

Application of SAN DIEGO GAS & ELECTRIC)
COMPANY for authority to update its gas and)
electric revenue requirement and base rates)
effective January 1, 2016 (U 902-M))

Application No. 14-11-____
Exhibit No.: (SDG&E-06-WP)

WORKPAPERS TO
PREPARED DIRECT TESTIMONY
OF RAYMOND K. STANFORD
ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

NOVEMBER 2014



2016 General Rate Case - APP
INDEX OF WORKPAPERS

Exhibit SDG&E-06-WP - ENGINEERING

DOCUMENT	PAGE
Overall Summary For Exhibit No. SDG&E-06-WP	1
<i>Summary of Non-Shared Services Workpapers</i>	2
Category: A. Gas Engineering	3
..1EN000.000 - GAS ENGINEERING	4
Category: B. Public Awareness	10
..1EN003.000 - PUBLIC AWARENESS	11
<i>Summary of Shared Services Workpapers</i>	16
Category: A. Gas Engineering	17
..2100-3563.000 - GAS ENGINEERING CODES & STANDARDS	18
<i>Appendix A: List of Non-Shared Cost Centers</i>	24

Overall Summary For Exhibit No. SDG&E-06-WP

Area:	ENGINEERING
Witness:	Raymond K. Stanford

Description	In 2013 \$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2013	2014	2015	2016
Non-Shared Services	261	570	682	718
Shared Services	8	41	77	92
Total	269	611	759	810

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
 2016 GRC - APP
 Non-Shared Service Workpapers

Area: ENGINEERING
 Witness: Raymond K. Stanford

Summary of Non-Shared Services Workpapers:

Description	In 2013 \$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2013	2014	2015	2016
A. Gas Engineering	1	223	278	257
B. Public Awareness	260	347	404	461
Total	261	570	682	718

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING
Witness: Raymond K. Stanford
Category: A. Gas Engineering
Workpaper: 1EN000.000

Summary for Category: A. Gas Engineering

	In 2013\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2013	2014	2015	2016
Labor	-1	85	131	119
Non-Labor	2	138	147	138
NSE	0	0	0	0
Total	<u>1</u>	<u>223</u>	<u>278</u>	<u>257</u>
FTE	0.0	0.3	1.3	1.3

Workpapers belonging to this Category:

1EN000.000 Gas Engineering

Labor	-1	85	131	119
Non-Labor	2	138	147	138
NSE	0	0	0	0
Total	<u>1</u>	<u>223</u>	<u>278</u>	<u>257</u>
FTE	0.0	0.3	1.3	1.3

Note: Totals may include rounding differences.

Beginning of Workpaper
1EN000.000 - Gas Engineering

San Diego Gas & Electric Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING
 Witness: Raymond K. Stanford
 Category: A. Gas Engineering
 Category-Sub: 1. Gas Engineering
 Workpaper: 1EN000.000 - Gas Engineering

Activity Description:

The Gas Engineering work paper group is a consolidation of the associated activities which provide engineering and supervision support to the distribution and transmission operations organizations of SDG&E. Support activities include GIS, mapping and database support as well as project and construction management. This work group captures the labor and non-labor expenses associated with these activities.

Forecast Explanations:

Labor - 5-YR Average

As the foundation for future labor expense requirements, the 5 year average was chosen. The nature of the associated activities provided by this work group, primarily Operations and Engineering Support for Transmission and Distribution in SDG&E, has proven to be the best indicator of work. This forecasting methodology serves to more accurately even out the work variations that occur. However, new enhancements are emerging and thus requiring additional staffing and resources to comply. These incremental costs have been identified and added to the 5 year average.

Non-Labor - 5-YR Average

As the foundation for future non-labor expense requirements, the 5 year average was chosen. The nature of the associated activities provided by this work group, primarily to the distribution and transmission operations organizations of SDG&E, has proven to be relatively stable over time. The 5 year average best represents the work group's funding requirements. However, new enhancements are emerging and thus requiring additional staffing and resources to comply. These incremental costs have been identified and added to the 5 year average.

NSE - 5-YR Average

There are no Non-Standard Escalation expenses in this work paper group.

