

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-22-WP-R)

REVISED WORKPAPERS TO
PREPARED DIRECT TESTIMONY
OF LANCE R. MUELLER
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-22-WP-R - CYBERSECURITY

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Overall Summary For Exhibit No. SCG-22-WP-R

Area:	CYBERSECURITY
Witness:	Lance R. Mueller

Description	In 2021 \$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
<i>Non-Shared Services</i>	0	0	0	0
<i>Shared Services</i>	3,850	3,970	3,970	3,970
Total	3,850	3,970	3,970	3,970

Note: Totals may include rounding differences.

Southern California Gas Company
 2024 GRC - REVISED
 Shared Services Workpapers

Area: CYBERSECURITY
 Witness: Lance R. Mueller

Summary of Shared Services Workpapers:

Description	In 2021 \$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
		2021	2022	2023
A. Cybersecurity	3,850	3,970	3,970	3,970
Total	3,850	3,970	3,970	3,970

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - REVISED
Shared Services Workpapers

Area: CYBERSECURITY
 Witness: Lance R. Mueller
 Category: A. Cybersecurity
 Cost Center: 2200-0430.000

Summary for Category: A. Cybersecurity

	In 2021\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2021	2022	2023	2024
Labor	1,363	1,483	1,483	1,483
Non-Labor	2,488	2,488	2,488	2,488
NSE	0	0	0	0
Total	3,851	3,971	3,971	3,971
FTE	10.2	11.2	11.2	11.2

Cost Centers belonging to this Category:

2200-0430.000 Shared Cybersecurity

Labor	1,363	1,483	1,483	1,483
Non-Labor	2,488	2,488	2,488	2,488
NSE	0	0	0	0
Total	3,851	3,971	3,971	3,971
FTE	10.2	11.2	11.2	11.2

Note: Totals may include rounding differences.

Beginning of Workpaper
2200-0430.000 - Shared Cybersecurity

Southern California Gas Company
2024 GRC - REVISED
Shared Services Workpapers

Area: CYBERSECURITY
 Witness: Lance R. Mueller
 Category: A. Cybersecurity
 Category-Sub: 1. Cybersecurity
 Cost Center: 2200-0430.000 - Shared Cybersecurity

Activity Description:

The shared SCG cybersecurity costs represent labor and non-labor for the cybersecurity area where costs are shared between multiple business units and support the objectives of operating and maintaining the company infrastructure systems safely and reliably. Cybersecurity supports the necessary resources and systems maintenance needs of the following functional cybersecurity areas: threat intelligence; monitoring, alerting and detection; systems operations; incident response; insider threat; vulnerability management; assessments; compliance; risk management; program office; consulting and engineering.

Forecast Explanations:

Labor - Base YR Rec

Historical costs have fluctuated between various workgroups as a result of either internal organizational changes, transfers of responsibilities, or shifting of cost drivers from one area of the Cybersecurity department to another. Therefore, base year methodology is most appropriate because the base year expenditures closely represent the future state of Cybersecurity forecasts.

Non-Labor - Base YR Rec

Historical costs, such as contractor services and cost of software and/or hardware systems maintenance, have fluctuated as a result of shifting cost drivers in the Cybersecurity department. Therefore, base year methodology is most appropriate because the base year expenditures closely represent the future state of Cybersecurity forecasts.

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		517	751	747	1,049	1,363	1,483	1,483	1,483	
Non-Labor		619	297	130	166	2,488	2,487	2,487	2,487	
NSE		0	0	0	0	0	0	0	0	
Total		1,136	1,048	877	1,215	3,850	3,970	3,970	3,970	
FTE		2.7	3.8	4.0	6.1	10.2	11.2	11.2	11.2	

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - REVISED
Shared Services Workpapers

Area: CYBERSECURITY
 Witness: Lance R. Mueller
 Category: A. Cybersecurity
 Category-Sub: 1. Cybersecurity
 Cost Center: 2200-0430.000 - Shared Cybersecurity

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	14	1,270	0	1,284	0.0	14	1,270	0	1,284	0.0
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	1,349	1,217	0	2,566	10.2	1,469	1,217	0	2,686	11.2
Total Incurred	1,363	2,487	0	3,850	10.2	1,483	2,487	0	3,970	11.2
% Allocation										
Retained	53.20%	53.20%				53.20%	53.20%			
SEU	43.09%	43.09%				43.09%	43.09%			
CORP	3.71%	3.71%				3.71%	3.71%			
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	14	1,270	0	1,284	0.0	14	1,270	0	1,284	0.0
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	1,469	1,217	0	2,686	11.2	1,469	1,217	0	2,686	11.2
Total Incurred	1,483	2,487	0	3,970	11.2	1,483	2,487	0	3,970	11.2
% Allocation										
Retained	53.20%	53.20%				53.20%	53.20%			
SEU	43.09%	43.09%				43.09%	43.09%			
CORP	3.71%	3.71%				3.71%	3.71%			
Unreg	0.00%	0.00%				0.00%	0.00%			

Cost Center Allocation Percentage Drivers/Methodology:

Cost Center Allocation Percentage for 2021

Allocations are based on a weighted average of all cost centers within the workpaper.

