

Application of SOUTHERN CALIFORNIA GAS)
COMPANY for authority to update its gas revenue)
requirement and base rates)
effective January 1, 2016 (U 904-G))

Application No. 14-11-____
Exhibit No.: (SCG-07-WP)

WORKPAPERS TO
PREPARED DIRECT TESTIMONY
OF RAYMOND K. STANFORD
ON BEHALF OF SOUTHERN CALIFORNIA GAS COMPANY

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

NOVEMBER 2014



**2016 General Rate Case - APP
INDEX OF WORKPAPERS**

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Overall Summary For Exhibit No. SCG-07-WP

Area:	ENGINEERING, EMERGENCY SERVICES & LAND
Witness:	Raymond K. Stanford

Description	In 2013 \$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2013	2014	2015	2016
Non-Shared Services	9,890	13,224	14,167	14,952
Shared Services	14,827	17,434	18,927	19,178
Total	24,717	30,658	33,094	34,130

Note: Totals may include rounding differences.

Southern California Gas Company
 2016 GRC - APP
 Non-Shared Service Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 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	7,497	9,601	9,727	9,838
B. Major Projects	489	1,385	1,815	1,945
C. Emergency Services	1,125	1,263	1,528	1,951
D. Public Awareness	779	975	1,097	1,218
Total	9,890	13,224	14,167	14,952

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
Witness: Raymond K. Stanford
Category: A. Gas Engineering
Workpaper: VARIOUS

Summary for Category: A. Gas Engineering

	In 2013\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2013	2014	2015	2016
Labor	4,951	6,854	6,966	7,077
Non-Labor	2,546	2,747	2,761	2,761
NSE	0	0	0	0
Total	7,497	9,601	9,727	9,838
FTE	56.9	79.9	80.9	81.9

Workpapers belonging to this Category:

2EN000.000 Gas Engineering

Labor	4,677	6,280	6,392	6,503
Non-Labor	1,485	1,727	1,727	1,727
NSE	0	0	0	0
Total	6,162	8,007	8,119	8,230
FTE	52.8	72.3	73.3	74.3

2EN002.000 Land Services and Right of Way

Labor	274	574	574	574
Non-Labor	1,061	1,020	1,034	1,034
NSE	0	0	0	0
Total	1,335	1,594	1,608	1,608
FTE	4.1	7.6	7.6	7.6

Note: Totals may include rounding differences.

Beginning of Workpaper
2EN000.000 - Gas Engineering

Southern California Gas Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. Gas Engineering
 Category-Sub: 1. Gas Engineering
 Workpaper: 2EN000.000 - Gas Engineering

Activity Description:

The Gas Engineering work group is a consolidation of the associated activities which provide engineering and supervision support to the distribution, transmission and storage operations organizations of SoCalGas. Support activities include system analysis, project management, engineering design, measurement maintenance, corrosion assessment, automation, compressor maintenance and related emission testing. This group also captures the shift in responsibilities associated with changes in GIS technology.

Forecast Explanations:

Labor - 5-YR Average

As the foundation for future labor expense requirements, the 5 year average was chosen. The nature of work performed by the Gas Engineering department, primarily Operations and Engineering Support for Transmission, Storage and Distribution, 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 and enhanced regulations 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 work performed by the Gas Engineering department, primarily Operations and Engineering Support for Transmission, Storage and Distribution, has proven to be relatively stable over time. The 5 year average best represents the work group's funding requirements. However, new and enhanced regulations 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 group.

Summary of Results:

		In 2013\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2009	2010	2011	2012	2013	2014	2015	2016	
Labor		6,639	6,681	6,515	5,868	4,677	6,280	6,392	6,503	
Non-Labor		2,035	1,871	1,605	1,550	1,485	1,727	1,727	1,727	
NSE		0	0	0	0	0	0	0	0	
Total		8,674	8,552	8,119	7,418	6,162	8,007	8,119	8,230	
FTE		79.2	77.1	74.9	69.1	52.8	72.3	73.3	74.3	

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. Gas Engineering
 Category-Sub: 1. Gas Engineering
 Workpaper: 2EN000.000 - 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	6,076	6,076	6,076	204	316	427	6,280	6,392	6,503
Non-Labor	5-YR Average	1,709	1,709	1,709	18	18	18	1,727	1,727	1,727
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
Total		7,785	7,785	7,785	222	334	445	8,007	8,119	8,230
FTE	5-YR Average	70.6	70.6	70.6	1.7	2.7	3.7	72.3	73.3	74.3

Forecast Adjustment Details:

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj Type</u>
2014	117	6	0	123	1.0	1-Sided Adj

This adjustment is due to an addition of one NGV technician to contend with added NGV stations per capital project in exhibit SCG-15 and to support the aging of existing stations.

2014	87	0	0	87	0.7	1-Sided Adj
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This adjustment is to include the labor split of one Project Manager who manages the Gas Operations Research and Development (RD&D). The employee's labor split is 75% of annual salary to the cost center 2200-0324, which is a Non-Shared cost center in work paper group 2EN000 and 25% of annual salary to cost center 2200-0323, which is a Shared cost center. Annual salary including Vacation and Sick (V&S) equals to \$116K.

2014	0	12	0	12	0.0	1-Sided Adj
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This adjustment was entered to include a non-labor incremental forecast in cost center 2200-1179 related to dues to CalOSHA certification by the Engineering Analysis Center (EAC).

2014 Total	204	18	0	222	1.7	
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2015	121	6	0	127	1.0	1-Sided Adj
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This adjustments is due to an addition of one NGV technician to contend with added NGV stations listed in exhibit SCG-15 and to support the aging of existing stations for Cost Center 2200-2265. Includes increase applied to the 2014 labor amount.

2015	90	0	0	90	0.7	1-Sided Adj
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Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. Gas Engineering
 Category-Sub: 1. Gas Engineering
 Workpaper: 2EN000.000 - Gas Engineering

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj Type</u>
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This adjustment is to include the labor split of one Project Manager who manages the Gas Operations Research and Development (RD&D). The employee's labor split is 75% of annual salary to the cost center 2200-0324, which is a Non-Shared cost center in work paper group 2EN000 and 25% of annual salary to cost center 2200-0323, which is a Shared cost center. Annual salary including Vacation and Sick (V&S) equals to \$116K. The 2015 labor amount includes a minimal increase from the 2014 amount.

2015	0	12	0	12	0.0	1-Sided Adj
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This adjustment was entered to include a non-labor incremental forecast in cost center 2200-1179 related to dues to CalOSHA certification by the Engineering Analysis Center (EAC).

2015	105	0	0	105	1.0	1-Sided Adj
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This adjustment is due to one FTE planned in the process Safety Management group. The incremental FTE is in support of Process Hazard Analysis.

2015 Total	316	18	0	334	2.7	
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2016	125	6	0	131	1.0	1-Sided Adj
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This adjustments is due to an addition of one NGV technician to contend with added NGV stations listed in exhibit SCG-15 and to support the aging of existing stations for Cost Center 2200-2265. Includes increase applied to the 2015 labor amount.

2016	92	0	0	92	0.7	1-Sided Adj
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This adjustment is to include the labor split of one Project Manager who manages the Gas Operations Research and Development (RD&D). The employee's labor split is 75% of annual salary to the cost center 2200-0324, which is a Non-Shared cost center in work paper group 2EN000 and 25% of annual salary to cost center 2200-0323, which is a Shared cost center. Annual salary including Vacation and Sick (V&S) equals to \$116K. The 2016 labor amount includes a minimal increase from 2015 to 2016.

2016	0	12	0	12	0.0	1-Sided Adj
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This adjustment was entered to include a non-labor incremental forecast in cost center 2200-1179 related to dues to CalOSHA certification by the Engineering Analysis Center (EAC).

2016	210	0	0	210	2.0	1-Sided Adj
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This adjustment is due to two incremental FTEs planned in the process Safety Management group. The incremental FTEs will support Process Hazard Analysis.

2016 Total	427	18	0	445	3.7	
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Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
Witness: Raymond K. Stanford
Category: A. Gas Engineering
Category-Sub: 1. Gas Engineering
Workpaper: 2EN000.000 - Gas Engineering

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	5,624	5,455	5,428	4,943	4,083
Non-Labor	2,216	1,413	1,618	1,581	1,585
NSE	0	0	0	0	0
Total	7,840	6,868	7,046	6,524	5,669
FTE	73.8	67.1	65.1	59.3	45.9
Adjustments (Nominal \$) **					
Labor	-523	-162	-93	-4	-73
Non-Labor	-379	318	-75	-58	-100
NSE	0	0	0	0	0
Total	-902	156	-168	-62	-173
FTE	-7.2	-1.8	-1.2	0.0	-0.7
Recorded-Adjusted (Nominal \$)					
Labor	5,101	5,293	5,335	4,939	4,010
Non-Labor	1,837	1,731	1,543	1,523	1,485
NSE	0	0	0	0	0
Total	6,939	7,024	6,878	6,462	5,496
FTE	66.6	65.3	63.9	59.3	45.2
Vacation & Sick (Nominal \$)					
Labor	922	925	886	791	667
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	922	925	886	791	667
FTE	12.6	11.8	10.9	9.8	7.6
Escalation to 2013\$					
Labor	615	463	294	138	0
Non-Labor	198	140	61	27	0
NSE	0	0	0	0	0
Total	814	603	355	165	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	6,639	6,681	6,515	5,868	4,677
Non-Labor	2,035	1,871	1,605	1,550	1,485
NSE	0	0	0	0	0
Total	8,674	8,552	8,119	7,418	6,162
FTE	79.2	77.1	74.8	69.1	52.8

* 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
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. Gas Engineering
 Category-Sub: 1. Gas Engineering
 Workpaper: 2EN000.000 - Gas Engineering

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs					
Years	2009	2010	2011	2012	2013
Labor	-523	-162	-93	-4	-73
Non-Labor	-379	318	-75	-58	-100
NSE	0	0	0	0	0
Total	-902	156	-168	-62	-173
FTE	-7.2	-1.8	-1.2	0.0	-0.7

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	-460	-318	0	-6.4	CCTR Transf	From 2200-2368.000	MGONZALX2014 0218113349377
<p>This adjustment is to transfer the Land Services and Right of Way historical costs from the Major Projects work paper group to the Gas Engineering work paper group in cost center 2200-0315. The transfer aligns resources to Gas Engineering and allows for better tracking and forecast of costs.</p>							
2009	919	635	0	12.8	CCTR Transf	From 2200-2368.000	MGONZALX2014 0218113841590
<p>This adjustment is to correct a cost center transfer that was entered incorrectly as a positive instead of a negative transfer. The Transfer was to account for the Land and Right of Way cost in the Gas Engineering work paper group.</p>							
2009	-98	-378	0	1.1	CCTR Transf	To 2200-2394.000	MGONZALX2014 0218143829827
<p>This adjustment is to transfer the historical costs of the Project and Construction Management (PCM) group from the Gas Engineering work paper group to Major Projects work paper group. The PCM group and activities are now managed within the Major Projects department. The transfer aligns resources to Major Projects and allows for better tracking and forecast of costs.</p>							
2009	0	0	0	-2.2	CCTR Transf	To 2200-2394.000	MGONZALX2014 0414094337307
<p>This adjustment is to transfer the FTEs and to correct a transfer error. The transfer error was completed to account for the FTEs in the Project & Construction Management (PCM) group.</p>							

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. Gas Engineering
 Category-Sub: 1. Gas Engineering
 Workpaper: 2EN000.000 - Gas Engineering

<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	-885	-319	0	-12.5	1-Sided Adj	N/A	MGONZALX2014 0512093654057
<p>This adjustment is to transfer the Land Services and Right of Way historical costs and lease payments from the Non-Shared Gas Engineering work paper group to a separate work paper group named Land Services and Right of Way. The transfer allows for better tracking and forecast of costs in the Land Services and Right of Way group.</p>							
2009 Total	-523	-379	0	-7.2			

2010	-0.520	0	0	0.0	CCTR Transf	From 2200-2186.000	CYANO20140219 114015707
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This adjustment is to transfer labor costs due to business function transfer for the Executive Assistant.

2010	381	483	0	5.3	CCTR Transf	From 2200-2368.000	MGONZALX2014 0218114200380
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This adjustment is to transfer the Land Services and Right of Way historical costs and lease payments from the Major Projects work paper group to the Gas Engineering work paper group. The transfer allows for better tracking and forecast of costs in the Land Services and Right of Way group.

2010	-94	318	0	0.8	CCTR Transf	To 2200-2394.000	MGONZALX2014 0218143927793
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This adjustment is to transfer the historical costs of the Project and Construction Management (PCM) group from the Gas Engineering work paper group to Major Projects work paper group. The PCM group and activities are now managed within the Major Projects department. The transfer aligns resources to Major Projects and allows for better tracking and forecast of costs.

2010	0	0	0	-1.6	CCTR Transf	To 2200-2394.000	MGONZALX2014 0218144028717
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This adjustment is to transfer the FTEs and to correct a transfer error. The transfer error was completed to account for the FTEs in the Project & Construction Management (PCM) group.

2010	-450	-484	0	-6.3	1-Sided Adj	N/A	MGONZALX2014 0512103529857
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This adjustment is to transfer the Land Services and Right of Way historical costs and lease payments from the Non-Shared Gas Engineering work paper group to a separate work paper group named Land Services and Right of Way. The transfer allows for better tracking and forecast of costs in the Land Services and Right of Way group.

2010 Total	-162	318	0	-1.8			
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Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. Gas Engineering
 Category-Sub: 1. Gas Engineering
 Workpaper: 2EN000.000 - Gas Engineering

<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>
2011	-76	0	0	-1.0	CCTR Transf	From 2200-2186.000	CYANO20140219 113907400
This adjustment is to transfer labor costs due to business function transfer for the Executive Assistant.							
2011	0	-0.025	0	0.0	CCTR Transf	To 2200-0306.000	MGONZALX2013 1205113331427
This adjustment is to transfer the historical cost from cost center 2200-0304 to cost center 2200-0306 because the activities and functions in these two cost centers have been merged.							
2011	-18	-61	0	-0.2	CCTR Transf	To 2200-2394.000	MGONZALX2014 0218144121683
This adjustment is to transfer the historical costs of the Project and Construction Management (PCM) group from the Gas Engineering work paper group to Major Projects work paper group. The PCM group and activities are now managed within the Major Projects department. The transfer aligns resources to Major Projects and allows for better tracking and forecast of costs.							
2011	0	-13	0	0.0	CCTR Transf	To 2200-2064.000	MGONZALX2014 0227120640550
This adjustment is to separate the Green House Gas historical cost and transfer them to the NERBA work group.							
2011	0	681	0	0.0	CCTR Transf	From 2200-2368.000	MGONZALX2014 0508125814717
This adjustment is to transfer the lease Right of Way historical payments from the Major Projects work paper group to the non-shared work paper group in Gas Engineering. The transfer aligns resources to Gas Engineering and allows for better tracking and forecast of costs.							
2011	392	81	0	5.4	CCTR Transf	From 2200-2368.000	MGONZALX2014 0508130720807
This adjustment is to transfer the Land Services and Right of Way historical costs from the Major Projects work paper group to the Gas Engineering work paper group in cost center 2200-0315. The transfer aligns resources to Gas Engineering and allows for better tracking and forecast of costs.							
2011	-392	-763	0	-5.4	1-Sided Adj	N/A	MGONZALX2014 0512103638657
This adjustment is to transfer the Land Services and Right of Way historical costs and lease payments from the Non-Shared Gas Engineering work paper group to a separate work paper group named Land Services and Right of Way. The transfer allows for better tracking and forecast of costs in the Land Services and Right of Way group.							
2011 Total	-93	-75	0	-1.2			

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. Gas Engineering
 Category-Sub: 1. Gas Engineering
 Workpaper: 2EN000.000 - Gas Engineering