Summary of Results:

		In 2013\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2009	2010	2011	2012	2013	2014	2015	2016	
Labor		0	0	0	49	-1	85	131	119	
Non-Labor		1	0	0	12	2	138	147	138	
NSE		0	0	0	0	0	0	0	0	
Total		1	0	0	61	1	223	278	257	
FTE		0.0	0.0	0.0	0.6	0.0	0.3	1.3	1.3	

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING
 Witness: Raymond K. Stanford
 Category: A. Gas Engineering
 Category-Sub: 1. Gas Engineering
 Workpaper: 1EN000.000 - Gas Engineering

Forecast Summary:

In 2013 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2014	2015	2016	2014	2015	2016	2014	2015	2016
Labor	5-YR Average	10	10	10	75	121	109	85	131	119
Non-Labor	5-YR Average	3	3	3	135	144	135	138	147	138
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
Total		13	13	13	210	265	244	223	278	257
FTE	5-YR Average	0.1	0.1	0.1	0.2	1.2	1.2	0.3	1.3	1.3

Forecast Adjustment Details:

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adi Type</u>
2014	20	69	0	89	0.2	1-Sided Adj

Adjustment is due to the O&M forecast associated with the total forecast in 2014 for phase 1 of the High Pressure Synchronization project.

2014	55	66	0	121	0.0	1-Sided Adj
------	----	----	---	-----	-----	-------------

Adjustment to account for 0.5 FTE to support Gas GIS projects and other related Gas Engineering and PCM projects.

2014 Total	75	135	0	210	0.2	
-------------------	-----------	------------	----------	------------	------------	--

2015	41	138	0	179	0.4	1-Sided Adj
------	----	-----	---	-----	-----	-------------

Adjustment is due to the O&M forecast associated with the total forecast in 2015 for phase 2 of the High Pressure Synchronization project.

2015	80	6	0	86	0.8	1-Sided Adj
------	----	---	---	----	-----	-------------

Adjustment to account for 0.5 FTE to support Gas GIS projects and other related Gas Engineering and PCM projects.

2015 Total	121	144	0	265	1.2	
-------------------	------------	------------	----------	------------	------------	--

2016	19	69	0	88	0.2	1-Sided Adj
------	----	----	---	----	-----	-------------

Adjustment is due to the O&M forecast associated with the total forecast in 2016 for phase 3 of the High Pressure Synchronization project.

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
 2016 GRC - APP
 Non-Shared Service Workpapers

Area: ENGINEERING
 Witness: Raymond K. Stanford
 Category: A. Gas Engineering
 Category-Sub: 1. Gas Engineering
 Workpaper: 1EN000.000 - Gas Engineering

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adi Type</u>
2016	90	66	0	156	1.0	1-Sided Adj

Adjustment to account for 0.5 FTE to support Gas GIS projects and other related Gas Engineering and PCM projects.

2016 Total	109	135	0	244	1.2	
-------------------	------------	------------	----------	------------	------------	--

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING
Witness: Raymond K. Stanford
Category: A. Gas Engineering
Category-Sub: 1. Gas Engineering
Workpaper: 1EN000.000 - Gas Engineering

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	0	0	0	42	-1
Non-Labor	1	0	0	12	2
NSE	0	0	0	0	0
Total	1	0	0	54	1
FTE	0.0	0.0	0.0	0.5	0.0
Adjustments (Nominal \$) **					
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	0	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Nominal \$)					
Labor	0	0	0	42	-1
Non-Labor	1	0	0	12	2
NSE	0	0	0	0	0
Total	1	0	0	54	1
FTE	0.0	0.0	0.0	0.5	0.0
Vacation & Sick (Nominal \$)					
Labor	0	0	0	6	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	6	0
FTE	0.0	0.0	0.0	0.1	0.0
Escalation to 2013\$					
Labor	0	0	0	1	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	1	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	0	0	0	49	-1
Non-Labor	1	0	0	12	2
NSE	0	0	0	0	0
Total	1	0	0	61	1
FTE	0.0	0.0	0.0	0.6	0.0

* After company-wide exclusions of Non-GRC costs

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

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING
 Witness: Raymond K. Stanford
 Category: A. Gas Engineering
 Category-Sub: 1. Gas Engineering
 Workpaper: 1EN000.000 - Gas Engineering

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs					
Years	2009	2010	2011	2012	2013
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	0	0
FTE	0.0	0.0	0.0	0.0	0.0

Detail of Adjustments to Recorded:

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>	<u>From CCtr</u>	<u>RefID</u>
2009 Total	0	0	0	0.0			
2010 Total	0	0	0	0.0			
2011 Total	0	0	0	0.0			
2012 Total	0	0	0	0.0			
2013 Total	0	0	0	0.0			

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING
Witness: Raymond K. Stanford
Category: B. Public Awareness
Workpaper: 1EN003.000

Summary for Category: B. Public Awareness

	In 2013\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2013	2014	2015	2016
Labor	0	0	0	0
Non-Labor	260	347	404	461
NSE	0	0	0	0
Total	260	347	404	461
FTE	0.0	0.0	0.0	0.0

Workpapers belonging to this Category:

1EN003.000 Public Awareness

Labor	0	0	0	0
Non-Labor	260	347	404	461
NSE	0	0	0	0
Total	260	347	404	461
FTE	0.0	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper
1EN003.000 - Public Awareness

San Diego Gas & Electric Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING
 Witness: Raymond K. Stanford
 Category: B. Public Awareness
 Category-Sub: 1. Public Awareness
 Workpaper: 1EN003.000 - Public Awareness

Activity Description:

The Public Awareness work group is focused on the mandates from 49 CFR Part 192, Section 192.616, requiring the development and implementation of a public awareness program. This program includes the identification of and communication with impacted customers and non-customers. There are specific messages, delivery methods and frequencies for the communications for each targeted audience. In addition, there are requirements for tracking of communications data analysis and effectiveness evaluations. The program impacts multiple organizations within SDG&E. Coordination of these efforts is managed within Gas Engineering.

Forecast Explanations:

Labor - 5-YR Linear

There are no labor expense requirements in this work group.

Non-Labor - 5-YR Linear

As the foundation for future non-labor expense requirements, the 5 year trend was chosen. The 5 year linear trend best represents the work group's funding requirements.

NSE - 5-YR Linear

There are no Non Standard Escalation expenses in this work group.

Summary of Results:

		In 2013\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2009	2010	2011	2012	2013	2014	2015	2016	
Labor		0	0	0	0	0	0	0	0	
Non-Labor		80	130	73	340	260	347	404	461	
NSE		0	0	0	0	0	0	0	0	
Total		80	130	73	340	260	347	404	461	
FTE		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING
 Witness: Raymond K. Stanford
 Category: B. Public Awareness
 Category-Sub: 1. Public Awareness
 Workpaper: 1EN003.000 - Public Awareness

Forecast Summary:

In 2013 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2014	2015	2016	2014	2015	2016	2014	2015	2016
Labor	5-YR Linear	0	0	0	0	0	0	0	0	0
Non-Labor	5-YR Linear	347	404	461	0	0	0	347	404	461
NSE	5-YR Linear	0	0	0	0	0	0	0	0	0
Total		347	404	461	0	0	0	347	404	461
FTE	5-YR Linear	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Forecast Adjustment Details:

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adi Type</u>
2014 Total	0	0	0	0	0.0	
2015 Total	0	0	0	0	0.0	
2016 Total	0	0	0	0	0.0	

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING
Witness: Raymond K. Stanford
Category: B. Public Awareness
Category-Sub: 1. Public Awareness
Workpaper: 1EN003.000 - Public Awareness

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	0	0	0	0	0
Non-Labor	73	121	70	334	260
NSE	0	0	0	0	0
Total	73	121	70	334	260
FTE	0.0	0.0	0.0	0.0	0.0
Adjustments (Nominal \$) **					
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	0	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Nominal \$)					
Labor	0	0	0	0	0
Non-Labor	73	121	70	334	260
NSE	0	0	0	0	0
Total	73	121	70	334	260
FTE	0.0	0.0	0.0	0.0	0.0
Vacation & Sick (Nominal \$)					
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	0	0
FTE	0.0	0.0	0.0	0.0	0.0
Escalation to 2013\$					
Labor	0	0	0	0	0
Non-Labor	8	10	3	6	0
NSE	0	0	0	0	0
Total	8	10	3	6	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	0	0	0	0	0
Non-Labor	80	130	73	340	260
NSE	0	0	0	0	0
Total	80	130	73	340	260
FTE	0.0	0.0	0.0	0.0	0.0