Cost Center Allocation Percentage for 2022

Allocations are based on a weighted average of all cost centers within the workpaper.

Cost Center Allocation Percentage for 2023

Allocations are based on a weighted average of all cost centers within the workpaper.

Cost Center Allocation Percentage for 2024

Allocations are based on a weighted average of all cost centers within the workpaper.

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - REVISED
Shared Services Workpapers

Area: CYBERSECURITY
 Witness: Lance R. Mueller
 Category: A. Cybersecurity
 Category-Sub: 1. Cybersecurity
 Cost Center: 2200-0430.000 - Shared Cybersecurity

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	1,363	1,363	1,363	120	120	120	1,483	1,483	1,483
Non-Labor	Base YR Rec	2,488	2,488	2,488	0	0	0	2,488	2,488	2,488
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
Total		3,850	3,850	3,850	120	120	120	3,970	3,970	3,970
FTE	Base YR Rec	10.2	10.2	10.2	1.0	1.0	1.0	11.2	11.2	11.2

Forecast Adjustment Details:

Year	Labor	NLbr	NSE	Total	FTE	Adj Type
2022	120	0	0	120	1.0	1-Sided Adj
Explanation:	Labor increases are necessary to expand, maintain, and effectively operate our Cybersecurity program, tools, systems, and applications					
2022 Total	120	0	0	120	1.0	
2023	120	0	0	120	1.0	1-Sided Adj
Explanation:	Labor increases are necessary to expand, maintain, and effectively operate our Cybersecurity program, tools, systems, and applications.					
2023 Total	120	0	0	120	1.0	
2024	120	0	0	120	1.0	1-Sided Adj
Explanation:	Labor increases are necessary to expand, maintain, and effectively operate our Cybersecurity program, tools, systems, and applications.					
2024 Total	120	0	0	120	1.0	

Note: Totals may include rounding differences.

SCG/CYBERSECURITY/Exh No:SCG-22-WP-R/Witness: L. Mueller

Southern California Gas Company
2024 GRC - REVISED
Shared Services Workpapers

Area: CYBERSECURITY
Witness: Lance R. Mueller
Category: A. Cybersecurity
Category-Sub: 1. Cybersecurity
Cost Center: 2200-0430.000 - Shared Cybersecurity

Determination of Adjusted-Recorded (Incurred Costs):

	2017 (\$000)	2018 (\$000)	2019 (\$000)	2020 (\$000)	2021 (\$000)
Recorded (Nominal \$)*					
Labor	282	373	399	645	1,011
Non-Labor	490	173	30	32	2,082
NSE	0	0	0	0	0
Total	772	546	429	677	3,093
FTE	2.2	3.1	3.3	5.0	7.6
Adjustments (Nominal \$) **					
Labor	118	219	195	211	147
Non-Labor	69	101	93	127	405
NSE	0	0	0	0	0
Total	187	320	288	337	552
FTE	0.1	0.1	0.1	0.1	1.1
Recorded-Adjusted (Nominal \$)					
Labor	400	592	594	856	1,158
Non-Labor	560	275	123	159	2,488
NSE	0	0	0	0	0
Total	959	867	717	1,015	3,646
FTE	2.3	3.2	3.4	5.1	8.6
Vacation & Sick (Nominal \$)					
Labor	68	102	113	151	204
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	68	102	113	151	204
FTE	0.4	0.6	0.6	1.0	1.6
Escalation to 2021\$					
Labor	50	57	40	43	0
Non-Labor	60	22	7	7	0
NSE	0	0	0	0	0
Total	109	79	47	50	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2021\$)					
Labor	517	751	747	1,049	1,363
Non-Labor	619	297	130	166	2,488
NSE	0	0	0	0	0
Total	1,136	1,048	877	1,215	3,850
FTE	2.7	3.8	4.0	6.1	10.2

* After company-wide exclusions of Non-GRC costs

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

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - REVISED
Shared Services Workpapers

Area: CYBERSECURITY
 Witness: Lance R. Mueller
 Category: A. Cybersecurity
 Category-Sub: 1. Cybersecurity
 Cost Center: 2200-0430.000 - Shared Cybersecurity

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs						
	Years	2017	2018	2019	2020	2021
Labor		118	219	195	211	147
Non-Labor		69	101	93	127	405
NSE		0	0	0	0	0
	Total	187	320	288	337	552
FTE		0.1	0.1	0.1	0.1	1.1

