,969
4		Incremental Boot Allowance Cost vs BY 2021		\$ 31,987	\$ 56,152	\$ 53,724
5	D <sup>3</sup>	BY 2021 Average PPE Per FTE	\$ 412.84	\$ 412.84	\$ 412.84	\$ 412.84
6	E = A x D	Estimated PPE Cost	\$ 404,313	\$ 432,475	\$ 523,164	\$ 514,055
7		Incremental PPE Cost vs BY 2021		\$ 28,162	\$ 118,851	\$ 109,742
8	F = C + E	Estimated Total Boot Allowance & PPE Cost	\$ 487,558	\$ 547,707	\$ 662,561	\$ 651,025
9		Total Incremental Boot Allowance & PPE Cost vs BY 2021		\$ 60,149	\$ 175,003	\$ 163,466

Line#	Calculation Steps	CS - Field Operations Employee Skills Training Estimated RAMP Cost	BY 2021	2022 Estimated	2023 Estimated	TY 2024 Estimated
10	G <sup>4</sup>	CS - Field Operations Average Non-Labor Per FTE	\$ 5,620	\$ 5,595	\$ 5,595	\$ 5,595
11	H = G - B - D	Non - Labor Per FTE Less Boot Allowance & PPE	\$ 5,123	\$ 5,072	\$ 5,072	\$ 5,072
12	I <sup>5</sup>	Estimated CS - Field Operations Training FTE	61.9	66.3	80.1	78.8
13	J <sup>6</sup>	BY 2021 Training Labor Cost	\$ 41.48	\$ 41.48	\$ 41.48	\$ 41.48
14	K <sup>7</sup>	Annual Paid Hours	2088	2080	2080	2096
15	L = I x J x K	Estimated CS - Field Operations Training Labor	\$ 5,364,829	\$ 5,716,518	\$ 6,915,266	\$ 6,847,130
16	M = G x I	Estimated CS - Field Operations Training Non-Labor	\$ 348,125	\$ 370,709	\$ 448,446	\$ 440,638
17	N = L + M	Estimated Total Training Cost	\$ 5,712,954	\$ 6,087,226	\$ 7,363,712	\$ 7,287,768
18		Incremental Training FTE vs BY 2021		4.3	18.2	16.8
19		Incremental Training Labor vs BY 2021		\$ 351,688	\$ 1,550,437	\$ 1,482,301
20		Incremental Training Non-Labor vs BY 2021		\$ 22,584	\$ 100,321	\$ 92,513
21		Total Incremental Training Cost vs BY 2021		\$ 374,272	\$ 1,650,758	\$ 1,574,813

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

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 Supplemental Workpaper 2 (2 of 17)  
 Customer Services Field Operations Estimated RAMP Costs Summary

Line#	Calculation Steps	CS - Operations Safety Related Orders Estimated RAMP Cost	BY 2021	2022 Estimated	2023 Estimated	TY 2024 Estimated
22	O <sup>8</sup>	CS - Field Operations Workload RAMP Labor	\$ 65,118,487	\$ 70,208,091	\$ 78,805,177	\$ 79,021,067
23	P <sup>9</sup>	CS - Field Operations Workload RAMP Non-Labor	\$ 3,776,850	\$ 4,069,718	\$ 4,568,061	\$ 4,545,609
24	Q = O + P	Total CS - Field Operations Workload RAMP Cost	\$ 68,895,337	\$ 74,277,809	\$ 83,373,238	\$ 83,566,677
25	R <sup>10</sup>	CS - Field Operations Workload RAMP FTE	664.8	719.6	807.7	803.7
26		Incremental Workload RAMP Labor vs BY 2021		\$ 5,089,604	\$ 13,686,690	\$ 13,902,581
27		Incremental Workload RAMP Non-Labor vs BY 2021		\$ 292,868	\$ 791,211	\$ 768,759
28		Total Incremental Workload RAMP Cost vs BY 2021		\$ 5,382,473	\$ 14,477,902	\$ 14,671,340
29		Incremental Workload RAMP FTE vs BY 2021		54.7	142.8	138.9

Line#	Calculation Steps	CS - Field Operations Total Estimated RAMP Cost	BY 2021	2022 Estimated	2023 Estimated	TY 2024 Estimated
30	S = L + O	Labor	\$ 70,483,316	\$ 75,924,609	\$ 85,720,443	\$ 85,868,197
31	T = F + M + P	Non-Labor	\$ 4,612,533	\$ 4,988,134	\$ 5,679,068	\$ 5,637,272
32	U = S + T	Total	\$ 75,095,849	\$ 80,912,742	\$ 91,399,511	\$ 91,505,469
33	V = I + R	FTE	726.8	785.8	887.8	882.4
34		Incremental RAMP Labor vs BY 2021		\$ 5,441,293	\$ 15,237,127	\$ 15,384,881
35		Incremental RAMP Non-Labor vs BY 2021		\$ 375,601	\$ 1,066,535	\$ 1,024,739
36		Total Incremental RAMP Cost vs BY 2021		\$ 5,816,893	\$ 16,303,662	\$ 16,409,620
37		Incremental RAMP FTE vs BY 2021		59.0	161.0	155.7

SCG-14-WP-2FC001 CSF Operations  
 Supplemental Workpaper 2 (3 of 17)  
 Customer Services Field Operations Estimated RAMP Costs Summary

Line#	Calculation Steps	Total CS - Field Operations Cost	BY 2021	2022 Estimated	2023 Estimated	TY 2024 Estimated
38	W <sup>11</sup>	Labor	\$ 99,692,217	\$ 101,464,862	\$ 122,741,948	\$ 121,532,572
39	X <sup>12</sup>	Non-Labor	\$ 6,431,429	\$ 6,468,611	\$ 7,825,072	\$ 7,688,827
40	Y = W + X	Total	\$ 106,123,646	\$ 107,933,473	\$ 130,567,021	\$ 129,221,399
41	Z = A	FTE	1,041.3	1,047.6	1,267.2	1,245.2
42		Incremental Total Labor vs BY 2021		\$ 1,772,645	\$ 23,049,731	\$ 21,840,355
43		Incremental Total Non-Labor vs BY 2021		\$ 37,182	\$ 1,393,643	\$ 1,257,398
44		Total Incremental Total Cost vs BY 2021		\$ 1,809,827	\$ 24,443,375	\$ 23,097,753
45		Incremental Total FTE vs BY 2021		6.3	225.9	203.9

Line#	Calculation Steps	Non RAMP CS - Field Operations Cost	BY 2021	2022 Estimated	2023 Estimated	TY 2024 Estimated
46	AA = W - S	Labor	\$ 29,208,901	\$ 25,540,253	\$ 37,021,505	\$ 35,664,375
47	AB = X - T	Non-Labor	\$ 1,818,896	\$ 1,480,477	\$ 2,146,004	\$ 2,051,555
48	AC = AA + AB	Total	\$ 31,027,797	\$ 27,020,730	\$ 39,167,510	\$ 37,715,930
49	AD = Z - V	FTE	314.5	261.8	379.4	362.7
50		Incremental Non-RAMP Labor vs BY 2021		\$ (3,668,648)	\$ 7,812,604	\$ 6,455,474
51		Incremental Non-RAMP Non-Labor vs BY 2021		\$ (338,419)	\$ 327,108	\$ 232,659
52		Total Incremental Non-RAMP Cost vs BY 2021		\$ (4,007,067)	\$ 8,139,713	\$ 6,688,133
53		Incremental Non-RAMP FTE vs BY 2021		(52.8)	64.9	48.2

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Supplemental Workpaper 2 (4 of 17)  
Customer Services Field Operations Estimated RAMP Costs Summary

**Footnotes:**

- <sup>1</sup> See SCG-14-WP-2FC001 CSF Operations Supplemental Workpaper 1 (Calculation Step Z)
- <sup>2</sup> SoCalGas Collective Bargaining Agreement - 10/1/21 (page 95) - (D) Footwear (Boot Allowance)
- <sup>3</sup> Operations 2FC001 2021 Uniform Costs divided by Operations 2FC001 2021 FTEs
- <sup>4</sup> BY 2021 = 2021 Training NL Cost (6,118) - 2021 PPE per FTE (498)
- <sup>4</sup> 2022-2024 = 2021 Training NL Cost (6,118) - 2021 PPE per FTE (523)
- <sup>5</sup> See SCG-14-WP-2FC001 CSF Operations Supplemental Workpaper 1 (Calculation Step R)
- <sup>6</sup> See SCG-14-WP-2FC001 CSF Operations Supplemental Workpaper 1 (Calculation Step S)
- <sup>7</sup> Annual Working Hours per Year
- <sup>8</sup> See SCG-14-WP-2FC001 CSF Operations Supplemental Workpaper 3 (Calculation Step L)
- <sup>9</sup> See SCG-14-WP-2FC001 CSF Operations Supplemental Workpaper 3 (Calculation Step K)
- <sup>10</sup> See SCG-14-WP-2FC001 CSF Operations Supplemental Workpaper 3 (Calculation Step H)
- <sup>11</sup> See SCG-14-WP-2FC001 CSF Operations Supplemental Workpaper 1 (Calculation Step W)
- <sup>12</sup> See SCG-14-WP-2FC001 CSF Operations Supplemental Workpaper 1 (Calculation Step X)

SCG-14-WP-2FC001 CSF Operations  
 Supplemental Workpaper 3 (5 of 17)  
 Customer Services Field Operations Safety Related Field Orders Estimated RAMP Costs

Line #	Calculation Steps → Safety Related Order Types	Total Labor Cost			
		A <sup>1</sup>			
		BY 2021	2022 Estimated	2023 Estimated	TY 2024 Estimated
1	Change of Account - Close (Soft)	50,246	58,774	58,774	58,774
2	Change of Account - Hang Tag	5,975,611	5,584,988	5,584,988	5,584,988
3	Customer Service Order ("CSO")	9,938,657	10,259,730	12,070,270	12,070,270
4	CSO - Carbon Monoxide Test	536,135	497,896	497,896	497,896
5	CSO - No Gas	1,034,463	964,044	964,044	964,044
6	CSO Seasonal - Off	150,149	192,804	192,804	192,804
7	CSO Seasonal - On	2,188,684	2,308,732	2,308,732	2,308,732
8	Gas Leak - CSO Leak	15,896,548	14,718,164	14,718,164	14,718,164
9	Gas Leak - Pilot Out Only	637,861	584,047	584,047	584,047
10	Gas Leak - Leak Investigation (Step 2)	1,312,446	1,235,653	1,235,653	1,235,653
11	Fumigation - Turn On	5,210,096	4,854,800	4,854,800	4,854,800
12	Fumigation - Close	3,866,886	3,530,506	3,530,506	3,530,506
13	Read/Verify - Verify	2,784,173	2,533,328	2,533,328	2,533,328
14	Read/Verify - Soft Close	9,508	705,152	705,152	705,152
15	Read/Verify - Soft Close - 180 Days	33	657,274	657,274	657,274
16	Food Industry - CSO Leak	457,625	735,448	735,448	735,448
17	Meter Work (Capital) - Meter Set - Turn On	697,632	653,114	-	-
18	Meter Work (Capital) - Meter Set - Left Off	56,289	83,578	-	-
19	Meter Work (Capital) - Meter Set (PSI)	12,301	38,282	-	-
20	Meter Work (Capital) - Meter Set - Turn On (USM)	-	34,264	853,173	876,649
21	Meter Work (Capital) - Meter Set - Left Off (USM)	-	4,416	109,969	112,995
22	Meter Work (Capital) - Meter Set (PSI) (USM)	-	2,114	52,648	54,096
23	AMM CSO (Residential/Commercial)	-	116,835	116,835	116,835
24	AMM ISO	-	40,330	40,330	40,330
25	Other Appliance Orders	15,580,656	21,248,532	28,101,356	28,294,907
26	Incomplete	2,610,293	2,756,958	3,003,936	3,011,212
<b>TOTAL</b>					

SCG-14-WP-2FC001 CSF Operations  
 Supplemental Workpaper 3 (6 of 17)  
 Customer Services Field Operations Safety Related Field Orders Estimated RAMP Costs

Line #	Calculation Steps → Safety Related Order Types	Total Non-Labor Cost			
		B <sup>2</sup>			
		BY 2021	2022 Estimated	2023 Estimated	TY 2024 Estimated
1	Change of Account - Close (Soft)	3,191	3,747	3,747	3,718
2	Change of Account - Hang Tag	379,499	356,055	356,055	353,337
3	Customer Service Order ("CSO")	631,184	654,081	769,507	763,632
4	CSO - Carbon Monoxide Test	34,049	31,742	31,742	31,500
5	CSO - No Gas	65,697	61,460	61,460	60,991
6	CSO Seasonal - Off	9,536	12,292	12,292	12,198
7	CSO Seasonal - On	138,999	147,187	147,187	146,063
8	Gas Leak - CSO Leak	1,009,557	938,316	938,316	931,153
9	Gas Leak - Pilot Out Only	40,509	37,234	37,234	36,950
10	Gas Leak - Leak Investigation (Step 2)	83,351	78,776	78,776	78,174
11	Fumigation - Turn On	330,883	309,504	309,504	307,142
12	Fumigation - Close	245,578	225,078	225,078	223,359
13	Read/Verify - Verify	176,817	161,505	161,505	160,272
14	Read/Verify - Soft Close	604	44,955	44,955	44,612
15	Read/Verify - Soft Close - 180 Days	2	41,903	41,903	41,583
16	Food Industry - CSO Leak	29,063	46,886	46,886	46,529
17	Meter Work (Capital) - Meter Set - Turn On	44,305	41,637	-	-
18	Meter Work (Capital) - Meter Set - Left Off	3,575	5,328	-	-
19	Meter Work (Capital) - Meter Set (PSI)	781	2,441	-	-
20	Meter Work (Capital) - Meter Set - Turn On (USM)	-	2,184	54,392	55,462
21	Meter Work (Capital) - Meter Set - Left Off (USM)	-	282	7,011	7,149
22	Meter Work (Capital) - Meter Set (PSI) (USM)	-	135	3,356	3,422
23	AMM CSO (Residential/Commercial)	-	7,448	7,448	7,392
24	AMM ISO	-	2,571	2,571	2,551
25	Other Appliance Orders	989,496	1,354,641	1,791,524	1,790,093
26	Incomplete	165,774	175,762	191,508	190,506
<b>TOTAL</b>					



SCG-14-WP-2FC001 CSF Operations  
 Supplemental Workpaper 3 (7 of 17)  
 Customer Services Field Operations Safety Related Field Orders Estimated RAMP Costs

Line #	Calculation Steps → Safety Related Order Types	Total Cost			
		C = A + B			
		BY 2021	2022 Estimated	2023 Estimated	TY 2024 Estimated
1	Change of Account - Close (Soft)	53,437	62,521	62,521	62,492
2	Change of Account - Hang Tag	6,355,110	5,941,044	5,941,044	5,938,326
3	Customer Service Order ("CSO")	10,569,841	10,913,810	12,839,777	12,833,903
4	CSO - Carbon Monoxide Test	570,184	529,638	529,638	529,396
5	CSO - No Gas	1,100,159	1,025,504	1,025,504	1,025,035
6	CSO Seasonal - Off	159,685	205,096	205,096	205,002
7	CSO Seasonal - On	2,327,683	2,455,919	2,455,919	2,454,795
8	Gas Leak - CSO Leak	16,906,105	15,656,480	15,656,480	15,649,317
9	Gas Leak - Pilot Out Only	678,370	621,281	621,281	620,997
10	Gas Leak - Leak Investigation (Step 2)	1,395,797	1,314,429	1,314,429	1,313,828
11	Fumigation - Turn On	5,540,979	5,164,305	5,164,305	5,161,942
12	Fumigation - Close	4,112,464	3,755,583	3,755,583	3,753,865
13	Read/Verify - Verify	2,960,990	2,694,833	2,694,833	2,693,600
14	Read/Verify - Soft Close	10,111	750,107	750,107	749,764
15	Read/Verify - Soft Close - 180 Days	35	699,177	699,177	698,857
16	Food Industry - CSO Leak	486,688	782,335	782,335	781,977
17	Meter Work (Capital) - Meter Set - Turn On	741,937	694,751	-	-
18	Meter Work (Capital) - Meter Set - Left Off	59,864	88,906	-	-
19	Meter Work (Capital) - Meter Set (PSI)	13,083	40,723	-	-
20	Meter Work (Capital) - Meter Set - Turn On (USM)	-	36,449	907,564	932,111
21	Meter Work (Capital) - Meter Set - Left Off (USM)	-	4,698	116,980	120,144
22	Meter Work (Capital) - Meter Set (PSI) (USM)	-	2,249	56,004	57,519
23	AMM CSO (Residential/Commercial)	-	124,283	124,283	124,226
24	AMM ISO	-	42,901	42,901	42,881
25	Other Appliance Orders	16,570,151	22,603,173	29,892,879	30,085,001
26	Incomplete	2,776,067	2,932,720	3,195,444	3,201,718
<b>TOTAL</b>					

SCG-14-WP-2FC001 CSF Operations  
 Supplemental Workpaper 3 (8 of 17)  
 Customer Services Field Operations Safety Related Field Orders Estimated RAMP Costs

Line #	Calculation Steps → Safety Related Order Types	Total FTEs			
		D <sup>3</sup>			
		BY 2021	2022 Estimated	2023 Estimated	TY 2024 Estimated
1	Change of Account - Close (Soft)	0.5	0.6	0.6	0.6
2	Change of Account - Hang Tag	61.5	57.7	57.7	57.2
3	Customer Service Order ("CSO")	102.2	105.9	124.6	123.7
4	CSO - Carbon Monoxide Test	5.5	5.1	5.1	5.1
5	CSO - No Gas	10.6	10.0	10.0	9.9
6	CSO Seasonal - Off	1.5	2.0	2.0	2.0
7	CSO Seasonal - On	22.5	23.8	23.8	23.7
8	Gas Leak - CSO Leak	163.5	152.0	152.0	150.8
9	Gas Leak - Pilot Out Only	6.6	6.0	6.0	6.0
10	Gas Leak - Leak Investigation (Step 2)	13.5	12.8	12.8	12.7
11	Fumigation - Turn On	53.6	50.1	50.1	49.7
12	Fumigation - Close	39.8	36.5	36.5	36.2
13	Read/Verify - Verify	28.6	26.2	26.2	26.0
14	Read/Verify - Soft Close	0.1	7.3	7.3	7.2
15	Read/Verify - Soft Close - 180 Days	0.0	6.8	6.8	6.7
16	Food Industry - CSO Leak	4.7	7.6	7.6	7.5
17	Meter Work (Capital) - Meter Set - Turn On	7.2	6.7	-	-
18	Meter Work (Capital) - Meter Set - Left Off	0.6	0.9	-	-
19	Meter Work (Capital) - Meter Set (PSI)	0.1	0.4	-	-
20	Meter Work (Capital) - Meter Set - Turn On (USM)	-	0.4	8.8	9.0
21	Meter Work (Capital) - Meter Set - Left Off (USM)	-	0.0	1.1	1.2
22	Meter Work (Capital) - Meter Set (PSI) (USM)	-	0.0	0.5	0.6
23	AMM CSO (Residential/Commercial)	-	1.2	1.2	1.2
24	AMM ISO	-	0.4	0.4	0.4
25	Other Appliance Orders	160.2	219.4	290.1	289.9
26	Incomplete	26.8	28.5	31.0	30.9
<b>TOTAL</b>					

SCG-14-WP-2FC001 CSF Operations  
 Supplemental Workpaper 3 (9 of 17)  
 Customer Services Field Operations Safety Related Field Orders Estimated RAMP Costs

Line #	Calculation Steps → Safety Related Order Types	Training Labor FTE			
		E <sup>4</sup>			
		BY 2021	2022 Estimated	2023 Estimated	TY 2024 Estimated
1	Change of Account - Close (Soft)	0.0	0.0	0.0	0.0
2	Change of Account - Hang Tag	3.9	3.6	3.6	3.6
3	Customer Service Order ("CSO")	6.5	6.7	7.9	7.8
4	CSO - Carbon Monoxide Test	0.3	0.3	0.3	0.3
5	CSO - No Gas	0.7	0.6	0.6	0.6
6	CSO Seasonal - Off	0.1	0.1	0.1	0.1
7	CSO Seasonal - On	1.4	1.5	1.5	1.5
8	Gas Leak - CSO Leak	10.3	9.6	9.6	9.5
9	Gas Leak - Pilot Out Only	0.4	0.4	0.4	0.4
10	Gas Leak - Leak Investigation (Step 2)	0.9	0.8	0.8	0.8
11	Fumigation - Turn On	3.4	3.2	3.2	3.1
12	Fumigation - Close	2.5	2.3	2.3	2.3
13	Read/Verify - Verify	1.8	1.7	1.7	1.6
14	Read/Verify - Soft Close	0.0	0.5	0.5	0.5
15	Read/Verify - Soft Close - 180 Days	0.0	0.4	0.4	0.4
16	Food Industry - CSO Leak	0.3	0.5	0.5	0.5
17	Meter Work (Capital) - Meter Set - Turn On	0.5	0.4	-	-
18	Meter Work (Capital) - Meter Set - Left Off	0.0	0.1	-	-
19	Meter Work (Capital) - Meter Set (PSI)	0.0	0.0	-	-
20	Meter Work (Capital) - Meter Set - Turn On (USM)	-	0.0	0.6	0.6
21	Meter Work (Capital) - Meter Set - Left Off (USM)	-	0.0	0.1	0.1
22	Meter Work (Capital) - Meter Set (PSI) (USM)	-	0.0	0.0	0.0
23	AMM CSO (Residential/Commercial)	-	0.1	0.1	0.1
24	AMM ISO	-	0.0	0.0	0.0
25	Other Appliance Orders	10.1	13.9	18.3	18.3
26	Incomplete	1.7	1.8	2.0	2.0
<b>TOTAL</b>					

SCG-14-WP-2FC001 CSF Operations  
 Supplemental Workpaper 3 (10 of 17)  
 Customer Services Field Operations Safety Related Field Orders Estimated RAMP Costs

Line #	Calculation Steps → Safety Related Order Types	Training Labor Cost			
		F <sup>5</sup>			
		BY 2021	2022 Estimated	2023 Estimated	TY 2024 Estimated
1	Change of Account - Close (Soft)	2,831	3,311	3,311	3,311
2	Change of Account - Hang Tag	336,665	314,658	314,658	314,658
3	Customer Service Order ("CSO")	559,943	578,032	680,038	680,038
4	CSO - Carbon Monoxide Test	30,206	28,051	28,051	28,051
5	CSO - No Gas	58,281	54,314	54,314	54,314
6	CSO Seasonal - Off	8,459	10,863	10,863	10,863
7	CSO Seasonal - On	123,310	130,074	130,074	130,074
8	Gas Leak - CSO Leak	895,610	829,220	829,220	829,220
9	Gas Leak - Pilot Out Only	35,937	32,905	32,905	32,905
10	Gas Leak - Leak Investigation (Step 2)	73,943	69,617	69,617	69,617
11	Fumigation - Turn On	293,536	273,519	273,519	273,519
12	Fumigation - Close	217,860	198,908	198,908	198,908
13	Read/Verify - Verify	156,860	142,727	142,727	142,727
14	Read/Verify - Soft Close	536	39,728	39,728	39,728
15	Read/Verify - Soft Close - 180 Days	2	37,031	37,031	37,031
16	Food Industry - CSO Leak	25,783	41,435	41,435	41,435
17	Meter Work (Capital) - Meter Set - Turn On	39,304	36,796	-	-
18	Meter Work (Capital) - Meter Set - Left Off	3,171	4,709	-	-
19	Meter Work (Capital) - Meter Set (PSI)	693	2,157	-	-
20	Meter Work (Capital) - Meter Set - Turn On (USM)	-	1,930	48,068	49,390
21	Meter Work (Capital) - Meter Set - Left Off (USM)	-	249	6,196	6,366
22	Meter Work (Capital) - Meter Set (PSI) (USM)	-	119	2,966	3,048
23	AMM CSO (Residential/Commercial)	-	6,582	6,582	6,582
24	AMM ISO	-	2,272	2,272	2,272
25	Other Appliance Orders	877,812	1,197,140	1,583,227	1,594,132
26	Incomplete	147,064	155,327	169,241	169,651
<b>TOTAL</b>					

SCG-14-WP-2FC001 CSF Operations  
 Supplemental Workpaper 3 (11 of 17)  
 Customer Services Field Operations Safety Related Field Orders Estimated RAMP Costs