<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>
2012	0	-0.082	0	0.0	CCTR Transf	To 2200-0306.000	MGONZALX2013 1205113409590
<p>This adjustment is to transfer the historical cost from cost center 2200-0304 to cost center 2200-0306 because the activities and functions of these two cost centers have now merged.</p>							
2012	-4	-58	0	0.0	CCTR Transf	To 2200-2394.000	MGONZALX2014 0218144213253
<p>This adjustment is to transfer the historical costs of the Project and Construction Management (PCM) group from the Gas Engineering work paper group to Major Projects work paper group. The PCM group and activities are now managed within the Major Projects department. The transfer aligns resources to Gas Engineering and allows for better tracking and forecast of costs.</p>							
2012	0	937	0	0.0	CCTR Transf	From 2200-2368.000	MGONZALX2014 0508131322180
<p>This adjustment is to move historical Right of Way lease payments from the Major Projects work paper group to the Non-Shared Gas Engineering work paper group where all the Right of Way lease payments is being sponsored.</p>							
2012	337	118	0	4.7	CCTR Transf	From 2200-2368.000	MGONZALX2014 0508131721373
<p>This adjustment is to transfer the Land Services and Right of Way historical costs from the Major Projects work paper group to the Gas Engineering work paper group in cost center 2200-0315. The transfer aligns resources to Gas Engineering and allows for better tracking and forecast of costs.</p>							
2012	-337	-1,055	0	-4.7	1-Sided Adj	N/A	MGONZALX2014 0512103744070
<p>Adjustment to transfer the Land Services historical costs to a separate work paper group.</p>							
2012 Total	-4	-58	0	0.0			
2013	0	-2	0	0.0	1-Sided Adj	N/A	MGONZALX2014 0218123703023
<p>Exclusion of Compression Service Tariff (CST) costs related to the evaluation of CST facility installation site. Pursuant to CPUC decision D.12-12-037, all CST activities must be excluded from base rates</p>							
2013	-56	-85	0	-0.5	CCTR Transf	To 2200-2394.000	MGONZALX2014 0218144309090
<p>This adjustment is to transfer the historical costs of the Project and Construction Management (PCM) group from the Gas Engineering work paper group to Major Projects work paper group. The PCM group and activities are now managed within the Major Projects department. The transfer aligns resources to Major Projects and allows for better tracking and forecast of costs.</p>							

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. Gas Engineering
 Category-Sub: 1. Gas Engineering
 Workpaper: 2EN000.000 - Gas Engineering

<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>
2013	-17	-12	0	-0.2	CCTR Transf	To 2200-0290.001	MGONZALX2014 0418154507000
<p>This adjustment is to transfer the new environmental emissions reporting historical costs from Gas Engineering cost center 2200-1180 to the Underground Storage NERBA work paper group. The Gas Engineering, Gas Transmission, Gas Distribution and Underground Storage witness groups agree to combined NERBA Subpart W costs under a single work paper in the Underground Storage witness area.</p>							
2013	253	113	0	3.3	CCTR Transf	From 2200-2368.000	MGONZALX2014 0508132415410
<p>This adjustment is to transfer the Land Services and Right of Way historical costs from the Major Projects work paper group to the Gas Engineering work paper group in cost center 2200-0315. The transfer aligns resources to Gas Engineering and allows for better tracking and forecast of costs.</p>							
2013	0	960	0	0.0	CCTR Transf	From 2200-2368.000	MGONZALX2014 0508132523440
<p>This adjustment is to move the historical Right of Way lease payments from the Major Projects work paper group to the non shared Gas Engineering work paper group where they will be represented.</p>							
2013	-253	-1,074	0	-3.3	1-Sided Adj	N/A	MGONZALX2014 0512103905750
<p>This adjustment is to transfer the Land Services and Right of Way historical costs and lease payments from the Non-Shared Gas Engineering work paper group to a separate work paper group named Land Services and Right of Way. The transfer allows for better tracking and forecast of costs in the Land Services and Right of Way group.</p>							
2013 Total	-73	-100	0	-0.7			

Note: Totals may include rounding differences.

Beginning of Workpaper
2EN002.000 - Land Services and Right of Way

Southern California Gas Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. Gas Engineering
 Category-Sub: 2. Land Services & Right of Way
 Workpaper: 2EN002.000 - Land Services and Right of Way

Activity Description:

This work paper group has been assigned to incorporate the Operation and Maintenance expenses in the Land Services and Right of Way group in Gas Engineering. In addition to the O&M expenses, this work paper also includes activities associated with the right of way lease payments.

Forecast Explanations:

Labor - 5-YR Average

The 5-year average was chosen for the labor in this group because the historical data indicate that activities and staffing levels have been transient and this trend is expected to continue. Therefore best estimate for future requirements is the five year average.

Non-Labor - Zero-Based

As the foundation for future non-labor expense requirements, zero-base method was chosen. The forecast for the non-labor include the Rights of Way lease payments which have been forecasted by the Land and Right of Way group in Gas Engineering.

NSE - Zero-Based

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		1,151	568	479	400	274	574	574	574	
Non-Labor		353	523	807	1,074	1,061	1,020	1,034	1,034	
NSE		0	0	0	0	0	0	0	0	
Total		1,505	1,090	1,285	1,474	1,335	1,594	1,608	1,608	
FTE		14.9	7.4	6.3	5.5	4.1	7.6	7.6	7.6	

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. Gas Engineering
 Category-Sub: 2. Land Services & Right of Way
 Workpaper: 2EN002.000 - Land Services and Right of Way

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	574	574	574	0	0	0	574	574	574
Non-Labor	Zero-Based	0	0	0	1,020	1,034	1,034	1,020	1,034	1,034
NSE	Zero-Based	0	0	0	0	0	0	0	0	0
Total		574	574	574	1,020	1,034	1,034	1,594	1,608	1,608
FTE	5-YR Average	7.6	7.6	7.6	0.0	0.0	0.0	7.6	7.6	7.6

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	0	1,020	0	1,020	0.0	1-Sided Adj

This adjustment is to include the work associated with the lease payments in the Land and Right of Way department. The forecast is directly from the 2016 Adjusted BLM accruals spreadsheet in the Right of Way group in Gas Engineering.

2014 Total	0	1,020	0	1,020	0.0	
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2015	0	1,034	0	1,034	0.0	1-Sided Adj
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This adjustment is to include the work associated with the lease payments in the Land and Right of Way department. The forecast is directly from the 2016 Adjusted BLM accruals spreadsheet in the Right of Way group in Gas Engineering.

2015 Total	0	1,034	0	1,034	0.0	
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2016	0	1,034	0	1,034	0.0	1-Sided Adj
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This adjustment is to include the work associated with the lease payments in the Land and Right of Way department. The forecast is directly from the 2016 Adjusted BLM accruals spreadsheet in the Right of Way group in Gas Engineering.

2016 Total	0	1,034	0	1,034	0.0	
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Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. Gas Engineering
 Category-Sub: 2. Land Services & Right of Way
 Workpaper: 2EN002.000 - Land Services and Right of Way

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	4	3	12	0	1
NSE	0	0	0	0	0
Total	4	3	12	0	1
FTE	0.0	0.0	0.0	0.0	0.0
Adjustments (Nominal \$) **					
Labor	884	449	392	337	235
Non-Labor	315	481	764	1,055	1,061
NSE	0	0	0	0	0
Total	1,199	930	1,156	1,392	1,296
FTE	12.5	6.3	5.4	4.7	3.5
Recorded-Adjusted (Nominal \$)					
Labor	885	450	392	337	235
Non-Labor	319	484	776	1,055	1,061
NSE	0	0	0	0	0
Total	1,204	933	1,168	1,393	1,296
FTE	12.5	6.3	5.4	4.7	3.5
Vacation & Sick (Nominal \$)					
Labor	160	79	65	54	39
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	160	79	65	54	39
FTE	2.4	1.1	0.9	0.8	0.6
Escalation to 2013\$					
Labor	107	39	22	9	0
Non-Labor	34	39	31	19	0
NSE	0	0	0	0	0
Total	141	78	52	28	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	1,151	568	479	400	274
Non-Labor	353	523	807	1,074	1,061
NSE	0	0	0	0	0
Total	1,505	1,090	1,285	1,474	1,335
FTE	14.9	7.4	6.3	5.5	4.1

* 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.

Southern California Gas Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. Gas Engineering
 Category-Sub: 2. Land Services & Right of Way
 Workpaper: 2EN002.000 - Land Services and Right of Way

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs					
Years	2009	2010	2011	2012	2013
Labor	884	449	392	337	235
Non-Labor	315	481	764	1,055	1,061
NSE	0	0	0	0	0
Total	1,199	930	1,156	1,392	1,296
FTE	12.5	6.3	5.4	4.7	3.5

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	-0.443	-4	0	0.0	1-Sided Adj	N/A	MGONZALX2013 1124230534710

This adjustment was made to exclude all Research and Development (RD&D) historical amounts from the Gas Operations RD&D work paper group. The RD&D forecast amounts will be sponsored by Jeff Reed's witness area.

2009	885	319	0	12.5	1-Sided Adj	N/A	MGONZALX2014 0512103251597
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This adjustment is account for the Land Services and Right of Way historical costs and lease payments from the Non-Shared Gas Engineering work paper group to a separate work paper group named Land Services and Right of Way. The transfer allows for better tracking and forecast of costs in the Land Services and Right of Way group.

2009 Total	884	315	0	12.5
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2010	-0.351	-3	0	0.0	1-Sided Adj	N/A	MGONZALX2013 1124231014930
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This adjustment was made to exclude all Research and Development (RD&D) historical amounts from the Gas Operations RD&D work paper group. The RD&D forecast amounts will be sponsored by Jeff Reed's witness area.

2010	450	484	0	6.3	1-Sided Adj	N/A	MGONZALX2014 0512104123177
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This adjustment is to account for the Land Services and Right of Way historical costs and lease payments from the Non-Shared Gas Engineering work paper group to a separate work paper group named Land Services and Right of Way. The transfer allows for better tracking and forecast of costs in the Land Services and Right of Way group.

2010 Total	449	481	0	6.3
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Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. Gas Engineering
 Category-Sub: 2. Land Services & Right of Way
 Workpaper: 2EN002.000 - Land Services and Right of Way

<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>
2011	-0.111	-12	0	0.0	1-Sided Adj	N/A	MGONZALX2013 1124231055590
<p>This adjustment was made to exclude all Research and Development (RD&D) historical amounts from the Gas Operations RD&D work paper group. The RD&D forecast amounts will be sponsored by Jeff Reed's witness area.</p>							
2011	0	13	0	0.0	CCTR Transf	From 2200-1180.000	MGONZALX2014 0227120640550
<p>This adjustment is to separate the Green House Gas historical cost and transfer them to the NERBA work group.</p>							
2011	392	763	0	5.4	1-Sided Adj	N/A	MGONZALX2014 0512104214900
<p>This adjustment is to account for the Land Services and Right of Way historical costs and lease payments from the Non-Shared Gas Engineering work paper group to a separate work paper group named Land Services and Right of Way. The transfer allows for better tracking and forecast of costs in the Land Services and Right of Way group.</p>							
2011 Total	392	764	0	5.4			

2012	-0.196	0	0	0.0	1-Sided Adj	N/A	MGONZALX2013 1124231117937
<p>This adjustment was made to exclude all Research and Development (RD&D) historical amounts from the Gas Operations RD&D work paper group. The RD&D forecast amounts will be sponsored by Jeff Reed's witness area.</p>							
2012	337	1,055	0	4.7	1-Sided Adj	N/A	MGONZALX2014 0512104245063
<p>This adjustment is to account for the Land Services and Right of Way historical costs and lease payments from the Non-Shared Gas Engineering work paper group to a separate work paper group named Land Services and Right of Way. The transfer allows for better tracking and forecast of costs in the Land Services and Right of Way group.</p>							
2012 Total	337	1,055	0	4.7			

2013	-2	0	0	0.0	1-Sided Adj	N/A	MGONZALX2014 0418154108787
<p>This adjustment is to remove the historical cost transfer from Gas Distribution. The Gas Engineering, Gas Transmission, Gas Distribution and Underground Storage witness groups agree and combined NERBA Subpart W costs under a single workpaper in the Underground Storage witness area. This adjustment is also added to the Underground Storage NERBA workpaper.</p>							

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. Gas Engineering
 Category-Sub: 2. Land Services & Right of Way
 Workpaper: 2EN002.000 - Land Services and Right of Way

<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>
2013	253	1,074	0	3.3	1-Sided Adj	N/A	MGONZALX2014 0512104517843
<p>This adjustment is to account for the Land Services and Right of Way historical costs and lease payments from the Non-Shared Gas Engineering work paper group to a separate work paper group named Land Services and Right of Way. The transfer allows for better tracking and forecast of costs in the Land Services and Right of Way group.</p>							
2013	-17	-12	0	0.2	1-Sided Adj	N/A	MGONZALX2014 0512104812750
<p>This adjustment is to remove the historical cost related to the new environmental subpart W reporting cost in Gas Engineering. The Gas Engineering, Gas Transmission, Gas Distribution and Underground Storage witness groups agree to combined NERBA Subpart W costs under a single work paper in the Underground Storage witness area.</p>							
2013	0	-0.588	0	0.0	1-Sided Adj	N/A	MGONZALX2014 0512105115113
<p>This adjustment was made to exclude all Research and Development (RD&D) historical amounts from the Gas Operations RD&D work paper group. The RD&D forecast amounts will be sponsored by Jeff Reed's witness area.</p>							
2013	2	0	0	0.0	CCTR Transf	From 2200-0483.000	RHFLAMIN20140 305120701317
<p>Transfer labor from Gas Distribution 2200-0483 to Gas Engineering 2200-2064 to combine NERBA Subpart W costs under a single workpaper.</p>							
2013 Total	235	1,061	0	3.5			

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: B. Major Projects
 Workpaper: 2EN001.000

Summary for Category: B. Major Projects

	In 2013\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2013	2014	2015	2016
Labor	173	988	1,243	1,318
Non-Labor	317	397	572	627
NSE	0	0	0	0
Total	490	1,385	1,815	1,945
FTE	1.4	8.2	11.1	11.8

Workpapers belonging to this Category:

2EN001.000 Major Projects

Labor	173	988	1,243	1,318
Non-Labor	317	397	572	627
NSE	0	0	0	0
Total	490	1,385	1,815	1,945
FTE	1.4	8.2	11.1	11.8

Note: Totals may include rounding differences.

Beginning of Workpaper
2EN001.000 - Major Projects

Southern California Gas Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: B. Major Projects
 Category-Sub: 1. Major Projects
 Workpaper: 2EN001.000 - Major Projects

Activity Description:

The primary activities associated with the Major Projects work group organization include the Project and Construction Management (PCM) group as well as the project managements, project controls, quality assurance, and detailed analysis of existing facilities, and systems; or potential additions and/or acquisitions to existing systems with the ultimate goal of optimizing asset usage and prolong useful life.

Forecast Explanations:

Labor - Zero-Based

The Major Projects department has gone through several organizational changes in the last five years and their labor cost is driven by splits in capital and O&M projects; thus zero base method was chosen for the labor expense requirements.

Non-Labor - Zero-Based

The Major Projects department has gone through several organizational changes in the last five years and their non-labor cost is driven by requirements in project management; thus zero base method was chosen for the labor expense requirements.

NSE - Zero-Based

There are no NSE expenses for 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		127	118	338	205	173	988	1,243	1,318	
Non-Labor		419	-344	92	71	317	397	572	627	
NSE		0	0	0	0	0	0	0	0	
Total		546	-226	430	276	489	1,385	1,815	1,945	
FTE		1.3	0.9	2.8	1.7	1.4	8.2	11.1	11.8	

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: B. Major Projects
 Category-Sub: 1. Major Projects
 Workpaper: 2EN001.000 - Major Projects

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	Zero-Based	0	0	0	988	1,243	1,318	988	1,243	1,318
Non-Labor	Zero-Based	0	0	0	397	572	627	397	572	627
NSE	Zero-Based	0	0	0	0	0	0	0	0	0
Total		0	0	0	1,385	1,815	1,945	1,385	1,815	1,945
FTE	Zero-Based	0.0	0.0	0.0	8.2	11.1	11.8	8.2	11.1	11.8

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	613	341	0	954	4.4	1-Sided Adj

Work paper 2EN001 represents the Project Controls & Quality (PCQ) cost centers 2200-2391, 2200-2393, 2200-2394 and Project and Construction Management (PCM), cost center 2200-0317. These represent the resources in the Major Projects department after the reorganization in February 2014. The adjustments are to account for 4.4 FTEs in PCQ and associated non-labor estimate.

2014	375	56	0	431	3.8	1-Sided Adj
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Work paper 2EN001 represents the Project Controls & Quality (PCQ) cost centers 2200-2391, 2200-2393, 2200-2394 and Project and Construction Management (PCM), cost center 2200-0317. These represent the resources in the Major Projects department after the reorganization in February 2014. The adjustments are to account for the cost calculated as 3.8 FTEs in PCM. The calculation assumes 15 current employees charging 8% of their salary to O&M and 17% V&S at an annual salary of \$100K.

2014 Total	988	397	0	1,385	8.2	
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2015	818	516	0	1,334	6.8	1-Sided Adj
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Work paper 2EN001 represents the Project Controls & Quality (PCQ) cost centers 2200-2391, 2200-2393, 2200-2394 and Project and Construction Management (PCM), cost center 2200-0317. These represent the resources in the Major Projects department after the reorganization in February 2014. The adjustments are to account for 6.8 FTEs in PCQ and associated non-labor estimate.