* After company-wide exclusions of Non-GRC costs

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

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING
 Witness: Raymond K. Stanford
 Category: B. Public Awareness
 Category-Sub: 1. Public Awareness
 Workpaper: 1EN003.000 - Public Awareness

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs					
Years	2009	2010	2011	2012	2013
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	0	0
FTE	0.0	0.0	0.0	0.0	0.0

Detail of Adjustments to Recorded:

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>	<u>From CCtr</u>	<u>RefID</u>
2009 Total	0	0	0	0.0			
2010 Total	0	0	0	0.0			
2011 Total	0	0	0	0.0			
2012 Total	0	0	0	0.0			
2013 Total	0	0	0	0.0			

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
 2016 GRC - APP
 Shared Services Workpapers

Area: ENGINEERING
 Witness: Raymond K. Stanford

Summary of Shared Services Workpapers:

Description	In 2013 \$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2013	2014	2015	2016
A. Gas Engineering	8	41	77	92
Total	8	41	77	92

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING
Witness: Raymond K. Stanford
Category: A. Gas Engineering
Cost Center: 2100-3563.000

Summary for Category: A. Gas Engineering

	In 2013\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2013	2014	2015	2016
Labor	7	40	75	90
Non-Labor	1	1	2	2
NSE	0	0	0	0
Total	8	41	77	92
FTE	0.1	0.4	0.7	0.9

Cost Centers belonging to this Category:

2100-3563.000 GAS ENGINEERING CODES & STANDARDS

Labor	7	40	75	90
Non-Labor	1	1	2	2
NSE	0	0	0	0
Total	8	41	77	92
FTE	0.1	0.4	0.7	0.9

Note: Totals may include rounding differences.

Beginning of Workpaper
2100-3563.000 - GAS ENGINEERING CODES & STANDARDS

San Diego Gas & Electric Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING
 Witness: Raymond K. Stanford
 Category: A. Gas Engineering
 Category-Sub: 1. Pipeline Design & Gas Standards
 Cost Center: 2100-3563.000 - GAS ENGINEERING CODES & STANDARDS

Activity Description:

Work performed includes evaluating piping designs, developing pipeline design gas standards, policies, and procedures governing operation of both distribution and transmission pipeline systems. Also, maintains compliance with publication requirements, provides for review and revision of those standards governed by the O&M plan annually and other Gas Standards every five years

Forecast Explanations:

Labor - 5-YR Average

As the foundation for future labor expense requirements, the 5 year average was chosen. This forecasting methodology serves to more accurately even out the work variations that occur. However, with recent CPUC audits requesting enhancements to policies and procedures supporting the reviews and revision of the standards governed by the O&M plan, additional staffing and resources are anticipated. These incremental costs have been identified and added to the 5 year average.

Non-Labor - 5-YR Average

The 5 year average was chosen since this methodology best match the anticipated resource requirements into the future.

NSE - 5-YR Average

There are no non-standard escalation expenses in this cost center.

Summary of Results:

		In 2013\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2009	2010	2011	2012	2013	2014	2015	2016	
Labor		35	148	11	0	7	40	75	90	
Non-Labor		0	2	1	0	1	1	2	2	
NSE		0	0	0	0	0	0	0	0	
Total		35	150	12	0	8	41	77	92	
FTE		0.4	1.4	0.1	0.0	0.1	0.4	0.7	0.9	

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING
 Witness: Raymond K. Stanford
 Category: A. Gas Engineering
 Category-Sub: 1. Pipeline Design & Gas Standards
 Cost Center: 2100-3563.000 - GAS ENGINEERING CODES & STANDARDS

Cost Center Allocations (Incurred Costs):

	2013 Adjusted-Recorded					2014 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	0	0	0	0	0.00	0	0	0	0	0.00
Directly Allocated	0	0	0	0	0.00	0	0	0	0	0.00
Subj. To % Alloc.	7	1	0	8	0.09	40	1	0	41	0.40
Total Incurred	7	1	0	8	0.09	40	1	0	41	0.40
% Allocation										
Retained	14.13%	14.13%				13.35%	13.35%			
SEU	85.87%	85.87%				86.65%	86.65%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

	2015 Adjusted-Forecast					2016 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	0	0	0	0	0.00	0	0	0	0	0.00
Directly Allocated	0	0	0	0	0.00	0	0	0	0	0.00
Subj. To % Alloc.	75	2	0	77	0.70	90	2	0	92	0.90
Total Incurred	75	2	0	77	0.70	90	2	0	92	0.90
% Allocation										
Retained	13.35%	13.35%				13.35%	13.35%			
SEU	86.65%	86.65%				86.65%	86.65%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

Cost Center Allocation Percentage Drivers/Methodology:

Cost Center Allocation Percentage for 2013

Values are the defaults from previous shared services templates.