Line #	Calculation Steps → Safety Related Order Types	Training Non-Labor Cost			
		G <sup>6</sup>			
		BY 2021	2022 Estimated	2023 Estimated	TY 2024 Estimated
1	Change of Account - Close (Soft)	200	235	235	233
2	Change of Account - Hang Tag	23,781	22,312	22,312	22,141
3	Customer Service Order ("CSO")	39,552	40,987	48,220	47,852
4	CSO - Carbon Monoxide Test	2,134	1,989	1,989	1,974
5	CSO - No Gas	4,117	3,851	3,851	3,822
6	CSO Seasonal - Off	598	770	770	764
7	CSO Seasonal - On	8,710	9,223	9,223	9,153
8	Gas Leak - CSO Leak	63,262	58,798	58,798	58,349
9	Gas Leak - Pilot Out Only	2,538	2,333	2,333	2,315
10	Gas Leak - Leak Investigation (Step 2)	5,223	4,936	4,936	4,899
11	Fumigation - Turn On	20,734	19,395	19,395	19,247
12	Fumigation - Close	15,389	14,104	14,104	13,996
13	Read/Verify - Verify	11,080	10,120	10,120	10,043
14	Read/Verify - Soft Close	38	2,817	2,817	2,796
15	Read/Verify - Soft Close - 180 Days	0	2,626	2,626	2,606
16	Food Industry - CSO Leak	1,821	2,938	2,938	2,916
17	Meter Work (Capital) - Meter Set - Turn On	2,776	2,609	-	-
18	Meter Work (Capital) - Meter Set - Left Off	224	334	-	-
19	Meter Work (Capital) - Meter Set (PSI)	49	153	-	-
20	Meter Work (Capital) - Meter Set - Turn On (USM)	-	137	3,408	3,475
21	Meter Work (Capital) - Meter Set - Left Off (USM)	-	18	439	448
22	Meter Work (Capital) - Meter Set (PSI) (USM)	-	8	210	214
23	AMM CSO (Residential/Commercial)	-	467	467	463
24	AMM ISO	-	161	161	160
25	Other Appliance Orders	62,005	84,887	112,263	112,173
26	Incomplete	10,388	11,014	12,001	11,938

**TOTAL**

SCG-14-WP-2FC001 CSF Operations  
 Supplemental Workpaper 3 (12 of 17)  
 Customer Services Field Operations Safety Related Field Orders Estimated RAMP Costs

Line #	Calculation Steps → Safety Related Order Types	RAMP Total FTE			
		H = D - E			
		BY 2021	2022 Estimated	2023 Estimated	TY 2024 Estimated
1	Change of Account - Close (Soft)	0.48	0.57	0.57	0.56
2	Change of Account - Hang Tag	57.57	54.02	54.02	53.60
3	Customer Service Order ("CSO")	95.75	99.23	116.74	115.85
4	CSO - Carbon Monoxide Test	5.17	4.82	4.82	4.78
5	CSO - No Gas	9.97	9.32	9.32	9.25
6	CSO Seasonal - Off	1.45	1.86	1.86	1.85
7	CSO Seasonal - On	21.09	22.33	22.33	22.16
8	Gas Leak - CSO Leak	153.15	142.35	142.35	141.26
9	Gas Leak - Pilot Out Only	6.15	5.65	5.65	5.61
10	Gas Leak - Leak Investigation (Step 2)	12.64	11.95	11.95	11.86
11	Fumigation - Turn On	50.20	46.95	46.95	46.59
12	Fumigation - Close	37.26	34.15	34.15	33.88
13	Read/Verify - Verify	26.82	24.50	24.50	24.31
14	Read/Verify - Soft Close	0.09	6.82	6.82	6.77
15	Read/Verify - Soft Close - 180 Days	0.00	6.36	6.36	6.31
16	Food Industry - CSO Leak	4.41	7.11	7.11	7.06
17	Meter Work (Capital) - Meter Set - Turn On	6.72	6.32	-	-
18	Meter Work (Capital) - Meter Set - Left Off	0.54	0.81	-	-
19	Meter Work (Capital) - Meter Set (PSI)	0.12	0.37	-	-
20	Meter Work (Capital) - Meter Set - Turn On (USM)	-	0.33	8.25	8.41
21	Meter Work (Capital) - Meter Set - Left Off (USM)	-	0.04	1.06	1.08
22	Meter Work (Capital) - Meter Set (PSI) (USM)	-	0.02	0.51	0.52
23	AMM CSO (Residential/Commercial)	-	1.13	1.13	1.12
24	AMM ISO	-	0.39	0.39	0.39
25	Other Appliance Orders	150.11	205.50	271.78	271.56
26	Incomplete	25.15	26.66	29.05	28.90
	<b>TOTAL</b>	<b>664.84</b>	<b>719.55</b>	<b>807.67</b>	<b>803.70</b>

SCG-14-WP-2FC001 CSF Operations  
 Supplemental Workpaper 3 (13 of 17)  
 Customer Services Field Operations Safety Related Field Orders Estimated RAMP Costs

Line #	Calculation Steps → Safety Related Order Types	PPE per FTE	PPE per FTE
		I <sup>7</sup> BY 2021	J <sup>8</sup> 2022-2024 Estimated
1	Change of Account - Close (Soft)	\$ 498	\$ 523
2	Change of Account - Hang Tag	\$ 498	\$ 523
3	Customer Service Order ("CSO")	\$ 498	\$ 523
4	CSO - Carbon Monoxide Test	\$ 498	\$ 523
5	CSO - No Gas	\$ 498	\$ 523
6	CSO Seasonal - Off	\$ 498	\$ 523
7	CSO Seasonal - On	\$ 498	\$ 523
8	Gas Leak - CSO Leak	\$ 498	\$ 523
9	Gas Leak - Pilot Out Only	\$ 498	\$ 523
10	Gas Leak - Leak Investigation (Step 2)	\$ 498	\$ 523
11	Fumigation - Turn On	\$ 498	\$ 523
12	Fumigation - Close	\$ 498	\$ 523
13	Read/Verify - Verify	\$ 498	\$ 523
14	Read/Verify - Soft Close	\$ 498	\$ 523
15	Read/Verify - Soft Close - 180 Days	\$ 498	\$ 523
16	Food Industry - CSO Leak	\$ 498	\$ 523
17	Meter Work (Capital) - Meter Set - Turn On	\$ 498	\$ 523
18	Meter Work (Capital) - Meter Set - Left Off	\$ 498	\$ 523
19	Meter Work (Capital) - Meter Set (PSI)	\$ 498	\$ 523
20	Meter Work (Capital) - Meter Set - Turn On (USM)	\$ 498	\$ 523
21	Meter Work (Capital) - Meter Set - Left Off (USM)	\$ 498	\$ 523
22	Meter Work (Capital) - Meter Set (PSI) (USM)	\$ 498	\$ 523
23	AMM CSO (Residential/Commercial)	\$ 498	\$ 523
24	AMM ISO	\$ 498	\$ 523
25	Other Appliance Orders	\$ 498	\$ 523
26	Incomplete	\$ 498	\$ 523

**TOTAL**

SCG-14-WP-2FC001 CSF Operations  
 Supplemental Workpaper 3 (14 of 17)  
 Customer Services Field Operations Safety Related Field Orders Estimated RAMP Costs

Line #	Calculation Steps → Safety Related Order Types	RAMP Non-Labor Cost			
		K = B - G - (I x H)	K = B - G - (J x H)		
		BY 2021	2022 Estimated	2023 Estimated	TY 2024 Estimated
1	Change of Account - Close (Soft)	\$ 2,750	\$ 3,215	\$ 3,215	\$ 3,190
2	Change of Account - Hang Tag	\$ 327,057	\$ 305,503	\$ 305,503	\$ 303,171
3	Customer Service Order ("CSO")	\$ 543,962	\$ 561,214	\$ 660,252	\$ 655,212
4	CSO - Carbon Monoxide Test	\$ 29,344	\$ 27,235	\$ 27,235	\$ 27,027
5	CSO - No Gas	\$ 56,618	\$ 52,734	\$ 52,734	\$ 52,331
6	CSO Seasonal - Off	\$ 8,218	\$ 10,547	\$ 10,547	\$ 10,466
7	CSO Seasonal - On	\$ 119,791	\$ 126,289	\$ 126,289	\$ 125,325
8	Gas Leak - CSO Leak	\$ 870,049	\$ 805,094	\$ 805,094	\$ 798,948
9	Gas Leak - Pilot Out Only	\$ 34,911	\$ 31,948	\$ 31,948	\$ 31,704
10	Gas Leak - Leak Investigation (Step 2)	\$ 71,833	\$ 67,591	\$ 67,591	\$ 67,075
11	Fumigation - Turn On	\$ 285,159	\$ 265,561	\$ 265,561	\$ 263,534
12	Fumigation - Close	\$ 211,642	\$ 193,121	\$ 193,121	\$ 191,647
13	Read/Verify - Verify	\$ 152,383	\$ 138,575	\$ 138,575	\$ 137,517
14	Read/Verify - Soft Close	\$ 520	\$ 38,572	\$ 38,572	\$ 38,278
15	Read/Verify - Soft Close - 180 Days	\$ 2	\$ 35,953	\$ 35,953	\$ 35,679
16	Food Industry - CSO Leak	\$ 25,047	\$ 40,230	\$ 40,230	\$ 39,922
17	Meter Work (Capital) - Meter Set - Turn On	\$ 38,183	\$ 35,726	\$ -	\$ -
18	Meter Work (Capital) - Meter Set - Left Off	\$ 3,081	\$ 4,572	\$ -	\$ -
19	Meter Work (Capital) - Meter Set (PSI)	\$ 673	\$ 2,094	\$ -	\$ -
20	Meter Work (Capital) - Meter Set - Turn On (USM)	\$ -	\$ 1,874	\$ 46,669	\$ 47,587
21	Meter Work (Capital) - Meter Set - Left Off (USM)	\$ -	\$ 242	\$ 6,015	\$ 6,134
22	Meter Work (Capital) - Meter Set (PSI) (USM)	\$ -	\$ 116	\$ 2,880	\$ 2,937
23	AMM CSO (Residential/Commercial)	\$ -	\$ 6,391	\$ 6,391	\$ 6,342
24	AMM ISO	\$ -	\$ 2,206	\$ 2,206	\$ 2,189
25	Other Appliance Orders	\$ 852,760	\$ 1,162,309	\$ 1,537,163	\$ 1,535,936
26	Incomplete	\$ 142,866	\$ 150,807	\$ 164,317	\$ 163,458
	<b>TOTAL</b>	<b>\$ 3,776,850</b>	<b>\$ 4,069,718</b>	<b>\$ 4,568,061</b>	<b>\$ 4,545,609</b>

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



SCG-14-WP-2FC001 CSF Operations  
 Supplemental Workpaper 3 (15 of 17)  
 Customer Services Field Operations Safety Related Field Orders Estimated RAMP Costs

Line #	Calculation Steps → Safety Related Order Types	RAMP Labor Cost			
		L = A - F			
		BY 2021	2022 Estimated	2023 Estimated	TY 2024 Estimated
1	Change of Account - Close (Soft)	\$ 47,415	\$ 55,462	\$ 55,462	\$ 55,462
2	Change of Account - Hang Tag	\$ 5,638,946	\$ 5,270,331	\$ 5,270,331	\$ 5,270,331
3	Customer Service Order ("CSO")	\$ 9,378,715	\$ 9,681,698	\$ 11,390,233	\$ 11,390,233
4	CSO - Carbon Monoxide Test	\$ 505,929	\$ 469,845	\$ 469,845	\$ 469,845
5	CSO - No Gas	\$ 976,181	\$ 909,730	\$ 909,730	\$ 909,730
6	CSO Seasonal - Off	\$ 141,690	\$ 181,942	\$ 181,942	\$ 181,942
7	CSO Seasonal - On	\$ 2,065,374	\$ 2,178,658	\$ 2,178,658	\$ 2,178,658
8	Gas Leak - CSO Leak	\$ 15,000,938	\$ 13,888,945	\$ 13,888,945	\$ 13,888,945
9	Gas Leak - Pilot Out Only	\$ 601,924	\$ 551,142	\$ 551,142	\$ 551,142
10	Gas Leak - Leak Investigation (Step 2)	\$ 1,238,503	\$ 1,166,037	\$ 1,166,037	\$ 1,166,037
11	Fumigation - Turn On	\$ 4,916,560	\$ 4,581,282	\$ 4,581,282	\$ 4,581,282
12	Fumigation - Close	\$ 3,649,026	\$ 3,331,598	\$ 3,331,598	\$ 3,331,598
13	Read/Verify - Verify	\$ 2,627,313	\$ 2,390,600	\$ 2,390,600	\$ 2,390,600
14	Read/Verify - Soft Close	\$ 8,972	\$ 665,424	\$ 665,424	\$ 665,424
15	Read/Verify - Soft Close - 180 Days	\$ 31	\$ 620,243	\$ 620,243	\$ 620,243
16	Food Industry - CSO Leak	\$ 431,842	\$ 694,013	\$ 694,013	\$ 694,013
17	Meter Work (Capital) - Meter Set - Turn On	\$ 658,327	\$ 616,317	\$ -	\$ -
18	Meter Work (Capital) - Meter Set - Left Off	\$ 53,118	\$ 78,869	\$ -	\$ -
19	Meter Work (Capital) - Meter Set (PSI)	\$ 11,608	\$ 36,126	\$ -	\$ -
20	Meter Work (Capital) - Meter Set - Turn On (USM)	\$ -	\$ 32,334	\$ 805,105	\$ 827,259
21	Meter Work (Capital) - Meter Set - Left Off (USM)	\$ -	\$ 4,168	\$ 103,774	\$ 106,629
22	Meter Work (Capital) - Meter Set (PSI) (USM)	\$ -	\$ 1,995	\$ 49,681	\$ 51,049
23	AMM CSO (Residential/Commercial)	\$ -	\$ 110,252	\$ 110,252	\$ 110,252
24	AMM ISO	\$ -	\$ 38,058	\$ 38,058	\$ 38,058
25	Other Appliance Orders	\$ 14,702,843	\$ 20,051,392	\$ 26,518,129	\$ 26,700,776
26	Incomplete	\$ 2,463,229	\$ 2,601,631	\$ 2,834,695	\$ 2,841,561
	<b>TOTAL</b>	<b>\$ 65,118,487</b>	<b>\$ 70,208,091</b>	<b>\$ 78,805,177</b>	<b>\$ 79,021,067</b>

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

SCG-14-WP-2FC001 CSF Operations  
 Supplemental Workpaper 3 (16 of 17)  
 Customer Services Field Operations Safety Related Field Orders Estimated RAMP Costs

Line #	Calculation Steps → Safety Related Order Types	RAMP Total Cost			
		M = K + L			
		BY 2021	2022 Estimated	2023 Estimated	TY 2024 Estimated
1	Change of Account - Close (Soft)	\$ 50,165	\$ 58,677	\$ 58,677	\$ 58,653
2	Change of Account - Hang Tag	\$ 5,966,003	\$ 5,575,833	\$ 5,575,833	\$ 5,573,501
3	Customer Service Order ("CSO")	\$ 9,922,677	\$ 10,242,912	\$ 12,050,485	\$ 12,045,445
4	CSO - Carbon Monoxide Test	\$ 535,273	\$ 497,080	\$ 497,080	\$ 496,872
5	CSO - No Gas	\$ 1,032,799	\$ 962,464	\$ 962,464	\$ 962,061
6	CSO Seasonal - Off	\$ 149,908	\$ 192,488	\$ 192,488	\$ 192,408
7	CSO Seasonal - On	\$ 2,185,165	\$ 2,304,948	\$ 2,304,948	\$ 2,303,984
8	Gas Leak - CSO Leak	\$ 15,870,988	\$ 14,694,038	\$ 14,694,038	\$ 14,687,892
9	Gas Leak - Pilot Out Only	\$ 636,835	\$ 583,090	\$ 583,090	\$ 582,846
10	Gas Leak - Leak Investigation (Step 2)	\$ 1,310,336	\$ 1,233,628	\$ 1,233,628	\$ 1,233,112
11	Fumigation - Turn On	\$ 5,201,719	\$ 4,846,843	\$ 4,846,843	\$ 4,844,815
12	Fumigation - Close	\$ 3,860,669	\$ 3,524,719	\$ 3,524,719	\$ 3,523,244
13	Read/Verify - Verify	\$ 2,779,696	\$ 2,529,175	\$ 2,529,175	\$ 2,528,117
14	Read/Verify - Soft Close	\$ 9,492	\$ 703,996	\$ 703,996	\$ 703,702
15	Read/Verify - Soft Close - 180 Days	\$ 33	\$ 656,196	\$ 656,196	\$ 655,922
16	Food Industry - CSO Leak	\$ 456,889	\$ 734,243	\$ 734,243	\$ 733,936
17	Meter Work (Capital) - Meter Set - Turn On	\$ 696,510	\$ 652,043	\$ -	\$ -
18	Meter Work (Capital) - Meter Set - Left Off	\$ 56,199	\$ 83,441	\$ -	\$ -
19	Meter Work (Capital) - Meter Set (PSI)	\$ 12,282	\$ 38,220	\$ -	\$ -
20	Meter Work (Capital) - Meter Set - Turn On (USM)	\$ -	\$ 34,208	\$ 851,774	\$ 874,846
21	Meter Work (Capital) - Meter Set - Left Off (USM)	\$ -	\$ 4,409	\$ 109,789	\$ 112,763
22	Meter Work (Capital) - Meter Set (PSI) (USM)	\$ -	\$ 2,111	\$ 52,561	\$ 53,985
23	AMM CSO (Residential/Commercial)	\$ -	\$ 116,643	\$ 116,643	\$ 116,594
24	AMM ISO	\$ -	\$ 40,264	\$ 40,264	\$ 40,247
25	Other Appliance Orders	\$ 15,555,603	\$ 21,213,702	\$ 28,055,292	\$ 28,236,712
26	Incomplete	\$ 2,606,096	\$ 2,752,439	\$ 2,999,012	\$ 3,005,019
	<b>TOTAL</b>	<b>\$ 68,895,337</b>	<b>\$ 74,277,809</b>	<b>\$ 83,373,238</b>	<b>\$ 83,566,677</b>

Southern California Gas Company  
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 Non-Shared Service Workpapers

SCG-14-WP-2FC001 CSF Operations  
Supplemental Workpaper 3 (17 of 17)  
Customer Services Field Operations Safety Related Field Orders Estimated RAMP Costs - Footnotes

**Footnote:**

<sup>1</sup> See SCG-14-2FC001.000 CSF Operations Supplemental Workpaper 1 (Calculation Step W)

<sup>2</sup> See SCG-14-2FC001.000 CSF Operations Supplemental Workpaper 1 (Calculation Step X)

<sup>3</sup> See SCG-14-2FC001.000 CSF Operations Supplemental Workpaper 1 (Calculation Step Z)

<sup>4</sup> See SCG-14-2FC001.000 CSF Operations Supplemental Workpaper 1 (Calculation Step R)

<sup>5</sup> See SCG-14-2FC001.000 CSF Operations Supplemental Workpaper 1 (Calculation Step T)

<sup>6</sup> See SCG-14-2FC001.000 CSF Operations Supplemental Workpaper 1 (Calculation Step V)

<sup>7</sup> 2021 Boot Allowance, \$85 + 2021 PPE per FTE, 412.84

<sup>8</sup> 2022 Boot Allowance, \$110 + 2021 PPE per FTE, 412.84

**Beginning of Workpaper**  
**2FC002.000 - Customer Services - Supervision**

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC002.000 - Customer Services - Supervision

**Activity Description:**

Labor and non-labor costs for front-line field supervisors who are geographically dispersed across all of SoCalGas's 51 operating bases. Field supervisors hire and coach employees, conduct safety and job observations, coordinate with the dispatch office and others to address and resolve issues, respond to emergency incidents to provide on-site leadership, and manage the overall performance of the CSF employees who work from each of the 51 operating bases.

**Forecast Explanations:**

**Labor - Base YR Rec**

The CSF Supervision forecast utilizes a Base Year forecast methodology for the average supervisor labor and non-labor rate per FTE as they represent the most current costs.

The estimated number of field supervisors in TY 2024 is calculated by applying a 12:1 employee-to-supervisor ratio to the forecasted FTE workforce in the Operations cost category ( Workpaper 2FC001.000). A 12:1 ratio is appropriate given the geographic area covered by each operating base and the importance of supervisors spending as much time as possible with employees in the field, providing safety and work process coaching. Supervisors have on-call responsibilities and respond to emergencies supporting employee, customer, and public safety.

**Non-Labor - Base YR Rec**

Non-labor expenses such as cell phones, office supplies and other miscellaneous expenses are driven by the forecasted number of supervisor FTEs. The non-labor forecast is calculated by applying the BY 2021 average non-labor rate per supervisor FTE multiplied by the forecasted number of supervisor FTEs. Because non-labor costs are driven by the number of supervisors, historical averaging or trending of expenses alone would not be appropriate because expenses would not be aligned with the forecasted number of supervisors.

**NSE - Base YR Rec**

N/A

**Summary of Results:**

		In 2021\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2017	2018	2019	2020	2021	2022	2023	2024	
Labor		11,304	11,793	11,687	11,292	11,407	9,603	11,617	11,502	
Non-Labor		555	669	684	550	599	506	613	602	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>11,859</b>	<b>12,462</b>	<b>12,371</b>	<b>11,843</b>	<b>12,007</b>	<b>10,109</b>	<b>12,230</b>	<b>12,104</b>	
FTE		101.5	103.3	104.2	99.8	103.3	87.3	105.6	103.8	

*Note: Totals may include rounding differences.*

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC002.000 - Customer Services - Supervision

**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	11,407	11,407	11,407	-1,804	210	95	9,603	11,617	11,502
Non-Labor	Base YR Rec	599	599	599	-93	14	3	506	613	602
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>12,007</b>	<b>12,007</b>	<b>12,007</b>	<b>-1,897</b>	<b>224</b>	<b>98</b>	<b>10,110</b>	<b>12,231</b>	<b>12,105</b>
FTE	Base YR Rec	103.3	103.3	103.3	-16.0	2.3	0.5	87.3	105.6	103.8

**Forecast Adjustment Details:**

Year	Labor	NLbr	NSE	Total	FTE	Adj Type
2022	-1,804	-93	0	-1,897	-16.0	1-Sided Adj
<b>Explanation:</b>	Labor and non-labor costs for front-line CS - Supervisors who provide direct supervision for CS - Operations technicians and collectors, utilizing an employee to supervisor ratio of 12:1. Please refer to SCG-14-WP-2FC002 CSF Supervision Supplemental Workpaper 1, Calculation of Customer Service Field Supervision Costs					
<b>2022 Total</b>	<b>-1,804</b>	<b>-93</b>	<b>0</b>	<b>-1,897</b>	<b>-16.0</b>	
2023	210	14	0	224	2.3	1-Sided Adj
<b>Explanation:</b>	Labor and non-labor costs for front-line CS - Supervisors who provide direct supervision for CS - Operations technicians and collectors, utilizing an employee to supervisor ratio of 12:1. Please refer to SCG-14-WP-2FC002 CSF Supervision Supplemental Workpaper 1, Calculation of Customer Service Field Supervision Costs					
<b>2023 Total</b>	<b>210</b>	<b>14</b>	<b>0</b>	<b>224</b>	<b>2.3</b>	
2024	95	3	0	98	0.5	1-Sided Adj
<b>Explanation:</b>	Labor and non-labor costs for front-line CS - Supervisors who provide direct supervision for CS - Operations technicians and collectors, utilizing an employee to supervisor ratio of 12:1. Please refer to SCG-14-WP-2FC002 CSF Supervision Supplemental Workpaper 1, Calculation of Customer Service Field Supervision Costs					
<b>2024 Total</b>	<b>95</b>	<b>3</b>	<b>0</b>	<b>98</b>	<b>0.5</b>	

Note: Totals may include rounding differences.