2015	425	56	0	481	4.3	1-Sided Adj
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Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: B. Major Projects
 Category-Sub: 1. Major Projects
 Workpaper: 2EN001.000 - Major Projects

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj Type</u>
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Work paper 2EN001 represents the Project Controls & Quality (PCQ) cost centers 2200-2391, 2200-2393, 2200-2394 and Project and Construction Management (PCM), cost center 2200-0317. These represent the resources in the Major Projects department after the reorganization in February 2014. The adjustments are to account for the cost calculated as 4.3 FTEs in PCM. The calculation assumes 17 employees in 2015 charging 8% of their salary to O&M and 17% V&S at an annual salary of \$100K.

2015 Total	1,243	572	0	1,815	11.1	
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2016	818	571	0	1,389	6.8	1-Sided Adj
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Work paper 2EN001 represents the Project Controls & Quality (PCQ) cost centers 2200-2391, 2200-2393, 2200-2394 and Project and Construction Management (PCM), cost center 2200-0317. These represent the resources in the Major Projects department after the reorganization in February 2014. The adjustments are to account for 6.8 FTEs in PCQ and associated non-labor estimate.

2016	500	56	0	556	5.0	1-Sided Adj
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Work paper 2EN001 represents the Project Controls & Quality (PCQ) cost centers 2200-2391, 2200-2393, 2200-2394 and Project and Construction Management (PCM), cost center 2200-0317. These represent the resources in the Major Projects department after the reorganization in February 2014. The adjustments are to account for the cost calculated as 5.0 FTEs in PCM. The calculation assumes 20 employees in 2016 charging 8% of their salary to O&M and 17% V&S at an annual salary of \$100K.

2016 Total	1,318	627	0	1,945	11.8	
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Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
Witness: Raymond K. Stanford
Category: B. Major Projects
Category-Sub: 1. Major Projects
Workpaper: 2EN001.000 - Major Projects

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	0	0	651	505	345
Non-Labor	0	0	108	130	345
NSE	0	0	0	0	0
Total	0	0	760	636	690
FTE	0.0	0.0	7.6	6.2	4.0
Adjustments (Nominal \$) **					
Labor	98	94	-374	-333	-197
Non-Labor	378	-318	-20	-60	-28
NSE	0	0	0	0	0
Total	476	-225	-395	-393	-225
FTE	1.1	0.8	-5.2	-4.7	-2.8
Recorded-Adjusted (Nominal \$)					
Labor	98	94	277	172	148
Non-Labor	378	-318	88	70	317
NSE	0	0	0	0	0
Total	476	-225	365	242	465
FTE	1.1	0.8	2.4	1.5	1.2
Vacation & Sick (Nominal \$)					
Labor	18	16	46	28	25
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	18	16	46	28	25
FTE	0.2	0.1	0.4	0.2	0.2
Escalation to 2013\$					
Labor	12	8	15	5	0
Non-Labor	41	-26	4	1	0
NSE	0	0	0	0	0
Total	53	-18	19	6	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	127	118	338	205	173
Non-Labor	419	-344	92	71	317
NSE	0	0	0	0	0
Total	546	-226	430	276	489
FTE	1.3	0.9	2.8	1.7	1.4

* 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.

Southern California Gas Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: B. Major Projects
 Category-Sub: 1. Major Projects
 Workpaper: 2EN001.000 - Major Projects

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs					
Years	2009	2010	2011	2012	2013
Labor	98	94	-374	-333	-197
Non-Labor	378	-318	-20	-60	-28
NSE	0	0	0	0	0
Total	476	-225	-395	-393	-225
FTE	1.1	0.8	-5.2	-4.7	-2.8

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	0	189	0	0.0	CCTR Transf	From 2200-2135.001	JHANDOKO2013 107183654160
<p>This adjustment is to move historical Right of Way Lease Payments moved to the Right of Way workpaper.</p>							
2009	460	128	0	6.4	1-Sided Adj	N/A	MGONZALX2013 1123065943220
<p>This one side adjustment was made to account for the labor and non labor associated with the employees in right of way that were transferred to SCG after the reorg alignment from cost center 2100-3023</p>							
2009	460	318	0	6.4	CCTR Transf	To 2200-0315.000	MGONZALX2014 0218113349377
<p>This adjustment is to transfer the Land Services and Right of Way historical costs from the Major Projects work paper group to the Gas Engineering work paper group in cost center 2200-0315. The transfer aligns resources to Gas Engineering and allows for better tracking and forecast of costs.</p>							
2009	-919	-635	0	-12.8	CCTR Transf	To 2200-0315.000	MGONZALX2014 0218113841590
<p>This adjustment is to correct a cost center transfer that was entered incorrectly as a positive instead of a negative transfer. The Transfer was to account for the Land and Right of Way cost in the Gas Engineering work paper group.</p>							
2009	98	378	0	-1.1	CCTR Transf	From 2200-0317.000	MGONZALX2014 0218143829827
<p>This adjustment is to transfer the historical costs of the Project and Construction Management (PCM) group from the Gas Engineering work paper group to Major Projects work paper group. The PCM group and activities are now managed within the Major Projects department. The transfer aligns resources to Major Projects and allows for better tracking and forecast of costs.</p>							

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: B. Major Projects
 Category-Sub: 1. Major Projects
 Workpaper: 2EN001.000 - Major Projects

<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	0	0	0	2.2	CCTR Transf	From 2200-0317.000	MGONZALX2014 0414094337307

This adjustment is to transfer the FTEs and to correct a transfer error. The transfer error was completed to account for the FTEs in the Project & Construction Management (PCM) group.

2009 Total	98	378	0	1.1			
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2010	0	368	0	0.0	CCTR Transf	From 2200-2135.001	JHANDOKO20131 107184031667
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This adjustment is to move historical Right of Way lease payments to Right of Way workpaper.

2010	381	116	0	5.3	1-Sided Adj	N/A	MGONZALX2013 1123070030767
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This one side adjustment was made to account for the labor and non labor associated with the employees in right of way that were transferred to SCG after the reorg alignment.

2010	-381	-483	0	-5.3	CCTR Transf	To 2200-0315.000	MGONZALX2014 0218114200380
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This adjustment is to transfer the Land Services and Right of Way historical costs and lease payments from the Major Projects work paper group to the Gas Engineering work paper group. The transfer allows for better tracking and forecast of costs in the Land Services and Right of Way group.

2010	94	-318	0	-0.8	CCTR Transf	From 2200-0317.000	MGONZALX2014 0218143927793
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This adjustment is to transfer the historical costs of the Project and Construction Management (PCM) group from the Gas Engineering work paper group to Major Projects work paper group. The PCM group and activities are now managed within the Major Projects department. The transfer aligns resources to Major Projects and allows for better tracking and forecast of costs.

2010	0	0	0	1.6	CCTR Transf	From 2200-0317.000	MGONZALX2014 0218144028717
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This adjustment is to transfer the FTEs and to correct a transfer error. The transfer error was completed to account for the FTEs in the Project & Construction Management (PCM) group.

2010 Total	94	-318	0	0.8			
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2011	0	681	0	0.0	CCTR Transf	From 2200-2135.001	JHANDOKO20131 107184121913
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This adjustment is to move historical Right of Way lease payments to Right of Way workpaper in the Gas Engineering department.

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: B. Major Projects
 Category-Sub: 1. Major Projects
 Workpaper: 2EN001.000 - Major Projects

<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>
2011	147	-5	0	1.4	CCTR Transf	From 2200-0323.000	MGONZALX2013 1123070920927
Pipeline and Project Development used to charged to this cost center, but now it will only be Tom's at 25% of his time and 75% in RD&D							
2011	18	61	0	0.2	CCTR Transf	From 2200-0317.000	MGONZALX2014 0218144121683
This adjustment is to transfer the historical costs of the Project and Construction Management (PCM) group from the Gas Engineering work paper group to Major Projects work paper group. The PCM group and activities are now managed within the Major Projects department. The transfer aligns resources to Major Projects and allows for better tracking and forecast of costs.							
2011	0	-681	0	0.0	CCTR Transf	To 2200-0315.000	MGONZALX2014 0508125814717
This adjustment is to transfer the lease Right of Way historical payments from the Major Projects work paper group to the non-shared work paper group in Gas Engineering. The transfer aligns resources to Gas Engineering and allows for better tracking and forecast of costs.							
2011	-392	-81	0	-5.4	CCTR Transf	To 2200-0315.000	MGONZALX2014 0508130720807
This adjustment is to transfer the Land Services and Right of Way historical costs from the Major Projects work paper group to the Gas Engineering work paper group in cost center 2200-0315. The transfer aligns resources to Gas Engineering and allows for better tracking and forecast of costs.							
2011	-147	-5	0	-1.4	CCTR Transf	From 2200-0323.000	MGONZALX2014 0513112815430
Adjustment to clean up the incorrect transfer.							
2011	0	9	0	0.0	CCTR Transf	From 2200-0323.000	MGONZALX2014 0513112955050
Adjustment to correct a transfer error.							
2011 Total	-374	-20	0	-5.2			

2012 0 937 0 0.0 CCTR Transf From 2200-2135.001 JHANDOKO20131
107184151797

This adjustment is to move the historical Right of Way lease payments to the Right of Way workpaper in the Gas Engineering department.

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: B. Major Projects
 Category-Sub: 1. Major Projects
 Workpaper: 2EN001.000 - Major Projects

<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>
2012	4	58	0	0.0	CCTR Transf	From 2200-0317.000	MGONZALX2014 0218144213253
<p>This adjustment is to transfer the historical costs of the Project and Construction Management (PCM) group from the Gas Engineering work paper group to Major Projects work paper group. The PCM group and activities are now managed within the Major Projects department. The transfer aligns resources to Gas Engineering and allows for better tracking and forecast of costs.</p>							
2012	0	-937	0	0.0	CCTR Transf	To 2200-0315.000	MGONZALX2014 0508131322180
<p>This adjustment is to move historical Right of Way lease payments from the Major Projects work paper group to the Non-Shared Gas Engineering work paper group where all the Right of Way lease payments is being sponsored.</p>							
2012	-337	-118	0	-4.7	CCTR Transf	To 2200-0315.000	MGONZALX2014 0508131721373
<p>This adjustment is to transfer the Land Services and Right of Way historical costs from the Major Projects work paper group to the Gas Engineering work paper group in cost center 2200-0315. The transfer aligns resources to Gas Engineering and allows for better tracking and forecast of costs.</p>							
2012 Total	-333	-60	0	-4.7			

2013	56	85	0	0.5	CCTR Transf	From 2200-0317.000	MGONZALX2014 0218144309090
<p>This adjustment is to transfer the historical costs of the Project and Construction Management (PCM) group from the Gas Engineering work paper group to Major Projects work paper group. The PCM group and activities are now managed within the Major Projects department. The transfer aligns resources to Major Projects and allows for better tracking and forecast of costs.</p>							
2013	-253	-113	0	-3.3	CCTR Transf	To 2200-0315.000	MGONZALX2014 0508132415410
<p>This adjustment is to transfer the Land Services and Right of Way historical costs from the Major Projects work paper group to the Gas Engineering work paper group in cost center 2200-0315. The transfer aligns resources to Gas Engineering and allows for better tracking and forecast of costs.</p>							
2013	0	-960	0	0.0	CCTR Transf	To 2200-0315.000	MGONZALX2014 0508132523440
<p>This adjustment is to move the historical Right of Way lease payments from the Major Projects work paper group to the non shared Gas Engineering work paper group where they will be represented.</p>							

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: B. Major Projects
 Category-Sub: 1. Major Projects
 Workpaper: 2EN001.000 - Major Projects

<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>
2013	0	960	0	0.0	CCTR Transf	From 2200-2135.001	SLI201402070932 09400

This adjustment is to move historical Right of Way lease payments to Right of Way workpaper within the Gas Engineering department, which is sponsoring the lease payments.

2013 Total	-197	-28	0	-2.8			
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Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
Witness: Raymond K. Stanford
Category: C. Emergency Services
Workpaper: 2EN004.000

Summary for Category: C. Emergency Services

	In 2013\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2013	2014	2015	2016
Labor	888	998	1,208	1,548
Non-Labor	237	265	320	403
NSE	0	0	0	0
Total	1,125	1,263	1,528	1,951
FTE	8.2	9.2	11.2	14.2

Workpapers belonging to this Category:

2EN004.000 Emergency Services

Labor	888	998	1,208	1,548
Non-Labor	237	265	320	403
NSE	0	0	0	0
Total	1,125	1,263	1,528	1,951
FTE	8.2	9.2	11.2	14.2

Note: Totals may include rounding differences.

Beginning of Workpaper
2EN004.000 - Emergency Services

Southern California Gas Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: C. Emergency Services
 Category-Sub: 1. Emergency Services
 Workpaper: 2EN004.000 - Emergency Services

Activity Description:

Responsible for SoCal Gas' comprehensive emergency response plan that includes emergency preparedness, crisis management, and business resumption planning, to provide for the safety of employees, customers, and the general public and the protection of property in the event of a major emergency related to gas pipeline operations. Additional activities also include the development of plans for coping with a major emergency including provisions for training, joint emergency exercises, coordination of First Responder efforts, response and recovery, on-call schedules and duties, inter-organizational assistance, coordination with, and notification of, governmental agencies, conformance with governmental regulations, media contact, assignments to governmental emergency organizations and activation of the Company's Gas Emergency Center.

This includes extensive training of management personnel in properly reporting emergencies. In addition, the department is responsible for Incident Command System training.

Forecast Explanations:

Labor - Base YR Rec

As the foundation for future labor expense requirements, the base year was chosen. The Emergency Services department experience a reorganization in the last five years and with a more mandates and requirements to comply with state regulator, additional staffing and resources are required. These incremental costs have been identified and added to the base year.

Non-Labor - Base YR Rec

As the foundation for future non-labor expense requirements, the base year was chosen. The Emergency Services department experience a reorganization in the last five years and with a more mandates and requirements from State regulation, additional staffing and resources are required. These incremental costs have been identified and added to the base year.

NSE - Base YR Rec

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		291	281	406	702	888	998	1,208	1,548	
Non-Labor		112	60	87	99	237	265	320	403	
NSE		0	0	0	0	0	0	0	0	
Total		404	341	493	801	1,125	1,263	1,528	1,951	
FTE		3.1	3.0	3.9	6.1	8.2	9.2	11.2	14.2	

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: C. Emergency Services
 Category-Sub: 1. Emergency Services
 Workpaper: 2EN004.000 - Emergency Services

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	Base YR Rec	888	888	888	110	320	660	998	1,208	1,548
Non-Labor	Base YR Rec	237	237	237	28	83	166	265	320	403
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
Total		1,125	1,125	1,125	138	403	826	1,263	1,528	1,951
FTE	Base YR Rec	8.2	8.2	8.2	1.0	3.0	6.0	9.2	11.2	14.2

Forecast Adjustment Details:

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj Type</u>
2014	110	28	0	138	1.0	1-Sided Adj

This adjustment is to add one FTE to cost center 2200-0613 due to increase requirements and regulations in the Emergency Services department.

2014 Total	110	28	0	138	1.0	
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2015	320	83	0	403	3.0	1-Sided Adj
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This adjustment is due to three additional FTEs in 2015 in support of First Responder and increased requirements and regulations in the Emergency Services department.

2015 Total	320	83	0	403	3.0	
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2016	330	83	0	413	3.0	1-Sided Adj
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This adjustment is due to three additional FTEs in 2016 in support of First Responder and increased requirements and regulations in the Emergency Services department.

2016	330	83	0	413	3.0	1-Sided Adj
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This adjustment is due to three additional FTEs in 2015 in support of First Responder and increased requirements and regulations in the Emergency Services department.

2016 Total	660	166	0	826	6.0	
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Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
Witness: Raymond K. Stanford
Category: C. Emergency Services
Category-Sub: 1. Emergency Services
Workpaper: 2EN004.000 - Emergency Services

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	224	223	332	591	762
Non-Labor	101	55	84	98	237
NSE	0	0	0	0	0
Total	325	278	416	688	999
FTE	2.6	2.5	3.3	5.2	7.0
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	224	223	332	591	762
Non-Labor	101	55	84	98	237
NSE	0	0	0	0	0
Total	325	278	416	688	999
FTE	2.6	2.5	3.3	5.2	7.0
Vacation & Sick (Nominal \$)					
Labor	40	39	55	95	127
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	40	39	55	95	127
FTE	0.5	0.5	0.6	0.9	1.2
Escalation to 2013\$					
Labor	27	20	18	16	0
Non-Labor	11	4	3	2	0
NSE	0	0	0	0	0
Total	38	24	22	18	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	291	281	406	702	888
Non-Labor	112	60	87	99	237
NSE	0	0	0	0	0
Total	404	341	493	801	1,125
FTE	3.1	3.0	3.9	6.1	8.2

* 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
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: C. Emergency Services
 Category-Sub: 1. Emergency Services
 Workpaper: 2EN004.000 - Emergency Services

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.

