

Application of SOUTHERN CALIFORNIA GAS)
COMPANY for authority to update its gas revenue)
requirement and base rates)
effective January 1, 2019 (U 904-G))

Application No. 17-10-008

Exhibit No.: (SCG-27-WP-R)

REVISED WORKPAPERS TO
PREPARED DIRECT TESTIMONY
OF GAVIN H. WORDEN
ON BEHALF OF SOUTHERN CALIFORNIA GAS COMPANY

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

DECEMBER 2017



2019 General Rate Case - REVISED
INDEX OF WORKPAPERS

Exhibit SCG-27-WP-R - CYBER SECURITY

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Overall Summary For Exhibit No. SCG-27-WP-R

Area:	CYBER SECURITY
Witness:	Gavin H. Worden

Description	In 2016 \$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2016	2017	2018	2019
<i>Non-Shared Services</i>	0	0	0	0
<i>Shared Services</i>	238	708	708	708
Total	238	708	708	708

Note: Totals may include rounding differences.

Southern California Gas Company
 2019 GRC - REVISED
 Shared Services Workpapers

Area: CYBER SECURITY
 Witness: Gavin H. Worden

Summary of Shared Services Workpapers:

Description	In 2016 \$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2016	2017	2018	2019
A. ACCESS MANAGEMENT	238	708	708	708
A. DELETE	0	0	0	0
Total	238	708	708	708

Note: Totals may include rounding differences.

Southern California Gas Company
2019 GRC - REVISED
Shared Services Workpapers

Area: CYBER SECURITY
 Witness: Gavin H. Worden
 Category: A. ACCESS MANAGEMENT
 Cost Center: 2200-2469.000

Summary for Category: A. ACCESS MANAGEMENT

	In 2016\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2016	2017	2018	2019
Labor	102	332	332	332
Non-Labor	137	377	377	377
NSE	0	0	0	0
Total	<u>239</u>	<u>709</u>	<u>709</u>	<u>709</u>
FTE	0.7	2.7	2.7	2.7

Cost Centers belonging to this Category:

2200-2469.000 IT INFORMATION SECURITY SCG

Labor	102	332	332	332
Non-Labor	137	377	377	377
NSE	0	0	0	0
Total	<u>239</u>	<u>709</u>	<u>709</u>	<u>709</u>
FTE	0.7	2.7	2.7	2.7

Note: Totals may include rounding differences.

Beginning of Workpaper
2200-2469.000 - IT INFORMATION SECURITY SCG

Southern California Gas Company
2019 GRC - REVISED
Shared Services Workpapers

Area: CYBER SECURITY
 Witness: Gavin H. Worden
 Category: A. ACCESS MANAGEMENT
 Category-Sub: 1. ACCESS MANAGEMENT
 Cost Center: 2200-2469.000 - IT INFORMATION SECURITY SCG

Activity Description:

The Security Engineering section provides enterprise-scale security functions and integration services for business, operational, and IT technology assets.

Forecast Explanations:

Labor - Base YR Rec

This method is most appropriate because the base year most accurately represents the current state of the IT workpapers. 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 IT department to another.

Non-Labor - Base YR Rec

This method is most appropriate because the base year most accurately represents the current state of the IT workpapers. 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 IT department to another.

NSE - Base YR Rec

N/A

Summary of Results:

		In 2016\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2012	2013	2014	2015	2016	2017	2018	2019	
Labor		389	646	544	260	102	332	332	332	
Non-Labor		16	7	246	56	137	377	377	377	
NSE		0	0	0	0	0	0	0	0	
Total		405	653	790	316	238	709	709	709	
FTE		4.7	5.8	5.0	2.3	0.7	2.7	2.7	2.7	

Note: Totals may include rounding differences.