SCG/CS - FIELD & ADVANCED METER OPERATIONS/Exh No:SCG-14-WP-R/Witness: D. Rendler

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
Witness: Daniel J. Rendler  
Category: A. Customer Services Field  
Category-Sub: 1. Customer Services Field  
Workpaper: 2FC002.000 - Customer Services - Supervision

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

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	12,680	13,027	12,918	13,954	14,799
Non-Labor	550	650	654	577	576
NSE	0	0	0	0	0
<b>Total</b>	<b>13,230</b>	<b>13,678</b>	<b>13,572</b>	<b>14,532</b>	<b>15,375</b>
FTE	133.3	129.6	134.9	131.8	135.5
<b>Adjustments (Nominal \$) **</b>					
Labor	-4,013	-3,757	-3,616	-4,631	-5,103
Non-Labor	-57	-37	-16	-66	23
NSE	0	0	0	0	0
<b>Total</b>	<b>-4,070</b>	<b>-3,794</b>	<b>-3,632</b>	<b>-4,697</b>	<b>-5,080</b>
FTE	-47.1	-42.1	-47.6	-48.6	-48.6
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	8,667	9,271	9,303	9,323	9,696
Non-Labor	493	613	638	511	599
NSE	0	0	0	0	0
<b>Total</b>	<b>9,160</b>	<b>9,884</b>	<b>9,941</b>	<b>9,834</b>	<b>10,295</b>
FTE	86.2	87.4	87.3	83.2	86.9
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	1,469	1,596	1,764	1,643	1,711
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>1,469</b>	<b>1,596</b>	<b>1,764</b>	<b>1,643</b>	<b>1,711</b>
FTE	15.3	15.9	16.9	16.6	16.4
<b>Escalation to 2021\$</b>					
Labor	1,168	927	621	326	0
Non-Labor	62	56	46	39	0
NSE	0	0	0	0	0
<b>Total</b>	<b>1,230</b>	<b>983</b>	<b>667</b>	<b>365</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2021\$)</b>					
Labor	11,304	11,793	11,687	11,292	11,407
Non-Labor	555	669	684	550	599
NSE	0	0	0	0	0
<b>Total</b>	<b>11,859</b>	<b>12,462</b>	<b>12,371</b>	<b>11,843</b>	<b>12,007</b>
FTE	101.5	103.3	104.2	99.8	103.3

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

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

Note: Totals may include rounding differences.

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC002.000 - Customer Services - Supervision

**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs					
Years	2017	2018	2019	2020	2021
Labor	-4,013	-3,757	-3,616	-4,631	-5,103
Non-Labor	-57	-37	-16	-66	23
NSE	0	0	0	0	0
<b>Total</b>	<b>-4,070</b>	<b>-3,794</b>	<b>-3,632</b>	<b>-4,697</b>	<b>-5,080</b>
FTE	-47.1	-42.1	-47.6	-48.6	-48.6

**Detail of Adjustments to Recorded:**

Year	Labor	NLbr	NSE	FTE	Adj Type
2017	-19	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	-3	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	-5	-1	0	-0.1	CCTR Transf To 2200-2571.000
<b>Explanation:</b>	Transfer Meter Set Assembly Inspection (MSAI) labor and non-labor expense associated with IO FG893222200 & FG893232200 from CS Supervision CCTRs to MSAI CCTR 2200-2571 in order to align historical costs with the workgroup in which the activity has been performed.				
2017	-587	0	0	-8.7	CCTR Transf To 2200-0497.000
<b>Explanation:</b>	Transfer of labor and non-labor expenses associated with CS represented field employees to CS Field Operations CCTRs from CS Supervision workpaper in order to align historical costs with the workgroup in which the activity has been performed.				
2017	-2,074	-4	0	-25.3	CCTR Transf To 2200-0479.000
<b>Explanation:</b>	Transfer of labor and non-labor expenses for IO FG8804002200 associated with admin/District Operation Clerks (DOCs) to CS Support CCTRs from CS Supervision workpaper in order to align historical costs with the workgroup in which the activity has been performed.				
2017	-1,324	-52	0	-12.8	CCTR Transf To 2200-0379.000
<b>Explanation:</b>	Transfer of labor expenses associated region area management employees between CS Support CCTRs and CS Supervision workpapers in order to align historical costs with the workgroup in which the activity has been performed.				
<b>2017 Total</b>	<b>-4,013</b>	<b>-57</b>	<b>0</b>	<b>-47.1</b>	
2018	-4	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				

*Note: Totals may include rounding differences.*



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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC002.000 - Customer Services - Supervision

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
2018	-7	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	-7	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	-69	-1	0	-0.5	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	-15	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	-8	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	-4	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	-23	0	0	-0.2	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	-11	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	-162	-1	0	-0.1	CCTR Transf To 2200-2571.000
<b>Explanation:</b>	Transfer MSAI labor and non-labor expense associated with IO FG893222200 & FG893232200 from CS Supervision CCTRs to MSAI CCTR 2200-2571 in order to align historical costs with the workgroup in which the activity has been performed.				
2018	58	0	0	0.4	CCTR Transf From 2200-0457.000
<b>Explanation:</b>	Transfer of labor and non-labor expenses associated with CS represented field employees to CS Field Operations CCTRs from CS Supervision workpaper in order to align historical costs with the workgroup in which the activity has been performed.				
2018	-58	0	0	-0.4	CCTR Transf To 2200-0584.000
<b>Explanation:</b>	Transfer of labor and non-labor expenses associated with CS represented field employees to CS Field Operations CCTRs from CS Supervision workpaper in order to align historical costs with the workgroup in which the activity has been performed.				

Note: Totals may include rounding differences.

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC002.000 - Customer Services - Supervision

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
2018	-2,478	-7	0	29.4	CCTR Transf To 2200-0357.000
<b>Explanation:</b>	Transfer of labor and non-labor expenses from IO FG8804002200 associated with admin/DOCs to CS Support CCTRs from CS Supervision workpaper in order to align historical costs with the workgroup in which the activity has been performed.				
2018	-968	-29	0	-11.2	CCTR Transf To 2200-0379.000
<b>Explanation:</b>	Transfer of labor expenses associated region area management employees between CS Support CCTRs and CS Supervision workpapers in order to align historical costs with the workgroup in which the activity has been performed.				
<b>2018 Total</b>	<b>-3,757</b>	<b>-37</b>	<b>0</b>	<b>-42.1</b>	
2019	2	0	0	0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2019	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).				
2019	41	0	0	0.6	CCTR Transf From 2200-0506.000
<b>Explanation:</b>	Transfer CS Operations labor and expense from CCTR 2200-0506 CS Dispatch Workpaper to CS Operations CCTR 2200-0449 in order to align historical costs with the workgroup in which the activity has been performed.				
2019	2	0	0	0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2019	63	-1	0	0.3	CCTR Transf To 2200-2571.000
<b>Explanation:</b>	Transfer MSAI labor and non-labor expense associated with IO FG893222200 & FG893232200 from CS Supervision CCTRs to MSAI CCTR 2200-2571 in order to align historical costs with the workgroup in which the activity has been performed.				
2019	127	0	0	1.8	CCTR Transf From 2200-0457.000
<b>Explanation:</b>	Transfer of labor and non-labor expenses associated with CS represented field employees to CS Field Operations CCTRs from CS Supervision workpaper in order to align historical costs with the workgroup in which the activity has been performed.				
2019	-127	0	0	-1.8	CCTR Transf To 2200-0584.000
<b>Explanation:</b>	Transfer of labor and non-labor expenses associated with CS represented field employees to CS Field Operations CCTRs from CS Supervision workpaper in order to align historical costs with the workgroup in which the activity has been performed.				
2019	-2,686	-4	0	30.9	CCTR Transf To 2200-0357.000

Note: Totals may include rounding differences.

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC002.000 - Customer Services - Supervision

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Transfer of labor and non-labor expenses associated with admin/DOCs to CS Support CCTRs from CS Supervision workpaper in order to align historical costs with the workgroup in which the activity has been performed.				
2019	-1,039	-12	0	-17.9	CCTR Transf To 2200-0379.000
<b>Explanation:</b>	Transfer of labor expenses associated region area management employees between CS Support CCTRs and CS Supervision workpapers in order to align historical costs with the workgroup in which the activity has been performed.				
<b>2019 Total</b>	<b>-3,616</b>	<b>-16</b>	<b>0</b>	<b>-47.6</b>	
2020	-6	-2	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-1	-11	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-1	-1	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-1	-2	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-4	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 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-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-2	-2	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-2	-2	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-3	-2	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-1	-3	0	-0.1	1-Sided Adj

Note: Totals may include rounding differences.

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC002.000 - Customer Services - Supervision

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Incremental COVID-19 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-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-27	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-1	-3	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 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-19 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-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-49	0	0	-0.1	CCTR Transf To 2200-2571.000
<b>Explanation:</b>	Transfer MSAI labor and non-labor expense associated with IO FG893222200 & FG893232200 from CS Supervision CCTRs to MSAI CCTR 2200-2571 in order to align historical costs with the workgroup in which the activity has been performed.				
2020	-233	-2	0	-2.7	CCTR Transf To 2200-0584.000
<b>Explanation:</b>	Transfer of labor and non-labor expenses associated with CS represented field employees to CS Field Operations CCTRs from CS Supervision workpaper in order to align historical costs with the workgroup in which the activity has been performed.				
2020	233	2	0	2.7	CCTR Transf From 2200-0448.000
<b>Explanation:</b>	Transfer of labor and non-labor expenses associated with CS represented field employees to CS Field Operations CCTRs from CS Supervision workpaper in order to align historical costs with the workgroup in which the activity has been performed.				
2020	-2,779	-7	0	30.9	CCTR Transf To 2200-0357.000
<b>Explanation:</b>	Transfer of labor and non-labor expenses from IO FG88004002200 associated with admin/District Operations Clerks (DOCs) to CS Support CCTRs from CS Supervision workpaper in order to align historical costs with the workgroup in which the activity has been performed.				
2020	-1,777	8	0	16.3	CCTR Transf To 2200-0379.000
<b>Explanation:</b>	Transfer of labor expenses associated region area management employees between CS Support CCTRs and CS Supervision workpapers in order to align historical costs with the workgroup in which the activity has been performed.				

Note: Totals may include rounding differences.

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC002.000 - Customer Services - Supervision

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>2020 Total</b>	<b>-4,631</b>	<b>-66</b>	<b>0</b>	<b>-48.6</b>	
2021	-2	-3	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	-1	-2	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 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-19 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-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-14	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 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-19 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-19 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-19 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-19 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-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	-1	-3	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-45	0	0.0	1-Sided Adj

Note: Totals may include rounding differences.

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC002.000 - Customer Services - Supervision

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Incremental COVID-19 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-19 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-19 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-19 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-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	-304	-2	0	-2.4	CCTR Transf To 2200-2567.000
<b>Explanation:</b>	Transfer Labor & Non-Labor expenses from Supervision 2FC002 to MSAI 2FC005 to align historical costs with the workgroup in which the activity was performed.				
2021	-4,795	109	0	45.8	CCTR Transf To 2200-0357.000
<b>Explanation:</b>	Transfer of Labor & Non-Labor expenses from Supervision 2FC002 to Support 2FC003 for region area management employees to align historical costs with the workgroup in which the activity was performed.				
<b>2021 Total</b>	<b>-5,103</b>	<b>23</b>	<b>0</b>	<b>-48.6</b>	

Note: Totals may include rounding differences.

**Supplemental Workpapers for Workpaper 2FC002.000**

SCG-14-WP-2FC002 CSF Supervision  
 Supplemental Workpaper 1 (1 of 1)  
 Calculation of Customer Service Field Supervision Costs

Line #	Calculation Steps	Calculation Factors	BY 2021	2022 Estimated	2023 Estimated	TY 2024 Estimated
1	A <sup>1</sup>	CS - Field Operations FTE	1,041.3	1,047.6	1,267.2	1,245.2
2	B <sup>2</sup>	2021 BY CS - Field Operations FTE Per Supervisor FTE	10.1	12.0	12.0	12.0
3	C <sup>3</sup>	2021 BY Average Supervisor Wage Rate	\$ 52.89	\$ 52.89	\$ 52.89	\$ 52.89
4	D <sup>4</sup>	2021 BY Average Supervisor Non-Labor Per FTE	\$ 5,803	\$ 5,803	\$ 5,803	\$ 5,803
5	E <sup>5</sup>	Total Annual Paid Hours	2,088	2,080	2,080	2,096

Line #	Calculation Steps	CS - Field Supervision Costs	BY 2021	2022 Estimated	2023 Estimated	TY 2024 Estimated
6	F <sup>6</sup> = A / B	Total Supervisor Labor FTE	103.3	87.3	105.6	103.8
7	G = F x E x C	Supervisor Labor Costs	\$ 11,407,062	\$ 9,603,003	\$ 11,616,744	\$ 11,502,284
8	H = F x D	Supervisor Non-Labor Costs	\$ 599,469	\$ 506,602	\$ 612,836	\$ 602,166
9	I = G + H	Total Costs	\$ 12,006,531	\$10,109,605	\$ 12,229,580	\$ 12,104,450
10		Incremental Supervisor Labor FTE vs BY 2021		(16.0)	2.3	0.5
11		Incremental Supervisor Labor Costs vs BY 2021		\$ (1,804,059)	\$ 209,682	\$ 95,222
12		Incremental Supervisor Non-Labor Costs vs BY 2021		\$ (92,867)	\$ 13,367	\$ 2,697
13		Incremental Total Costs vs BY 2021		\$ (1,896,926)	\$ 223,049	\$ 97,919

**Footnote:**

- <sup>1</sup> See SCG-14-WP\_Supplemental\_2FC001.000\_1 - CSF Operations (Calculation Step Z)
- <sup>2</sup> Span of Control: Field Operations FTE per Supervisor FTE
- <sup>3</sup> BY 2021 Average Supervisor Wage Rate: BY 2021 Adjusted Recorded Supervisor Labor / (BY 2021 Annual Paid Hours x BY 2021 Adjusted Recorded Supervisor FTEs)
- <sup>4</sup> BY 2021 Average Supervisor Non-Labor per FTE: BY 2021 Adjusted Recorded Supervisor Non-Labor / BY 2021 Adjusted Recorded Supervisor FTEs)
- <sup>5</sup> Annual Working Hours per Year
- <sup>6</sup> BY 2021 Supervisor FTE = 103.3



**Beginning of Workpaper**  
**2FC003.000 - Customer Services - Support**

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC003.000 - Customer Services - Support

**Activity Description:**

The CSF Support cost category includes: (1) Classroom instructors, senior instructors, supervisors, and a training manager strategically located at SoCalGas' Skills Training Centers (Pico Rivera and Bakersfield); (2) field instructors who conduct mandatory post formal in-field training for field service technicians based on safety processes and procedures; (3) quality assurance (QA) inspectors and a QA supervisor who inspects the work of field technicians to ensure policy adherence and quality of the work performed; (4) District operations clerks who are located at field operating bases; (5) region and district management; and (6) administrative associates; (7) support and clerical.

**Forecast Explanations:**

**Labor - Base YR Rec**

BY 2021, the most recent year is used for CSF Support as a basis for the forecast methodology for TY 2024. The base year provides a reasonable starting point for staffing levels to provide the necessary training, assessments, management and administrative support for Customer Services Field needs. Incremental funding requests are then added to the base year forecast to determine total funding requirements necessary for CSF Support functions.

Costs are primarily driven by the need to train new employees, maintain a technically skilled and proficient workforce, and enable work to be performed in a safe manner that meets SoCalGas's quality standards.

**Non-Labor - Base YR Rec**

Non-labor costs include cell phones, office supplies, computer supplies, travel (hotel, airfare, etc.), mileage reimbursement, appliance purchases, miscellaneous hand tools and other miscellaneous expenses.

**NSE - Base YR Rec**

NSE is not applicable to this workgroup

**Summary of Results:**

		In 2021\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2017	2018	2019	2020	2021	2022	2023	2024	
Labor		11,717	10,005	10,272	11,022	12,161	13,694	13,796	13,796	
Non-Labor		981	697	565	499	545	588	588	588	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>12,698</b>	<b>10,702</b>	<b>10,838</b>	<b>11,522</b>	<b>12,706</b>	<b>14,282</b>	<b>14,384</b>	<b>14,384</b>	
FTE		114.5	104.9	112.0	105.7	114.0	131.9	133.1	133.1	

*Note: Totals may include rounding differences.*

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
Witness: Daniel J. Rendler  
Category: A. Customer Services Field  
Category-Sub: 1. Customer Services Field  
Workpaper: 2FC003.000 - Customer Services - Support

**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	12,161	12,161	12,161	1,534	1,636	1,636	13,695	13,797	13,797
Non-Labor	Base YR Rec	545	545	545	43	43	43	588	588	588
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>12,706</b>	<b>12,706</b>	<b>12,706</b>	<b>1,577</b>	<b>1,679</b>	<b>1,679</b>	<b>14,283</b>	<b>14,385</b>	<b>14,385</b>
FTE	Base YR Rec	114.0	114.0	114.0	17.9	19.1	19.1	131.9	133.1	133.1

**Forecast Adjustment Details:**

Year	Labor	NLbr	NSE	Total	FTE	Adj Type
2022	303	0	0	303	3.6	1-Sided Adj
<b>Explanation:</b>	\$303k Labor Forecast adjustment needed to support QA Staffing. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.C., for more information on this adjustment. Please refer to SCG-14-WP-2FC003 CSF Support Supplemental Workpaper 3, Calculation of Customer Service Support Labor Costs to Support Quality Assurance					
2022	1,231	43	0	1,274	14.3	1-Sided Adj
<b>Explanation:</b>	\$499k Labor & \$43k Non-Labor Forecast adjustment to support Centralized Training; \$732k Labor Forecast adjustment to support Field Instruction. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.C., for more information on this adjustment. Please refer to SCG-14-WP-2FC003 CSF Support Supplemental Workpaper 1 and 2 for calculation details					
<b>2022 Total</b>	<b>1,534</b>	<b>43</b>	<b>0</b>	<b>1,577</b>	<b>17.9</b>	
2023	1,333	43	0	1,376	15.5	1-Sided Adj
<b>Explanation:</b>	\$525k Labor & \$43k Non-Labor Forecast adjustment to support Centralized Training; \$808k Labor Forecast adjustment to support Field Instruction. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.C., for more information on this adjustment. Please refer to SCG-14-WP-2FC003 CSF Support Supplemental Workpaper 1 and 2 for calculation details					
2023	303	0	0	303	3.6	1-Sided Adj
<b>Explanation:</b>	\$303k Labor Forecast adjustment needed to support QA Staffing. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.C., for more information on this adjustment. Please refer to SCG-14-WP-2FC003 CSF Support Supplemental Workpaper 3, Calculation of Customer Service Support Labor Costs to Support Quality Assurance					
<b>2023 Total</b>	<b>1,636</b>	<b>43</b>	<b>0</b>	<b>1,679</b>	<b>19.1</b>	
2024	1,333	43	0	1,376	15.5	1-Sided Adj
<b>Explanation:</b>	\$525k Labor & \$43k Non-Labor Forecast adjustment to support Centralized Training; \$808k Labor Forecast adjustment to support Field Instruction. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.C., for more information on this adjustment. Please refer to SCG-14-WP-2FC003 CSF Support Supplemental Workpaper 1 and 2 for calculation details					
2024	303	0	0	303	3.6	1-Sided Adj

Note: Totals may include rounding differences.

SCG/CS - FIELD & ADVANCED METER OPERATIONS/Exh No:SCG-14-WP-R/Witness: D. Rendler

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC003.000 - Customer Services - Support

<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>	\$303k Labor Forecast adjustment needed to support QA Staffing . Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.C., for more information on this adjustment. Please refer to SCG-14-WP-2FC003 CSF Support Supplemental Workpaper 3, Calculation of Customer Service Support Labor Costs to Support Quality Assurance					
<b>2024 Total</b>	<b>1,636</b>	<b>43</b>	<b>0</b>	<b>1,679</b>	<b>19.1</b>	

*Note: Totals may include rounding differences.*

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
Witness: Daniel J. Rendler  
Category: A. Customer Services Field  
Category-Sub: 1. Customer Services Field  
Workpaper: 2FC003.000 - Customer Services - Support

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

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	5,401	4,335	4,452	4,486	5,544
Non-Labor	813	615	387	662	712
NSE	0	0	0	0	0
<b>Total</b>	<b>6,214</b>	<b>4,950</b>	<b>4,838</b>	<b>5,148</b>	<b>6,256</b>
FTE	57.3	47.6	45.0	40.9	50.2
<b>Adjustments (Nominal \$) **</b>					
Labor	3,582	3,530	3,725	4,615	4,792
Non-Labor	59	24	141	-198	-166
NSE	0	0	0	0	0
<b>Total</b>	<b>3,641</b>	<b>3,553</b>	<b>3,866</b>	<b>4,417</b>	<b>4,626</b>
FTE	39.9	41.3	48.8	47.6	45.7
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	8,983	7,865	8,177	9,100	10,336
Non-Labor	872	639	527	464	545
NSE	0	0	0	0	0
<b>Total</b>	<b>9,855</b>	<b>8,504</b>	<b>8,704</b>	<b>9,564</b>	<b>10,882</b>
FTE	97.2	88.9	93.8	88.5	95.9
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	1,523	1,354	1,550	1,603	1,824
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>1,523</b>	<b>1,354</b>	<b>1,550</b>	<b>1,603</b>	<b>1,824</b>
FTE	17.3	16.0	18.2	17.2	18.1
<b>Escalation to 2021\$</b>					
Labor	1,210	786	545	319	0
Non-Labor	109	58	38	35	0
NSE	0	0	0	0	0
<b>Total</b>	<b>1,320</b>	<b>844</b>	<b>583</b>	<b>354</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2021\$)</b>					
Labor	11,717	10,005	10,272	11,022	12,161
Non-Labor	981	697	565	499	545
NSE	0	0	0	0	0
<b>Total</b>	<b>12,698</b>	<b>10,702</b>	<b>10,838</b>	<b>11,522</b>	<b>12,706</b>
FTE	114.5	104.9	112.0	105.7	114.0

\* 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  
Non-Shared Service Workpapers

Area: CS - FIELD & ADVANCED METER OPERATIONS  
Witness: Daniel J. Rendler  
Category: A. Customer Services Field  
Category-Sub: 1. Customer Services Field  
Workpaper: 2FC003.000 - Customer Services - Support

**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs					
Years	2017	2018	2019	2020	2021
Labor	3,582	3,530	3,725	4,615	4,792
Non-Labor	59	24	141	-198	-166
NSE	0	0	0	0	0
<b>Total</b>	<b>3,641</b>	<b>3,553</b>	<b>3,866</b>	<b>4,417</b>	<b>4,626</b>
FTE	39.9	41.3	48.8	47.6	45.7

**Detail of Adjustments to Recorded:**

Year	Labor	NLbr	NSE	FTE	Adj Type
2017	0	0	0	0.0	CCTR Transf To 2200-2160.000
<b>Explanation:</b>	Correction of parts expense				
2017	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Adjust Event & Ticket Costs				
2017	0	0	0	0.0	CCTR Transf From 2200-2160.000
<b>Explanation:</b>	Reclassify parts expense				
2017	2	0	0	0.1	CCTR Transf From 2200-0440.000
<b>Explanation:</b>	Transfer CS Support labor and non-labor expense associated with Metering Reading Office Support from CS Dispatch Workpaper to CS Operations CCTR 2200-0479 in order to align historical costs with the workgroup in which the activity has been performed.				
2017	2,074	4	0	25.3	CCTR Transf From 2200-0548.000
<b>Explanation:</b>	Transfer of labor and non-labor expenses for IO FG8804002200 associated with admin/District Operation Clerks (DOCs) to CS Support CCTRs from CS Supervision workpaper in order to align historical costs with the workgroup in which the activity has been performed.				
2017	1,324	52	0	12.8	CCTR Transf From 2200-0457.000
<b>Explanation:</b>	Transfer of labor expenses associated region area management employees between CS Support CCTRs and CS Supervision workpapers in order to align historical costs with the workgroup in which the activity has been performed.				
2017	182	3	0	1.7	CCTR Transf From 2200-0462.000
<b>Explanation:</b>	Transfer of labor and non-labor expenses associated with CS management, clerical and administrative employees from CS Field Operations CCTRs to CS Support workpaper in order to align historical costs with the workgroup in which the activity has been performed.				
<b>2017 Total</b>	<b>3,582</b>	<b>59</b>	<b>0</b>	<b>39.9</b>	
2018	0	-2	0	0.0	1-Sided Adj

Note: Totals may include rounding differences.