Southern California Gas Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: D. Public Awareness
 Workpaper: 2EN003.000

Summary for Category: D. Public Awareness

	In 2013\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2013	2014	2015	2016
Labor	0	0	0	0
Non-Labor	779	975	1,097	1,218
NSE	0	0	0	0
Total	<u>779</u>	<u>975</u>	<u>1,097</u>	<u>1,218</u>
FTE	0.0	0.0	0.0	0.0

Workpapers belonging to this Category:

2EN003.000 Public Awareness

Labor	0	0	0	0
Non-Labor	779	975	1,097	1,218
NSE	0	0	0	0
Total	<u>779</u>	<u>975</u>	<u>1,097</u>	<u>1,218</u>
FTE	0.0	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper
2EN003.000 - Public Awareness

Southern California Gas Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: D. Public Awareness
 Category-Sub: 1. Public Awareness
 Workpaper: 2EN003.000 - Public Awareness

Activity Description:

The activities associated with the Public Awareness work group focus on those mandated by 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 the 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 SoCalGas. Coordination of these efforts is managed within Emergency Services.

Forecast Explanations:

Labor - 5-YR Average

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 linear trend was chosen. This forecasting methodology serves to more accurately represent the new work variations and better represent the future of the Public Awareness group.

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		1	0	0	0	0	0	0	0	
Non-Labor		339	491	616	827	779	975	1,097	1,218	
NSE		0	0	0	0	0	0	0	0	
Total		340	491	616	827	779	975	1,097	1,218	
FTE		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: D. Public Awareness
 Category-Sub: 1. Public Awareness
 Workpaper: 2EN003.000 - 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 Average	0	0	0	0	0	0	0	0	0
Non-Labor	5-YR Linear	975	1,097	1,218	0	0	0	975	1,097	1,218
NSE	5-YR Linear	0	0	0	0	0	0	0	0	0
Total		975	1,097	1,218	0	0	0	975	1,097	1,218
FTE	5-YR Average	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.

Southern California Gas Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: D. Public Awareness
 Category-Sub: 1. Public Awareness
 Workpaper: 2EN003.000 - Public Awareness

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	1	0	0	0	0
Non-Labor	306	454	592	813	581
NSE	0	0	0	0	0
Total	307	454	592	813	581
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	198
NSE	0	0	0	0	0
Total	0	0	0	0	198
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Nominal \$)					
Labor	1	0	0	0	0
Non-Labor	306	454	592	813	779
NSE	0	0	0	0	0
Total	307	454	592	813	779
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	33	37	24	14	0
NSE	0	0	0	0	0
Total	33	37	24	14	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	1	0	0	0	0
Non-Labor	339	491	616	827	779
NSE	0	0	0	0	0
Total	340	491	616	827	779
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.

Southern California Gas Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: D. Public Awareness
 Category-Sub: 1. Public Awareness
 Workpaper: 2EN003.000 - 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	198
NSE	0	0	0	0	0
Total	0	0	0	0	198
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	0	198	0	0.0	CCTR Transf	From 2200-2188.000	CMAK201402191 64022330
Cost alignment adjustment - Transfer costs related to Public Awareness to the responsible work group.							
2013 Total	0	198	0	0.0			

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
Witness: Raymond K. Stanford

Summary of Shared Services Workpapers:

Description	In 2013 \$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2013	2014	2015	2016
A. General Engineering	13,650	16,040	17,291	17,346
B. Pipeline Design & Gas Standards	737	833	883	901
C. Pipeline Safety & Compliance	266	326	420	536
D. Public Awareness	174	235	333	395
Total	14,827	17,434	18,927	19,178

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
Witness: Raymond K. Stanford
Category: A. General Engineering
Cost Center: VARIOUS

Summary for Category: A. General Engineering

	In 2013\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2013	2014	2015	2016
Labor	10,543	11,454	12,449	13,293
Non-Labor	3,105	4,587	4,843	4,054
NSE	0	0	0	0
Total	13,648	16,041	17,292	17,347
FTE	113.2	122.9	133.2	141.9

Cost Centers belonging to this Category:

2200-0225.000 USS - VP GAS ENGINEERING AND SYSTEM INTEGRITY

Labor	396	410	410	410
Non-Labor	120	75	75	75
NSE	0	0	0	0
Total	516	485	485	485
FTE	2.0	2.1	2.1	2.1

2200-0300.000 DIR ENG & TECH SERVICES

Labor	360	420	420	420
Non-Labor	14	20	20	20
NSE	0	0	0	0
Total	374	440	440	440
FTE	2.9	3.5	3.5	3.5

2200-0318.000 ENGINEERING DESIGN MANAGER

Labor	273	251	251	251
Non-Labor	128	182	182	182
NSE	0	0	0	0
Total	401	433	433	433
FTE	2.6	2.5	2.5	2.5

2200-0321.000 MECHANICAL DESIGN

Labor	131	232	337	442
Non-Labor	90	36	36	36
NSE	0	0	0	0
Total	221	268	373	478
FTE	1.4	2.2	3.2	4.2

2200-0323.000 PLANNING & DEVELOPMENT

Labor	20	30	30	30
Non-Labor	5	5	5	5
NSE	0	0	0	0
Total	25	35	35	35
FTE	0.1	0.2	0.2	0.2

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
Witness: Raymond K. Stanford
Category: A. General Engineering
Cost Center: VARIOUS

In 2013\$ (000) Incurred Costs			
Adjusted-Recorded	Adjusted-Forecast		
2013	2014	2015	2016

2200-2022.000 2200-0320 MATERIALS & QUALITY

Labor	1,012	966	966	966
Non-Labor	0	130	130	130
NSE	0	0	0	0
Total	1,012	1,096	1,096	1,096
FTE	10.6	10.4	10.4	10.4

2200-2377.000 HIGH PRESSURE & DISTRIBUTION ENG

Labor	493	543	691	799
Non-Labor	12	13	16	22
NSE	0	0	0	0
Total	505	556	707	821
FTE	5.0	5.5	7.0	8.0

2200-0309.000 MEAS REG & CONTR MGR & SPECIAL PROJECTS

Labor	566	515	515	515
Non-Labor	264	229	229	229
NSE	0	0	0	0
Total	830	744	744	744
FTE	6.3	5.7	5.7	5.7

2200-0310.000 MEASUREMENT & DESIGN

Labor	1,038	982	1,040	1,040
Non-Labor	159	212	237	257
NSE	0	0	0	0
Total	1,197	1,194	1,277	1,297
FTE	11.2	10.2	10.7	10.7

2200-0311.000 MEASUREMENT TECHNOLOGIES

Labor	693	849	849	849
Non-Labor	136	104	104	104
NSE	0	0	0	0
Total	829	953	953	953
FTE	7.2	8.9	8.9	8.9

2200-0312.000 MEASUREMENT FIELD SUPPORT

Labor	760	881	996	996
Non-Labor	214	165	171	171
NSE	0	0	0	0
Total	974	1,046	1,167	1,167
FTE	7.8	9.1	10.1	10.1

2200-0799.000 INSTRUMENT REPAIR & FIELD MAINT SUPV

Labor	663	610	610	610
Non-Labor	349	413	413	413
NSE	0	0	0	0
Total	1,012	1,023	1,023	1,023
FTE	8.1	7.7	7.7	7.7

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
Witness: Raymond K. Stanford
Category: A. General Engineering
Cost Center: VARIOUS

In 2013\$ (000) Incurred Costs			
Adjusted-Recorded	Adjusted-Forecast		
2013	2014	2015	2016

2200-2248.000 MEAS AND REG STANDARDS/MAT AND BTU DISTR

Labor	724	583	583	583
Non-Labor	22	126	126	126
NSE	0	0	0	0
Total	746	709	709	709
FTE	8.0	6.3	6.3	6.3

2200-1178.000 EAC CHEMICAL SECTION

Labor	1,216	1,376	1,456	1,536
Non-Labor	322	316	316	316
NSE	0	0	0	0
Total	1,538	1,692	1,772	1,852
FTE	13.2	15.6	16.6	17.6

2200-0302.000 BUSINESS PROCESS & INFOGRAPHICS SOLUTIONS

Labor	135	180	180	180
Non-Labor	6	8	8	8
NSE	0	0	0	0
Total	141	188	188	188
FTE	1.6	2.4	2.4	2.4

2200-0303.000 CADD APPLICATIONS

Labor	627	598	710	922
Non-Labor	205	320	320	120
NSE	0	0	0	0
Total	832	918	1,030	1,042
FTE	7.4	6.3	7.3	9.3

2200-0306.000 WORK MANAGEMENT & DATABASES DEVELOPMENT

Labor	545	875	1,040	1,376
Non-Labor	512	1,001	601	601
NSE	0	0	0	0
Total	1,057	1,876	1,641	1,977
FTE	6.6	10.8	12.8	15.8

2200-0308.000 CONTRACT/MAINTENANCE

Labor	0	0	0	0
Non-Labor	418	480	480	480
NSE	0	0	0	0
Total	418	480	480	480
FTE	0.0	0.0	0.0	0.0

2200-2376.000 ESS GIS

Labor	891	1,153	1,365	1,368
Non-Labor	129	752	1,374	759
NSE	0	0	0	0
Total	1,020	1,905	2,739	2,127
FTE	11.2	13.5	15.8	16.5

Note: Totals may include rounding differences.

Beginning of Workpaper
2200-0225.000 - USS - VP GAS ENGINEERING AND SYSTEM INTEGRITY

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 1. Engineering Design
 Cost Center: 2200-0225.000 - USS - VP GAS ENGINEERING AND SYSTEM INTEGRITY

Activity Description:

This cost center captures the activities and expenses associated with the Senior Vice President of Gas Operations and System Integrity and the organizations' administrative and financial support functions.

Forecast Explanations:

Labor - 5-YR Average

The labor expense requirements for this cost center have been consistent over recorded historical data. Thus this trend is expected to continue, and as the foundation for future labor expense requirements, the 5 year average was chosen.

Non-Labor - 5-YR Average

The non labor expense requirements for this cost center have been consistent over recorded historical data. Thus this trend is expected to continue, and as the foundation for future non labor expense requirements, the 5 year average was chosen.

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		425	418	406	404	396	410	410	410	
Non-Labor		59	36	58	100	120	75	75	75	
NSE		0	0	0	0	0	0	0	0	
Total		484	454	464	504	517	485	485	485	
FTE		2.2	2.2	2.1	2.1	2.0	2.1	2.1	2.1	

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 1. Engineering Design
 Cost Center: 2200-0225.000 - USS - VP GAS ENGINEERING AND SYSTEM INTEGRITY

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	5	0	5	0.00	2	11	0	13	0.00
Directly Allocated	0	0	0	0	0.00	0	0	0	0	0.00
Subj. To % Alloc.	396	115	0	511	2.02	408	64	0	472	2.12
Total Incurred	396	120	0	516	2.02	410	75	0	485	2.12
% Allocation										
Retained	86.70%	86.70%				86.66%	86.66%			
SEU	13.30%	13.30%				13.34%	13.34%			
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	2	11	0	13	0.00	2	11	0	13	0.00
Directly Allocated	0	0	0	0	0.00	0	0	0	0	0.00
Subj. To % Alloc.	408	64	0	472	2.12	408	64	0	472	2.12
Total Incurred	410	75	0	485	2.12	410	75	0	485	2.12
% Allocation										
Retained	86.66%	86.66%				86.66%	86.66%			
SEU	13.34%	13.34%				13.34%	13.34%			
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

Shared Services Template

Cost Center Allocation Percentage for 2014

From shared services report dated February 2014.

Cost Center Allocation Percentage for 2015

From shared services report dated February 2014.

Cost Center Allocation Percentage for 2016

From shared services report dated February 2014.

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 1. Engineering Design
 Cost Center: 2200-0225.000 - USS - VP GAS ENGINEERING AND SYSTEM INTEGRITY

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	410	410	410	0	0	0	410	410	410
Non-Labor	5-YR Average	75	75	75	0	0	0	75	75	75
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
Total		485	485	485	0	0	0	485	485	485
FTE	5-YR Average	2.1	2.1	2.1	0.0	0.0	0.0	2.1	2.1	2.1

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.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 1. Engineering Design
 Cost Center: 2200-0225.000 - USS - VP GAS ENGINEERING AND SYSTEM INTEGRITY

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	328	331	333	341	340
Non-Labor	53	34	56	98	120
NSE	0	0	0	0	0
Total	381	365	389	439	460
FTE	1.8	1.8	1.8	1.8	1.7
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	328	331	333	341	340
Non-Labor	53	34	56	98	120
NSE	0	0	0	0	0
Total	381	365	389	439	460
FTE	1.8	1.8	1.8	1.8	1.7
Vacation & Sick (Nominal \$)					
Labor	59	58	55	55	56
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	59	58	55	55	56
FTE	0.3	0.3	0.3	0.3	0.3
Escalation to 2013\$					
Labor	38	28	17	9	0
Non-Labor	5	2	2	2	0
NSE	0	0	0	0	0
Total	44	31	20	11	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	425	418	406	404	396
Non-Labor	59	36	58	100	120
NSE	0	0	0	0	0
Total	484	454	464	504	517
FTE	2.1	2.1	2.1	2.1	2.0

* 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
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 1. Engineering Design
 Cost Center: 2200-0225.000 - USS - VP GAS ENGINEERING AND SYSTEM INTEGRITY

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.

Beginning of Workpaper
2200-0300.000 - DIR ENG & TECH SERVICES

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 1. Engineering Design
 Cost Center: 2200-0300.000 - DIR ENG & TECH SERVICES

Activity Description:

This cost center captures the activities and expenses associated with the Director of Gas Engineering and the organizations' administrative and financial support functions. Expenses are typically for gas transmission, underground storage, and gas distribution-related engineering services and associated costs.

Forecast Explanations:

Labor - 5-YR Average

The labor expense requirements for this cost center have been consistent over recorded historical data. This trend is expected to continue. As such the 5 year average methodology was chosen as best representing the future expense requirements.

Non-Labor - 5-YR Average

The non labor expense requirements for this cost center have been consistent over recorded historical data. This trend is expected to continue. As such the 5 year average methodology was chosen as best representing the future expense requirements.

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		463	450	419	409	360	420	420	420	
Non-Labor		16	13	11	43	14	20	20	20	
NSE		0	0	0	0	0	0	0	0	
Total		479	463	429	452	374	440	440	440	
FTE		3.8	3.8	3.5	3.3	2.9	3.5	3.5	3.5	

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 1. Engineering Design
 Cost Center: 2200-0300.000 - DIR ENG & TECH SERVICES

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	2	0	0	2	0.00	1	0	0	1	0.00
Directly Allocated	0	2	0	2	0.00	1	0	0	1	0.01
Subj. To % Alloc.	357	13	0	370	2.93	418	19	0	437	3.44
Total Incurred	359	15	0	374	2.93	420	19	0	439	3.45
% Allocation										
Retained	96.54%	96.54%				95.48%	95.48%			
SEU	3.46%	3.46%				4.52%	4.52%			
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	1	0	0	1	0.00	1	0	0	1	0.00
Directly Allocated	1	0	0	1	0.01	1	0	0	1	0.01
Subj. To % Alloc.	418	19	0	437	3.44	418	19	0	437	3.44
Total Incurred	420	19	0	439	3.45	420	19	0	439	3.45
% Allocation										
Retained	95.48%	95.48%				95.48%	95.48%			
SEU	4.52%	4.52%				4.52%	4.52%			
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

Shared Services Template

Cost Center Allocation Percentage for 2014

Allocation percentages from shared services templates. The methodology used is based on the FTEs supported.

Cost Center Allocation Percentage for 2015

Allocation percentages from shared services templates. The methodology used is based on the FTEs supported.

Cost Center Allocation Percentage for 2016

Allocation percentages from shared services templates. The methodology used is based on the FTEs supported.

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 1. Engineering Design
 Cost Center: 2200-0300.000 - DIR ENG & TECH SERVICES

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	420	420	420	0	0	0	420	420	420
Non-Labor	5-YR Average	20	20	20	0	0	0	20	20	20
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
Total		440	440	440	0	0	0	440	440	440
FTE	5-YR Average	3.5	3.5	3.5	0.0	0.0	0.0	3.5	3.5	3.5

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.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
Witness: Raymond K. Stanford
Category: A. General Engineering
Category-Sub: 1. Engineering Design
Cost Center: 2200-0300.000 - DIR ENG & TECH SERVICES

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	357	357	344	345	308
Non-Labor	15	13	10	43	14
NSE	0	0	0	0	0
Total	371	370	354	387	323
FTE	3.2	3.2	3.0	2.9	2.5
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	357	357	344	345	308
Non-Labor	15	13	10	43	14
NSE	0	0	0	0	0
Total	371	370	354	387	323
FTE	3.2	3.2	3.0	2.9	2.5
Vacation & Sick (Nominal \$)					
Labor	64	62	57	55	51
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	64	62	57	55	51
FTE	0.6	0.6	0.5	0.5	0.4
Escalation to 2013\$					
Labor	42	31	18	9	0
Non-Labor	1	1	0	1	0
NSE	0	0	0	0	0
Total	43	32	18	10	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	463	450	419	409	360
Non-Labor	16	13	11	43	14
NSE	0	0	0	0	0
Total	479	463	429	452	374
FTE	3.8	3.8	3.5	3.4	2.9

* 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
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 1. Engineering Design
 Cost Center: 2200-0300.000 - DIR ENG & TECH SERVICES

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.