Detail of Adjustments to Recorded:

Year	Labor	NLbr	NSE	FTE	Adj Type
2017	118	69	0	0.1	1-Sided Adj
Explanation:	Adjusting for historical				
2017 Total	118	69	0	0.1	
2018	219	101	0	0.1	1-Sided Adj
Explanation:	Adjusting for historical				
2018 Total	219	101	0	0.1	
2019	195	93	0	0.1	1-Sided Adj
Explanation:	Adjusting for historical				
2019 Total	195	93	0	0.1	
2020	0	-2	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2020	211	129	0	0.1	1-Sided Adj
Explanation:	Adjusting for historical				
2020 Total	211	127	0	0.1	
2021	0	-3	0	0.0	1-Sided Adj
Explanation:	Incremental COVID-related costs that are anticipated to be requested for recovery through a non-GRC Catastrophic Event Memorandum Account (CEMA).				
2021	44	402	0	0.2	CCTR Transf From 2200-0835.000
Explanation:	Cyber only has USS workpaper. No NSS. Transferring NSS cost center to USS cost center/workpaper.				
2021	103	6	0	0.9	CCTR Transf From 2200-0837.000
Explanation:	Cyber only has USS workpaper. No NSS. Transferring NSS cost center to USS cost center/workpaper. (Screenshot #5)				

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - REVISED
Shared Services Workpapers

Area: CYBERSECURITY
Witness: Lance R. Mueller
Category: A. Cybersecurity
Category-Sub: 1. Cybersecurity
Cost Center: 2200-0430.000 - Shared Cybersecurity

<u>Year</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>
2021 Total	147	405	0	1.1	

Note: Totals may include rounding differences.

Southern California Gas Company
2024 GRC - REVISED
Shared Services Workpapers

Area: CYBERSECURITY
 Witness: Lance R. Mueller
 Category: A. Cybersecurity
 Category-Sub: 1. Cybersecurity
 Cost Center: 2200-0430.000 - Shared Cybersecurity

RAMP Item # 1

RAMP Activity

RAMP Chapter: SCG-Risk-6 Cybersecurity
 RAMP Line Item ID: C01-C05
 RAMP Line Item Name: All Mitigations (C01-C05)
 Tranche(/s): Tranche1: Overall

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	3,850	3,939	3,847	3,935	9,123	11,657

Cost Estimate Changes from RAMP:

Modeling all five Cyber RAMP mitigations (C01-C05) in this one workpaper. The RAMP range is the sum of ranges for all five mitigations. Dollars reflect pre-allocated forecast values while RAMP ranges reflect post-allocation values between SoCalGas and SDG&E.

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 N/A	0.00	0.00	0.00	0.00	0.00	0.00

Work Unit Changes from RAMP:

Units were not defined during RAMP filing. Labor can be identified by forecasted FTEs, and for non-labor there is no single unit defined.

Risk Spend Efficiency (RSE)

	GRC RSE	RAMP RSE
Tranche 1	368.000	112.000

RSE Changes from RAMP:

Southern California Gas Company
2024 GRC - REVISED
Shared Services Workpapers

Area: CYBERSECURITY
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Category: A. Cybersecurity
Category-Sub: 1. Cybersecurity
Cost Center: 2200-0430.000 - Shared Cybersecurity

The RSEs for Cybersecurity were calculated at the activity/mitigation level, and have not been split up between O&M and Capital. The respective RSE's for Cybersecurity Mitigations are listed below. GRC RSE's = Internal Defenses: 110; Obsolete Information Technology (IT) Infrastructure and Application Replacement: 129; Operational Technology: 368; Perimeter Defenses: 134; Sensitive Data Protection: 104 RAMP RSE's = 95 Internal Defenses, 102 Obsolete Information Technology (IT) Infrastructure and Application Replacement, 112 Operational Technology, 160 Perimeter Defenses, 62 Sensitive Data Protection

Supplemental Workpapers for Workpaper 2200-0430.000

SCG-22

Supplemental Workpaper for Shared Services Allocation Percentage

Area: Cybersecurity
 Witness: Lance Mueller
 Workpaper: 2200-0430

2021											
Workpaper	Cost Center	2021 Forecast	SDGE %	SCG %	Corp %	Unreg			UNREG		Methodology
						%	SDGE \$	SCG \$	CORP \$	\$	
2200-0430.000	2200-0944	\$ -	0%	0%	0%		-	-	-		Multi-Factor
	2200-0901	\$ -	0%	0%	0%		-	-	-		Employee Matrix
	2200-0835	\$ 446,545	43%	53%	4%		192,416	237,562	16,567		N/A
	2200-0426	\$ -	0%	0%	0%		-	-	-		Multi-Factor
	2200-0837	\$ 109,446	43%	53%	4%		47,160	58,225	4,060		N/A
	2200-0430	\$ 3,093,336	43%	53%	4%		1,332,919	1,645,655	114,763		Multi-Factor
	2200-2469	\$ -	0%	0%	0%		-	-	-		Employee Matrix
	2200-2513	\$ -	0%	0%	0%		-	-	-		Employee Matrix
Grand Total		3,649,328					1,572,495	1,941,442	135,390	-	