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC003.000 - Customer Services - Support

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2018	0	-12	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	-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	-2	0	0	-0.1	CCTR Transf To 2200-2571.000
<b>Explanation:</b>	Transfer MSAI labor and non-labor expense associated with IO FG893222200 from CS Support CCTR to MSAI CCTR 2200-2571 in order to align historical costs with the workgroup in which the activity has been performed.				
2018	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	Adjust Event & Ticket Costs				
2018	2,478	7	0	29.4	CCTR Transf From 2200-0568.000
<b>Explanation:</b>	Transfer of labor and non-labor expenses from IO FG8804002200 associated with admin/DOCs to CS Support CCTRs from CS Supervision workpaper in order to align historical costs with the workgroup in which the activity has been performed.				
2018	968	29	0	11.2	CCTR Transf From 2200-0476.000
<b>Explanation:</b>	Transfer of labor expenses associated region area management employees between CS Support CCTRs and CS Supervision workpapers in order to align historical costs with the workgroup in which the activity has been performed.				
2018	87	3	0	0.9	CCTR Transf From 2200-0445.000
<b>Explanation:</b>	Transfer of labor and non-labor expenses associated with CS management, clerical/District Operations Clerks (DOCs) and administrative employees from CS Field Operations CCTRs to CS Support workpaper in order to align historical costs with the workgroup in which the activity has been performed.				
<b>2018 Total</b>	<b>3,530</b>	<b>24</b>	<b>0</b>	<b>41.3</b>	
2019	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Adjust Event & Ticket Costs				
2019	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Adjust Event & Ticket Costs				
2019	0	64	0	0.0	CCTR Transf To 2200-8000.002
<b>Explanation:</b>	Transfer non-labor expense associated with executive benefit LTIP from 2200-0479 in work group 2FC003.000 [Support] to cost center 2200-8000.002 in work group 2CP000.001 Human Resources, Disability, & Workers Comp in order to align historical costs with workgroup in which the activity will be forecasted.				

Note: Totals may include rounding differences.

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
Witness: Daniel J. Rendler  
Category: A. Customer Services Field  
Category-Sub: 1. Customer Services Field  
Workpaper: 2FC003.000 - Customer Services - Support

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
2019	0	24	0	0.0	CCTR Transf To 2200-8000.002
<b>Explanation:</b>	Transfer non-labor expense associated with executive benefit LTIP from 2200-0536 in work group 2FC003.000 [Support] to cost center 2200-8000.002 in work group 2CP000.001 Human Resources, Disability, & Workers Comp in order to align historical costs with workgroup in which the activity will be forecasted.				
2019	0	39	0	0.0	CCTR Transf To 2200-8000.002
<b>Explanation:</b>	Transfer non-labor expense associated with executive benefit LTIP from 2200-2111 in work group 2FC003.000 [Support] to cost center 2200-8000.002 in work group 2CP000.001 Human Resources, Disability, & Workers Comp in order to align historical costs with workgroup in which the activity will be forecasted.				
2019	2,686	4	0	30.9	CCTR Transf From 2200-0476.000
<b>Explanation:</b>	Transfer of labor and non-labor expenses associated with admin/DOCs to CS Support CCTRs from CS Supervision workpaper in order to align historical costs with the workgroup in which the activity has been performed.				
2019	1,039	12	0	17.9	CCTR Transf From 2200-0476.000
<b>Explanation:</b>	Transfer of labor expenses associated region area management employees between CS Support CCTRs and CS Supervision workpapers in order to align historical costs with the workgroup in which the activity has been performed.				
<b>2019 Total</b>	<b>3,725</b>	<b>141</b>	<b>0</b>	<b>48.8</b>	
2020	0	-15	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 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-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-79	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 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-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-90	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 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-19 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: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC003.000 - Customer Services - Support

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
2020	0	-4	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 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-19 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-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-13	-7	0	-0.3	CCTR Transf To 2200-2571.000
<b>Explanation:</b>	Transfer MSAI labor and non-labor expense associated with IO FG893222200 from CS Support CCTR to MSAI CCTR 2200-2571 in order to align historical costs with the workgroup in which the activity has been performed.				
2020	2,779	7	0	30.9	CCTR Transf From 2200-0476.000
<b>Explanation:</b>	Transfer of labor and non-labor expenses from IO FG88004002200 associated with admin/District Operations Clerks (DOCs) to CS Support CCTRs from CS Supervision workpaper in order to align historical costs with the workgroup in which the activity has been performed.				
2020	1,777	-8	0	16.3	CCTR Transf From 2200-0476.000
<b>Explanation:</b>	Transfer of labor expenses associated region area management employees between CS Support CCTRs and CS Supervision workpapers in order to align historical costs with the workgroup in which the activity has been performed.				
2020	71	6	0	0.7	CCTR Transf From 2200-0509.000
<b>Explanation:</b>	Transfer of labor and non-labor expenses associated with CS management, clerical/DOCs and administrative employees from CS Field Operations CCTRs to CS Support workpaper in order to align historical costs with the workgroup in which the activity has been performed.				
<b>2020 Total</b>	<b>4,615</b>	<b>-198</b>	<b>0</b>	<b>47.6</b>	
2021	0	-8	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 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-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-11	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 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

Note: Totals may include rounding differences.

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC003.000 - Customer Services - Support

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-9	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 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-19 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-19 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-19 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-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	-2	0	0	-0.1	CCTR Transf To 2200-2567.000
<b>Explanation:</b>	Transfer Labor & Non-Labor expenses from Support 2FC003 to MSAI 2FC005 to align historical costs with the workgroup in which the activity was performed.				
2021	0	-10	0	0.0	1-Sided Adj
<b>Explanation:</b>	Removing non-GRC costs related to regulatory memorandum accounts (RM 300808367)				
2021	0	-11	0	0.0	1-Sided Adj
<b>Explanation:</b>	Removing non-GRC costs related to regulatory memorandum accounts (RM 300808367)				
2021	4,795	-109	0	45.8	CCTR Transf From 2200-2116.000
<b>Explanation:</b>	Transfer of Labor & Non-Labor expenses from Supervision 2FC002 to Support 2FC003 for region area management employees to align historical costs with the workgroup in which the activity was performed.				
<b>2021 Total</b>	<b>4,792</b>	<b>-166</b>	<b>0</b>	<b>45.7</b>	

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

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 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC003.000 - Customer Services - Support

**RAMP Item # 1**

**RAMP Activity**

RAMP Chapter: SCG-Risk-3 Incident Related to the Medium Pressure System (Excluding Dig-in)

RAMP Line Item ID: C26

RAMP Line Item Name: Staff Employee Skills Training

Tranche(/s): Tranche1: Meter and Beyond the Meter

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

	2021 Historical Embedded Cost (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2024 RAMP Range (2020 Incurred \$)	
					Low	High
Tranche 1 Cost Estimate	4,014	5,288	5,390	5,390	2,432	2,944

**Cost Estimate Changes from RAMP:**

The TY 2024 GRC forecasted dollars is greater than the 2021 RAMP filing low/high threshold. The RAMP filing utilized a 5-year average methodology whereas the GRC forecast utilized a Base Year methodology.

**GRC Work Unit/Activity Level Estimates**

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2024 RAMP Range Activities	
					Low	High
Tranche 1 FTE	37.40	51.70	52.90	52.90	26.00	31.00

**Work Unit Changes from RAMP:**

The TY 2024 GRC forecasted units is greater than the 2021 RAMP filing low/high threshold. The RAMP filing utilized a 5-year average methodology whereas the GRC forecast utilized a Base Year methodology.

**Risk Spend Efficiency (RSE)**

	GRC RSE	RAMP RSE
Tranche 1	0.000	0.000

**RSE Changes from RAMP:**

An RSE was not calculated for this activity.

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
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 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC003.000 - Customer Services - Support

**RAMP Item # 2**

**RAMP Activity**

RAMP Chapter: SCG-Risk-3 Incident Related to the Medium Pressure System (Excluding Dig-in)

RAMP Line Item ID: C28

RAMP Line Item Name: Quality Assurance

Tranche(/s): Tranche1: Meter and Beyond the Meter

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

	2021 Historical Embedded Cost (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2024 RAMP Range (2020 Incurred \$)	
					Low	High
Tranche 1 Cost Estimate	824	1,127	1,127	1,127	771	933

**Cost Estimate Changes from RAMP:**

The TY 2024 GRC forecasted dollars is greater than the 2021 RAMP filing low/high threshold. The RAMP filing utilized a 5-year average methodology whereas the GRC forecast utilized a Base Year methodology.

**GRC Work Unit/Activity Level Estimates**

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2024 RAMP Range Activities	
					Low	High
Tranche 1 FTE	8.00	11.50	11.50	11.50	9.00	10.00

**Work Unit Changes from RAMP:**

The TY 2024 GRC forecasted units is greater than the 2021 RAMP filing low/high threshold. The RAMP filing utilized a 5-year average methodology whereas the GRC forecast utilized a Base Year methodology.

**Risk Spend Efficiency (RSE)**

	GRC RSE	RAMP RSE
Tranche 1	0.600	7.600

**RSE Changes from RAMP:**

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

**Supplemental Workpapers for Workpaper 2FC003.000**

SCG-14-WP-2FC003 CSF Support  
 Supplemental Workpaper 1 (1 of 4)

**Calculation of Customer Service Support Labor Costs to Support Centralized Training**

Line #	Calculation Steps	Calculation Factors	2022 Estimated	2022 Estimated	2023 Estimated	TY 2024 Estimated
1		Management Pay Bands Role	Specialist / Analyst	Specialist / Analyst	Specialist / Analyst	Specialist / Analyst
2		Code	SA5	SA5	SA5	SA5
3		Low Salary Range	77,300	77,300	77,300	77,300
4		High Salary Range	116,000	116,000	116,000	116,000
5	A	Number of Employees	4	1	5	5
6	B	Salary	105,000	105,000	105,000	105,000
7	C	V&S Rate	0.1765	0.1765	0.1765	0.1765
8	$D = B / (1 + C)$	Direct Salary (12 Months)	89,248	89,248	89,248	89,248
9	E	Forecasted Months	12	9	12	12
10	$F = A \times ((D/12) \times E)$	Salary Calculation	356,991	66,936	446,239	446,239
11	$G = F \times (1 + C)$	Salary Calculation w/ V&S	420,000	78,750	525,000	525,000

SCG-14-WP-2FC003 CSF Support  
 Supplemental Workpaper 1 (2 of 4)

**Calculation of Non-Labor Costs to Support Centralized Training**

Line #	Calculation Steps	Calculation Factors	2022 Estimated	2023 Estimated	TY 2024 Estimated
2	A	Reduction to BY 2021 Costs (One Time Purchase)	\$ (29,500)	\$ (29,500)	\$ (29,500)
3	B = A	Estimated Incremental Non-Labor Cost	\$ (29,500)	\$ (29,500)	\$ (29,500)
		<b><u>Bakersfield Training Costs Not in BY 2021</u></b>			
4	C	Estimated Weeks of Training (Bakersfield)	46	46	46
5	D	Number of Instructors (Bakersfield)	2	2	2
6	E	Estimated Hotel Costs per Week (Bakersfield)	\$ 445	\$ 445	\$ 445
7	F = C x D x E	Estimated Accommodation Costs	\$ 40,940	\$ 40,940	\$ 40,940
8	G	Estimated Weeks of Training (Bakersfield)	46	46	46
9	H	Number of Instructors (Bakersfield)	2	2	2
10	I	Estimated Miles Traveled to Bakersfield (Round Trip)	250	250	250
11	J	Estimated Mileage Reimbursement per Mile	0.576	0.576	0.576
12	K = G x H x I x J	Estimated Mileage Costs	\$ 13,248	\$ 13,248	\$ 13,248
13	L	Estimated Weeks of Training (Bakersfield)	46	46	46
14	M	Number of Instructors (Bakersfield)	2	2	2
15	N	Estimated Meals Reimbursement per Week	\$ 200	\$ 200	\$ 200
16	O = L x M x N	Estimated Meal Costs	\$ 18,400	\$ 18,400	\$ 18,400
17	P = B + F + K + O	<b>Total Estimated Incremental Non-Labor Costs</b>	<b>\$ 43,088</b>	<b>\$ 43,088</b>	<b>\$ 43,088</b>

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

SCG-14-WP-2FC003 CSF Support  
Supplemental Workpaper 2 (3 of 4)

**Calculation of Customer Service Support Labor Costs Filling Vacancies for Eight SA4s to Support Field Instruction**

Line #	Calculation Steps	Calculation Factors	2022 Estimated	2022 Estimated	2023 Estimated	TY 2024 Estimated
1		Management Pay Bands Role	Specialist / Analyst	Specialist / Analyst	Specialist / Analyst	Specialist / Analyst
2		Code	SA4	SA4	SA4	SA4
3		Low Salary Range	68,400	68,400	68,400	68,400
4		High Salary Range	102,600	102,600	102,600	102,600
5	A	Number of Employees	5	3	8	8
6	B	Expected Salary	101,000	101,000	101,000	101,000
7	C	V&S Rate	0.1765	0.1765	0.1765	0.1765
8	$D = B / (1 + C)$	Direct Salary (12 Months)	85,848	85,848	85,848	85,848
9	E	Forecasted Months	12	9	12	12
10	$F = A \times ((D/12) \times E)$	Salary Calculation	429,239	193,158	686,783	686,783
11	$G = F \times (1 + C)$	Salary Calculation w/ V&S	505,000	227,250	808,000	808,000



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

SCG-14-WP-2FC003 CSF Support  
Supplemental Workpaper 3 (4 of 4)  
Calculation of Customer Service Support Labor Costs to Support Quality Assurance

Line #	Calculation Steps	Calculation Factors	2022 Estimated	2023 Estimated	TY 2024 Estimated
1		Management Pay Bands Role	Specialist / Analyst	Specialist / Analyst	Specialist / Analyst
2		Code	SA4	SA4	SA4
3		Low Salary Range	68,400	68,400	68,400
4		High Salary Range	102,600	102,600	102,600
5	A	Number of Employees	3	3	3
6	B	Salary	101,000	101,000	101,000
7	C	V&S Rate	0.1765	0.1765	0.1765
8	$D = B / (1 + C)$	Direct Salary (12 Months)	85,848	85,848	85,848
9	E	Forecasted Months	12	12	12
10	$F = A \times ((D/12) \times E)$	Salary Calculation	257,544	257,544	257,544
11	$G = F \times (1 + C)$	Salary Calculation w/ V&S	303,000	303,000	303,000

**Beginning of Workpaper**  
**2FC004.000 - Customer Services - Dispatch**

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC004.000 - Customer Services - Dispatch

**Activity Description:**

CSF Dispatch includes labor and non-labor costs for personnel who schedule, route and dispatch work to CSF Operations employees 24 hours a day, 365 days a year. CSF Dispatch also works with various internal departments to coordinate work and with outside agencies such as local police and fire departments to manage emergencies for public safety. The Dispatch team manages customer and company generated work including but not limited to 1) managing multiple aspects of emergency incidents such as dispatching emergency first responders, management/supervisor reporting notifications, and reporting requirements; 2) coordinating, and redistributing work from unavailable CSF Operations employees; 3) dispatching same day work to available CSF Operations employees including analysis and redistribution of work/workforce to maximize efficiencies.

**Forecast Explanations:**

**Labor - Base YR Rec**

BY 2021, the most recent year is used for CSF Dispatch as a basis for the forecast methodology for TY 2024. In base year 2021, CSF Dispatch achieved staffing levels necessary to provide 24/7, 365 days per year coverage to schedule, route and dispatch Customer Services Field work. Incremental funding requests are then added to the base year forecast to determine total funding requirements necessary for CSF Dispatch functions.

CSF Dispatch costs are primarily driven by the labor required to train new employees and maintain a technically skilled and proficient workforce that perform in a manner that meets SoCalGas's continuous improvement and safety culture.

**Non-Labor - Base YR Rec**

Non-labor expenses include computer equipment, communication expenses, office materials and software maintenance expenses.

**NSE - Base YR Rec**

NSE is not applicable to this workgroup.

**Summary of Results:**

		In 2021\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2017	2018	2019	2020	2021	2022	2023	2024	
Labor		11,475	11,381	13,206	13,121	13,922	13,923	13,923	13,923	
Non-Labor		160	165	240	111	144	169	169	169	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>11,634</b>	<b>11,546</b>	<b>13,446</b>	<b>13,231</b>	<b>14,066</b>	<b>14,092</b>	<b>14,092</b>	<b>14,092</b>	
FTE		109.5	109.2	116.0	123.2	127.9	127.9	127.9	127.9	

*Note: Totals may include rounding differences.*

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC004.000 - Customer Services - Dispatch

**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	13,922	13,922	13,922	0	0	0	13,922	13,922	13,922
Non-Labor	Base YR Rec	144	144	144	25	25	25	169	169	169
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>14,066</b>	<b>14,066</b>	<b>14,066</b>	<b>25</b>	<b>25</b>	<b>25</b>	<b>14,091</b>	<b>14,091</b>	<b>14,091</b>
FTE	Base YR Rec	127.9	127.9	127.9	0.0	0.0	0.0	127.9	127.9	127.9

**Forecast Adjustment Details:**

Year	Labor	NLbr	NSE	Total	FTE	Adj Type
2022	0	25	0	25	0.0	1-Sided Adj
<b>Explanation:</b>	\$25k Non-Labor yearly contract price through TY 2024 associated with Radio Laptop Software Maintenance. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.D., for more information on this adjustment.					
<b>2022 Total</b>	<b>0</b>	<b>25</b>	<b>0</b>	<b>25</b>	<b>0.0</b>	
2023	0	25	0	25	0.0	1-Sided Adj
<b>Explanation:</b>	\$25k Non-Labor yearly contract price through TY 2024 associated with Radio Laptop Software Maintenance. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.D., for more information on this adjustment.					
<b>2023 Total</b>	<b>0</b>	<b>25</b>	<b>0</b>	<b>25</b>	<b>0.0</b>	
2024	0	25	0	25	0.0	1-Sided Adj
<b>Explanation:</b>	\$25k Non-Labor yearly contract price through TY 2024 associated with Radio Laptop Software Maintenance. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.D., for more information on this adjustment.					
<b>2024 Total</b>	<b>0</b>	<b>25</b>	<b>0</b>	<b>25</b>	<b>0.0</b>	

Note: Totals may include rounding differences.

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
Witness: Daniel J. Rendler  
Category: A. Customer Services Field  
Category-Sub: 1. Customer Services Field  
Workpaper: 2FC004.000 - Customer Services - Dispatch

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

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	9,101	8,966	10,546	10,859	11,848
Non-Labor	142	152	224	137	325
NSE	0	0	0	0	0
<b>Total</b>	<b>9,243</b>	<b>9,117</b>	<b>10,770</b>	<b>10,997</b>	<b>12,173</b>
FTE	98.0	92.7	97.7	103.2	107.8
<b>Adjustments (Nominal \$) **</b>					
Labor	-303	-19	-34	-27	-14
Non-Labor	-1	0	0	-35	-181
NSE	0	0	0	0	0
<b>Total</b>	<b>-303</b>	<b>-19</b>	<b>-34</b>	<b>-61</b>	<b>-195</b>
FTE	-5.0	-0.1	-0.5	-0.2	-0.2
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	8,798	8,947	10,512	10,833	11,834
Non-Labor	142	152	224	103	144
NSE	0	0	0	0	0
<b>Total</b>	<b>8,940</b>	<b>9,098</b>	<b>10,735</b>	<b>10,935</b>	<b>11,977</b>
FTE	93.0	92.6	97.2	103.0	107.6
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	1,491	1,540	1,993	1,909	2,089
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>1,491</b>	<b>1,540</b>	<b>1,993</b>	<b>1,909</b>	<b>2,089</b>
FTE	16.5	16.6	18.8	20.2	20.3
<b>Escalation to 2021\$</b>					
Labor	1,185	895	701	379	0
Non-Labor	18	14	16	8	0
NSE	0	0	0	0	0
<b>Total</b>	<b>1,203</b>	<b>908</b>	<b>717</b>	<b>387</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2021\$)</b>					
Labor	11,475	11,381	13,206	13,121	13,922
Non-Labor	160	165	240	111	144
NSE	0	0	0	0	0
<b>Total</b>	<b>11,634</b>	<b>11,546</b>	<b>13,446</b>	<b>13,231</b>	<b>14,066</b>
FTE	109.5	109.2	116.0	123.2	127.9

\* 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: CS - FIELD & ADVANCED METER OPERATIONS  
Witness: Daniel J. Rendler  
Category: A. Customer Services Field  
Category-Sub: 1. Customer Services Field  
Workpaper: 2FC004.000 - Customer Services - Dispatch

**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs					
Years	2017	2018	2019	2020	2021
Labor	-303	-19	-34	-27	-14
Non-Labor	-0.526	-0.033	-0.138	-35	-181
NSE	0	0	0	0	0
<b>Total</b>	<b>-303</b>	<b>-19</b>	<b>-34</b>	<b>-61</b>	<b>-195</b>
FTE	-5.0	-0.1	-0.5	-0.2	-0.2

**Detail of Adjustments to Recorded:**

Year	Labor	NLbr	NSE	FTE	Adj Type
2017	-15	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2017	-11	0	0	-0.1	CCTR Transf To 2200-2571.000
<b>Explanation:</b>	Transfer MSAI labor and/or non-labor expense from associated with IO FG893222200 & FG893232200 from CS Dispatch CCTRs to MSAI CCTR 2200-2571 in order to align historical costs with the workgroup in which the activity has been preformed.				
2017	-276	0	0	-4.7	CCTR Transf To 2200-0449.000
<b>Explanation:</b>	Transfer CS Operations labor and/or non-labor expense associated with CCTR 2200-0506 from CS Dispatch Workpaper to CS Operations CCTR 2200-0449 in order to align historical costs with the workgroup in which the activity has been preformed.				
2017	-2	0	0	-0.1	CCTR Transf To 2200-0479.000
<b>Explanation:</b>	Transfer CS Support labor and non-labor expense associated with Metering Reading Office Support from CS Dispatch Workpaper to CS Operations CCTR 2200-0479 in order to align historical costs with the workgroup in which the activity has been performed.				
<b>2017 Total</b>	<b>-303</b>	<b>-1</b>	<b>0</b>	<b>-5.0</b>	
2018	-19	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
<b>2018 Total</b>	<b>-19</b>	<b>0</b>	<b>0</b>	<b>-0.1</b>	
2019	7	0	0	0.1	1-Sided Adj
<b>Explanation:</b>	Incremental costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2019	-41	0	0	-0.6	CCTR Transf To 2200-0448.000

*Note: Totals may include rounding differences.*

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC004.000 - Customer Services - Dispatch

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Transfer CS Operations labor and expense from CCTR 2200-0506 CS Dispatch Workpaper to CS Operations CCTR 2200-0449 in order to align historical costs with the workgroup in which the activity has been performed.				
<b>2019 Total</b>	<b>-34</b>	<b>0</b>	<b>0</b>	<b>-0.5</b>	
2020	-12	-16	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-14	-18	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 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	CCTR Transf To 2200-0449.000
<b>Explanation:</b>	Transfer CS Operations non-labor expense from CCTR 2200-0506 CS Dispatch Workpaper to CS Operations CCTR 2200-0449 in order to align historical costs with the workgroup in which the activity has been performed.				
2020	0	0	0	0.0	1-Sided Adj
<b>Explanation:</b>	Transfer MSAI non-labor expense from CS Dispatch CCTRs to MSAI CCTR 2200-2571 in order to align historical costs with the workgroup in which the activity has been performed.				
<b>2020 Total</b>	<b>-27</b>	<b>-35</b>	<b>0</b>	<b>-0.2</b>	
2021	0	-181	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 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-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	-8	0	0	-0.1	CCTR Transf To 2200-2567.000
<b>Explanation:</b>	Transfer Labor & Non-Labor expenses from Dispatch 2FC004 to MSAI 2FC005 to align historical costs with the workgroup in which the activity was performed.				
2021	-6	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Removing non-GRC costs related to regulatory memorandum accounts (RM 300808367)				
<b>2021 Total</b>	<b>-14</b>	<b>-181</b>	<b>0</b>	<b>-0.2</b>	

Note: Totals may include rounding differences.

**Beginning of Workpaper**  
**2FC005.000 - Customer Services - MSA Inspection Program**



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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC005.000 - Customer Services - MSA Inspection Program

**Activity Description:**

Pursuant to CFR § 192.481, the DOT generally requires that each MSA be inspected every three years for atmospheric corrosion. Meter readers have historically performed this function, but with the implementation of AMI and the elimination of the traditional meter reading function, the CSF MSA Inspection Organization was formed in 2016.

The CSF MSA Inspection Organization performs physical, onsite inspections of each MSA to comply with DOT required MSA inspections for atmospheric corrosion, identifying conditions which require remediation by CSF and Distribution field employees. The organization also contacts customers to resolve meter access issues.

**Forecast Explanations:**

**Labor - Base YR Rec**

A BY2021 forecast is used to forecast MSA Inspection TY2024 labor expenses based on the volume of inspections and associated remediation work estimated to meet DOT requirements and the work required to address meter access issues. Labor costs are primarily driven by work order volumes. Costs are also driven by factors outside of SoCalGas's control such as meter access issues related to customer response to SoCalGas's attempts to gain access to the meter to complete the inspections.