Beginning of Workpaper
2200-0318.000 - ENGINEERING DESIGN MANAGER

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 1. Engineering Design
 Cost Center: 2200-0318.000 - ENGINEERING DESIGN MANAGER

Activity Description:

This cost center has administrative, managerial and budgetary oversight over the following engineering activities; pipeline engineering; and development of gas standards and design. Personnel consist of Department Manager, and Administrative Support individual.

Forecast Explanations:

Labor - 5-YR Average

The 5-year average serves as the best indication of the ongoing requirements for this organization. Historical data indicate that activities and staffing levels have been transient, driven by unforeseen requests. This trend is expected to continue so the best estimate for future requirements is the five year average.

Non-Labor - 5-YR Average

The 5-year average serves as the best indication of the ongoing requirements for this organization. Historical data indicate that activities and staffing levels have been transient, driven by unforeseen requests. This trend is expected to continue so the best estimate for future requirements is the five year average.

NSE - 5-YR Average

There are no Non-Standard Escalation expenses associated with 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		308	275	261	140	273	251	251	251	
Non-Labor		120	185	231	248	128	182	182	182	
NSE		0	0	0	0	0	0	0	0	
Total		428	460	491	388	401	434	434	434	
FTE		3.0	2.8	2.5	1.5	2.6	2.5	2.5	2.5	

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 1. Engineering Design
 Cost Center: 2200-0318.000 - ENGINEERING DESIGN MANAGER

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	105	8	0	113	0.83	36	2	0	38	0.26
Directly Allocated	0	0	0	0	0.00	0	0	0	0	0.00
Subj. To % Alloc.	169	120	0	289	1.75	216	180	0	396	2.22
Total Incurred	274	128	0	402	2.58	252	182	0	434	2.48
% Allocation										
Retained	95.29%	95.29%				91.13%	91.13%			
SEU	4.71%	4.71%				8.87%	8.87%			
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	36	2	0	38	0.26	36	2	0	38	0.26
Directly Allocated	0	0	0	0	0.00	0	0	0	0	0.00
Subj. To % Alloc.	216	180	0	396	2.22	216	180	0	396	2.22
Total Incurred	252	182	0	434	2.48	252	182	0	434	2.48
% Allocation										
Retained	91.13%	91.13%				91.13%	91.13%			
SEU	8.87%	8.87%				8.87%	8.87%			
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

Allocation percentages from shared services template.

Cost Center Allocation Percentage for 2014

Allocation percentages from shared services template. The methodology used is based on the FTEs supported.

Cost Center Allocation Percentage for 2015

Allocation percentages from shared services template. The methodology used is based on the FTEs supported.

Cost Center Allocation Percentage for 2016

Allocation percentages from shared services template. The methodology used is based on the FTEs supported.

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 1. Engineering Design
 Cost Center: 2200-0318.000 - ENGINEERING DESIGN MANAGER

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	251	251	251	0	0	0	251	251	251
Non-Labor	5-YR Average	182	182	182	0	0	0	182	182	182
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
Total		434	434	434	0	0	0	434	434	434
FTE	5-YR Average	2.5	2.5	2.5	0.0	0.0	0.0	2.5	2.5	2.5

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.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 1. Engineering Design
 Cost Center: 2200-0318.000 - ENGINEERING DESIGN MANAGER

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	237	218	214	118	234
Non-Labor	109	173	221	243	128
NSE	0	0	0	0	0
Total	347	391	435	361	362
FTE	2.5	2.4	2.1	1.3	2.2
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	237	218	214	118	234
Non-Labor	109	173	221	243	128
NSE	0	0	0	0	0
Total	347	391	435	361	362
FTE	2.5	2.4	2.1	1.3	2.2
Vacation & Sick (Nominal \$)					
Labor	43	38	36	19	39
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	43	38	36	19	39
FTE	0.5	0.4	0.4	0.2	0.4
Escalation to 2013\$					
Labor	28	19	11	3	0
Non-Labor	11	13	10	5	0
NSE	0	0	0	0	0
Total	38	31	21	8	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	308	275	261	140	273
Non-Labor	120	185	231	248	128
NSE	0	0	0	0	0
Total	428	460	491	388	401
FTE	3.0	2.8	2.5	1.5	2.6

* 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
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 1. Engineering Design
 Cost Center: 2200-0318.000 - ENGINEERING DESIGN MANAGER

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.

Beginning of Workpaper
2200-0321.000 - MECHANICAL DESIGN

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 1. Engineering Design
 Cost Center: 2200-0321.000 - MECHANICAL DESIGN

Activity Description:

The Mechanical Design engineering group provides technical expertise in the development and implementation of mechanical engineering strategies and designs related to transmission and storage facilities, including compressor stations, instrument air systems, exhaust systems, pressure vessels, field piping, fire protection systems, and gas processing facilities.

Forecast Explanations:

Labor - 5-YR Average

As the foundation for future labor expense requirements, the 5 year average was chosen. The nature of work performed by the Mechanical Design department, has proven to be consistent over time as evident by historical data. It is predicted that the current activity levels and program support functions will be sustained moving forward. As such, the 5 year average would sufficiently meet the future funding requirements.

Non-Labor - 5-YR Average

As the foundation for future non-labor expense requirements, the 5 year average was chosen. The nature of work performed by the Mechanical Design department, has proven to be consistent over time as evident by historical data. It is predicted that the current activity levels and program support functions will be sustained moving forward. As such, the 5 year average would sufficiently meet the future funding requirements.

NSE - 5-YR Average

There are no non-standard escalation expenses associated with 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		307	312	302	106	131	232	337	442	
Non-Labor		20	14	10	44	90	36	36	36	
NSE		0	0	0	0	0	0	0	0	
Total		326	326	312	150	220	267	372	477	
FTE		3.1	3.0	2.8	1.0	1.4	2.2	3.2	4.2	

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 1. Engineering Design
 Cost Center: 2200-0321.000 - MECHANICAL DESIGN

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	3	0	0	3	0.04	2	0	0	2	0.01
Directly Allocated	0	0	0	0	0.00	0	0	0	0	0.00
Subj. To % Alloc.	128	90	0	218	1.33	230	36	0	266	2.23
Total Incurred	131	90	0	221	1.37	232	36	0	268	2.24
% Allocation										
Retained	98.26%	98.26%				98.28%	98.28%			
SEU	1.74%	1.74%				1.72%	1.72%			
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	2	0	0	2	0.01	2	0	0	2	0.01
Directly Allocated	0	0	0	0	0.00	0	0	0	0	0.00
Subj. To % Alloc.	335	36	0	371	3.23	440	36	0	476	4.23
Total Incurred	337	36	0	373	3.24	442	36	0	478	4.24
% Allocation										
Retained	98.28%	98.28%				98.28%	98.28%			
SEU	1.72%	1.72%				1.72%	1.72%			
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

Allocation percentages from shared services template.

Cost Center Allocation Percentage for 2014

Allocation percentages from shared services template. The methodology used is based on the amount of Horse Power (HP) in Compressors/Eng.

Cost Center Allocation Percentage for 2015

Allocation percentages from shared services template. The methodology used is based on the amount of Horse Power (HP) in Compressors/Eng.

Cost Center Allocation Percentage for 2016

Allocation percentages from shared services template. The methodology used is based on the amount of Horse Power (HP) in Compressors/Eng.

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 1. Engineering Design
 Cost Center: 2200-0321.000 - MECHANICAL DESIGN

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	232	232	232	0	105	210	232	337	442
Non-Labor	5-YR Average	36	36	36	0	0	0	36	36	36
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
Total		267	267	267	0	105	210	267	372	477
FTE	5-YR Average	2.2	2.2	2.2	0.0	1.0	2.0	2.2	3.2	4.2

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	105	0	0	105	1.0	1-Sided Adj
Adjustment to account for the V&S associated with six additional employees charging the majority of their labor to capital Storage projects and 17% of their labor to V&S.						
2015 Total	105	0	0	105	1.0	
2016	210	0	0	210	2.0	1-Sided Adj
Adjustment to account for the V&S associated with additional employees charging the majority of their labor to capital Storage projects and 17% of their labor to V&S.						
2016 Total	210	0	0	210	2.0	

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
Witness: Raymond K. Stanford
Category: A. General Engineering
Category-Sub: 1. Engineering Design
Cost Center: 2200-0321.000 - MECHANICAL DESIGN

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	237	247	249	91	112
Non-Labor	18	13	10	43	90
NSE	0	0	0	0	0
Total	254	261	259	134	202
FTE	2.6	2.5	2.4	0.8	1.2
Adjustments (Nominal \$) **					
Labor	0	0	-1	-2	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	-1	-2	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Nominal \$)					
Labor	237	247	248	89	112
Non-Labor	18	13	10	43	90
NSE	0	0	0	0	0
Total	254	261	258	132	202
FTE	2.6	2.5	2.4	0.8	1.2
Vacation & Sick (Nominal \$)					
Labor	43	43	41	14	19
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	43	43	41	14	19
FTE	0.5	0.5	0.4	0.1	0.2
Escalation to 2013\$					
Labor	28	21	13	2	0
Non-Labor	2	1	0	1	0
NSE	0	0	0	0	0
Total	29	22	13	3	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	307	312	302	106	131
Non-Labor	20	14	10	44	90
NSE	0	0	0	0	0
Total	326	326	312	150	220
FTE	3.1	3.0	2.8	0.9	1.4

* 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.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 1. Engineering Design
 Cost Center: 2200-0321.000 - MECHANICAL DESIGN

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs					
Years	2009	2010	2011	2012	2013
Labor	0	0	-0.696	-2	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	-0.696	-2	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	-0.696	0	0	0.0	1-Sided Adj	N/A	MGONZALX2013 1112123809280
This one-sided adjustment is due to exclusion of Compression Service Tariff (CST) costs related to the evaluation of CST facility installation site. Pursuant to CPUC decision D.12-12-037, all CST activities must be excluded from base rates.							
2011 Total	-0.696	0	0	0.0			
2012	-2	0	0	0.0	1-Sided Adj	N/A	MGONZALX2013 1112124103080
This adjustment was due to the exclusion of Compression Service Tariff (CST) costs related to the evaluation of CST facility installation site. Pursuant to CPUC decision D.12-12-037, all CST activities must be excluded from base rates.							
2012 Total	-2	0	0	0.0			
2013 Total	0	0	0	0.0			

Note: Totals may include rounding differences.

Beginning of Workpaper
2200-0323.000 - PLANNING & DEVELOPMENT

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 1. Engineering Design
 Cost Center: 2200-0323.000 - PLANNING & DEVELOPMENT

Activity Description:

This cost center provides analytical support and project management to administer, forecast, and execute air emissions credit requirements at company storage, transmission, and other facilities. The trading of air emission credits, such as the South Coast Air Quality Management District's RECLAIM Cap & Trade Program, is for regulatory compliance and equipment permitting purposes. The associated activities to this cost center include 25% of labor expenses for one full time Project Manager II, while the remaining 75% of labor expenses is assigned to Gas Operations' RD&D, non-shared cost center 2200-0324 in the Gas Engineering non-shared work paper group.

Forecast Explanations:

Labor - Base YR Rec

As the foundation for future labor expense requirements, base year was chosen because the historical costs included other groups and activities that did not represent the anticipated expense requirements. In addition, incremental adjustments to the base year were included to represent the expense requirements anticipated in test year 2016.

Non-Labor - Base YR Rec

As the foundation for future non labor expense requirements, base year was chosen because the historical costs included other groups and activities that did not represent the anticipated expense requirements. In addition, incremental adjustments to the base year were included to represent the expense requirements anticipated in test year 2016.

NSE - Base YR Rec

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	606	529	216	29	20	30	30	30		
Non-Labor	67	51	6	5	5	5	5	5		
NSE	0	0	0	0	0	0	0	0		
Total	673	580	223	33	25	35	35	35		
FTE	5.1	4.6	2.0	0.2	0.1	0.2	0.2	0.2		

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 1. Engineering Design
 Cost Center: 2200-0323.000 - PLANNING & DEVELOPMENT

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	-0.04	0	0	0	0	-0.04
Directly Allocated	0	0	0	0	0.00	0	0	0	0	0.00
Subj. To % Alloc.	20	5	0	25	0.18	30	5	0	35	0.28
Total Incurred	20	5	0	25	0.14	30	5	0	35	0.24
% Allocation										
Retained	74.77%	74.77%				70.53%	70.53%			
SEU	25.23%	25.23%				29.47%	29.47%			
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	-0.04	0	0	0	0	-0.04
Directly Allocated	0	0	0	0	0.00	0	0	0	0	0.00
Subj. To % Alloc.	30	5	0	35	0.28	30	5	0	35	0.28
Total Incurred	30	5	0	35	0.24	30	5	0	35	0.24
% Allocation										
Retained	70.53%	70.53%				70.53%	70.53%			
SEU	29.47%	29.47%				29.47%	29.47%			
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

Allocation percentages from shared services template.

Cost Center Allocation Percentage for 2014

Allocation percentages from shared services template. The methodology used is based on the Meter Ratio applied to specific budgeted activities.

Cost Center Allocation Percentage for 2015

Allocation percentages from shared services template. The methodology used is based on the Meter Ratio applied to specific budgeted activities.

Cost Center Allocation Percentage for 2016

Allocation percentages from shared services template. The methodology used is based on the Meter Ratio applied to specific budgeted activities.

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 1. Engineering Design
 Cost Center: 2200-0323.000 - PLANNING & DEVELOPMENT

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	Base YR Rec	20	20	20	10	10	10	30	30	30
Non-Labor	Base YR Rec	5	5	5	0	0	0	5	5	5
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
Total		25	25	25	10	10	10	35	35	35
FTE	Base YR Rec	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2

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	10	0	0	10	0.1	1-Sided Adj

Adjustment to account for 25% of one FTE charged by a Project Manager II who manages the Gas Operations Research, Development and Demonstrations (RD&D). The other 75% of his labor is captured in the Research (RD&D) cost center 2200-0324. Note, the Gas Operations RD&D dollars are being sponsored by the RD&D department witnessed by Jeff Reed.

2014 Total	10	0	0	10	0.1	
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2015	10	0	0	10	0.1	1-Sided Adj
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Adjustment to account for 25% of one FTE charged by a Project Manager II who manages the Gas Operations Research, Development and Demonstrations (RD&D). The other 75% of his labor is captured in the Research (RD&D) cost center 2200-0324. Note, the Gas Operations RD&D dollars are being sponsored by the RD&D department witnessed by Jeff Reed.

2015 Total	10	0	0	10	0.1	
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2016	10	0	0	10	0.1	1-Sided Adj
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Adjustment to account for 25% of one FTE charged by a Project Manager II who manages the Gas Operations Research, Development and Demonstrations (RD&D). The other 75% of his labor is captured in the Research (RD&D) cost center 2200-0324. Note, the Gas Operations RD&D dollars are being sponsored by the RD&D department witnessed by Jeff Reed.