							43.09%	53.20%	3.71%	0.00%	2021 Weighted Average of 2200-0430.000
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2022											
Workpaper	Cost Center	2022 Forecast	SDGE %	SCG %	Corp %	Unreg			UNREG		Methodology
						%	SDGE \$	SCG \$	CORP \$	\$	
2200-0430.000	2200-0944	\$ 2,490,652	43%	53%	4%		1,073,221.93	1,325,027	92,403		Multi-Factor
	2200-0901	\$ 73,662	43%	53%	4%		31,740.90	39,188	2,733		Employee Matrix
	2200-0835	\$ 39,740	43%	53%	4%		17,123.93	21,142	1,474		N/A
	2200-0426	\$ 136,922	43%	53%	4%		58,999.64	72,842	5,080		Multi-Factor
	2200-0837	\$ 191,873	43%	53%	4%		82,678.21	102,077	7,118		N/A
	2200-0430	\$ 133,823	43%	53%	4%		57,664.22	71,194	4,965		Multi-Factor
	2200-2469	\$ 599,814	43%	53%	4%		258,459.78	319,101	22,253		Employee Matrix
	2200-2513	\$ 72,031	43%	53%	4%		31,038.07	38,320	2,672		Employee Matrix
Grand Total		3,738,516					1,610,927	1,988,891	138,699	-	

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Supplemental Workpaper for Shared Services Allocation Percentage

Area: Cybersecurity
 Witness: Lance Mueller
 Workpaper: 2200-0430

43.09%	53.20%	3.71%	0.00%	2022 Weighted Average of 2200-0430.000
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2023											
Workpaper	Cost Center	2023 Forecast	SDGE %	SCG %	Corp %	Unreg			UNREG		Methodology
						%	SDGE \$	SCG \$	CORP \$	\$	
2200-0430.000	2200-0944	\$ 2,343,362	43%	53%	4%		1,009,755	1,246,668	86,939		Multi-Factor
	2200-0901	\$ 73,662	43%	53%	4%		31,741	39,188	2,733		Employee Matrix
	2200-0835	\$ 39,740	43%	53%	4%		17,124	21,142	1,474		N/A
	2200-0426	\$ 136,922	43%	53%	4%		59,000	72,842	5,080		Multi-Factor
	2200-0837	\$ 191,873	43%	53%	4%		82,678	102,077	7,118		N/A
	2200-0430	\$ 133,823	43%	53%	4%		57,664	71,194	4,965		Multi-Factor
	2200-2469	\$ 655,383	43%	53%	4%		282,405	348,664	24,315		Employee Matrix
	2200-2513	\$ 72,031	43%	53%	4%		31,038	38,320	2,672		Employee Matrix
Grand Total		3,646,795					1,571,404	1,940,095	135,296	-	

43.09%	53.20%	3.71%	0.00%	2023 Weighted Average of 2200-0430.000
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2024											
Workpaper	Cost Center	2024 Forecast	SDGE %	SCG %	Corp %	Unreg			UNREG		Methodology
						%	SDGE \$	SCG \$	CORP \$	\$	
2200-0430.000	2200-0944	\$ 2,343,362	43%	53%	4%		1,009,755	1,246,668	86,939		Multi-Factor
	2200-0901	\$ 73,662	43%	53%	4%		31,741	39,188	2,733		Employee Matrix
	2200-0835	\$ 39,740	43%	53%	4%		17,124	21,142	1,474		N/A
	2200-0426	\$ 224,751	43%	53%	4%		96,845	119,568	8,338		Multi-Factor
	2200-0837	\$ 191,873	43%	53%	4%		82,678	102,077	7,118		N/A
	2200-0430	\$ 133,823	43%	53%	4%		57,664	71,194	4,965		Multi-Factor
	2200-2469	\$ 655,383	43%	53%	4%		282,405	348,664	24,315		Employee Matrix
	2200-2513	\$ 72,031	43%	53%	4%		31,038	38,320	2,672		Employee Matrix

SCG-22
Supplemental Workpaper for Shared Services Allocation Percentage

Area: Cybersecurity
 Witness: Lance Mueller
 Workpaper: 2200-0430
 Grand Total

3,734,624	1,609,250	1,986,820	138,555	-
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43.09%	53.20%	3.71%	0.00%	2024 Weighted Average of 2200-0430.000
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