**Non-Labor - Base YR Rec**

Non-labor costs are based on BY 2021 associated non-labor expenses for related small tools, uniforms, cost of notices and miscellaneous supplies.

**NSE - Base YR Rec**

NSE is not applicable to this workgroup.

**Summary of Results:**

		In 2021\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2017	2018	2019	2020	2021	2022	2023	2024	
Labor		13,379	13,794	19,006	23,841	24,756	25,147	25,147	25,147	
Non-Labor		769	470	545	676	563	563	563	563	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>14,148</b>	<b>14,264</b>	<b>19,551</b>	<b>24,517</b>	<b>25,320</b>	<b>25,710</b>	<b>25,710</b>	<b>25,710</b>	
FTE		192.4	173.4	237.1	299.1	310.9	315.5	315.5	315.5	

*Note: Totals may include rounding differences.*

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC005.000 - Customer Services - MSA Inspection Program

**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	24,756	24,756	24,756	391	391	391	25,147	25,147	25,147
Non-Labor	Base YR Rec	563	563	563	0	0	0	563	563	563
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>25,320</b>	<b>25,320</b>	<b>25,320</b>	<b>391</b>	<b>391</b>	<b>391</b>	<b>25,711</b>	<b>25,711</b>	<b>25,711</b>
FTE	Base YR Rec	310.9	310.9	310.9	4.6	4.6	4.6	315.5	315.5	315.5

**Forecast Adjustment Details:**

Year	Labor	NLbr	NSE	Total	FTE	Adj Type
2022	391	0	0	391	4.6	1-Sided Adj
<b>Explanation:</b>	Adjustment to annualize labor costs for positions vacant at various points during BY 2021. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.E., for more information on this adjustment. Please refer to SCG-14-WP-2FC005 CSF Meter Set Assembly Inspection (MSAI) Supplemental Workpaper 1 for calculation details.					
<b>2022 Total</b>	<b>391</b>	<b>0</b>	<b>0</b>	<b>391</b>	<b>4.6</b>	
2023	391	0	0	391	4.6	1-Sided Adj
<b>Explanation:</b>	Adjustment to annualize labor costs for positions vacant at various points during BY 2021. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.E., for more information on this adjustment. Please refer to SCG-14-WP-2FC005 CSF Meter Set Assembly Inspection (MSAI) Supplemental Workpaper 1 for calculation details.					
<b>2023 Total</b>	<b>391</b>	<b>0</b>	<b>0</b>	<b>391</b>	<b>4.6</b>	
2024	391	0	0	391	4.6	1-Sided Adj
<b>Explanation:</b>	Adjustment to annualize labor costs for positions vacant at various points during BY 2021. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.E., for more information on this adjustment. Please refer to SCG-14-WP-2FC005 CSF Meter Set Assembly Inspection (MSAI) Supplemental Workpaper 1 for calculation details.					
<b>2024 Total</b>	<b>391</b>	<b>0</b>	<b>0</b>	<b>391</b>	<b>4.6</b>	

Note: Totals may include rounding differences.

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
Witness: Daniel J. Rendler  
Category: A. Customer Services Field  
Category-Sub: 1. Customer Services Field  
Workpaper: 2FC005.000 - Customer Services - MSA Inspection Program

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

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	10,229	10,678	15,170	16,992	18,904
Non-Labor	682	429	507	669	622
NSE	0	0	0	0	0
<b>Total</b>	<b>10,910</b>	<b>11,108</b>	<b>15,678</b>	<b>17,661</b>	<b>19,526</b>
FTE	163.2	146.9	198.8	216.7	237.7
<b>Adjustments (Nominal \$) **</b>					
Labor	29	165	-42	2,692	2,139
Non-Labor	2	2	1	-41	-59
NSE	0	0	0	0	0
<b>Total</b>	<b>31</b>	<b>167</b>	<b>-41</b>	<b>2,651</b>	<b>2,080</b>
FTE	0.3	0.2	-0.1	33.4	23.8
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	10,258	10,844	15,129	19,684	21,042
Non-Labor	683	431	508	628	563
NSE	0	0	0	0	0
<b>Total</b>	<b>10,941</b>	<b>11,275</b>	<b>15,637</b>	<b>20,311</b>	<b>21,606</b>
FTE	163.5	147.1	198.7	250.1	261.6
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	1,739	1,866	2,868	3,468	3,714
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>1,739</b>	<b>1,866</b>	<b>2,868</b>	<b>3,468</b>	<b>3,714</b>
FTE	28.9	26.3	38.4	49.0	49.3
<b>Escalation to 2021\$</b>					
Labor	1,382	1,084	1,009	689	0
Non-Labor	86	39	37	48	0
NSE	0	0	0	0	0
<b>Total</b>	<b>1,468</b>	<b>1,123</b>	<b>1,046</b>	<b>737</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2021\$)</b>					
Labor	13,379	13,794	19,006	23,841	24,756
Non-Labor	769	470	545	676	563
NSE	0	0	0	0	0
<b>Total</b>	<b>14,148</b>	<b>14,264</b>	<b>19,551</b>	<b>24,517</b>	<b>25,320</b>
FTE	192.4	173.4	237.1	299.1	310.9

\* 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: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC005.000 - Customer Services - MSA Inspection Program

**Summary of Adjustments to Recorded:**

		In Nominal \$ (000) Incurred Costs				
Years	2017	2018	2019	2020	2021	
Labor	29	165	-42	2,692	2,139	
Non-Labor	2	2	0.648	-41	-59	
NSE	0	0	0	0	0	
<b>Total</b>	<b>31</b>	<b>167</b>	<b>-41</b>	<b>2,651</b>	<b>2,080</b>	
FTE	0.3	0.2	-0.1	33.4	23.8	

**Detail of Adjustments to Recorded:**

Year	Labor	NLbr	NSE	FTE	Adj Type
2017	11	0	0	0.1	CCTR Transf From 2200-0498.000
<b>Explanation:</b>	Transfer MSAI labor and/or non-labor expense from associated with IO FG893222200 & FG893232200 from CS Dispatch CCTRs to MSAI CCTR 2200-2571 in order to align historical costs with the workgroup in which the activity has been performed.				
2017	5	1	0	0.1	CCTR Transf From 2200-0448.000
<b>Explanation:</b>	Transfer Meter Set Assembly Inspection (MSAI) labor and non-labor expense associated with IO FG893222200 & FG893232200 from CS Supervision CCTRs to MSAI CCTR 2200-2571 in order to align historical costs with the workgroup in which the activity has been performed.				
2017	14	1	0	0.1	CCTR Transf From 2200-0534.000
<b>Explanation:</b>	Transfer Meter Set Assembly Inspection (MSAI) labor and non-labor expense associated with IO FG893222200 & FG893232200 from CS Operations CCTRs to MSAI CCTR 2200-2571 in order to align historical costs with the workgroup in which the activity has been performed.				
<b>2017 Total</b>	<b>29</b>	<b>2</b>	<b>0</b>	<b>0.3</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	2	0	0	0.1	CCTR Transf From 2200-2539.000
<b>Explanation:</b>	Transfer MSAI labor and non-labor expense associated with IO FG893222200 from CS Support CCTR to MSAI CCTR 2200-2571 in order to align historical costs with the workgroup in which the activity has been performed.				
2018	162	1	0	0.1	CCTR Transf From 2200-0448.000
<b>Explanation:</b>	Transfer MSAI labor and non-labor expense associated with IO FG893222200 & FG893232200 from CS Supervision CCTRs to MSAI CCTR 2200-2571 in order to align historical costs with the workgroup in which the activity has been performed.				
2018	2	1	0	0.1	CCTR Transf From 2200-0534.000

*Note: Totals may include rounding differences.*

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC005.000 - Customer Services - MSA Inspection Program

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Transfer MSAI labor and non-labor expense from associated with IO FG893222200 & FG893232200 from CS Operations CCTRs to MSAI CCTR 2200-2571 in order to align historical costs with the workgroup in which the activity has been performed.				
<b>2018 Total</b>	<b>165</b>	<b>2</b>	<b>0</b>	<b>0.2</b>	
2019	-63	1	0	-0.3	CCTR Transf From 2200-0448.000
<b>Explanation:</b>	Transfer MSAI labor and non-labor expense associated with IO FG893222200 & FG893232200 from CS Supervision CCTRs to MSAI CCTR 2200-2571 in order to align historical costs with the workgroup in which the activity has been performed.				
2019	22	0	0	0.2	CCTR Transf From 2200-0534.000
<b>Explanation:</b>	Transfer MSAI labor and non-labor expense associated with IO FG893222200 & FG893232200 from CS Operations CCTRs to MSAI CCTR 2200-2571 in order to align historical costs with the workgroup in which the activity has been performed.				
<b>2019 Total</b>	<b>-42</b>	<b>1</b>	<b>0</b>	<b>-0.1</b>	
2020	-8	-5	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-59	-13	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-70	-14	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	-1	-17	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	13	7	0	0.3	CCTR Transf From 2200-2539.000
<b>Explanation:</b>	Transfer MSAI labor and non-labor expense associated with IO FG893222200 from CS Support CCTR to MSAI CCTR 2200-2571 in order to align historical costs with the workgroup in which the activity has been performed.				
2020	49	0	0	0.1	CCTR Transf From 2200-0448.000
<b>Explanation:</b>	Transfer MSAI labor and non-labor expense associated with IO FG893222200 & FG893232200 from CS Supervision CCTRs to MSAI CCTR 2200-2571 in order to align historical costs with the workgroup in which the activity has been performed.				
2020	2,769	1	0	33.4	CCTR Transf From 2200-0600.000
<b>Explanation:</b>	Transfer MSAI labor and non-labor expense associated with IO FG893222200 & FG893232200 from CS Operations CCTRs to MSAI CCTR 2200-2571 in order to align historical costs with the workgroup in which the activity has been performed.				

Note: Totals may include rounding differences.

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC005.000 - Customer Services - MSA Inspection Program

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>2020 Total</b>	<b>2,692</b>	<b>-41</b>	<b>0</b>	<b>33.4</b>	
2021	0	-1	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-24	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-14	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	8	0	0	0.1	CCTR Transf From 2200-0506.000
<b>Explanation:</b>	Transfer Labor & Non-Labor expenses from Dispatch 2FC004 to MSAI 2FC005 to align historical costs with the workgroup in which the activity was performed.				
2021	0	-22	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	-2	0	0	-0.1	CCTR Transf To 2200-0359.000
<b>Explanation:</b>	Transfer Labor expenses from MSAI 2FC005 to Operations 2FC001 to align historical costs with the workgroup in which the activity was performed.				
2021	2	0	0	0.1	CCTR Transf From 2200-0358.000
<b>Explanation:</b>	Transfer Labor & Non-Labor expenses from Support 2FC003 to MSAI 2FC005 to align historical costs with the workgroup in which the activity was performed.				
2021	304	2	0	2.4	CCTR Transf From 2200-2114.000
<b>Explanation:</b>	Transfer Labor & Non-Labor expenses from Supervision 2FC002 to MSAI 2FC005 to align historical costs with the workgroup in which the activity was performed.				
2021	1,826	0	0	21.3	CCTR Transf From 2200-0359.000
<b>Explanation:</b>	Transfer Labor & Non-Labor expenses from Operations 2FC001 to MSAI 2FC005 to align historical costs with the workgroup in which the activity was performed.				
<b>2021 Total</b>	<b>2,139</b>	<b>-59</b>	<b>0</b>	<b>23.8</b>	

Note: Totals may include rounding differences.

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC005.000 - Customer Services - MSA Inspection Program

**RAMP Item # 1**

**RAMP Activity**

RAMP Chapter: SCG-Risk-3 Incident Related to the Medium Pressure System (Excluding Dig-in)

RAMP Line Item ID: C30

RAMP Line Item Name: Meter Set Assembly (MSA) Inspection Program

Tranche(/s): Tranche1: Meter and Beyond the Meter

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

	2021 Historical Embedded Cost (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2024 RAMP Range (2020 Incurred \$)	
					Low	High
Tranche 1 Cost Estimate	25,319	25,710	25,710	25,710	21,065	25,499

**Cost Estimate Changes from RAMP:**

2024 GRC Forecasted cost is slightly greater than the 2024 RAMP Range. MSAI Scheduling team transferred into the organization mid 2021 and were not captured in the RAMP Filing.

**GRC Work Unit/Activity Level Estimates**

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2024 RAMP Range Activities	
					Low	High
Tranche 1 Orders	2,863,145.00	2,768,367.00	2,768,367.00	2,768,367.00	2,611,887.00	3,161,758.00

**Work Unit Changes from RAMP:**

2024 GRC Forecasted units is within 2024 RAMP Range

**Risk Spend Efficiency (RSE)**

	GRC RSE	RAMP RSE
Tranche 1	13.200	11.900

**RSE Changes from RAMP:**

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

**Supplemental Workpapers for Workpaper 2FC005.000**



SCG-14-WP-2FC005 CSF Meter Set Assembly Inspection (MSAI)  
 Supplemental Workpaper 1 (1 of 3)  
 Calculation to Annualize Customer Service MSAI Labor Costs for Positions Vacant at Various Points During 2021

Line #	Calculation Steps	Calculation Factors	2022 Estimated	2022 Estimated	2022 Estimated	2022 Estimated	2022 Estimated
1		Management Pay Bands Role	Supervisor / Team Leader	Advisor	Advisor	Advisor	Specialist / Analyst
2		Code	ST4	AD2	AD1	AD1	SA4
3		Team Role	Scheduling Team				Field Instructors
4		Low Salary Range	90,500	89,000	77,300	77,300	68,400
5		High Salary Range	135,800	133,500	116,000	116,000	102,600
6	A	Number of Employees	1	1	1	1	2
7	B	Salary	113,150	111,250	96,650	96,650	85,500
8	C	V&S Rate	0.1765	0.1765	0.1765	0.1765	0.1765
9	D = B/(1 + C)	Direct Salary (12 Months)	96,175	94,560	82,150	82,150	72,673
10	E	Forecasted Months	6	10	10	6	8
11	F = A x ((D/12) x E)	Salary Calculation	48,088	78,800	68,459	41,075	95,638
12	G = F x (1 + C)	Salary Calculation w/ V&S	56,575	92,708	80,542	48,325	112,518
13		Sum of Salary Calculation w/ V&S					390,668

SCG-14-WP-2FC005 CSF Meter Set Assembly Inspection (MSAI)  
 Supplemental Workpaper 1 (2 of 3)  
 Calculation to Annualize Customer Service MSAI Labor Costs for Positions Vacant at Various Points During 2021

Line #	Calculation Steps	Calculation Factors	2023 Estimated	2023 Estimated	2023 Estimated	2023 Estimated	2023 Estimated
1		Management Pay Bands Role	Supervisor / Team Leader	Advisor	Advisor	Advisor	Specialist / Analyst
2		Code	ST4	AD2	AD1	AD1	SA4
3		Team Role	Scheduling Team				Field Instructors
4		Low Salary Range	90,500	89,000	77,300	77,300	68,400
5		High Salary Range	135,800	133,500	116,000	116,000	102,600
6	A	Number of Employees	1	1	1	1	2
7	B	Salary	113,150	111,250	96,650	96,650	85,500
8	C	V&S Rate	0.1765	0.1765	0.1765	0.1765	0.1765
9	D = B/(1 + C)	Direct Salary (12 Months)	96,175	94,560	82,150	82,150	72,673
10	E	Forecasted Months	6	10	10	6	8
11	F = A x ((D/12) x E)	Salary Calculation	48,088	78,800	68,459	41,075	95,638
12	G = F x (1 + C)	Salary Calculation w/ V&S	56,575	92,708	80,542	48,325	112,518
13		Sum of Salary Calculation w/ V&S					390,668

SCG-14-WP-2FC005 CSF Meter Set Assembly Inspection (MSAI)  
 Supplemental Workpaper 1 (3 of 3)  
 Calculation to Annualize Customer Service MSAI Labor Costs for Positions Vacant at Various Points During 2021

Line #	Calculation Steps	Calculation Factors	TY 2024 Estimated	TY 2024 Estimated	TY 2024 Estimated	TY 2024 Estimated	TY 2024 Estimated
1		Management Pay Bands Role	Supervisor / Team Leader	Advisor	Advisor	Advisor	Specialist / Analyst
2		Code	ST4	AD2	AD1	AD1	SA4
3		Team Role	Scheduling Team				Field Instructors
4		Low Salary Range	90,500	89,000	77,300	77,300	68,400
5		High Salary Range	135,800	133,500	116,000	116,000	102,600
6	A	Number of Employees	1	1	1	1	2
7	B	Salary	113,150	111,250	96,650	96,650	85,500
8	C	V&S Rate	0.1765	0.1765	0.1765	0.1765	0.1765
9	D = B/(1 + C)	Direct Salary (12 Months)	96,175	94,560	82,150	82,150	72,673
10	E	Forecasted Months	6	10	10	6	8
11	F = A x ((D/12) x E)	Salary Calculation	48,088	78,800	68,459	41,075	95,638
12	G = F x (1 + C)	Salary Calculation w/ V&S	56,575	92,708	80,542	48,325	112,518
13		Sum of Salary Calculation w/ V&S					390,668

SCG-14-WP-2FC005 CSF Meter Set Assembly Inspection (MSAI)  
 Supplemental Workpaper 2 (1 of 2)  
 MSAI Total Inspection Volume

Line #	Calculation Steps	Calculation Factors	BY 2021	2022 Estimated	2023 Estimated	TY 2024 Estimated
1	A	Annual MSA Inspection Volume	2,371,831	2,288,743	2,288,743	2,288,743
2	B	CGI Order Volume for MSA Meter Access Handling	333,715	322,025	322,025	322,025
3	C = B / A	CGI (Can't Get In) Rate - MSA Inspections	14.1%	14.1%	14.1%	14.1%
4	D = A + B	Total Attempts	2,705,546	2,610,768	2,610,768	2,610,768
5	E = B / D	Total Incomplete Inspection Rate	12.3%	12.3%	12.3%	12.3%

SCG-14-WP-2FC005 CSF Meter Set Assembly Inspection (MSAI)  
 Supplemental Workpaper 3 (2 of 2)  
 MSAI Total Remediation Volume

Line #	Calculation Steps	Calculation Factors	BY 2021	2022 Estimated	2023 Estimated	TY 2024 Estimated
1	A	Annual MSA Remediation Volume	136,007	136,007	136,007	136,007
2	B	CGI Order Volume for MSA Meter Access Handling	21,592	21,592	21,592	21,592
3	C = B / A	CGI (Can't Get In) Rate - MSA Remediations	15.9%	15.9%	15.9%	15.9%
4	D = A + B	Total Attempts	157,599	157,599	157,599	157,599
5	E = B / D	Total Remediation Inspection Rate	13.7%	13.7%	13.7%	13.7%

**Beginning of Workpaper**  
**2FC006.000 - Customer Services - Advanced Meter Operations**

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC006.000 - Customer Services - Advanced Meter Operations

**Activity Description:**

CSF Advanced Meter Operations includes labor and non-labor costs associated with the Advanced Meter Operations (AMO) organization and the Field Systems and Analytics organization.

AMO Activities include 1) Management and maintenance of AM systems, 2) Management and back-office analysis of Data Collection Units (DCU), 3) Management of construction, field inspection and replacement of DCUs and 4) Management of Meter Transmission Units (MTU), back-office analysis of MTUs and forecast of MTU investigations and field visits by CSF Operations technicians to support accurate and timely AMI reads.

Field Systems and Analytics activities include 1) Integration, management and maintenance of Advanced Meter systems and interfaces with other SoCalGas operational systems, 2) Implementation and maintenance of new technologies and systems that leverage AMI consumption data in an effort to enhance safety and support an effortless customer experience, 3) Implementation, management and maintenance of reporting systems, tools and applications and 4) project and system support for Advanced Meter systems integration with SoCalGas work management and scheduling systems.

**Forecast Explanations:**

**Labor - Base YR Rec**

BY 2021 was used to forecast TY 2024 Labor costs for Advanced Meter Operations because BY 2021 best reflects a reasonable starting point for current programs and activities. A historical average would not include new activities that support the identification of gas consumption anomalies and systems implemented in BY 2021. Incremental funding requests are then added to the base year forecast to determine total funding requirements.

**Non-Labor - Base YR Rec**

BY 2021 was used to forecast TY2024 Non-labor costs which include DCU construction and replacement and yearly inspections, MTU Warrantees, Wireless cards necessary for DCU communication, After-hours systems support by contractors and maintenance software licenses, employee cell phones and miscellaneous expenses.

**NSE - Base YR Rec**

NSE is not applicable to this workgroup.

**Summary of Results:**

		In 2021\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2017	2018	2019	2020	2021	2022	2023	2024	
Labor		0	0	4,496	4,392	4,342	5,169	5,312	5,610	
Non-Labor		0	0	2,835	3,470	3,981	4,187	7,761	8,591	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>0</b>	<b>0</b>	<b>7,331</b>	<b>7,862</b>	<b>8,323</b>	<b>9,356</b>	<b>13,073</b>	<b>14,201</b>	
FTE		0.0	0.0	40.1	39.3	38.4	47.3	48.8	50.9	

Note: Totals may include rounding differences.

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
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 Workpaper: 2FC006.000 - Customer Services - Advanced Meter Operations

**Summary of Adjustments to Forecast:**

In 2021 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2022	2023	2024	2022	2023	2024	2022	2023	2024
Labor	Base YR Rec	4,342	4,342	4,342	828	971	1,269	5,170	5,313	5,611
Non-Labor	Base YR Rec	3,981	3,981	3,981	206	3,780	4,610	4,187	7,761	8,591
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>8,323</b>	<b>8,323</b>	<b>8,323</b>	<b>1,034</b>	<b>4,751</b>	<b>5,879</b>	<b>9,357</b>	<b>13,074</b>	<b>14,202</b>
FTE	Base YR Rec	38.4	38.4	38.4	8.9	10.4	12.5	47.3	48.8	50.9

**Forecast Adjustment Details:**

Year	Labor	NLbr	NSE	Total	FTE	Adj Type
2022	158	-139	0	19	2.5	1-Sided Adj
<b>Explanation:</b>	Labor & Non-Labor adjustment to support RAMP Incremental activity, DCU Pole Inspections. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.F., for more information on this adjustment. Please refer to SCG-14-WP-2FC006 CSF Advanced Meter Operations Supplemental Workpaper 5, DCU Inspections for calculation details.					
2022	0	160	0	160	0.0	1-Sided Adj
<b>Explanation:</b>	\$160k Non-Labor associated with MTU Warranty Payments. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.F., for more information on this adjustment. Please refer to SCG-14-WP-2FC006 CSF Advanced Meter Operations Supplemental Workpaper 1A & 1B for analysis and calculation details.					
2022	94	0	0	94	0.9	1-Sided Adj
<b>Explanation:</b>	\$94k Labor to reflect full year salaries for PM2 and AD2 which were vacant in various points during BY 2021. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.F., for more information on this adjustment. Please refer to SCG-14-WP-2FC006 CSF Advanced Meter Operations Supplemental Workpaper 4 for calculation details.					
2022	0	153	0	153	0.0	1-Sided Adj
<b>Explanation:</b>	\$153k Non-Labor associated with DCU Extended Maintenance Payments. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.F., for more information on this adjustment. Please refer to SCG-14-WP-2FC006 CSF Advanced Meter Operations Supplemental Workpaper 2 for calculation details.					
2022	167	6	0	173	1.7	1-Sided Adj
<b>Explanation:</b>	\$167K Labor & \$6K Non-Labor to reflect full year salaries for positions hired in Q2 2022 to fill behind vacancies in the Analytics Development Organization. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.F., for more information on this adjustment. Please refer to SCG-14-WP-2FC006 CSF Advanced Meter Operations Supplemental Workpaper 6 for calculation details.					
2022	0	30	0	30	0.0	1-Sided Adj
<b>Explanation:</b>	\$30k Non-Labor associated with vendor payments for Structured Query Language (SQL) licenses. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.F., for more information on this adjustment. Please refer to SCG-14-WP-2FC006 CSF Advanced Meter Operations Supplemental Workpaper 7 for calculation details.					

Note: Totals may include rounding differences.