2016 Total	10	0	0	10	0.1	
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Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 1. Engineering Design
 Cost Center: 2200-0323.000 - PLANNING & DEVELOPMENT

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	467	420	178	24	36
Non-Labor	61	48	6	4	2,225
NSE	0	0	0	0	0
Total	528	467	184	29	2,261
FTE	4.3	3.9	1.7	0.2	0.3
Adjustments (Nominal \$) **					
Labor	0	0	0	0	-18
Non-Labor	0	0	0	0	-2,220
NSE	0	0	0	0	0
Total	0	0	0	0	-2,238
FTE	0.0	0.0	0.0	0.0	-0.2
Recorded-Adjusted (Nominal \$)					
Labor	467	420	178	24	18
Non-Labor	61	48	6	4	5
NSE	0	0	0	0	0
Total	528	467	184	29	22
FTE	4.3	3.9	1.7	0.2	0.1
Vacation & Sick (Nominal \$)					
Labor	84	73	30	4	3
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	84	73	30	4	3
FTE	0.8	0.7	0.3	0.0	0.0
Escalation to 2013\$					
Labor	54	36	9	1	0
Non-Labor	6	3	0	0	0
NSE	0	0	0	0	0
Total	60	39	9	1	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	606	529	216	29	20
Non-Labor	67	51	6	5	5
NSE	0	0	0	0	0
Total	673	580	223	33	25
FTE	5.1	4.6	2.0	0.2	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.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 1. Engineering Design
 Cost Center: 2200-0323.000 - PLANNING & DEVELOPMENT

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs					
Years	2009	2010	2011	2012	2013
Labor	0	0	0	0	-18
Non-Labor	0	0	0	0	-2,220
NSE	0	0	0	0	0
Total	0	0	0	0	-2,238
FTE	0.0	0.0	0.0	0.0	-0.2

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	-147	5	0	-1.4	CCTR Transf	To 2200-2391.000	MGONZALX2013 1123070920927
							Pipeline and Project Development used to charged to this cost center, but now it will only be Tom's at 25% of his time and 75% in RD&D
2011	147	5	0	1.4	CCTR Transf	To 2200-2391.000	MGONZALX2014 0513112815430
							Adjustment to clean up the incorrect transfer.
2011	0	-9	0	0.0	CCTR Transf	To 2200-2391.000	MGONZALX2014 0513112955050
							Adjustment to correct a transfer error.
2011 Total	0	0	0	0.0			
2012 Total	0	0	0	0.0			
2013	-18	-2,220	0	-0.2	1-Sided Adj	N/A	MGONZALX2014 0505131805737
							This adjustment is to removed the AB32 Cap & Trade costs from the Gas Engineering shared cost center 2200-0323 because AB32 Cap & Trade costs are to be recovered in a separate proceeding.

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
Witness: Raymond K. Stanford
Category: A. General Engineering
Category-Sub: 1. Engineering Design
Cost Center: 2200-0323.000 - PLANNING & DEVELOPMENT

<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>
2013 Total	-18	-2,220	0	-0.2			

Note: Totals may include rounding differences.

Beginning of Workpaper
2200-2022.000 - 2200-0320 MATERIALS & QUALITY

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 1. Engineering Design
 Cost Center: 2200-2022.000 - 2200-0320 MATERIALS & QUALITY

Activity Description:

The Materials and Quality team (cost center 2200-0320) manages the business processes for the approval, documentation, and quality management of Gas Pipeline Materials. Regulatory requirements mandate minimum requirements for the selection and qualification of pipe and components for use in pipelines. This team manages Gas Engineering oversight of material quality processes. This includes processes for approving manufacturers that supply specified pipeline materials, which is also integrated into the material approval process. This team coordinates assessments of potential and approved suppliers of pipeline materials and products, and tracks supplier quality performance. This team also supports the minimum levels of materials-related information, such as tracking and traceability requirements, that are needed to facilitate effective long-term management of pipeline data used for system integrity, and O&M decisions in the future.

Forecast Explanations:

Labor - 5-YR Average

The labor expense requirements for this cost center have been consistent over recorded historical data. This trend is expected to continue. As such the 5 year average methodology was chosen as best representing the future expense requirements.

Non-Labor - 5-YR Average

The non-labor expense requirements for this cost center have been consistent over recorded historical data. This trend is expected to continue. As such the 5 year average methodology was chosen as best representing the future expense requirements.

NSE - 5-YR Average

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		968	935	998	919	1,012	966	966	966	
Non-Labor		283	192	175	0	0	130	130	130	
NSE		0	0	0	0	0	0	0	0	
Total		1,250	1,127	1,173	919	1,012	1,096	1,096	1,096	
FTE		12.5	8.8	10.5	9.6	10.6	10.4	10.4	10.4	

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 1. Engineering Design
 Cost Center: 2200-2022.000 - 2200-0320 MATERIALS & QUALITY

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	1	0	0	1	0.00
Directly Allocated	0	0	0	0	0.00	0	0	0	0	0.00
Subj. To % Alloc.	1,012	0	0	1,012	10.64	966	130	0	1,096	10.41
Total Incurred	1,012	0	0	1,012	10.64	967	130	0	1,097	10.41
% Allocation										
Retained	100.00%	100.00%				86.65%	86.65%			
SEU	0.00%	0.00%				13.35%	13.35%			
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	1	0	0	1	0.00	1	0	0	1	0.00
Directly Allocated	0	0	0	0	0.00	0	0	0	0	0.00
Subj. To % Alloc.	966	130	0	1,096	10.41	966	130	0	1,096	10.41
Total Incurred	967	130	0	1,097	10.41	967	130	0	1,097	10.41
% Allocation										
Retained	86.65%	86.65%				86.65%	86.65%			
SEU	13.35%	13.35%				13.35%	13.35%			
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

The methodology used in the split is based the total miles of all pipe, and it is part of the shared services template for this cost center.

Cost Center Allocation Percentage for 2014

The methodology used in the split is based the total miles of all pipe, and it is part of the shared services template for this cost center.

Cost Center Allocation Percentage for 2015

The methodology used in the split is based the total miles of all pipe, and it is part of the shared services template for this cost center.

Cost Center Allocation Percentage for 2016

The methodology used in the split is based the total miles of all pipe, and it is part of the shared services template for this cost center.

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 1. Engineering Design
 Cost Center: 2200-2022.000 - 2200-0320 MATERIALS & QUALITY

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	966	966	966	0	0	0	966	966	966
Non-Labor	5-YR Average	130	130	130	0	0	0	130	130	130
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
Total		1,096	1,096	1,096	0	0	0	1,096	1,096	1,096
FTE	5-YR Average	10.4	10.4	10.4	0.0	0.0	0.0	10.4	10.4	10.4

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.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 1. Engineering Design
 Cost Center: 2200-2022.000 - 2200-0320 MATERIALS & QUALITY

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	119	70	58	0	0
Non-Labor	257	179	168	0	0
NSE	0	0	0	0	0
Total	377	249	226	0	0
FTE	1.4	0.9	0.7	0.0	0.0
Adjustments (Nominal \$) **					
Labor	626	672	761	775	868
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	626	672	761	775	868
FTE	9.1	6.6	8.3	8.2	9.1
Recorded-Adjusted (Nominal \$)					
Labor	746	742	819	775	868
Non-Labor	257	179	168	0	0
NSE	0	0	0	0	0
Total	1,003	921	987	775	868
FTE	10.5	7.5	9.0	8.2	9.1
Vacation & Sick (Nominal \$)					
Labor	135	130	136	124	144
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	135	130	136	124	144
FTE	2.0	1.3	1.5	1.4	1.5
Escalation to 2013\$					
Labor	87	64	43	20	0
Non-Labor	25	13	7	0	0
NSE	0	0	0	0	0
Total	112	77	50	20	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	968	935	998	919	1,012
Non-Labor	283	192	175	0	0
NSE	0	0	0	0	0
Total	1,250	1,127	1,173	919	1,012
FTE	12.5	8.8	10.5	9.6	10.6

* 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
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 1. Engineering Design
 Cost Center: 2200-2022.000 - 2200-0320 MATERIALS & QUALITY

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs					
Years	2009	2010	2011	2012	2013
Labor	626	672	761	775	868
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	626	672	761	775	868
FTE	9.1	6.6	8.3	8.2	9.1

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	0	0	0	3.1	1-Sided Adj	N/A	MGONZALX2014 0224132349160
Adjustment is to make a correction in the FTEs that were supposed to be transferred to account for the labor transferred for Ed Newton's group.							
2009	2	0	0	0.0	CCTR Transf	From 2200-2296.001	TPDLB201402241 20354807
Ed Newtons Group (R.Mueller + G.Ching) are moving from PI to Gas Engineering (D.Haines) in 2014 ReOrg. So we are moving historical costs to follow this.							
2009	66	0	0	0.0	CCTR Transf	From 2200-2296.000	TPDLB201402251 21358350
Ed Newton s group (R.Mueller + G.Ching) are moving from PI to Gas Engineering. Moving historical costs to reflect this.							
2009	558	0	0	6.0	CCTR Transf	From 2200-0320.001	TPDLB201402251 22453417
Ed Newton s group (R.Mueller + G.Ching) are moving from PI to Gas Engineering. Moving historical costs to reflect this.							
2009 Total	626	0	0	9.1			
2010	53	0	0	0.6	CCTR Transf	From 2200-2296.001	TPDLB201402241 20119503
Ed Newton s group (R.Mueller + G.Ching) are moving from PI to Gas Engineering (D.Haines) Org in 2014. Will move historical costs to go along with this ReORG							
2010	60	0	0	0.0	CCTR Transf	From 2200-2296.000	TPDLB201402251 21141573
Ed Newton s group (R.Mueller + G.Ching) are moving from PI to Gas Engineering. Moving historical costs to reflect this.							

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 1. Engineering Design
 Cost Center: 2200-2022.000 - 2200-0320 MATERIALS & QUALITY

<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>
2010	558	0	0	6.0	CCTR Transf	From 2200-0320.001	TPDLB201402251 22324290

Ed Newton s group (R.Mueller + G.Ching) are moving from PI to Gas Engineering. Moving historical costs to reflect this.

2010 Total	672	0	0	6.6			
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2011	198	0	0	2.3	CCTR Transf	From 2200-2296.001	TPDLB201402241 15907847
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Ed Newton s group (R.Mueller + G.Ching) are moving from PI to under Gas Engineering (D.Haines) in 2014 in ReOrg. So moving historical costs also.

2011	5	0	0	0.0	CCTR Transf	From 2200-2296.000	TPDLB201402251 20801033
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Ed Newton s group (R.Mueller + G.Ching) is moving from PI to Gas Engineering. Move historical costs to reflect this.

2011	558	0	0	6.0	CCTR Transf	From 2200-0320.001	TPDLB201402251 22120010
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Ed Newton s group (R.Mueller + G.Ching) are moving from PI to Gas Engineering. Moving historical costs to reflect this.

2011 Total	761	0	0	8.3			
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2012	215	0	0	2.2	CCTR Transf	From 2200-2296.001	TPDLB201402241 15455673
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Ed Newtons group (R.Mueller + G.Ching) are moving from PI to under Gas Engineering (D.Haines)

2012	1	0	0	0.0	CCTR Transf	From 2200-2296.000	TPDLB201402251 20440837
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Ed Newton s group is moving from PI to Gas Engineering (D.Haines). moving labor cost into 2200-2022

2012	558	0	0	6.0	CCTR Transf	From 2200-0320.001	TPDLB201402251 21954450
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Ed Newton s group (R.Mueller + G.Ching) are moving from PI to Gas Engineering. Moving historical costs to reflect this.

2012 Total	775	0	0	8.2			
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2013	0	0	0	6.2	1-Sided Adj	N/A	MGONZALX2014 0224132633090
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Adjustment to account for the 3.1 FTEs that were transferred as a negative 3.1 for Ed Newton's group.

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 1. Engineering Design
 Cost Center: 2200-2022.000 - 2200-0320 MATERIALS & QUALITY

<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>
2013	305	0	0	-3.1	CCTR Transf	From 2200-2296.001	TPDLB201402241 14625260
Two groups under Ed Newton are transferring to Gas Engineering under D.Haines (R.Mueller + G.Ching)							
2013	4	0	0	0.0	CCTR Transf	From 2200-2296.000	TPDLB201402241 20543890
Ed Newton s group (R.Mueller + G.Ching) are moving from PI to Gas Engineering (D.Haines) in ReOrg 2014. To align with this we are moving historical costs also.							
2013	558	0	0	6.0	CCTR Transf	From 2200-0320.001	TPDLB201402251 21830230
Ed Newton s group (R.Mueller + G.Ching) is moving from PI to Gas Engineering. Moving historical costs to reflect this.							
2013 Total	868	0	0	9.1			

Note: Totals may include rounding differences.

Beginning of Workpaper
2200-2377.000 - HIGH PRESSURE & DISTRIBUTION ENG

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 1. Engineering Design
 Cost Center: 2200-2377.000 - HIGH PRESSURE & DISTRIBUTION ENG

Activity Description:

Activities associated with this work group are performed by the Distribution System Engineering Support (DSES) group. Activities are primarily focused on providing the Distribution region engineering groups with technical, data and policy support, as well as developing and implementing new technologies to enhance safety, effectiveness and productivity in those groups. Specific activities include (1) the creation and validation of computer hydraulic models of medium and high pressure pipe networks as requested by the Distribution region engineering groups, (2) managing the company's multi-year program to replace all mechanical pressure recorders with electronic recorders and enhance associated processes, (3) developing and providing system design and analysis training to Region Engineering employees, and (4) providing project management over a range of other areas, including gas blown to atmosphere, isolation area management, year-end gas inventory calculation and reporting, review and update of Gas Standards and Forms, and participation on ASME B31.8 and GPTC/Z380 committees.

Forecast Explanations:

Labor - Base YR Rec

The DSES group is a relatively new group in the Engineering Design department with insufficient historical data to provide meaningful trends and averages. Therefore, the 2013 baseline level with identified incremental requirements serves as the best means to forecast ongoing funding needs in labor. In addition, incremental resources are requested due to the proposed Distribution System Monitoring & Analysis group.

Non-Labor - Base YR Rec

The DSES group is a relatively new group in the Engineering Design department with insufficient historical data to provide meaningful trends and averages. Therefore, the 2013 baseline level with identified incremental requirements serves as the best means to forecast ongoing funding needs in non-labor.

NSE - Base YR Rec

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	339	374	493	543	691	799	
Non-Labor		0	0	3	13	12	13	16	22	
NSE		0	0	0	0	0	0	0	0	
Total		0	0	343	387	505	556	707	821	
FTE		0.0	0.0	4.0	4.1	5.0	5.5	7.0	8.0	

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 1. Engineering Design
 Cost Center: 2200-2377.000 - HIGH PRESSURE & DISTRIBUTION ENG

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	2	0	0	2	0.00	2	0	0	2	0.00
Directly Allocated	1	0	0	1	0.01	1	0	0	1	0.01
Subj. To % Alloc.	490	12	0	502	5.04	540	13	0	553	5.54
Total Incurred	493	12	0	505	5.05	543	13	0	556	5.55
% Allocation										
Retained	85.34%	85.34%				86.19%	86.19%			
SEU	14.66%	14.66%				13.81%	13.81%			
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	2	0	0	2	0.00	2	0	0	2	0.00
Directly Allocated	1	0	0	1	0.01	1	0	0	1	0.01
Subj. To % Alloc.	688	16	0	704	7.04	796	22	0	818	8.04
Total Incurred	691	16	0	707	7.05	799	22	0	821	8.05
% Allocation										
Retained	86.19%	86.19%				86.19%	86.19%			
SEU	13.81%	13.81%				13.81%	13.81%			
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

Allocation percentages from shared services template.

Cost Center Allocation Percentage for 2014

Allocation percentages from shared services template. The methodology used is based on the total miles of Distribution pipeline.

Cost Center Allocation Percentage for 2015

Allocation percentages from shared services template. The methodology used is based on the total miles of Distribution pipeline.

Cost Center Allocation Percentage for 2016

Allocation percentages from shared services template. The methodology used is based on the total miles of Distribution pipeline.

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 1. Engineering Design
 Cost Center: 2200-2377.000 - HIGH PRESSURE & DISTRIBUTION ENG

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	Base YR Rec	493	493	493	50	198	306	543	691	799
Non-Labor	Base YR Rec	12	12	12	1	4	10	13	16	22
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
Total		505	505	505	51	202	316	556	707	821
FTE	Base YR Rec	5.0	5.0	5.0	0.5	2.0	3.0	5.5	7.0	8.0

Forecast Adjustment Details:

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj Type</u>
2014	50	1	0	51	0.5	1-Sided Adj

This adjustment is to account for a part time FTEs to support Distribution System Monitoring & Analysis group to further our ability to meet the requirements spelled out in SB 705 and identify and minimize hazards and systemic risks in order to minimize accidents, explosion, fires, and dangerous conditions, and protect the public and the gas corporation workforce.

2014 Total	50	1	0	51	0.5	
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2015	148	3	0	151	1.5	1-Sided Adj
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This adjustment is to account for 1.5 FTEs to support Distribution System Monitoring & Analysis group to further our ability to meet the requirements spelled out in SB 705 and identify and minimize hazards and systemic risks in order to minimize accidents, explosion, fires, and dangerous conditions, and protect the public and the gas corporation workforce.

2015 Total	198	4	0	202	2.0	
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2016	100	6	0	106	1.0	1-Sided Adj
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This adjustment is to account for a part time FTE from 2014 to support Distribution System Monitoring & Analysis group to further our ability to meet the requirements spelled out in SB 705 and identify and minimize hazards and systemic risks in order to minimize accidents, explosion, fires, and dangerous conditions, and protect the public and the gas corporation workforce.