Southern California Gas Company
2019 GRC - REVISED
Shared Services Workpapers

Area: CYBER SECURITY
 Witness: Gavin H. Worden
 Category: A. ACCESS MANAGEMENT
 Category-Sub: 1. ACCESS MANAGEMENT
 Cost Center: 2200-2469.000 - IT INFORMATION SECURITY SCG

Cost Center Allocations (Incurred Costs):

	2016 Adjusted-Recorded					2017 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	0	0	0	0	0.0	0	0	0	0	0.0
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	102	137	0	239	0.7	332	377	0	709	2.7
Total Incurred	102	137	0	239	0.7	332	377	0	709	2.7
% Allocation										
Retained	61.91%	61.91%				61.91%	61.91%			
SEU	34.50%	34.50%				34.50%	34.50%			
CORP	3.59%	3.59%				3.59%	3.59%			
Unreg	0.00%	0.00%				0.00%	0.00%			

	2018 Adjusted-Forecast					2019 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	0	0	0	0	0.0	0	0	0	0	0.0
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	332	377	0	709	2.7	332	377	0	709	2.7
Total Incurred	332	377	0	709	2.7	332	377	0	709	2.7
% Allocation										
Retained	61.91%	61.91%				61.91%	61.91%			
SEU	34.50%	34.50%				34.50%	34.50%			
CORP	3.59%	3.59%				3.59%	3.59%			
Unreg	0.00%	0.00%				0.00%	0.00%			

Cost Center Allocation Percentage Drivers/Methodology:

Cost Center Allocation Percentage for 2016

Coming soon...

Cost Center Allocation Percentage for 2017

Coming soon...

Cost Center Allocation Percentage for 2018

Coming soon...

Cost Center Allocation Percentage for 2019

Coming soon...

Note: Totals may include rounding differences.

Southern California Gas Company
2019 GRC - REVISED
Shared Services Workpapers

Area: CYBER SECURITY
 Witness: Gavin H. Worden
 Category: A. ACCESS MANAGEMENT
 Category-Sub: 1. ACCESS MANAGEMENT
 Cost Center: 2200-2469.000 - IT INFORMATION SECURITY SCG

Summary of Adjustments to Forecast:

In 2016 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2017	2018	2019	2017	2018	2019	2017	2018	2019
Labor	Base YR Rec	102	102	102	230	230	230	332	332	332
Non-Labor	Base YR Rec	137	137	137	240	240	240	377	377	377
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
Total		238	238	238	470	470	470	708	708	708
FTE	Base YR Rec	0.7	0.7	0.7	2.0	2.0	2.0	2.7	2.7	2.7

Forecast Adjustment Details:

Year	Adj Group	Labor	NLbr	NSE	Total	FTE	Adj Type	RefID
2017	RAMP Incremental	115	0	0	115	1.0	1-Sided Adj	MEHLERS20161116150018827
Explanation: RAMP - Cyber Security (RAMP Chapter 03) Add x2 Firewall Admin resources (50% Capital)								
2017	RAMP Incremental	115	0	0	115	1.0	1-Sided Adj	MEHLERS20161116150143380
Explanation: RAMP - Cyber Security (RAMP Chapter 03) Filling of vacant Infrastructure Technologist position								
2017	RAMP Incremental	0	240	0	240	0.0	1-Sided Adj	MEHLERS20170303140117487
Explanation: RAMP - Cyber Security (RAMP Chapter 03) Addition of contracted Firewall Admin.								
2017 Total		230	240	0	470	2.0		
2018	RAMP Incremental	115	0	0	115	1.0	1-Sided Adj	MEHLERS20161130181313013
Explanation: RAMP - Cyber Security (RAMP Chapter 03) Add x2 Firewall Admin resources (50% Capital)								
2018	RAMP Incremental	115	0	0	115	1.0	1-Sided Adj	MEHLERS20161130181359497
Explanation: RAMP - Cyber Security (RAMP Chapter 03) Filling of vacant Infrastructure Technologist position								
2018	RAMP Incremental	0	240	0	240	0.0	1-Sided Adj	MEHLERS20170309180108623
Explanation: RAMP - Cyber Security (RAMP Chapter 03) Addition of contracted Firewall Admin.								
2018 Total		230	240	0	470	2.0		
2019	RAMP Incremental	115	0	0	115	1.0	1-Sided Adj	MEHLERS20161130181327203
Explanation: RAMP - Cyber Security (RAMP Chapter 03) Add x2 Firewall Admin resources (50% Capital)								

Note: Totals may include rounding differences.