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

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 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC006.000 - Customer Services - Advanced Meter Operations

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj Type</u>
2022	0	90	0	90	0.0	1-Sided Adj
<b>Explanation:</b>	\$90k Non-Labor associated with vendor payments to support High Performance Processing Operational System (HiPPOS) platform - after hour support. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.F., for more information on this adjustment. Please refer to SCG-14-WP-2FC006 CSF Advanced Meter Operations Supplemental Workpaper 7 for calculation details.					
2022	117	0	0	117	0.1	1-Sided Adj
<b>Explanation:</b>	\$117k V&S associated with FTEs on Capital & Refundable Projects. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.F., for more information on this adjustment. Please refer to SCG-14-WP-2FC006 CSF Advanced Meter Operations Supplemental Workpaper 8 for calculation details.					
2022	292	-94	0	198	3.7	1-Sided Adj
<b>Explanation:</b>	\$292k Labor and (\$94k) Non-Labor to Annualize Positions Vacant at Various Points During 2021 to Support Work Order Management Systems. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.F., for more information on this adjustment. Please refer to SCG-14-WP-2FC006 CSF Advanced Meter Operations Supplemental Workpaper 9 for calculation details.					
<b>2022 Total</b>	<b>828</b>	<b>206</b>	<b>0</b>	<b>1,034</b>	<b>8.9</b>	
2023	163	-139	0	24	2.5	1-Sided Adj
<b>Explanation:</b>	Labor & Non-Labor adjustment to support RAMP Incremental activity, DCU Pole Inspections. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.F., for more information on this adjustment. Please refer to SCG-14-WP-2FC006 CSF Advanced Meter Operations Supplemental Workpaper 5, DCU Inspections for calculation details.					
2023	0	3,830	0	3,830	0.0	1-Sided Adj
<b>Explanation:</b>	\$3.8M Non-Labor associated with MTU Warranty Payments. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.F., for more information on this adjustment. Please refer to SCG-14-WP-2FC006 CSF Advanced Meter Operations Supplemental Workpaper 1A & 1B for analysis and calculation details.					
2023	94	0	0	94	0.9	1-Sided Adj
<b>Explanation:</b>	\$94k Labor to reflect full year salaries for PM2 and AD2 which were vacant in various points during BY 2021. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.F., for more information on this adjustment. Please refer to SCG-14-WP-2FC006 CSF Advanced Meter Operations Supplemental Workpaper 4 for calculation details.					
2023	0	69	0	69	0.0	1-Sided Adj
<b>Explanation:</b>	\$69k Non-Labor associated with DCU Extended Maintenance Payments. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.F., for more information on this adjustment. Please refer to SCG-14-WP-2FC006 CSF Advanced Meter Operations Supplemental Workpaper 2 for calculation details.					
2023	222	6	0	228	2.4	1-Sided Adj

Note: Totals may include rounding differences.

SCG/CS - FIELD & ADVANCED METER OPERATIONS/Exh No:SCG-14-WP-R/Witness: D. Rendler

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC006.000 - Customer Services - Advanced Meter Operations

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	\$222K Labor & \$6K Non-Labor to reflect full year salaries for positions hired in Q2 2022 to fill behind vacancies in the Analytics Development Organization. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.F., for more information on this adjustment. Please refer to SCG-14-WP-2FC006 CSF Advanced Meter Operations Supplemental Workpaper 6 for calculation details.					
2023	0	10	0	10	0.0	1-Sided Adj
<b>Explanation:</b>	\$10k Non-Labor associated with vendor payments for Structured Query Language (SQL) licenses. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.F., for more information on this adjustment. Please refer to SCG-14-WP-2FC006 CSF Advanced Meter Operations Supplemental Workpaper 7 for calculation details.					
2023	0	94	0	94	0.0	1-Sided Adj
<b>Explanation:</b>	\$94k Non-Labor associated with vendor payments to support High Performance Processing Operational System (HiPPOS) platform - after hour support. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.F., for more information on this adjustment. Please refer to SCG-14-WP-2FC006 CSF Advanced Meter Operations Supplemental Workpaper 7 for calculation details.					
2023	117	0	0	117	0.1	1-Sided Adj
<b>Explanation:</b>	\$117k V&S associated with FTEs on Capital & Refundable Projects. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.F., for more information on this adjustment. Please refer to SCG-14-WP-2FC006 CSF Advanced Meter Operations Supplemental Workpaper 8 for calculation details.					
2023	292	-94	0	198	3.6	1-Sided Adj
<b>Explanation:</b>	\$292k Labor and (\$94k) Non-Labor to Annualize Positions Vacant at Various Points During 2021 to Support Work Order Management Systems. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.F., for more information on this adjustment. Please refer to SCG-14-WP-2FC006 CSF Advanced Meter Operations Supplemental Workpaper 9 for calculation details.					
2023	83	4	0	87	0.9	1-Sided Adj
<b>Explanation:</b>	\$83K Labor & \$4k Non-Labor to Support DevOps Tasks in the Analytics Maintenance Organization Estimated to Start in Q2 2023. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.F., for more information on this adjustment. Please refer to SCG-14-WP-2FC006 CSF Advanced Meter Operations Supplemental Workpaper 10 for calculation details.					
<b>2023 Total</b>	<b>971</b>	<b>3,780</b>	<b>0</b>	<b>4,751</b>	<b>10.4</b>	
2024	165	-139	0	26	2.5	1-Sided Adj
<b>Explanation:</b>	Labor & Non-Labor adjustment to support RAMP Incremental activity, DCU Pole Inspections. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.F., for more information on this adjustment. Please refer to SCG-14-WP-2FC006 CSF Advanced Meter Operations Supplemental Workpaper 5, DCU Inspections for calculation details.					
2024	0	4,450	0	4,450	0.0	1-Sided Adj
<b>Explanation:</b>	\$4.45M Non-Labor associated with MTU Warranty Payments. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.F., for more information on this adjustment. Please refer to SCG-14-WP-2FC006 CSF Advanced Meter Operations Supplemental Workpaper 1A & 1B for analysis and calculation details.					

Note: Totals may include rounding differences.

SCG/CS - FIELD & ADVANCED METER OPERATIONS/Exh No:SCG-14-WP-R/Witness: D. Rendler

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

Area: CS - FIELD & ADVANCED METER OPERATIONS  
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 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC006.000 - Customer Services - Advanced Meter Operations

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj Type</u>
2024	94	0	0	94	1.0	1-Sided Adj
<b>Explanation:</b>	\$94k Labor to reflect full year salaries for PM2 and AD2 which were vacant in various points during BY 2021. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.F., for more information on this adjustment. Please refer to SCG-14-WP-2FC006 CSF Advanced Meter Operations Supplemental Workpaper 4 for calculation details.					
2024	0	30	0	30	0.0	1-Sided Adj
<b>Explanation:</b>	\$29k Non-Labor associated with DCU Extended Maintenance Payments. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.F., for more information on this adjustment. Please refer to SCG-14-WP-2FC006 CSF Advanced Meter Operations Supplemental Workpaper 2 for calculation details.					
2024	100	0	0	100	0.1	1-Sided Adj
<b>Explanation:</b>	\$100k V&S associated with FTEs on Capital Projects. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.F., for more information on this adjustment. Please refer to SCG-14-WP-2FC006 CSF Advanced Meter Operations Supplemental Workpaper 3 for calculation details.					
2024	223	6	0	229	2.3	1-Sided Adj
<b>Explanation:</b>	\$223K Labor & \$6K Non-Labor to reflect full year salaries for positions hired in Q2 2022 to fill behind vacancies in the Analytics Development Organization. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.F., for more information on this adjustment. Please refer to SCG-14-WP-2FC006 CSF Advanced Meter Operations Supplemental Workpaper 6 for calculation details.					
2024	167	6	0	173	1.7	1-Sided Adj
<b>Explanation:</b>	\$167k Labor & \$6k Non-Labor to support consumption analytics applications estimated to start in Q2 2024. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.F., for more information on this adjustment. Please refer to SCG-14-WP-2FC006 CSF Advanced Meter Operations Supplemental Workpaper 7 for calculation details.					
2024	0	40	0	40	0.0	1-Sided Adj
<b>Explanation:</b>	\$40k Non-Labor associated with vendor payments for Structured Query Language (SQL) licenses. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.F., for more information on this adjustment. Please refer to SCG-14-WP-2FC006 CSF Advanced Meter Operations Supplemental Workpaper 7 for calculation details.					
2024	0	97	0	97	0.0	1-Sided Adj
<b>Explanation:</b>	\$97k Non-Labor associated with vendor payments to support High Performance Processing Operational System (HiPPOS) platform - after hour support. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.F., for more information on this adjustment. Please refer to SCG-14-WP-2FC006 CSF Advanced Meter Operations Supplemental Workpaper 7 for calculation details.					
2024	0	210	0	210	0.0	1-Sided Adj
<b>Explanation:</b>	\$210k Non-Labor Vendor Services associated with Core Balancing / DAS Support - after hour support. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.F., for more information on this adjustment. Please refer to SCG-14-WP-2FC006 CSF Advanced Meter Operations Supplemental Workpaper 7 for calculation details.					
2024	117	0	0	117	0.1	1-Sided Adj

Note: Totals may include rounding differences.

SCG/CS - FIELD & ADVANCED METER OPERATIONS/Exh No:SCG-14-WP-R/Witness: D. Rendler

Southern California Gas Company  
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Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Services Field  
 Category-Sub: 1. Customer Services Field  
 Workpaper: 2FC006.000 - Customer Services - Advanced Meter Operations

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj_Type</u>
<b>Explanation:</b>	\$117k V&S associated with FTEs on Capital & Refundable Projects. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.F., for more information on this adjustment. Please refer to SCG-14-WP-2FC006 CSF Advanced Meter Operations Supplemental Workpaper 8 for calculation details.					
2024	292	-94	0	198	3.7	1-Sided Adj
<b>Explanation:</b>	\$292k Labor and (\$94k) Non-Labor to Annualize Positions Vacant at Various Points During 2021 to Support Work Order Management Systems. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.F., for more information on this adjustment. Please refer to SCG-14-WP-2FC006 CSF Advanced Meter Operations Supplemental Workpaper 9 for calculation details.					
2024	111	4	0	115	1.1	1-Sided Adj
<b>Explanation:</b>	\$111K Labor & \$4k Non-Labor to Support DevOps Tasks in the Analytics Maintenance Organization Estimated to Start in Q2 2023. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section IV.F., for more information on this adjustment. Please refer to SCG-14-WP-2FC006 CSF Advanced Meter Operations Supplemental Workpaper 10 for calculation details.					
<b>2024 Total</b>	<b>1,269</b>	<b>4,610</b>	<b>0</b>	<b>5,879</b>	<b>12.5</b>	

Note: Totals may include rounding differences.

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Area: CS - FIELD & ADVANCED METER OPERATIONS  
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 Workpaper: 2FC006.000 - Customer Services - Advanced Meter Operations

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

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	0	0	3,425	3,626	3,709
Non-Labor	0	0	2,645	3,246	4,004
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>6,070</b>	<b>6,872</b>	<b>7,712</b>
FTE	0.0	0.0	32.2	32.9	32.5
<b>Adjustments (Nominal \$) **</b>					
Labor	0	0	153	0	-18
Non-Labor	0	0	0	-22	-22
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>153</b>	<b>-22</b>	<b>-41</b>
FTE	0.0	0.0	1.4	0.0	-0.3
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	0	0	3,579	3,626	3,690
Non-Labor	0	0	2,645	3,224	3,981
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>6,223</b>	<b>6,850</b>	<b>7,671</b>
FTE	0.0	0.0	33.6	32.9	32.2
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	0	0	679	639	651
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>679</b>	<b>639</b>	<b>651</b>
FTE	0.0	0.0	6.5	6.4	6.2
<b>Escalation to 2021\$</b>					
Labor	0	0	239	127	0
Non-Labor	0	0	191	246	0
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>429</b>	<b>373</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2021\$)</b>					
Labor	0	0	4,496	4,392	4,342
Non-Labor	0	0	2,835	3,470	3,981
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>7,331</b>	<b>7,862</b>	<b>8,323</b>
FTE	0.0	0.0	40.1	39.3	38.4

\* 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.

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Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
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 Workpaper: 2FC006.000 - Customer Services - Advanced Meter Operations

**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs					
Years	2017	2018	2019	2020	2021
Labor	0	0	153	0	-18
Non-Labor	0	0	0	-22	-22
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>153</b>	<b>-22</b>	<b>-41</b>
FTE	0.0	0.0	1.4	0.0	-0.3

**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	153	0	0	1.4	CCTR Transf From 2200-0942.000
<b>Explanation:</b>	Transfer of labor and FTEs for DART employees moving from CS Staff Cost Center to CS Analytics Cost Center				
<b>2019 Total</b>	<b>153</b>	<b>0</b>	<b>0</b>	<b>1.4</b>	
2020	0	-4	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-8	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	0	-10	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 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>-22</b>	<b>0</b>	<b>0.0</b>	
2021	0	-5	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-6	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	0	-6	0	0.0	1-Sided Adj

*Note: Totals may include rounding differences.*

Southern California Gas Company  
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 Workpaper: 2FC006.000 - Customer Services - Advanced Meter Operations

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<b>Explanation:</b>	Incremental COVID-19 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	CCTR Transf From 2200-2315.000
<b>Explanation:</b>	Correction of Mischarge of FG8940002200 Maintenance of Other Equipment tranfer to Cost Center 2200-0172				
2021	0	-3	0	0.0	CCTR Transf To 2200-0172.000
<b>Explanation:</b>	Correction of Mischarge of FG8940002200 Maintenance of Other Equipment tranfer to Cost Center 2200-0172				
2021	-18	-6	0	-0.2	1-Sided Adj
<b>Explanation:</b>	Removing non-GRC costs related to regulatory memorandum accounts (RM 300808367)				
2021	-1	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Removing costs associated with residential and small business Emergency Customer Protections in accordance with Decision (D.) 21-06-036 that are being tracked in the CPPMA regulatory account.				
<b>2021 Total</b>	<b>-18</b>	<b>-22</b>	<b>0</b>	<b>-0.3</b>	

Note: Totals may include rounding differences.

Southern California Gas Company  
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Non-Shared Service Workpapers

Area: CS - FIELD & ADVANCED METER OPERATIONS  
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 Workpaper: 2FC006.000 - Customer Services - Advanced Meter Operations

**RAMP Item # 1**

**RAMP Activity**

RAMP Chapter: SCG-Risk-3 Incident Related to the Medium Pressure System (Excluding Dig-in)

RAMP Line Item ID: C29

RAMP Line Item Name: DCU/Pole Inspections

Tranche(/s): Tranche1: Meter and Beyond the Meter

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

	2021 Historical Embedded Cost (2021 \$)	2022 Forecast (2021 \$)	2023 Forecast (2021 \$)	2024 Forecast (2021 \$)	2024 RAMP Range (2020 Incurred \$)	
					Low	High
Tranche 1 Cost Estimate	258	277	282	284	251	304

**Cost Estimate Changes from RAMP:**

2024 GRC forecasted cost is within the 2024 RAMP Range.

**GRC Work Unit/Activity Level Estimates**

Unit of Measure	2021 Historical Embedded Activities	2022 Forecast Activities	2023 Forecast Activities	2024 Forecast Activities	2024 RAMP Range Activities	
					Low	High
Tranche 1 Inspections	4,437.00	4,535.00	4,609.00	4,649.00	4,478.00	5,421.00

**Work Unit Changes from RAMP:**

2024 GRC forecasted units is within the 2024 RAMP Range.

**Risk Spend Efficiency (RSE)**

	GRC RSE	RAMP RSE
Tranche 1	0.000	0.000

**RSE Changes from RAMP:**

An RSE was not calculated for this activity.



**Supplemental Workpapers for Workpaper 2FC006.000**

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

SCG-14-WP-2FC006 CSF Advanced Meter Operations  
Supplemental Workpaper 1A: Decision Analysis (1 of 5)  
MTU Warranty Payments - Decision Analysis

SoCalGas possesses over 6 million Meter Transmission Units (MTUs) as part of its Advanced Meter (AM) system and the vendor, Aclara, provides a 20-year warranty on these MTUs. For the first 15 years from date of installation, SoCalGas receives a full Parts Credit for the MTU hardware and a partial Labor Reimbursement for the costs associated with removal and reinstallation of any MTU that experiences a warranty failure.

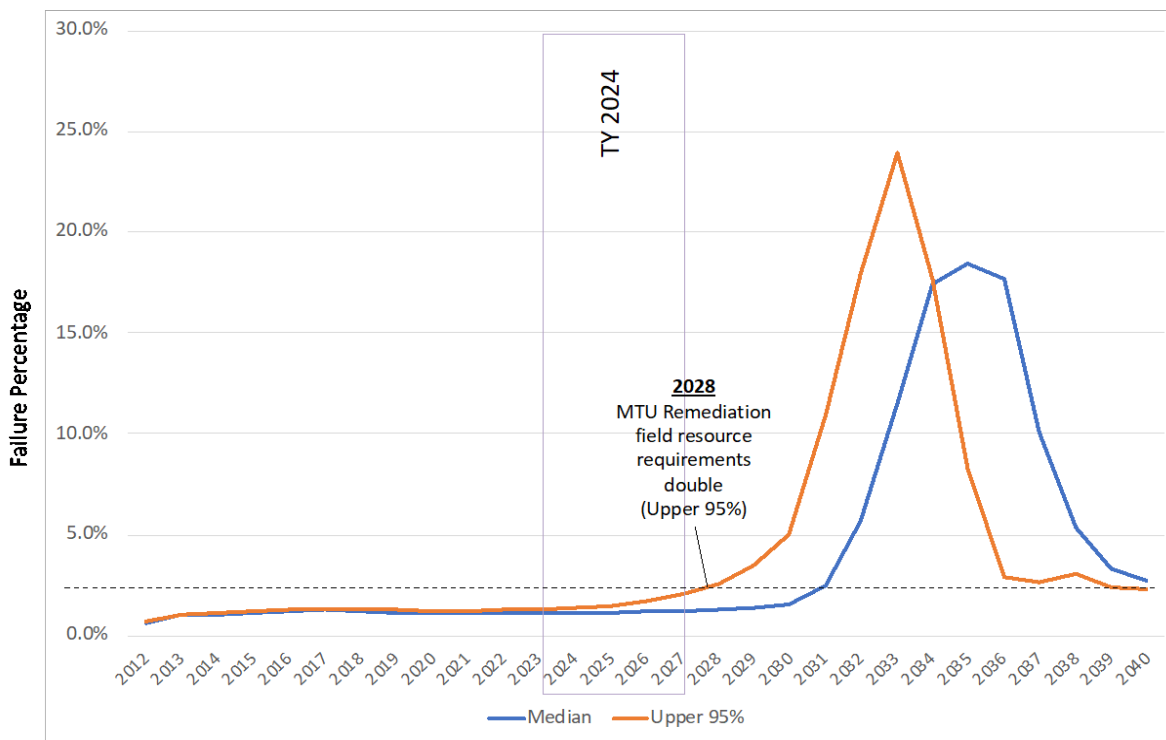
Starting in the 16th year after an MTU's installation, the Parts Credit to be received under warranty is significantly reduced, and the Labor Reimbursement is eliminated. However, SoCalGas possesses warranty enhancement rights with Aclara to maintain the full Parts Credit and reinstate the Labor Reimbursement. Aclara's warranty extension provides the option to purchase as many or few consecutive years of warranty uplift (16 through 20) as desired. MTUs are grouped into Installation Classes, defined as those MTUs that were installed in a given calendar year. SoCalGas may purchase (or enhance) the Parts Credit and/or Labor Reimbursement for all MTUs in an Installation Class. This purchase must be made on the 10th anniversary of that installation year. For example, for the 20,000 MTUs that were installed in 2012, the decision and payment to enhance the warranty for all remaining 20,000 MTUs must be made in 2022 (SoCalGas may not enhance the warranty on only a subset of the 20,000 MTUs); for the over 1 million MTUs installed in 2013, the decision and payment is made in 2023; etc. SoCalGas's AM deployment began in 2012 and continues to this day; MTU warranty extension payments will therefore continue as an annual cost for maintaining the Advanced Meter system in cases where it is financially advantageous to the Company's operations and the rate payer. Specifically, those MTUs installed in calendar years 2014, 2015, 2016 and 2017 will have their warranty enhancement payments made within TY2024 GRC's rate case.

In April 2021, SoCalGas launched the Advanced Meter MTU End-of-Life analysis to prepare for the first warranty enhancement opportunity in 2022 for Installation Class 2012. This analysis sought to forecast MTU failures rates and produce warranty enhancement recommendations based on current and projected failures.

The analysis resulted in a model containing a range of projected failure rates. The Median Failure Rate is defined as the average expected failure rate (for all model iterations, there is a 50% probability the rate will be higher and a 50% probability it will be lower). The 95% Upper Confidence rate is defined as the worst case (for all model iterations, there is a 97.5% probability that the result will be below this rate).

Southern California Gas Company  
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Non-Shared Service Workpapers

SCG-14-WP-2FC006 CSF Advanced Meter Operations  
Supplemental Workpaper 1A: Decision Analysis (2 of 5)  
MTU Warranty Payments - Decision Analysis

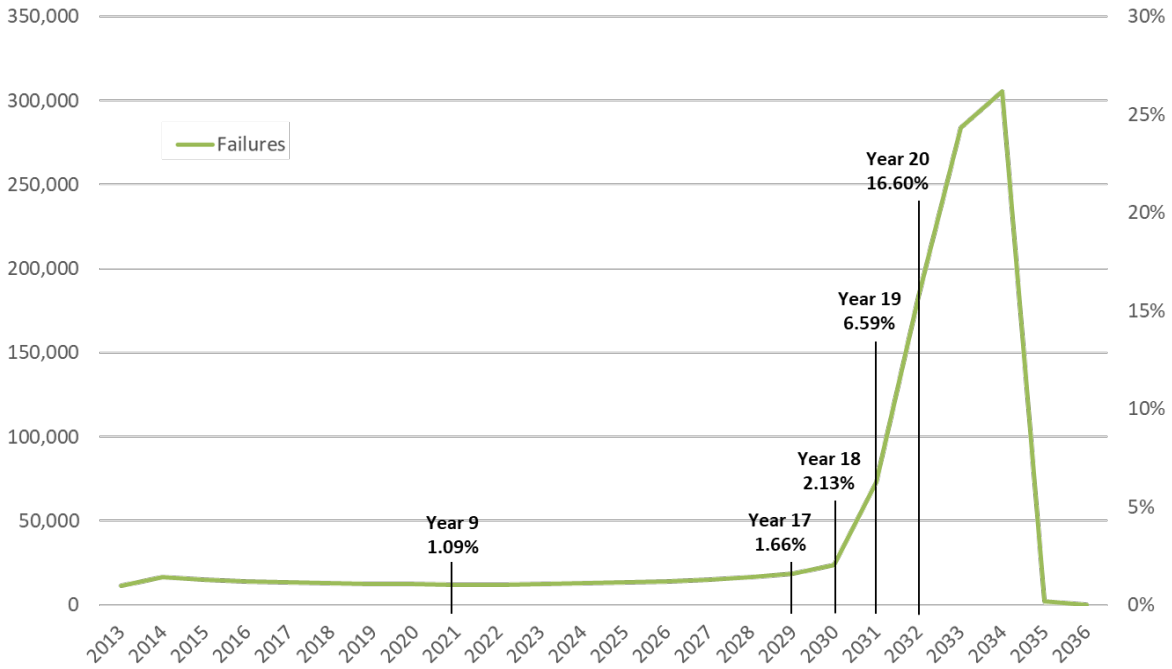


The aggregated MTU failure rate is the failure rate SoCalGas experiences for the entire population of MTUs. This is a layering of all Installation Classes' failure rates (MTUs were installed from 2012 to 2017 as part of the Advanced Meter Installation Project). The aggregated MTU failure rate is currently 1.1% and by 2030, the aggregated failure rate is projected to be 1.5%. After 2030, the failure rate is projected to increase rapidly to 2.5%, 5.7% and 11.5%, respectively, for years 2031 through 2033, equating to approximately 155,000, 355,000 and 715,000 failures.

The next graph isolates Installation Class 2013 to illustrate the failure rate implications that apply to each Installation Class. In this case we are using the Median Failure rate because it most closely aligns with our actual/historical failure rate as of 2022.

SCG-14-WP-2FC006 CSF Advanced Meter Operations  
 Supplemental Workpaper 1A: Decision Analysis (3 of 5)  
 MTU Warranty Payments - Decision Analysis

Projected Warranty Failures for Install Class 2013 at the Median Rate



When evaluating the expected MTU failure rate by Installation Class, the failure rate increases dramatically after the 18<sup>th</sup> year of operation. For example, currently, at Year 9 for Installation Class 2013, the MTU failure rate is around 1.09%. By Year 18, it is projected to be at 2.13%. As shown in the table below, between Years 18 and 19, the failure rate more than triples.