2016 Total	100	6	0	106	1.0	
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Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 1. Engineering Design
 Cost Center: 2200-2377.000 - HIGH PRESSURE & DISTRIBUTION ENG

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj Type</u>
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This adjustment is to account for one additional FTEs to support Distribution System Monitoring and Analysis group to further our ability to meet the requirements spelled out in SB 705 and identify and minimize hazards and systemic risks in order to minimize accidents, explosion, fires, and dangerous conditions, and protect the public and the gas corporation workforce.

2016	206	4	0	210	2.0	1-Sided Adj
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This adjustment is to account for 2014 and 2015 FTEs to support Distribution System Monitoring and Analysis group to further our ability to meet the requirements spelled out in SB 705 and identify and minimize hazards and systemic risks in order to minimize accidents, explosion, fires, and dangerous conditions, and protect the public and the gas corporation workforce.

2016 Total	306	10	0	316	3.0	
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Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 1. Engineering Design
 Cost Center: 2200-2377.000 - HIGH PRESSURE & DISTRIBUTION ENG

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	0	0	279	315	423
Non-Labor	0	0	3	13	12
NSE	0	0	0	0	0
Total	0	0	282	328	435
FTE	0.0	0.0	3.4	3.5	4.3
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	279	315	423
Non-Labor	0	0	3	13	12
NSE	0	0	0	0	0
Total	0	0	282	328	435
FTE	0.0	0.0	3.4	3.5	4.3
Vacation & Sick (Nominal \$)					
Labor	0	0	46	51	70
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	46	51	70
FTE	0.0	0.0	0.6	0.6	0.7
Escalation to 2013\$					
Labor	0	0	14	8	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	15	8	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	0	0	339	374	493
Non-Labor	0	0	3	13	12
NSE	0	0	0	0	0
Total	0	0	343	387	505
FTE	0.0	0.0	4.0	4.1	5.0

* 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
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 1. Engineering Design
 Cost Center: 2200-2377.000 - HIGH PRESSURE & DISTRIBUTION ENG

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.

Beginning of Workpaper
2200-0309.000 - MEAS REG & CONTR MGR & SPECIAL PROJECTS

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 2. Gas Measurement, Regulation & Pressure Control
 Cost Center: 2200-0309.000 - MEAS REG & CONTR MGR & SPECIAL PROJECTS

Activity Description:

This cost center provides the general management and all administrative support for approximately 82 employees performing work in shared cost centers 2200-0310, 2200- 0311, 2200-0312, 2200-2248, 2200-0799, 2200-2487; and for similar support of non-shared cost center 2200-2265. The shared cost centers are for engineering policy, design, material selection, testing and field support related to measurement, gas regulation, automated control systems for pipelines and compressor stations and other instrumentation for both SoCalGas and SDG&E. Expenses are typically for transmission and gas distribution-related engineering services and associated costs.

Forecast Explanations:

Labor - 5-YR Average

The labor expense requirements for this cost center have been consistent over recorded historical data. This trend is expected to continue. As such, the 5 year average methodology was chosen as best representing the future expense requirements.

Non-Labor - 5-YR Average

The non-labor expense requirements for this cost center have been consistent over recorded historical data. This trend is expected to continue. As such the 5 year average methodology was chosen as best representing the future expense requirements.

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		469	496	516	527	566	515	515	515	
Non-Labor		152	100	114	517	264	229	229	229	
NSE		0	0	0	0	0	0	0	0	
Total		621	596	629	1,044	830	744	744	744	
FTE		5.2	5.4	5.8	5.8	6.3	5.7	5.7	5.7	

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 2. Gas Measurement, Regulation & Pressure Control
 Cost Center: 2200-0309.000 - MEAS REG & CONTR MGR & SPECIAL PROJECTS

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	6	0	0	6	0.01	3	0	0	3	0.01
Directly Allocated	0	0	0	0	0.00	2	2	0	4	0.01
Subj. To % Alloc.	561	264	0	825	6.31	509	227	0	736	5.67
Total Incurred	567	264	0	831	6.32	514	229	0	743	5.69
% Allocation										
Retained	86.66%	86.66%				86.65%	86.65%			
SEU	13.34%	13.34%				13.35%	13.35%			
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	3	0	0	3	0.01	3	0	0	3	0.01
Directly Allocated	2	2	0	4	0.01	2	2	0	4	0.01
Subj. To % Alloc.	509	227	0	736	5.67	509	227	0	736	5.67
Total Incurred	514	229	0	743	5.69	514	229	0	743	5.69
% Allocation										
Retained	86.65%	86.65%				86.65%	86.65%			
SEU	13.35%	13.35%				13.35%	13.35%			
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

Allocation percentages from shared services template.

Cost Center Allocation Percentage for 2014

Allocation percentages from shared services template. The methodology used is based on the total number of customer Meters.

Cost Center Allocation Percentage for 2015

Allocation percentages from shared services template. The methodology used is based on the total number of customer Meters.

Cost Center Allocation Percentage for 2016

Allocation percentages from shared services template. The methodology used is based on the total number of customer Meters.

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 2. Gas Measurement, Regulation & Pressure Control
 Cost Center: 2200-0309.000 - MEAS REG & CONTR MGR & SPECIAL PROJECTS

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	515	515	515	0	0	0	515	515	515
Non-Labor	5-YR Average	229	229	229	0	0	0	229	229	229
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
Total		744	744	744	0	0	0	744	744	744
FTE	5-YR Average	5.7	5.7	5.7	0.0	0.0	0.0	5.7	5.7	5.7

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.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 2. Gas Measurement, Regulation & Pressure Control
 Cost Center: 2200-0309.000 - MEAS REG & CONTR MGR & SPECIAL PROJECTS

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	361	393	423	444	485
Non-Labor	138	93	109	506	264
NSE	0	0	0	0	0
Total	500	486	532	950	750
FTE	4.3	4.5	4.9	5.0	5.4
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	361	393	423	444	485
Non-Labor	138	93	109	506	264
NSE	0	0	0	0	0
Total	500	486	532	950	750
FTE	4.3	4.5	4.9	5.0	5.4
Vacation & Sick (Nominal \$)					
Labor	65	69	70	71	81
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	65	69	70	71	81
FTE	0.8	0.8	0.8	0.8	0.9
Escalation to 2013\$					
Labor	42	34	22	11	0
Non-Labor	14	7	5	11	0
NSE	0	0	0	0	0
Total	56	41	27	23	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	469	496	516	527	566
Non-Labor	152	100	114	517	264
NSE	0	0	0	0	0
Total	621	596	629	1,044	830
FTE	5.1	5.3	5.7	5.8	6.3

* 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
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 2. Gas Measurement, Regulation & Pressure Control
 Cost Center: 2200-0309.000 - MEAS REG & CONTR MGR & SPECIAL PROJECTS

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.

Beginning of Workpaper
2200-0310.000 - MEASUREMENT & DESIGN

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 2. Gas Measurement, Regulation & Pressure Control
 Cost Center: 2200-0310.000 - MEASUREMENT & DESIGN

Activity Description:

This cost center provides detailed engineering design, planning, policy, equipment standards and consultation to operations related to: large meter and regulator stations, California producer gas facilities, interstate pipeline inter-connects, pressure protection for pipelines and related automated controls. This cost center will also be utilized to represent the pole maintenance and all the electrical and control system engineering associated with the design, operation; and the related compliance the safety aspects of large gas handling facilities also reside within this cost center and are contained within the associated cost. These engineering services are provided for both SoCalGas and SDG&E. Design, material specifications and policy are typically managed for gas transmission, storage and gas distribution assets; and supports the operational personnel associated with those entities.

Forecast Explanations:

Labor - 5-YR Average

The labor expense requirements for this cost center have been consistent over recorded historical data. Thus, the 5-year average was chosen because it best represents the future expense requirements, and because it captures the fluctuations that this cost center can experience. However, due to the requirement anticipated for pole maintenance and to meet compliance, additional staffing and resources are required. These incremental costs have been identified and added to the 5-year average.

Non-Labor - 5-YR Average

The non-labor expense requirements for this cost center have been consistent over recorded historical data. Thus 5 year average methodology was chosen as best representing the future expense requirements because it best captures the fluctuations that this cost center can experience. However, due to the requirement anticipated for pole maintenance and to meet compliance, additional staffing and resources are required. 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 cost center.

Summary of Results:

		In 2013\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years	2009	2010	2011	2012	2013	2014	2015	2016		
Labor	992	867	908	815	1,038	982	1,040	1,040		
Non-Labor	402	195	199	77	159	212	237	257		
NSE	0	0	0	0	0	0	0	0		
Total	1,394	1,062	1,108	892	1,198	1,194	1,277	1,297		
FTE	10.2	9.2	9.6	8.4	11.2	10.2	10.7	10.7		

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 2. Gas Measurement, Regulation & Pressure Control
 Cost Center: 2200-0310.000 - MEASUREMENT & DESIGN

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	54	0	0	54	0.55	16	0	0	16	0.14
Directly Allocated	0	0	0	0	0.00	4	0	0	4	0.05
Subj. To % Alloc.	984	159	0	1,143	10.64	961	211	0	1,172	10.03
Total Incurred	1,038	159	0	1,197	11.19	981	211	0	1,192	10.22
% Allocation										
Retained	89.22%	89.22%				86.65%	86.65%			
SEU	10.78%	10.78%				13.35%	13.35%			
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	16	0	0	16	0.14	16	0	0	16	0.14
Directly Allocated	4	0	0	4	0.05	4	0	0	4	0.05
Subj. To % Alloc.	1,019	236	0	1,255	10.53	1,019	256	0	1,275	10.53
Total Incurred	1,039	236	0	1,275	10.72	1,039	256	0	1,295	10.72
% Allocation										
Retained	86.65%	86.65%				86.65%	86.65%			
SEU	13.35%	13.35%				13.35%	13.35%			
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

Allocation percentages from shared services template.

Cost Center Allocation Percentage for 2014

Allocation percentages from shared services template. The methodology used is based on the total number of customer Meters.

Cost Center Allocation Percentage for 2015

Allocation percentages from shared services template. The methodology used is based on the total number of customer Meters.

Cost Center Allocation Percentage for 2016

Allocation percentages from shared services template. The methodology used is based on the total number of customer Meters.

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 2. Gas Measurement, Regulation & Pressure Control
 Cost Center: 2200-0310.000 - MEASUREMENT & DESIGN

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	924	924	924	58	116	116	982	1,040	1,040
Non-Labor	5-YR Average	207	207	207	5	30	50	212	237	257
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
Total		1,131	1,131	1,131	63	146	166	1,194	1,277	1,297
FTE	5-YR Average	9.7	9.7	9.7	0.5	1.0	1.0	10.2	10.7	10.7

Forecast Adjustment Details:

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj Type</u>
2014	58	5	0	63	0.5	1-Sided Adj

This adjustment is for an incremental FTE to be employed mid 2014 as well as for the non labor expense associated with the requirements for pole maintenance.

2014 Total	58	5	0	63	0.5	
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2015	116	30	0	146	1.0	1-Sided Adj
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This adjustment is to include the incremental FTE from 2014 and the associated non-labor cost to support the requirements for Pole Maintenance.

2015 Total	116	30	0	146	1.0	
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2016	116	50	0	166	1.0	1-Sided Adj
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This adjustment is to include the incremental FTE from 2014 and the associated non-labor cost to support the requirements for Pole Maintenance.

2016 Total	116	50	0	166	1.0	
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Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 2. Gas Measurement, Regulation & Pressure Control
 Cost Center: 2200-0310.000 - MEASUREMENT & DESIGN

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	765	688	746	687	847
Non-Labor	366	182	191	75	157
NSE	0	0	0	0	0
Total	1,131	870	937	762	1,005
FTE	8.6	7.8	8.2	7.2	9.0
Adjustments (Nominal \$) **					
Labor	0	0	0	0	43
Non-Labor	0	0	0	0	2
NSE	0	0	0	0	0
Total	0	0	0	0	45
FTE	0.0	0.0	0.0	0.0	0.6
Recorded-Adjusted (Nominal \$)					
Labor	765	688	746	687	890
Non-Labor	366	182	191	75	159
NSE	0	0	0	0	0
Total	1,131	870	937	762	1,050
FTE	8.6	7.8	8.2	7.2	9.6
Vacation & Sick (Nominal \$)					
Labor	138	120	124	110	148
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	138	120	124	110	148
FTE	1.6	1.4	1.4	1.2	1.6
Escalation to 2013\$					
Labor	89	59	39	18	0
Non-Labor	36	13	8	2	0
NSE	0	0	0	0	0
Total	125	72	47	19	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	992	867	908	815	1,038
Non-Labor	402	195	199	77	159
NSE	0	0	0	0	0
Total	1,394	1,062	1,108	892	1,198
FTE	10.2	9.2	9.6	8.4	11.2

* 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
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 2. Gas Measurement, Regulation & Pressure Control
 Cost Center: 2200-0310.000 - MEASUREMENT & DESIGN

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs					
Years	2009	2010	2011	2012	2013
Labor	0	0	0	0	43
Non-Labor	0	0	0	0	2
NSE	0	0	0	0	0
Total	0	0	0	0	45
FTE	0.0	0.0	0.0	0.0	0.6

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	39	2	0	0.5	CCTR Transf	From 2200-2487.000	MGONZALX2014 0321123053697
Adjustment made because cost center 2200-0310 includes the historical costs associated with the electrical design group that was provided with a new cost center (2200-2487) in 2013. Cost center 2200-2487 will not include any forecast to validate that double counting does not occur.							
2013	0.007	0	0	0.0	CCTR Transf	From 2200-2487.000	MGONZALX2014 0321123438557
Adjustment made because cost center 2200-0310 includes the historical costs associated with the electrical design group that was provided with a new cost center 2200-2487 in 2013. Cost center 2200-2487 will not include any forecast to validate that double counting does not occur.							

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 2. Gas Measurement, Regulation & Pressure Control
 Cost Center: 2200-0310.000 - MEASUREMENT & DESIGN

<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>
2013	4	0	0	0.1	CCTR Transf	From 2200-2487.000	MGONZALX2014 0321123554500

Adjustment made because cost center 2200-0310 includes the historical costs associated with the electrical design group that was provided with a new cost center 2200-2487 in 2013. Cost center 2200-2487 will not include any forecast to validate that double counting does not occur.

2013 Total	43	2	0	0.6			
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Note: Totals may include rounding differences.

Beginning of Workpaper
2200-0311.000 - MEASUREMENT TECHNOLOGIES

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 2. Gas Measurement, Regulation & Pressure Control
 Cost Center: 2200-0311.000 - MEASUREMENT TECHNOLOGIES

Activity Description:

The Measurement Technologies team in this cost center is responsible for testing, evaluation, selection, and deployment of strategic planning and policies and practices associated with gas metering equipment ranging from the smallest residential diaphragm meters to the largest ultrasonic meters and electronic measurement equipment. This work is conducted on behalf of both SDGE and SoCalGas. This group is also responsible for managing the company's meter and regulator maintenance and inspection scheduling and reporting system, and for providing auditing of company measurement sites to validate compliance with policy and technical specifications. Furthermore, this group is also responsible for conducting engineering studies to determine replacement and performance enhancement strategies for installed measurement infrastructure.

Forecast Explanations:

Labor - 5-YR Average

The labor expense requirements for this cost center have been consistent over recorded historical data. Thus, the 5-year average was chosen because it best represents the future expense requirements, and because it captures the fluctuations that this cost center can experience.

Non-Labor - 5-YR Average

The non-labor expense requirements for this cost center have been consistent over recorded historical data. Thus, the 5-year average was chosen because it best represents the future expense requirements, and because it captures the fluctuations that this cost center can experience.

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		837	971	884	860	693	849	849	849	
Non-Labor		104	151	162	-33	136	104	104	104	
NSE		0	0	0	0	0	0	0	0	
Total		941	1,121	1,045	827	829	953	953	953	
FTE		8.5	10.2	9.5	9.2	7.2	8.9	8.9	8.9	

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 2. Gas Measurement, Regulation & Pressure Control
 Cost Center: 2200-0311.000 - MEASUREMENT TECHNOLOGIES

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	5	1	0	6	0.00	45	-61	0	-16	0.42
Directly Allocated	0	0	0	0	0.00	0	0	0	0	0.00
Subj. To % Alloc.	688	134	0	822	7.18	804	165	0	969	8.50
Total Incurred	693	135	0	828	7.18	849	104	0	953	8.92
% Allocation										
Retained	86.66%	86.66%				86.65%	86.65%			
SEU	13.34%	13.34%				13.35%	13.35%			
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	45	-61	0	-16	0.42	45	-61	0	-16	0.42
Directly Allocated	0	0	0	0	0.00	0	0	0	0	0.00
Subj. To % Alloc.	804	165	0	969	8.50	804	165	0	969	8.50
Total Incurred	849	104	0	953	8.92	849	104	0	953	8.92
% Allocation										
Retained	86.65%	86.65%				86.65%	86.65%			
SEU	13.35%	13.35%				13.35%	13.35%			
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

Allocation percentages from shared services template.