SCG/CYBER SECURITY/Exh No:SCG-27-WP-R/Witness: G. Worden

Southern California Gas Company
2019 GRC - REVISED
Shared Services Workpapers

Area: CYBER SECURITY
 Witness: Gavin H. Worden
 Category: A. ACCESS MANAGEMENT
 Category-Sub: 1. ACCESS MANAGEMENT
 Cost Center: 2200-2469.000 - IT INFORMATION SECURITY SCG

<u>Year</u>	<u>Adj Group</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj_Type</u>	<u>RefID</u>
2019	RAMP Incremental	115	0	0	115	1.0	1-Sided Adj	MEHLERS20161130181410480
Explanation: RAMP - Cyber Security (RAMP Chapter 03) Filling of vacant Infrastructure Technologist position								
2019	RAMP Incremental	0	240	0	240	0.0	1-Sided Adj	MEHLERS20170309180253257
Explanation: RAMP - Cyber Security (RAMP Chapter 03) Addition of contracted Firewall Admin.								
2019 Total		230	240	0	470	2.0		

Note: Totals may include rounding differences.

Southern California Gas Company
2019 GRC - REVISED
Shared Services Workpapers

Area: CYBER SECURITY
Witness: Gavin H. Worden
Category: A. ACCESS MANAGEMENT
Category-Sub: 1. ACCESS MANAGEMENT
Cost Center: 2200-2469.000 - IT INFORMATION SECURITY SCG

Determination of Adjusted-Recorded (Incurred Costs):

	2012 (\$000)	2013 (\$000)	2014 (\$000)	2015 (\$000)	2016 (\$000)
Recorded (Nominal \$)*					
Labor	0	533	457	354	87
Non-Labor	0	7	241	56	137
NSE	0	0	0	0	0
Total	0	539	698	409	224
FTE	0.0	5.0	4.3	2.0	0.6
Adjustments (Nominal \$) **					
Labor	319	0	0	-133	0
Non-Labor	15	0	0	0	0
NSE	0	0	0	0	0
Total	334	0	0	-133	0
FTE	4.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Nominal \$)					
Labor	319	533	457	221	87
Non-Labor	15	7	241	56	137
NSE	0	0	0	0	0
Total	334	539	698	276	224
FTE	4.0	5.0	4.3	2.0	0.6
Vacation & Sick (Nominal \$)					
Labor	48	89	75	36	14
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	48	89	75	36	14
FTE	0.7	0.8	0.7	0.3	0.1
Escalation to 2016\$					
Labor	22	25	12	3	0
Non-Labor	1	0	5	1	0
NSE	0	0	0	0	0
Total	23	25	17	4	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2016\$)					
Labor	389	646	544	260	102
Non-Labor	16	7	246	56	137
NSE	0	0	0	0	0
Total	405	653	790	316	238
FTE	4.7	5.8	5.0	2.3	0.7

* After company-wide exclusions of Non-GRC costs

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

Note: Totals may include rounding differences.

Southern California Gas Company
2019 GRC - REVISED
Shared Services Workpapers

Area: CYBER SECURITY
 Witness: Gavin H. Worden
 Category: A. ACCESS MANAGEMENT
 Category-Sub: 1. ACCESS MANAGEMENT
 Cost Center: 2200-2469.000 - IT INFORMATION SECURITY SCG

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs						
Years	2012	2013	2014	2015	2016	
Labor	319	0	0	-133	0	
Non-Labor	15	0	0	0	0	
NSE	0	0	0	0	0	
Total	334	0	0	-133	0	
FTE	4.0	0.0	0.0	0.0	0.0	

Detail of Adjustments to Recorded:

Year	Adj Group	Labor	NLbr	NSE	FTE	Adj Type	RefID
2012	Other	190	9	0	2.0	CCTR Transf From 2100-3775.000	MEHLERS20170223155412793
Explanation: Employee transfer from SDG&E to SCG (2200-2469)							
2012	Other	78	3	0	1.0	CCTR Transf From 2100-3101.000	MEHLERS20170223160921417
Explanation: Employee transfer from SDG&E to SCG (2200-2469)							
2012	Other	51	3	0	1.0	CCTR Transf From 2100-3096.000	SOMAHONY20161104175125350
Explanation: Employee transfer from SDG&E to SCG (2200-2469)							
2012 Total		319	15	0	4.0		
2013 Total		0	0	0	0.0		
2014 Total		0	0	0	0.0		
2015	Other	-133	0	0	0.0	1-Sided Adj	MEHLERS20161116111548817
Explanation: Removal of 2015 severance payout.							
2015 Total		-133	0	0	0.0		
2016 Total		0	0	0	0.0		

Note: Totals may include rounding differences.