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SCG-14-WP-2FC006 CSF Advanced Meter Operations  
Supplemental Workpaper 1A: Decision Analysis (4 of 5)  
MTU Warranty Payments - Decision Analysis

<b>Installation Class 2013</b>		
<i>MTU Age</i>	<i>Projected FR</i>	<i>FR% Increase</i>
Year 15	1.38%	
Year 16	1.51%	9%
Year 17	1.66%	10%
Year 18	2.13%	28%
Year 19	6.59%	209%
Year 20	16.60%	152%

MTU failure rates will inevitably rise to a level whereby it becomes impractical to service the modules without a planned and organized replacement effort. 2013 is the first year SoCalGas installed a significant number of MTUs (~1,000,000); Installation Class 2013 will therefore be the first Installation Class for which failed MTUs cannot be effectively remediated without such a planned and organized replacement effort. As shown in the graph and table above using the Median Failure rate, a rapid increase in failures is projected to begin in Year 18, therefore SoCalGas is currently planning a systemwide MTU replacement to begin in 2030.

Operational and safety considerations require a similarly planned replacement effort to begin no later than the 18<sup>th</sup> year for any given Installation Class. SoCalGas has evaluated the financial impact of the warranty enhancement option and, based on the Median Failure Rate, determined that it is in the ratepayer's best interest to enhance the warranty through Year 18 to support this systemwide replacement (see **Workpaper (1B)**).

SCG-14-WP-2FC006 CSF Advanced Meter Operations  
 Supplemental Workpaper 1B: Warranty Enhancement Requirements (5 of 5)  
 MTU Warranty Payments - Warranty Enhancements

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	<b>Workpaper (B): Warranty Enhancement Requirements</b>														
3							MEDIAN	MEDIAN (E+G)		MEDIAN		UPPER 95%	UPPER 95% (E+L)		UPPER 95%
4		Year to Purchase Warranty	Install Class being replaced:	Year(s) of Warranty by Install Class:	MTU Warranty Enhancement Costs*		Unreimbursed Labor Cost* w/ Warranty	Total Cost* (Warranty & Labor)		Total Cost* NO Warranty		Unreimbursed Labor Cost* w/ Warranty	Total Cost* (Warranty & Labor)		Total Cost* NO Warranty
5		2022		2012 (4 years)	\$160			\$160					\$160		
6		2023		2013 (3 years)	\$3,830			\$3,830					\$3,830		
7	TY 2024	2024		2014 (3 years)	\$6,420			\$6,420					\$6,420		
8		2025		2015 (3 years)	\$6,000			\$6,000					\$6,000		
9		2026		2016 (3 years)	\$4,600			\$4,600					\$4,600		
10		2027		2017 (3 years)	\$780		\$0	\$780	\$20	\$20	\$800	\$60			
11	Future GRC	2028		2018 (2 years)	\$250		\$460	\$710	\$1,850	\$1,100	\$1,350	\$4,440			
12		2029		2019 (1 year)	\$80		\$1,060	\$1,140	\$4,350	\$3,000	\$3,080	\$12,320			
13		2030	2012, 2013				\$1,910	\$1,910	\$7,940	\$6,660	\$6,660	\$27,770			
14		2031	2014				\$1,860	\$1,860	\$7,760	\$6,870	\$6,870	\$28,680			
15		2032	2015			\$1,320	\$1,320	\$5,560	\$6,340	\$6,340	\$26,630				
16		2033	2016			\$650	\$650	\$2,750	\$3,940	\$3,940	\$16,550				
17		2034	2017+			\$170	\$170	\$690	\$1,830	\$1,830	\$7,720				
18	*All costs in thousands, rounded to the nearest 10,000				\$22,120	\$7,430	\$29,550	\$30,920	\$29,760	\$51,880	\$124,170				

Analysis spans 2022 though 2034, because a replacement project is expected to span 2030 through 2034.

\$17,800 Sum of Total Warranty Payments 2024 - 2027 (E7:E10)

\$4,450 Average of Total Warranty Payments in TY2024 (E7:E10)

\$1,370 Median Failure Rate Cost Avoidance (J18-H18), for years 2027 through 2034

\$72,290 Upper 95% Confidence Failure Rate Cost Avoidance (O18-M18), for years 2027 through 2034

\$70,920 Range of savings between Median Failure Rate and Upper 95% Confidence Failure Rate

Southern California Gas Company  
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SCG-14-WP-2FC006 CSF Advanced Meter Operations  
Supplemental Workpaper 2 (1 of 4)  
Estimated DCU Extended Maintenance Payments

2021	Calculation Steps →	A	B = Prior Month Balance + A	C	D = B x C
	Period	DCUs	Cumulative DCUs	Per Unit Cost	Monthly Cost
	Prior Balance		3,295		
	Jan-21	50	3,345	31.25	104,531
	Feb-21	40	3,385	31.25	105,781
	Mar-21	36	3,421	31.25	106,906
	Apr-21	55	3,476	31.25	108,625
	May-21	54	3,530	31.25	110,313
	Jun-21	48	3,578	31.25	111,813
	Jul-21	34	3,612	31.25	112,875
	Aug-21	31	3,643	31.25	113,844
	Sep-21	61	3,704	31.25	115,750
	Oct-21	65	3,769	31.25	117,781
	Nov-21	62	3,831	31.25	119,719
	Dec-21	32	3,863	31.25	120,719
	<b>Yearly Total</b>	<b>568</b>			<b>1,348,656</b>

Southern California Gas Company  
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Non-Shared Service Workpapers

SCG-14-WP-2FC006 CSF Advanced Meter Operations  
Supplemental Workpaper 2 (2 of 4)  
Estimated DCU Extended Maintenance Payments

2022	Calculation Steps →	A	B = Prior Month Balance + A	C	D = B x C	E = Current Year D (Yearly Total) - Prior Year D (Yearly Total)
	Period	DCUs	Cumulative DCUs	Per Unit Cost	Monthly Cost	Incremental Cost
	Prior Balance		3,863			
	Jan-22	38	3,901	31.25	121,906	
	Feb-22	23	3,924	31.25	122,625	
	Mar-22	16	3,940	31.25	123,125	
	Apr-22	11	3,951	31.25	123,469	
	May-22	14	3,965	31.25	123,906	
	Jun-22	26	3,991	31.25	124,719	
	Jul-22	19	4,010	31.25	125,313	
	Aug-22	22	4,032	31.25	126,000	
	Sep-22	28	4,060	31.25	126,875	
	Oct-22	13	4,073	31.25	127,281	
	Nov-22	19	4,092	31.25	127,875	
	Dec-22	17	4,109	31.25	128,406	
	<b>Yearly Total</b>	<b>246</b>			<b>1,501,500</b>	<b>152,844</b>



Southern California Gas Company  
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Non-Shared Service Workpapers

SCG-14-WP-2FC006 CSF Advanced Meter Operations  
Supplemental Workpaper 2 (3 of 4)  
Estimated DCU Extended Maintenance Payments

2023	Calculation Steps →	A	B = Prior Month Balance + A	C	D = B x C	E = Current Year D (Yearly Total) - Prior Year D (Yearly Total)
	Period	DCUs	Cumulative DCUs	Per Unit Cost	Monthly Cost	Incremental Cost
	Prior Balance		4,109			
	Jan-23	42	4,151	31.25	129,719	
	Feb-23	2	4,153	31.25	129,781	
	Mar-23	7	4,160	31.25	130,000	
	Apr-23	4	4,164	31.25	130,125	
	May-23	11	4,175	31.25	130,469	
	Jun-23	12	4,187	31.25	130,844	
	Jul-23	6	4,193	31.25	131,031	
	Aug-23	7	4,200	31.25	131,250	
	Sep-23	1	4,201	31.25	131,281	
	Oct-23	11	4,212	31.25	131,625	
	Nov-23	7	4,219	31.25	131,844	
	Dec-23	6	4,225	31.25	132,031	
	<b>Yearly Total</b>	<b>116</b>			<b>1,570,000</b>	<b>68,500</b>

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

SCG-14-WP-2FC006 CSF Advanced Meter Operations  
Supplemental Workpaper 2 (4 of 4)  
Estimated DCU Extended Maintenance Payments

2024	Calculation Steps →	A	B = Prior Month Balance + A	C	D = B x C	E = Current Year D (Yearly Total) - Prior Year D (Yearly Total)
	Period	DCUs	Cumulative DCUs	Per Unit Cost	Monthly Cost	Incremental Cost
	Prior Balance		4,225			
	Jan-24	20	4,245	31.25	132,656	
	Feb-24	2	4,247	31.25	132,719	
	Mar-24	3	4,250	31.25	132,813	
	Apr-24	7	4,257	31.25	133,031	
	May-24	1	4,258	31.25	133,063	
	Jun-24	3	4,261	31.25	133,156	
	Jul-24	5	4,266	31.25	133,313	
	Aug-24	5	4,271	31.25	133,469	
	Sep-24	5	4,276	31.25	133,625	
	Oct-24	2	4,278	31.25	133,688	
	Nov-24	6	4,284	31.25	133,875	
	Dec-24	3	4,287	31.25	133,969	
	<b>Yearly Total</b>	<b>62</b>			<b>1,599,375</b>	<b>29,375</b>

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

SCG-14-WP-2FC006 CSF Advanced Meter Operations  
Supplemental Workpaper 3 (1 of 13)  
Calculation for Customer Service Advanced Meter Operations FTEs on Capital Project (DCU Hardware Refresh) - Vacation and Sick Labor Costs ONLY

Line #	Calculation Steps	Calculation Factors	TY 2024 Estimated
1		Management Pay Bands Role	Project Manager / Strategic Lead
2		Code	PM1
3		Low Salary Range	89,000
4		High Salary Range	133,500
5	A	Number of Employees	6
6	B	Salary	111,250
7	C	V&S Rate	0.1765
8	$D = B / (1 + C)$	Direct Salary (12 Months)	94,560
9	E	Forecasted Months Worked	12
10	$F = A \times ((D/12) \times E)$	Salary Calculation	567,361
11	$G = F \times (1 + C)$	Salary Calculation w/ V&S	667,500
12	$H = G - F$	V&S Salary Only	100,139

SCG-14-WP-2FC006 CSF Advanced Meter Operations  
 Supplemental Workpaper 4 (2 of 13)

Calculation to Annualize Customer Service Advanced Meter Operations Labor Costs for PM2 and AD2 Positions Vacant at Various Points During 2021

Line #	Calculation Steps	Calculation Factors	2022 Estimated	2022 Estimated	2023 Estimated	2023 Estimated	TY 2024 Estimated	TY 2024 Estimated
1		Management Pay Bands Role	Project Manager / Strategic Lead	Advisor	Project Manager / Strategic Lead	Advisor	Project Manager / Strategic Lead	Advisor
2		Code	PM2	AD2	PM2	AD2	PM2	AD2
3		Low Salary Range	100,800	89,000	100,800	89,000	100,800	89,000
4		High Salary Range	151,200	133,500	151,200	133,500	151,200	133,500
5	A	Number of Employees	1	1	1	1	1	1
6	B	Salary	126,000	111,250	126,000	111,250	126,000	111,250
7	C	V&S Rate	0.1765	0.1765	0.1765	0.1765	0.1765	0.1765
8	D = B/(1 + C)	Direct Salary (12 Months)	107,097	94,560	107,097	94,560	107,097	94,560
9	E	Forecasted Months Worked	1	9	1	9	1	9
10	F = A x ((D/12) x E)	Salary Calculation	8,925	70,920	8,925	70,920	8,925	70,920
11	G = F x (1 + C)	Salary Calculation w/ V&S	10,500	83,438	10,500	83,438	10,500	83,438
12		Sum of Salary Calculation w/ V&S		93,938		93,938		93,938

SCG-14-WP-2FC006 CSF Advanced Meter Operations  
 Supplemental Workpaper 5 (3 of 13)  
 DCU Inspections

Line #	Calculation Steps	Calculation Factors	BY2021	2022 Estimated	2023 Estimated	TY 2024 Estimated
1	A	DCUs Added to the Network Annually		98	74	40
3	B	Total Estimated Completed Inspections	4,437	4,535	4,609	4,649
4	C	Contractor Inspected	2,488	-	-	-
5	D = B - C	Employee Inspected	1,949	4,535	4,609	4,649
6	E	Estimated Cost Per Inspection	\$52	\$52	\$52	\$52
7	F	Hours per inspection	1	1	1	1
8	G = D x E x F	Labor	\$101,277	\$235,655	\$239,500	\$241,579
9	H	V&S Rate	0.1765	0.1765	0.1765	0.1765
10	I = G x (1+ H)	Labor w/ V&S	\$119,152	\$277,248	\$281,772	\$284,217
9	J	Non-Labor (Contractor Costs)	\$138,527	\$0	\$0	\$0
10	K = I + J	Total Costs	\$257,680	\$277,248	\$281,772	\$284,217
11		Incremental Labor Costs		\$158,096	\$162,620	\$165,065
12		Incremental Non-Labor Costs		(\$138,527)	(\$138,527)	(\$138,527)
13		Total Incremental Costs		\$19,568	\$24,092	\$26,538

SCG-14-WP-2FC006 CSF Advanced Meter Operations  
 Supplemental Workpaper 6 (4 of 13)

Calculation of Labor to Reflect Full Year Salaries for Positions hired in Q2 of 2022 to Fill Behind Vacancies in the Analytics Development Organization

Line #	Calculation Steps	Calculation Factors	2022 Estimated	2023 Estimated	TY 2024 Estimated
1		Management Pay Bands Role	Advisor	Advisor	Advisor
2		Code	AD2	AD2	AD2
3		Low Salary Range	89,000	89,000	89,000
4		High Salary Range	133,500	133,500	133,500
5	A	Number of Employees	2	2	2
6	B	Salary	111,250	111,250	111,250
7	C	V&S Rate	0.1765	0.1765	0.1765
8	$D = B / (1 + C)$	Direct Salary (12 Months)	94,560	94,560	94,560
9	E	Forecasted Months Worked	9	12	12
10	$F = A \times ((D/12) \times E)$	Salary Calculation	141,840	189,120	189,120
11	$G = F \times (1 + C)$	Salary Calculation w/ V&S	166,875	222,500	222,500

SCG-14-WP-2FC006 CSF Advanced Meter Operations  
Supplemental Workpaper 7 (5 of 13)

**Calculation of Customer Service Advanced Meter Operations Labor Costs  
for an AD2 to Support Consumption Analytics Applications Estimated to  
Start in Q2 of 2024**

Line #	Calculation Steps	Calculation Factors	TY 2024 Estimated
1		Management Pay Bands Role	Advisor
2		Code	AD2
3		Low Salary Range	89,000
4		High Salary Range	133,500
5	A	Number of Employees	2
6	B	Salary	111,250
7	C	V&S Rate	0.1765
8	$D = B / (1 + C)$	Direct Salary (12 Months)	94,560
9	E	Forecasted Months Worked	9
10	$F = A \times ((D/12) \times E)$	Salary Calculation	141,840
11	$G = F \times (1 + C)$	Salary Calculation w/ V&S	166,875

SCG-14-WP-2FC006 CSF Advanced Meter Operations  
Supplemental Workpaper 7 (6 of 13)

**Non-Labor funding associated with the Core Balancing Project, which  
includes the Advanced Metering Infrastructure Data Aggregation System  
(AMI DAS) - AMI DAS after hour support**

Line #	Calculation Steps	Calculation Factors	TY 2024 Estimated
1	A	Systems Architect Rate	\$ 135.00
2	B	Sr. Software Developer Rate (India)	\$ 25.20
3	C	Sr. Software Developer Rate (Mexico)	\$ 46.30
4	$D = (B + C) / 2$	Sr. Software Developer Blended Rate	\$ 35.75
5	E	Estimated Forecasted Hours	2,000
6	$F = A \times E$	Systems Architect Yearly Cost	\$ 270,000
7	G	Percent Allocation of Systems Architect	50%
8	$H = F \times G$	Systems Architect Allocated Yearly Cost	\$ 135,000
9	$I = D \times E$	Sr. Software Developer Yearly Cost	71,500
10	$J = H + I$	Sum of System Architect & Sr. Software Developer	\$ 206,500
11	K	Percent Increase for Salary Negotiation	1.7%
12	$L = J \times K$	Increase for Salary Negotiation	3,500
13	$M = J + L$	Total Estimated Non-Labor Cost	\$ 210,000



SCG-14-WP-2FC006 CSF Advanced Meter Operations  
Supplemental Workpaper 7 (7 of 13)

**Non-Labor funding associated with the implementation of the High-Performance Processing  
Operational System (HiPPOS) - HiPPOS after hour support**

Line #	Calculation Steps	Calculation Factors	2022 Estimated	2023 Estimated	TY 2024 Estimated
1	A	Systems Architect Rate	\$ 135.00		
2	B	Estimated Forecasted Hours	2,000		
3	C = A x B	Systems Architect Yearly Cost	\$ 270,000		
4	D	Percent Allocation of Systems Architect	33%		
5	E = C x D	Systems Architect Allocated Yearly Cost	\$ 88,500		
6	F	Percentage Increase for Salary Negotiation	1.7%		
7	G = E x F	Increase for Salary Negotiation	\$ 1,500		
8	2022: H = E + G 2023-2024: H = J	2022: Estimated Non-Labor Cost 2023-2024: Prior Year Cost	\$ 90,000	90,000	93,600
9	I	Yearly Escalation	0%	4%	4%
10	J = H x (1 + I)	Escalated Non-Labor Cost	\$ 90,000	\$ 93,600	\$ 97,344

SCG-14-WP-2FC006 CSF Advanced Meter Operations  
Supplemental Workpaper 7 (8 of 13)

**Non-Labor associated with vendor payments for Structured Query Language (SQL) licenses**

Line #	Calculation Steps	Calculation Factors	2022 Estimated	2023 Estimated	TY 2024 Estimated
1	A	Estimated cost per License	\$ 10,000	\$ 10,000	\$ 10,000
2	B	Number of Licenses Requested	3	1	4
3	C = A x B	Total Estimated License Cost	\$ 30,000	\$ 10,000	\$ 40,000

SCG-14-WP-2FC006 CSF Advanced Meter Operations

Supplemental Workpaper 8 (9 of 13)

Calculation for Customer Service Advanced Meter Operations FTEs on Capital and Refundable Projects - Vacation and Sick Labor Costs ONLY

Line #	Calculation Steps	Calculation Factors	2022, 2023, 2024 Estimated							
			Advisor	Advisor	Advisor	Advisor	Specialist / Analyst	Supervisor / Team Leader	Advisor	Advisor
1		Management Pay Bands Role	Advisor	Advisor	Advisor	Advisor	Specialist / Analyst	Supervisor / Team Leader	Advisor	Advisor
2		Code	AD2	AD2	AD2	AD2	SA4	ST5	AD2	AD2
3		Low Salary Range	89,000	89,000	89,000	89,000	68,400	102,100	89,000	89,000
4		High Salary Range	133,500	133,500	133,500	133,500	102,600	153,200	133,500	133,500
5	A	Salary	111,250	111,250	111,250	111,250	85,500	127,650	111,250	111,250
6	B	V&S Rate	0.1765	0.1765	0.1765	0.1765	0.1765	0.1765	0.1765	0.1765
7	C = A / (1 + B)	Direct Salary	94,560	94,560	94,560	94,560	72,673	108,500	94,560	94,560
8		Program / Project	AMM Investigations	AMM Investigations	AMM Investigations	SB1371	DART Upgrade / MSAI	DART Upgrade / MSAI	DART Upgrade / MSAI	AMM System Enhancements
9	D	Capital / Refundable %	1.00	1.00	1.00	0.25	0.60	0.60	0.60	0.40
10	E	O&M %	-	-	-	0.75	0.40	0.40	0.40	0.60
11	F = D + E	Total % Allocation	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
12	G	Months Worked in 2021	12	12	12	6	12	12	12	12
13	H = ((C / 12) x G) x D	2021 Capital Salary	94,560	94,560	94,560	11,820	43,604	65,100	56,736	37,824
14	I = ((C / 12) x G) x E	2021 O&M Salary	-	-	-	35,460	29,069	43,400	37,824	56,736
15	J = H x B	2021 Capital V&S	16,690	16,690	16,690	2,086	7,696	11,490	10,014	6,676
16	K = (12 / G) x J	Estimate Full Year Capital V&S ONLY	16,690	16,690	16,690	4,172	7,696	11,490	10,014	6,676

SCG-14-WP-2FC006 CSF Advanced Meter Operations  
 Supplemental Workpaper 8 (10 of 13)

Calculation for Customer Service Advanced Meter Operations FTEs on Capital and Refundable Projects - Vacation and Sick Labor Costs ONLY

Line #	Calculation Steps	Calculation Factors							TOTAL
1		Management Pay Bands Role	Advisor	Supervisor / Team Leader	Advisor	Advisor	Project Manager / Strategic Lead	Advisor	
2		Code	AD2	ST5	AD3	AD2	PM4	AD2	
3		Low Salary Range	89,000	102,100	100,800	89,000	127,300	89,000	
4		High Salary Range	133,500	153,200	151,200	133,500	191,000	133,500	
5	A	Salary	111,250	127,650	126,000	111,250	159,150	111,250	
6	B	V&S Rate	0.1765	0.1765	0.1765	0.1765	0.1765	0.1765	
7	C = A / (1 + B)	Direct Salary	94,560	108,500	107,097	94,560	135,274	94,560	
8		Program / Project	AMM System Enhancements	Core Balancing	Core Balancing	Core Balancing	AMM System Enhancements	3rd Party Attachments	
9	D	Capital / Refundable %	0.40	0.40	0.20	0.20	0.10	0.20	
10	E	O&M %	0.60	0.60	0.80	0.80	0.90	0.80	
11	F = D + E	Total % Allocation	1.00	1.00	1.00	1.00	1.00	1.00	
12	G	Months Worked in 2021	12	12	6	12	12	12	
13	H = ((C / 12) x G) x D	2021 Capital Salary	37,824	43,400	10,710	18,912	13,527	18,912	
14	I = ((C / 12) x G) x E	2021 O&M Salary	56,736	65,100	42,839	75,648	121,747	75,648	
15	J = H x B	2021 Capital V&S	6,676	7,660	1,890	3,338	2,388	3,338	
16	K = (12 / G) x J	Estimate Full Year Capital V&S ONLY	6,676	7,660	3,781	3,338	2,388	3,338	117,298

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

SCG-14-WP-2FC006 CSF Advanced Meter Operations  
 Supplemental Workpaper 9 (11 of 13)

Calculation to Annualize Advanced Meter Operations Labor Costs for Positions Vacant at Various Points During 2021 to Support Work Order Management Systems

Line #	Calculation Steps	Calculation Factors	2022 Estimated	2022 Estimated	2022 Estimated	2022 Estimated	2023 Estimated	2023 Estimated	2023 Estimated	2023 Estimated
1		Management Pay Bands Role	Supervisor / Team Leader	Advisor	Specialist / Analyst	Advisor	Supervisor / Team Leader	Advisor	Specialist / Analyst	Advisor
2		Code	ST5	AD2	SA4	AD3	ST5	AD2	SA4	AD3
3		Low Salary Range	102,100	89,000	68,400	100,800	102,100	89,000	68,400	100,800
4		High Salary Range	153,200	133,500	102,600	151,200	153,200	133,500	102,600	151,200
5	A	Number of Employees	1	2	2	1	1	2	2	1
6	B	Salary	127,650	111,250	85,500	126,000	127,650	111,250	85,500	126,000
7	C	V&S Rate	0.1765	0.1765	0.1765	0.1765	0.1765	0.1765	0.1765	0.1765
8	D = B/(1 + C)	Direct Salary (12 Months)	108,500	94,560	72,673	107,097	108,500	94,560	72,673	107,097
9	E	Forecasted Months Worked	6	6	6	3	6	6	6	3
10	F = A x ((D/12) x E)	Salary Calculation	54,250	94,560	72,673	26,774	54,250	94,560	72,673	26,774
11	G = F x (1 + C)	Salary Calculation w/ V&S	63,825	111,250	85,500	31,500	63,825	111,250	85,500	31,500
12		Sum of Salary Calculation w/ V&S				292,075				292,075
13	H	Months Worked as a Contractor in 2021				9				9
14	I = A x ((B / 12) x H)	Non Labor Contractor Salary Calculation				94,500				94,500
15	J = -1 x I	Subtract Contractor Costs from Forecast Years				(94,500)				(94,500)

SCG-14-WP-2FC006 CSF Advanced Meter Operations  
 Supplemental Workpaper 9 (12 of 13)

Calculation to Annualize Advanced Meter Operations Labor Costs for Positions Vacant at Various Points During 2021 to Support Work Order Management Systems