Cost Center Allocation Percentage for 2014

The percent allocation has been reviewed and revised to reflect the shared services template.

Cost Center Allocation Percentage for 2015

The percent allocation has been reviewed and revised to reflect the shared services template.

Cost Center Allocation Percentage for 2016

The percent allocation has been reviewed and revised to reflect the shared services template.

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING
 Witness: Raymond K. Stanford
 Category: A. Gas Engineering
 Category-Sub: 1. Pipeline Design & Gas Standards
 Cost Center: 2100-3563.000 - GAS ENGINEERING CODES & STANDARDS

Forecast Summary:

In 2013 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2014	2015	2016	2014	2015	2016	2014	2015	2016
Labor	5-YR Average	40	40	40	0	35	50	40	75	90
Non-Labor	5-YR Average	1	1	1	0	1	1	1	2	2
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
Total		41	41	41	0	36	51	41	77	92
FTE	5-YR Average	0.4	0.4	0.4	0.0	0.3	0.5	0.4	0.7	0.9

Forecast Adjustment Details:

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adi Type</u>
2014 Total	0	0	0	0	0.0	
2015	35	1	0	36	0.3	1-Sided Adj
Adjustment to add part time labor from a student intern in Pipeline Design and Standards.						
2015 Total	35	1	0	36	0.3	
2016	50	1	0	51	0.5	1-Sided Adj
Adjustment to add one part time employee to manage Gas Standard database.						
2016 Total	50	1	0	51	0.5	

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING
Witness: Raymond K. Stanford
Category: A. Gas Engineering
Category-Sub: 1. Pipeline Design & Gas Standards
Cost Center: 2100-3563.000 - GAS ENGINEERING CODES & STANDARDS

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	27	119	9	0	6
Non-Labor	0	2	1	0	1
NSE	0	0	0	0	0
Total	28	121	10	0	7
FTE	0.3	1.2	0.1	0.0	0.1
Adjustments (Nominal \$) **					
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	0	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Nominal \$)					
Labor	27	119	9	0	6
Non-Labor	0	2	1	0	1
NSE	0	0	0	0	0
Total	28	121	10	0	7
FTE	0.3	1.2	0.1	0.0	0.1
Vacation & Sick (Nominal \$)					
Labor	4	19	1	0	1
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	4	19	1	0	1
FTE	0.1	0.2	0.0	0.0	0.0
Escalation to 2013\$					
Labor	3	10	0	0	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	3	10	0	0	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	35	148	11	0	7
Non-Labor	0	2	1	0	1
NSE	0	0	0	0	0
Total	35	150	12	0	8
FTE	0.4	1.4	0.1	0.0	0.1

* 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.

San Diego Gas & Electric Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING
 Witness: Raymond K. Stanford
 Category: A. Gas Engineering
 Category-Sub: 1. Pipeline Design & Gas Standards
 Cost Center: 2100-3563.000 - GAS ENGINEERING CODES & STANDARDS

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs					
Years	2009	2010	2011	2012	2013
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	0	0
FTE	0.0	0.0	0.0	0.0	0.0

Detail of Adjustments to Recorded:

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>	<u>From CCtr</u>	<u>RefID</u>
2009 Total	0	0	0	0.0			
2010 Total	0	0	0	0.0			
2011 Total	0	0	0	0.0			
2012 Total	0	0	0	0.0			
2013 Total	0	0	0	0.0			

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING
Witness: Raymond K. Stanford

Appendix A: List of Non-Shared Cost Centers

Cost Center	Sub	Description
2100-3421	000	GAS ENGINEERING DIRECTOR
2100-3425	000	GAS MAPPING
2100-3612	000	SDG&E PUBLIC AWARENESS
2100-3731	000	PROJECT & CONSTRUCTION MANAGEMENT - SDG&E
2100-3821	000	ESS GIS Gas