Southern California Gas Company
2019 GRC - REVISED
Shared Services Workpapers

Area: CYBER SECURITY
Witness: Gavin H. Worden
Category: A. ACCESS MANAGEMENT
Category-Sub: 1. ACCESS MANAGEMENT
Cost Center: 2200-2469.000 - IT INFORMATION SECURITY SCG

RAMP Item # 1

Ref ID: MEHLERS20161116150018827

RAMP Chapter: SCG-3

Program Name: Cyber Security - Firewall Admin

Program Description: IS Engineering

Risk/Mitigation:

Risk: Cyber Security

Mitigation: See Subsidiary Workpaper

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
High	0	0	0

Funding Source: CPUC-GRC

Forecast Method: Zero-Based

Work Type: Non-Mandated

Work Type Citation: See Subsidiary Workpaper

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation: 0

Southern California Gas Company
2019 GRC - REVISED
Shared Services Workpapers

Area: CYBER SECURITY
Witness: Gavin H. Worden
Category: A. ACCESS MANAGEMENT
Category-Sub: 1. ACCESS MANAGEMENT
Cost Center: 2200-2469.000 - IT INFORMATION SECURITY SCG

RAMP Item # 2

Ref ID: MEHLERS20161116150143380

RAMP Chapter: SCG-3

Program Name: Cyber Security - Infra Tech

Program Description: IS Engineering

Risk/Mitigation:

Risk: Cyber Security

Mitigation: See Subsidiary Workpaper

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
High	0	0	0

Funding Source: CPUC-GRC

Forecast Method: Zero-Based

Work Type: Non-Mandated

Work Type Citation: See Subsidiary Workpaper

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation: 0

Southern California Gas Company
2019 GRC - REVISED
Shared Services Workpapers

Area: CYBER SECURITY
Witness: Gavin H. Worden
Category: A. ACCESS MANAGEMENT
Category-Sub: 1. ACCESS MANAGEMENT
Cost Center: 2200-2469.000 - IT INFORMATION SECURITY SCG

RAMP Item # 3

Ref ID: MEHLERS20170303110746050

RAMP Chapter: SCG-3

Program Name: Cyber Security

Program Description: IS Engineering

Risk/Mitigation:

Risk: Cyber Security

Mitigation: See Subsidiary Workpaper

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
High	0	0	0

Funding Source: CPUC-GRC

Forecast Method: Trend

Work Type: Non-Mandated

Work Type Citation: See Subsidiary Workpaper

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 239

Explanation: 0

Southern California Gas Company
2019 GRC - REVISED
Shared Services Workpapers

Area: CYBER SECURITY
Witness: Gavin H. Worden
Category: A. ACCESS MANAGEMENT
Category-Sub: 1. ACCESS MANAGEMENT
Cost Center: 2200-2469.000 - IT INFORMATION SECURITY SCG

RAMP Item # 4

Ref ID: MEHLERS20170303140117487

RAMP Chapter: SCG-3

Program Name: Cyber Security - Contract Firewall Admin

Program Description: IS Engineering

Risk/Mitigation:

Risk: Cyber Security

Mitigation: See Subsidiary Workpaper

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
High	0	0	0

Funding Source: CPUC-GRC

Forecast Method: Trend

Work Type: Non-Mandated

Work Type Citation: See Subsidiary Workpaper

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation: 0

Supplemental Workpapers for Workpaper 2200-2469.000

Southern California Gas Company
2019 GRC - REVISED
Shared Services Workpapers

		Cost Center O&M by Mitigation (000s)																		
Company	Cost Center	L/NL	2017					2018					2019							
			Identify	Protect	Detect	Respond	Recover	Total	Identify	Protect	Detect	Respond	Recover	Total	Identify	Protect	Detect	Respond	Recover	Total
2100	2100-3101	Labor	182	540	17	118	10	868	182	540	17	118	10	868	182	540	17	118	10	868
2100	2100-3101	Non-Labor	30	38	2	19	0	89	30	38	2	19	0	89	30	38	2	19	0	89
2100	2100-3101 Total		212	578	19	138	10	957	212	578	19	138	10	957	212	578	19	138	10	957
2100	2100-3763	Labor	89	72	16	98	6	282	89	72	16	98	6	282	89	72	16	98	6	282
2100	2100-3763	Non-Labor	32	15	5	32	1	85	32	15	5	32	1	85	32	15	5	32	1	85
2100	2100-3763 Total		122	87	21	130	7	367	122	87	21	130	7	367	122	87	21	130	7	367
2100	2100-3774	Labor	153	793	38	44	3	1,031	162	838	40	46	3	1,089	162	838	40	46	3	1,089
2100	2100-3774	Non-Labor	114	220	4	6	0	344	114	220	4	6	0	344	114	220	4	6	0	344
2100	2100-3774 Total		267	1,013	42	50	3	1,375	276	1,058	44	52	3	1,433	276	1,058	44	52	3	1,433
2100	2100-3775	Labor	218	458	733	229	6	1,643	225	474	758	237	7	1,701	225	474	758	237	7	1,701
2100	2100-3775	Non-Labor	8	22	16	10	1	56	8	22	16	10	1	56	8	22	16	10	1	56
2100	2100-3775 Total		226	480	748	238	7	1,699	233	496	774	247	7	1,757	233	496	774	247	7	1,757
2100	2100-3781	Non-Labor	405	945	540	810	0	2,700	428	998	570	855	0	2,850	506	1,180	674	1,011	0	3,370
2100	2100-3781 Total		405	945	540	810	0	2,700	428	998	570	855	0	2,850	506	1,180	674	1,011	0	3,370
2100	2100-3976	Labor	5	4	1	6	0	16	5	4	1	6	0	16	5	4	1	6	0	16
2100	2100-3976	Non-Labor	2	1	0	2	0	6	2	1	0	2	0	6	2	1	0	2	0	6
2100	2100-3976 Total		7	5	1	8	0	22	7	5	1	8	0	22	7	5	1	8	0	22
2100 Total	Labor		648	1,868	805	494	25	3,840	664	1,929	833	505	25	3,956	664	1,929	833	505	25	3,956
2100 Total	Non-Labor		592	1,240	567	879	2	3,280	614	1,293	597	924	2	3,430	692	1,475	701	1,080	2	3,950
2100 Total	Total		1,239	3,108	1,372	1,373	28	7,120	1,278	3,221	1,430	1,429	28	7,386	1,356	3,403	1,534	1,585	28	7,906
2200	2200-2469	Labor	19	301	0	12	0	332	19	301	0	12	0	332	19	301	0	12	0	332
2200	2200-2469	Non-Labor	146	228	1	1	0	377	146	228	1	1	0	377	146	228	1	1	0	377
2200	2200-2469 Total		166	530	1	13	0	709	166	530	1	13	0	709	166	530	1	13	0	709
2200 Total	Labor		19	301	0	12	0	332	19	301	0	12	0	332	19	301	0	12	0	332
2200 Total	Non-Labor		146	228	1	1	0	377	146	228	1	1	0	377	146	228	1	1	0	377
2200 Total	Total		166	530	1	13	0	709	166	530	1	13	0	709	166	530	1	13	0	709
Grand Total	Labor		667	2,169	805	506	25	4,172	683	2,230	833	516	25	4,288	683	2,230	833	516	25	4,288
Grand Total	Non-Labor		738	1,468	567	881	2	3,657	760	1,521	597	926	2	3,807	838	1,703	701	1,082	2	4,327
Grand Total	Total		1,405	3,637	1,373	1,386	28	7,829	1,444	3,751	1,431	1,442	28	8,095	1,522	3,933	1,535	1,598	28	8,615