Line #	Calculation Steps	Calculation Factors	TY 2024 Estimated	TY 2024 Estimated	TY 2024 Estimated	TY 2024 Estimated
1		Management Pay Bands Role	Supervisor / Team Leader	Advisor	Specialist / Analyst	Advisor
2		Code	ST5	AD2	SA4	AD3
3		Low Salary Range	102,100	89,000	68,400	100,800
4		High Salary Range	153,200	133,500	102,600	151,200
5	A	Number of Employees	1	2	2	1
6	B	Salary	127,650	111,250	85,500	126,000
7	C	V&S Rate	0.1765	0.1765	0.1765	0.1765
8	$D = B / (1 + C)$	Direct Salary (12 Months)	108,500	94,560	72,673	107,097
9	E	Forecasted Months Worked	6	6	6	3
10	$F = A \times ((D/12) \times E)$	Salary Calculation	54,250	94,560	72,673	26,774
11	$G = F \times (1 + C)$	Salary Calculation w/ V&S	63,825	111,250	85,500	31,500
12		Sum of Salary Calculation w/ V&S				292,075
13	H	Months Worked as a Contractor in 2021				9
14	$I = A \times ((B / 12) \times H)$	Non Labor Contractor Salary Calculation				94,500
15	$J = -1 \times I$	Subtract Contractor Costs from Forecast Years				(94,500)

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

SCG-14-WP-2FC006 CSF Advanced Meter Operations  
Supplemental Workpaper 10 (13 of 13)

Calculation of Customer Service Advanced Meter Operations Labor Costs to Support DevOps Tasks in  
the Analytics Maintenance Organization Estimated to Start in Q2 2023

Line #	Calculation Steps	Calculation Factors	2023 Estimated	TY 2024 Estimated
1		Management Pay Bands Role	Advisor	Advisor
2		Code	AD2	AD2
3		Low Salary Range	89,000	89,000
4		High Salary Range	133,500	133,500
5	A	Number of Employees	1	1
6	B	Salary	111,250	111,250
7	C	V&S Rate	0.1765	0.1765
8	$D = B / (1 + C)$	Direct Salary (12 Months)	94,560	94,560
9	E	Forecasted Months Worked	9	12
10	$F = A \times ((D/12) \times E)$	Salary Calculation	70,920	94,560
11	$G = F \times (1 + C)$	Salary Calculation w/ V&S	83,438	111,250

Southern California Gas Company  
 2024 GRC - REVISED  
 Shared Services Workpapers

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler

**Summary of Shared Services Workpapers:**

Description	In 2021 \$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
		2021	2022	2023
A. Customer Service Field Staff	1,393	1,393	1,583	1,618
<b>Total</b>	<b>1,393</b>	<b>1,393</b>	<b>1,583</b>	<b>1,618</b>

*Note: Totals may include rounding differences.*



Southern California Gas Company  
2024 GRC - REVISED  
Shared Services Workpapers

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Service Field Staff  
 Cost Center: 2200-0942.000

**Summary for Category: A. Customer Service Field Staff**

	In 2021\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	1,313	1,313	1,497	1,534
Non-Labor	79	79	85	83
NSE	0	0	0	0
<b>Total</b>	<b>1,392</b>	<b>1,392</b>	<b>1,582</b>	<b>1,617</b>
FTE	11.5	11.5	13.5	13.9

**Cost Centers belonging to this Category:**

**2200-0942.000 Customer Services - Staff Manager**

Labor	1,313	1,313	1,497	1,534
Non-Labor	79	79	85	83
NSE	0	0	0	0
<b>Total</b>	<b>1,392</b>	<b>1,392</b>	<b>1,582</b>	<b>1,617</b>
FTE	11.5	11.5	13.5	13.9

*Note: Totals may include rounding differences.*

**Beginning of Workpaper**  
**2200-0942.000 - Customer Services - Staff Manager**

Southern California Gas Company  
2024 GRC - REVISED  
Shared Services Workpapers

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Service Field Staff  
 Category-Sub: 1. Customer Service Field Staff  
 Cost Center: 2200-0942.000 - Customer Services - Staff Manager

**Activity Description:**

CSF Staff Manager is comprised primarily of management personnel who develop and implement processes, policies and procedures, including Gas Standards and Information Bulletins; track, analyze and report operational data; and manage special projects for CSF operations. Although the CSF Staff Manager is primarily centralized in SoCalGas's headquarters, this organization supports both SoCalGas's and SDGE's CSF organizations.

CSF staff is needed to establish and maintain uniform policies and procedures for CSF field personnel to follow. Policies and procedures are continuously updated to reflect new rules and regulations, manufacturer safety alerts, manufacturer appliance recalls, and other related changes. Analysts within CSF Staff Manger track and analyze customer and company-generated work order volumes, drive time, on premises time and other associated operating metrics. Project managers oversee and implement processes and other changes that impact CSF operations.

**Forecast Explanations:**

**Labor - Base YR Rec**

BY 2021 was used to forecast TY 2024 for Staff Manager because BY 2021 best reflects a reasonable starting point for current programs and activities. Incremental funding requests are then added to the BY for future expenditures to support efforts such as sustainability strategy initiatives. The shared services allocation percentage is based on the cost center managers' assessment of the activities and contributions of each individual employee, with input from each employee to determine how much of their time is spent performing shared services. As a result of assessing the work performed by positions in this cost category, 3.04 percent of CSF Staff Manager costs were allocated to SDG&E in 2021.

**Non-Labor - Base YR Rec**

Non-labor costs include cell phone expenses, office supplies, travel and other miscellaneous expenses.

**NSE - Base YR Rec**

NSE is not applicable to this workgroup.

**Summary of Results:**

		In 2021\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2017	2018	2019	2020	2021	2022	2023	2024	
Labor		1,346	1,215	1,063	1,271	1,313	1,313	1,497	1,534	
Non-Labor		190	59	96	59	79	79	85	83	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>1,536</b>	<b>1,274</b>	<b>1,159</b>	<b>1,331</b>	<b>1,393</b>	<b>1,392</b>	<b>1,582</b>	<b>1,617</b>	
FTE		12.0	10.3	9.2	10.7	11.5	11.5	13.5	13.9	

*Note: Totals may include rounding differences.*

Southern California Gas Company  
2024 GRC - REVISED  
Shared Services Workpapers

Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Service Field Staff  
 Category-Sub: 1. Customer Service Field Staff  
 Cost Center: 2200-0942.000 - Customer Services - Staff 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	0	1	0	1	0.0	0	1	0	1	0.0
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	1,313	78	0	1,391	11.5	1,313	78	0	1,391	11.5
<b>Total Incurred</b>	<b>1,313</b>	<b>79</b>	<b>0</b>	<b>1,392</b>	<b>11.5</b>	<b>1,313</b>	<b>79</b>	<b>0</b>	<b>1,392</b>	<b>11.5</b>
<b>% Allocation</b>										
Retained	96.96%	96.96%				96.96%	96.96%			
SEU	3.04%	3.04%				3.04%	3.04%			
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	1	0	1	0.0	0	1	0	1	0.0
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	1,497	84	0	1,581	13.5	1,534	82	0	1,616	13.9
<b>Total Incurred</b>	<b>1,497</b>	<b>85</b>	<b>0</b>	<b>1,582</b>	<b>13.5</b>	<b>1,534</b>	<b>83</b>	<b>0</b>	<b>1,617</b>	<b>13.9</b>
<b>% Allocation</b>										
Retained	96.96%	96.96%				96.96%	96.96%			
SEU	3.04%	3.04%				3.04%	3.04%			
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  
2024 GRC - REVISED  
Shared Services Workpapers

Area: CS - FIELD & ADVANCED METER OPERATIONS  
Witness: Daniel J. Rendler  
Category: A. Customer Service Field Staff  
Category-Sub: 1. Customer Service Field Staff  
Cost Center: 2200-0942.000 - Customer Services - Staff Manager

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

**Cost Center Allocation Percentage for 2021**

The shared services allocation percentage is based on the cost center managers' assessment of the activities and contributions of each individual employee, with input from each employee to determine how much of their time is spent performing shared services.

**Cost Center Allocation Percentage for 2022**

The shared services allocation percentage is based on the cost center managers' assessment of the activities and contributions of each individual employee, with input from each employee to determine how much of their time is spent performing shared services.

**Cost Center Allocation Percentage for 2023**

The shared services allocation percentage is based on the cost center managers' assessment of the activities and contributions of each individual employee, with input from each employee to determine how much of their time is spent performing shared services.

**Cost Center Allocation Percentage for 2024**

The shared services allocation percentage is based on the cost center managers' assessment of the activities and contributions of each individual employee, with input from each employee to determine how much of their time is spent performing shared services.

*Note: Totals may include rounding differences.*

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Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Service Field Staff  
 Category-Sub: 1. Customer Service Field Staff  
 Cost Center: 2200-0942.000 - Customer Services - Staff 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	Base YR Rec	1,313	1,313	1,313	0	184	221	1,313	1,497	1,534
Non-Labor	Base YR Rec	79	79	79	0	6	4	79	85	83
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>1,393</b>	<b>1,393</b>	<b>1,393</b>	<b>0</b>	<b>190</b>	<b>225</b>	<b>1,393</b>	<b>1,583</b>	<b>1,618</b>
FTE	Base YR Rec	11.5	11.5	11.5	0.0	2.0	2.4	11.5	13.5	13.9

**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	184	6	0	190	2.0	1-Sided Adj
<b>Explanation:</b>	\$184k Labor & \$6k Non-Labor to support CSF processes, policies & procedures, analysis and reporting. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section V.A., for more information on this adjustment. Please refer to SCG-14-WP-2200-0942 CSF Staff Manager Supplemental Workpaper 1 for calculation details.					
<b>2023 Total</b>	<b>184</b>	<b>6</b>	<b>0</b>	<b>190</b>	<b>2.0</b>	
2024	221	4	0	225	2.4	1-Sided Adj
<b>Explanation:</b>	\$221k Labor & \$4k Non-Labor to support CSF processes, policies & procedures, analysis and reporting. Refer to SoCalGas witness, Dan Rendler, Ex. SCG-14, Section V.A., for more information on this adjustment. Please refer to SCG-14-WP-2200-0942 CSF Staff Manager Supplemental Workpaper 1 for calculation details.					
<b>2024 Total</b>	<b>221</b>	<b>4</b>	<b>0</b>	<b>225</b>	<b>2.4</b>	

Note: Totals may include rounding differences.

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Area: CS - FIELD & ADVANCED METER OPERATIONS  
Witness: Daniel J. Rendler  
Category: A. Customer Service Field Staff  
Category-Sub: 1. Customer Service Field Staff  
Cost Center: 2200-0942.000 - Customer Services - Staff Manager

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

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	1,040	959	999	1,037	1,116
Non-Labor	172	55	92	62	83
NSE	0	0	0	0	0
<b>Total</b>	<b>1,212</b>	<b>1,014</b>	<b>1,091</b>	<b>1,099</b>	<b>1,200</b>
FTE	10.3	8.8	9.2	9.1	9.7
<b>Adjustments (Nominal \$) **</b>					
Labor	0	0	-154	0	0
Non-Labor	0	0	-1	-5	-4
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>-155</b>	<b>-5</b>	<b>-4</b>
FTE	-0.1	-0.1	-1.5	-0.2	0.0
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	1,040	958	845	1,037	1,116
Non-Labor	172	55	91	57	79
NSE	0	0	0	0	0
<b>Total</b>	<b>1,212</b>	<b>1,013</b>	<b>936</b>	<b>1,094</b>	<b>1,196</b>
FTE	10.2	8.7	7.7	8.9	9.7
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	176	165	160	183	197
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>176</b>	<b>165</b>	<b>160</b>	<b>183</b>	<b>197</b>
FTE	1.8	1.6	1.5	1.8	1.8
<b>Escalation to 2021\$</b>					
Labor	129	92	57	52	0
Non-Labor	18	4	5	2	0
NSE	0	0	0	0	0
<b>Total</b>	<b>148</b>	<b>96</b>	<b>63</b>	<b>54</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2021\$)</b>					
Labor	1,346	1,215	1,063	1,271	1,313
Non-Labor	190	59	96	59	79
NSE	0	0	0	0	0
<b>Total</b>	<b>1,536</b>	<b>1,274</b>	<b>1,159</b>	<b>1,331</b>	<b>1,393</b>
FTE	12.0	10.3	9.2	10.7	11.5

\* 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.

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Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Service Field Staff  
 Category-Sub: 1. Customer Service Field Staff  
 Cost Center: 2200-0942.000 - Customer Services - Staff Manager

**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs					
Years	2017	2018	2019	2020	2021
Labor	-0.478	-0.478	-154	-0.483	0
Non-Labor	0	0	-1	-5	-4
NSE	0	0	0	0	0
<b>Total</b>	<b>-0.478</b>	<b>-0.478</b>	<b>-155</b>	<b>-5</b>	<b>-4</b>
FTE	-0.1	-0.1	-1.5	-0.2	0.0

**Detail of Adjustments to Recorded:**

Year	Labor	NLbr	NSE	FTE	Adj Type
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>0</b>	<b>0</b>	<b>-0.1</b>	
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>0</b>	<b>0</b>	<b>0</b>	<b>-0.1</b>	
2019	0	-1	0	0.0	CCTR Transf To 2200-0445.000
<b>Explanation:</b>	Transfer non-labor from Staff Manager 2200-0942 associated with CSF Operations 2FC001 workpaper area.				
2019	-153	0	0	-1.4	CCTR Transf To 2200-2315.000
<b>Explanation:</b>	Transfer of labor and FTEs for DART employees moving from CS Staff Cost Center to CS Analytics Cost Center				
2019	0	0	0	-0.1	1-Sided Adj
<b>Explanation:</b>	Exclude labor expenses associated with lobbying activities (FERC 426.4). This adjustment is in addition to other costs that have already been excluded based other specific accounting attributes.				
<b>2019 Total</b>	<b>-154</b>	<b>-1</b>	<b>0</b>	<b>-1.5</b>	
2020	0	-5	0	0.0	1-Sided Adj
<b>Explanation:</b>	Incremental COVID-19 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 2200-2011.002
<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

*Note: Totals may include rounding differences.*



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Area: CS - FIELD & ADVANCED METER OPERATIONS  
 Witness: Daniel J. Rendler  
 Category: A. Customer Service Field Staff  
 Category-Sub: 1. Customer Service Field Staff  
 Cost Center: 2200-0942.000 - Customer Services - Staff Manager

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
<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>0</b>	<b>-5</b>	<b>0</b>	<b>-0.2</b>	
2021	0	-4	0	0.0	1-Sided Adj
<b>Explanation:</b> Incremental COVID-19 related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).					
<b>2021 Total</b>	<b>0</b>	<b>-4</b>	<b>0</b>	<b>0.0</b>	

*Note: Totals may include rounding differences.*

**Supplemental Workpapers for Workpaper 2200-0942.000**

Southern California Gas Company  
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Shared Services Workpapers

SCG-14-WP-2200-0942 CSF Staff Manager  
Supplemental Workpaper 1 (1 of 1)  
Calculation of Customer Service Staff Manager Shared Costs for Incremental Labor to Support CSF Processes,  
Policies Procedures, Analysis Reporting

Line #	Calculation Steps	Calculation Factors	2023 Estimated	TY 2024 Estimated
1		Management Pay Bands Role	Project Manager / Strategic Lead	Project Manager / Strategic Lead
2		Code	PM1	PM1
3		Low Salary Range	89,000	89,000
4		High Salary Range	133,500	133,500
5	A	Number of Employees	2	2
6	B	Salary	110,000	110,000
7	C	V&S Rate	0.1765	0.1765
8	$D = B / (1 + C)$	Direct Salary (12 Months)	93,498	93,498
9	E	Forecasted Months	10	12
10	$F = A \times ((D/12) \times E)$	Salary Calculation	155,829	186,995
11	$G = F \times (1 + C)$	Salary Calculation w/ V&S	183,333	220,000

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Area: CS - FIELD & ADVANCED METER OPERATIONS  
Witness: Daniel J. Rendler

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

<b>Cost Center</b>	<b>Sub</b>	<b>Description</b>
2200-0025	000	MSA OFFICE REPRESENTATIVES
2200-0172	000	CS AM DCU Planning & Construction
2200-0345	000	SCG - CSF TRAINING & DEVELOPMENT
2200-0357	000	METER READING OPERATIONS STAFF
2200-0358	000	MTR READING CENTRAL AREA MGR
2200-0359	000	METER READING RIVERSIDE - BEAUMONT
2200-0361	000	MTR READING RIM-FOREST
2200-0362	000	METER READING FONTANA
2200-0363	000	METER READING CORONA
2200-0364	000	METER READING CHINO
2200-0369	000	MTR READ SBRNDO-WRTWD-VICTORVILLE
2200-0370	000	METER READING ALISO VIEJO
2200-0371	000	METER READING SANTA ANA
2200-0373	000	METER READING WHITTIER
2200-0374	000	METER READING ANAHEIM
2200-0375	000	METER READING LA JOLLA
2200-0376	000	METER READING GARDEN GROVE
2200-0377	000	METER READING INDUSTRY
2200-0378	000	METER READING AZUSA
2200-0379	000	METER READING OPER SUPPORT CENTRAL
2200-0380	000	MTR READING NORTH MGR
2200-0381	000	METER READING VALENCIA
2200-0383	000	METER READING LANCASTER & MOJAVE
2200-0384	000	METER READING OXNARD
2200-0385	000	METER READING CANOGA
2200-0386	000	METER READING SIMI
2200-0388	000	METER READING YUKON
2200-0389	000	METER READING TEMPLETON & SLO
2200-0390	000	METER READING SANTA MARIA & LOMPOC
2200-0391	000	METER READING SANTA BARBARA
2200-0392	000	METER READING SATICOY
2200-0393	000	METER READING HOLLYWOOD
2200-0394	000	METER READING 182ND STREET
2200-0395	000	METER READING SANTA MONICA
2200-0398	000	METER READING OPERATIONS MGT
2200-0399	000	METER READING GLENDALE
2200-0400	000	METER READING OPER SUPPORT NORTH
2200-0440	000	CSF DISPATCH INLAND
2200-0442	000	CSF SE FIELD OPERATIONS MGR
2200-0445	000	CSF SE SAN BERNARDINO
2200-0448	000	CSF SE AREA MGR INLAND EAST
2200-0449	000	CSF SE CHINO
2200-0452	000	CSF SE FONTANA
2200-0455	000	CSF SE PALM DESERT
2200-0457	000	CSF SE AREA MGR INLAND SOUTH

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Area: CS - FIELD & ADVANCED METER OPERATIONS  
Witness: Daniel J. Rendler

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

<b>Cost Center</b>	<b>Sub</b>	<b>Description</b>
2200-0458	000	CSF SE RIVRSIDE
2200-0462	000	CSF SE RAMONA
2200-0463	000	CSF SE AREA MGR DESERT VALLEY
2200-0464	000	CSF SE EL CENTRO
2200-0467	000	CSF SE RIM FOREST
2200-0470	000	CSF SE ALHAMBRA
2200-0473	000	CSF SE AZUSA
2200-0475	000	CSF SE CORONA
2200-0476	000	CSF DOM ALHAMBRA/PASADENA
2200-0477	000	CSF SE PASADENA
2200-0479	000	CSF NORTHWEST REGION DIRECTOR
2200-0493	000	CSF NW VISALIA
2200-0495	000	CSF NW AREA MGR SAN JOAQUIN
2200-0497	000	CSF NW BAKERSFIELD
2200-0498	000	CSF DISPATCH CHATSWORTH
2200-0502	000	CSF NW SAN LUIS OBISPO/TEMPLETON
2200-0503	000	CSF NW AREA MGR NORTH COAST
2200-0505	000	CSF NW SANTA MARIA
2200-0506	000	CSF DISPATCH COMPTON
2200-0507	000	MTU REMEDIATION REIMBURSEMENTS CSF NW
2200-0508	000	CSF NW AREA MGR CENTRAL COAST
2200-0509	000	CSF NW VENTURA
2200-0513	000	CSF NW SANTA BARBARA
2200-0514	000	CSF NORTHWEST REGION FIELD OPERATIONS MGR
2200-0515	000	CSF NW AREA MGR SAN FERNANDO VALLEY
2200-0516	000	CSF NW CANOGA
2200-0519	000	CSF NW SIMI VALLEY
2200-0522	000	CSF NW SATICOY
2200-0525	000	CSF NW BRANFORD
2200-0529	000	CSF NW GLENDALE
2200-0530	000	CSF NW AREA MGR NORTH VALLEY
2200-0531	000	CSF NW VALENCIA
2200-0534	000	CSF NW LANCASTER
2200-0536	000	CSF SOUTH EAST REGION DIRECTOR
2200-0546	000	CSF SE DOWNEY
2200-0548	000	CSF SE WHITTIER DOM
2200-0550	000	CSF SE WHITTIER
2200-0551	000	CSF SE AREA MGR ORANGE NORTH
2200-0552	000	CSF SE ANAHEIM
2200-0554	000	CSF DOM ANAHEIM/LA JOLLA
2200-0556	000	CSF SE LA JOLLA
2200-0557	000	CS SE RGN SPEC PROJ 6 (FKA ARSO)
2200-0560	000	CSF SE ALISO VIEJO
2200-0561	000	CSF AREA MGR ORANGE COUNTY COAST
2200-0563	000	CSF SE GARDEN GROVE

Southern California Gas Company  
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Area: CS - FIELD & ADVANCED METER OPERATIONS  
Witness: Daniel J. Rendler

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

<b>Cost Center</b>	<b>Sub</b>	<b>Description</b>
2200-0564	000	CS SE RGN SPEC PROJ 1 (FKA SNA DOM)
2200-0566	000	CSF SE SANTA ANA
2200-0568	000	CSF SE AREA MGR SAN GABRIEL VALLEY
2200-0570	000	CSF SE INDUSTRY
2200-0573	000	CSF AREA MGR MID CITY LA
2200-0574	000	CSF NW BELVEDERE
2200-0578	000	CSF NW JUANITA
2200-0582	000	CSF NW HUNTINGTON PARK
2200-0584	000	CSF NW AREA MGR HARBOR CORRIDOR
2200-0585	000	CSF NW COMPTON
2200-0587	000	CSF AREA MGR SOUTH COAST
2200-0589	000	CSF NW CRENSHAW
2200-0591	000	CSF NW SANTA MONICA
2200-0594	000	CSF NW REDONDO BEACH
2200-0596	000	CSF DOM REDONDO/SAN PEDRO
2200-0597	000	CSF NW SAN PEDRO
2200-0599	000	CSF DOM JUANITA/HOLLYWOOD
2200-0600	000	CSF NW HOLLYWOOD
2200-0603	000	CS NW RGN SPEC PROJ 6 (FKA TSM)
2200-0845	000	MSAI NORTHWEST REGION
2200-0846	000	MSAI SOUTHEAST REGION
2200-1146	000	METER READING TRAINING OPERATIONS
2200-1544	000	CS SE RGN SPEC PROJ 5 (FKA OPQUAL)
2200-2025	000	METER READING PLANNING & ANALYSIS
2200-2081	000	CSF SE MURRIETA
2200-2082	000	CSF SE BEAUMONT
2200-2105	000	METER READING MANAGER
2200-2111	000	CSF STAFF DIRECTOR
2200-2113	000	CSF NW YUKON
2200-2114	000	CSF DOM YUKON
2200-2116	000	CS SE RGN SPEC PROJ 7 (FKA OC TSM)
2200-2152	000	METER READING SYSTEMS
2200-2153	000	METER READING OPERATIONS MGR
2200-2179	000	CORE Balance
2200-2206	000	QUALITY ASSURANCE
2200-2217	000	CSF SE AREA MGR MOUNTAIN PASS
2200-2225	000	GD SE RGN SPEC PROJ 14 (FKA CS BEAU DOM)
2200-2226	000	GD SE RGN SPEC PROJ 15 (FKA CS COR DOM)
2200-2231	000	CSF SE YUCCA
2200-2315	000	CS ANALYTICS
2200-2340	000	CS AM Network Management
2200-2404	000	METER READING ROUTE ANALYSIS
2200-2539	000	CSF CURB METER PROJECT
2200-2567	000	CUST SVC MSA INSPECTIONS
2200-2571	000	MSA INSPECTION PROGRAM

Southern California Gas Company  
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Non-Shared Service Workpapers

Area: CS - FIELD & ADVANCED METER OPERATIONS  
Witness: Daniel J. Rendler

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

<b>Cost Center</b>	<b>Sub</b>	<b>Description</b>
2200-2583	000	CSF FIELD INSTRUCTOR