Cost Center Allocation Percentage for 2014

Allocation percentages from shared services template. The methodology used is based on the total number of customer Meters.

Cost Center Allocation Percentage for 2015

Allocation percentages from shared services template. The methodology used is based on the total number of customer Meters.

Cost Center Allocation Percentage for 2016

Allocation percentages from shared services template. The methodology used is based on the total number of customer Meters.

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 2. Gas Measurement, Regulation & Pressure Control
 Cost Center: 2200-0311.000 - MEASUREMENT TECHNOLOGIES

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	849	849	849	0	0	0	849	849	849
Non-Labor	5-YR Average	104	104	104	0	0	0	104	104	104
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
Total		953	953	953	0	0	0	953	953	953
FTE	5-YR Average	8.9	8.9	8.9	0.0	0.0	0.0	8.9	8.9	8.9

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 Total	0	0	0	0	0.0	
2016 Total	0	0	0	0	0.0	

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
Witness: Raymond K. Stanford
Category: A. General Engineering
Category-Sub: 2. Gas Measurement, Regulation & Pressure Control
Cost Center: 2200-0311.000 - MEASUREMENT TECHNOLOGIES

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	645	770	726	725	594
Non-Labor	94	140	155	-32	136
NSE	0	0	0	0	0
Total	740	910	880	693	730
FTE	7.2	8.7	8.1	7.9	6.1
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	645	770	726	725	594
Non-Labor	94	140	155	-32	136
NSE	0	0	0	0	0
Total	740	910	880	693	730
FTE	7.2	8.7	8.1	7.9	6.1
Vacation & Sick (Nominal \$)					
Labor	117	135	121	116	99
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	117	135	121	116	99
FTE	1.4	1.6	1.4	1.3	1.0
Escalation to 2013\$					
Labor	75	66	38	19	0
Non-Labor	9	10	7	-1	0
NSE	0	0	0	0	0
Total	85	76	45	18	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	837	971	884	860	693
Non-Labor	104	151	162	-33	136
NSE	0	0	0	0	0
Total	941	1,121	1,045	827	829
FTE	8.6	10.3	9.5	9.2	7.1

* 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.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 2. Gas Measurement, Regulation & Pressure Control
 Cost Center: 2200-0311.000 - MEASUREMENT TECHNOLOGIES

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.

Beginning of Workpaper
2200-0312.000 - MEASUREMENT FIELD SUPPORT

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 2. Gas Measurement, Regulation & Pressure Control
 Cost Center: 2200-0312.000 - MEASUREMENT FIELD SUPPORT

Activity Description:

The labor and non-labor expenses for this cost center are for employees who provide planning, hands on support, technical guidance, policy, procedures and training in the areas of large automated control systems for gas compressor stations, pipelines, California Producers, metering and regulating stations and auxiliary equipment for both SDGE and SCG. The gas systems and operational personnel supported include gas transmission, distribution and underground storage. Occasional support provided to customer services. This cost center also provides field support to maintain over 200 field computers used by distribution, transmission, and storage field personnel to program, calibrate and configure electronic field instruments such as measurement systems, gas chromatographs, and programmable logic controllers.

Forecast Explanations:

Labor - 5-YR Average

The labor expense requirements for this cost center have been consistent over recorded historical data. Thus 5 year average methodology was chosen as best representing the future expense requirements because it best captures the fluctuations that this cost center can experience. However, due to added upward pressure related to California producer hourly gas quality management are attributable to increases in employee travel and expenses to respond to programming and data processing issues, and maintenance of hardware, software and communications costs to manage additional remote monitoring and capture of producer gas quality data from on-site gas chromatographs. additional staffing and resources are required. These incremental costs have been identified and added to the 5-year average.

Non-Labor - 5-YR Average

The non-labor expense requirements for this cost center have been consistent over recorded historical data. Thus 5 year average methodology was chosen as best representing the future expense requirements because it best captures the fluctuations that this cost center can experience. However, due to added upward pressure related to California producer hourly gas quality management are attributable to increases in employee travel and expenses to respond to programming and data processing issues, and maintenance of hardware, software and communications costs to manage additional remote monitoring and capture of producer gas quality data from on-site gas chromatographs. additional staffing and resources are required. 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 cost center.

Summary of Results:

		In 2013\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2009	2010	2011	2012	2013	2014	2015	2016	
Labor		916	680	731	744	760	881	996	996	
Non-Labor		199	121	100	162	214	165	171	171	
NSE		0	0	0	0	0	0	0	0	
Total		1,115	801	831	905	974	1,046	1,167	1,167	
FTE		9.8	7.2	7.7	7.7	7.8	9.1	10.1	10.1	

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 2. Gas Measurement, Regulation & Pressure Control
 Cost Center: 2200-0312.000 - MEASUREMENT FIELD SUPPORT

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	3	0	0	3	0.00	3	1	0	4	0.02
Directly Allocated	0	0	0	0	0.00	6	3	0	9	0.06
Subj. To % Alloc.	757	214	0	971	7.83	872	162	0	1,034	8.98
Total Incurred	760	214	0	974	7.83	881	166	0	1,047	9.06
% Allocation										
Retained	86.66%	86.66%				86.65%	86.65%			
SEU	13.34%	13.34%				13.35%	13.35%			
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	3	1	0	4	0.02	3	1	0	4	0.02
Directly Allocated	6	3	0	9	0.06	6	3	0	9	0.06
Subj. To % Alloc.	987	168	0	1,155	9.98	987	168	0	1,155	9.98
Total Incurred	996	172	0	1,168	10.06	996	172	0	1,168	10.06
% Allocation										
Retained	86.65%	86.65%				86.65%	86.65%			
SEU	13.35%	13.35%				13.35%	13.35%			
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

Allocation percentages from shared services template.

Cost Center Allocation Percentage for 2014

Allocation percentages from shared services template. The methodology used is based on the total number of customer Meters.

Cost Center Allocation Percentage for 2015

Allocation percentages from shared services template. The methodology used is based on the total number of customer Meters.

Cost Center Allocation Percentage for 2016

Allocation percentages from shared services template. The methodology used is based on the total number of customer Meters.

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 2. Gas Measurement, Regulation & Pressure Control
 Cost Center: 2200-0312.000 - MEASUREMENT FIELD SUPPORT

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	766	766	766	115	230	230	881	996	996
Non-Labor	5-YR Average	159	159	159	6	12	12	165	171	171
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
Total		925	925	925	121	242	242	1,046	1,167	1,167
FTE	5-YR Average	8.1	8.1	8.1	1.0	2.0	2.0	9.1	10.1	10.1

Forecast Adjustment Details:

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj Type</u>
2014	115	6	0	121	1.0	1-Sided Adj

This adjustment is due to an additional FTE for compiling data related to producers and the expansion of electronic devices.

2014 Total	115	6	0	121	1.0	
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2015	230	12	0	242	2.0	1-Sided Adj
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This adjustment is due to an additional FTE in 2015 and to account for the one FTE in 2014. The work associated with these incremental FTEs is in support of compiling data related to producers and the expansion of electronic devices.

2015 Total	230	12	0	242	2.0	
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2016	230	12	0	242	2.0	1-Sided Adj
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This adjustment is due to an additional FTE in 2015 and to account for the one FTE in 2014. The work associated with these incremental FTEs is in support of compiling data related to producers and the expansion of electronic devices.

2016 Total	230	12	0	242	2.0	
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Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 2. Gas Measurement, Regulation & Pressure Control
 Cost Center: 2200-0312.000 - MEASUREMENT FIELD SUPPORT

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	706	539	600	627	652
Non-Labor	181	113	96	158	214
NSE	0	0	0	0	0
Total	887	652	696	785	866
FTE	8.3	6.1	6.6	6.6	6.7
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	706	539	600	627	652
Non-Labor	181	113	96	158	214
NSE	0	0	0	0	0
Total	887	652	696	785	866
FTE	8.3	6.1	6.6	6.6	6.7
Vacation & Sick (Nominal \$)					
Labor	128	94	100	100	108
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	128	94	100	100	108
FTE	1.6	1.1	1.1	1.1	1.1
Escalation to 2013\$					
Labor	82	46	31	16	0
Non-Labor	18	8	4	4	0
NSE	0	0	0	0	0
Total	100	54	35	20	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	916	680	731	744	760
Non-Labor	199	121	100	162	214
NSE	0	0	0	0	0
Total	1,115	801	831	905	974
FTE	9.9	7.2	7.7	7.7	7.8

* 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
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 2. Gas Measurement, Regulation & Pressure Control
 Cost Center: 2200-0312.000 - MEASUREMENT FIELD SUPPORT

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.

Beginning of Workpaper
2200-0799.000 - INSTRUMENT REPAIR & FIELD MAINT SUPV

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 2. Gas Measurement, Regulation & Pressure Control
 Cost Center: 2200-0799.000 - INSTRUMENT REPAIR & FIELD MAINT SUPV

Activity Description:

The resources in this organization provide: calibration of temperature and pressure gauges and secondary standards used by field personnel to maintain gas facilities, field inspection of large metering facilities using bore scoping techniques, maintenance of all company gas standards used to test and calibrate gas meters and the laboratory configuration, programming testing and laboratory repair/assessment of all electronic measurement devices used for customer billing. Special meter testing is also conducted on gas meters removed from the field where safety or other matters are investigated. This cost center also provides for the maintenance, troubleshooting repair and upgrade of all "bell provers" (primary measurement test standards) used by the both SDGE and SCG to test over 100,000 meters annually.

Forecast Explanations:

Labor - 5-YR Average

The labor expense requirements for this cost center have been consistent over recorded historical data. This trend is expected to continue. As such the 5 year average methodology was chosen as best representing the future expense requirements.

Non-Labor - 5-YR Average

The non-labor expense requirements for this cost center have been consistent over recorded historical data. This trend is expected to continue. As such the 5 year average methodology was chosen as best representing the future expense requirements.

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		515	602	604	664	663	610	610	610	
Non-Labor		282	551	569	314	349	413	413	413	
NSE		0	0	0	0	0	0	0	0	
Total		797	1,153	1,173	978	1,012	1,023	1,023	1,023	
FTE		6.5	7.6	7.7	8.3	8.1	7.7	7.7	7.7	

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 2. Gas Measurement, Regulation & Pressure Control
 Cost Center: 2200-0799.000 - INSTRUMENT REPAIR & FIELD MAINT SUPV

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	17	163	0	180	0.16	7	115	0	122	0.04
Directly Allocated	0	0	0	0	0.00	0	0	0	0	0.00
Subj. To % Alloc.	646	186	0	832	7.98	603	297	0	900	7.62
Total Incurred	663	349	0	1,012	8.14	610	412	0	1,022	7.66
% Allocation										
Retained	95.59%	95.59%				94.58%	94.58%			
SEU	4.41%	4.41%				5.42%	5.42%			
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	7	115	0	122	0.04	7	115	0	122	0.04
Directly Allocated	0	0	0	0	0.00	0	0	0	0	0.00
Subj. To % Alloc.	603	297	0	900	7.62	603	297	0	900	7.62
Total Incurred	610	412	0	1,022	7.66	610	412	0	1,022	7.66
% Allocation										
Retained	94.58%	94.58%				94.58%	94.58%			
SEU	5.42%	5.42%				5.42%	5.42%			
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

Allocation percentages from shared services template.

Cost Center Allocation Percentage for 2014

Allocation percentages from shared services template. The methodology used is based on the Meter Ratio applied to specific budgeted activities.

Cost Center Allocation Percentage for 2015

Allocation percentages from shared services template. The methodology used is based on the Meter Ratio applied to specific budgeted activities.

Cost Center Allocation Percentage for 2016

Allocation percentages from shared services template. The methodology used is based on the Meter Ratio applied to specific budgeted activities.

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 2. Gas Measurement, Regulation & Pressure Control
 Cost Center: 2200-0799.000 - INSTRUMENT REPAIR & FIELD MAINT SUPV

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	610	610	610	0	0	0	610	610	610
Non-Labor	5-YR Average	413	413	413	0	0	0	413	413	413
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
Total		1,023	1,023	1,023	0	0	0	1,023	1,023	1,023
FTE	5-YR Average	7.7	7.7	7.7	0.0	0.0	0.0	7.7	7.7	7.7

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.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 2. Gas Measurement, Regulation & Pressure Control
 Cost Center: 2200-0799.000 - INSTRUMENT REPAIR & FIELD MAINT SUPV

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	397	477	496	560	568
Non-Labor	257	514	545	307	349
NSE	0	0	0	0	0
Total	654	991	1,041	867	918
FTE	5.4	6.4	6.6	7.1	7.0
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	397	477	496	560	568
Non-Labor	257	514	545	307	349
NSE	0	0	0	0	0
Total	654	991	1,041	867	918
FTE	5.4	6.4	6.6	7.1	7.0
Vacation & Sick (Nominal \$)					
Labor	72	83	82	90	94
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	72	83	82	90	94
FTE	1.0	1.2	1.1	1.2	1.2
Escalation to 2013\$					
Labor	46	41	26	14	0
Non-Labor	25	37	24	7	0
NSE	0	0	0	0	0
Total	72	78	50	21	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	515	602	604	664	663
Non-Labor	282	551	569	314	349
NSE	0	0	0	0	0
Total	797	1,153	1,173	978	1,012
FTE	6.4	7.6	7.7	8.3	8.2

* 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
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 2. Gas Measurement, Regulation & Pressure Control
 Cost Center: 2200-0799.000 - INSTRUMENT REPAIR & FIELD MAINT SUPV

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.

Beginning of Workpaper
2200-2248.000 - MEAS AND REG STANDARDS/MAT AND BTU DISTR

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 2. Gas Measurement, Regulation & Pressure Control
 Cost Center: 2200-2248.000 - MEAS AND REG STANDARDS/MAT AND BTU DISTR

Activity Description:

Activity in this cost center includes engineering, design, material specification and technical standards for small and medium sized meter and regulator stations employed by both SoCalGas and SDG&E. Other activity includes the management of all policy, standards and planning for the measurement of gas quality associated with thermal zone (SDGE) and Btu district measurement, and for any special reporting and planning in both companies to contend with regulatory and customer need for gas quality/component reporting.

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.

Non-Labor - 5-YR Average

As the foundation for future non-labor expense requirements, the 5 year average was chosen. This forecasting methodology serves to more accurately even out the work variations that occur. However, due to anticipated gas quality reporting requirements, additional costs have been added to the five year average.

NSE - 5-YR Average

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		473	543	562	613	724	583	583	583	
Non-Labor		11	31	39	23	22	126	126	126	
NSE		0	0	0	0	0	0	0	0	
Total		484	574	601	637	745	709	709	709	
FTE		5.0	5.9	6.1	6.6	8.0	6.3	6.3	6.3	

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 2. Gas Measurement, Regulation & Pressure Control
 Cost Center: 2200-2248.000 - MEAS AND REG STANDARDS/MAT AND BTU DISTR

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	1	0	0	1	0.00	2	0	0	2	0.02
Directly Allocated	0	0	0	0	0.00	0	0	0	0	0.00
Subj. To % Alloc.	723	21	0	744	8.00	581	126	0	707	6.29
Total Incurred	724	21	0	745	8.00	583	126	0	709	6.31
% Allocation										
Retained	86.66%	86.66%				86.65%	86.65%			
SEU	13.34%	13.34%				13.35%	13.35%			
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	2	0	0	2	0.02	2	0	0	2	0.02
Directly Allocated	0	0	0	0	0.00	0	0	0	0	0.00
Subj. To % Alloc.	581	126	0	707	6.29	581	126	0	707	6.29
Total Incurred	583	126	0	709	6.31	583	126	0	709	6.31
% Allocation										
Retained	86.65%	86.65%				86.65%	86.65%			
SEU	13.35%	13.35%				13.35%	13.35%			
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

Allocation percentages from shared services template.

Cost Center Allocation Percentage for 2014

Allocation percentages from shared services template. The methodology used is based on the total number of customer Meters.

Cost Center Allocation Percentage for 2015

Allocation percentages from shared services template. The methodology used is based on the total number of customer Meters.

Cost Center Allocation Percentage for 2016

Allocation percentages from shared services template. The methodology used is based on the total number of customer Meters.

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 2. Gas Measurement, Regulation & Pressure Control
 Cost Center: 2200-2248.000 - MEAS AND REG STANDARDS/MAT AND BTU DISTR

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	583	583	583	0	0	0	583	583	583
Non-Labor	5-YR Average	25	25	25	101	101	101	126	126	126
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
Total		608	608	608	101	101	101	709	709	709
FTE	5-YR Average	6.3	6.3	6.3	0.0	0.0	0.0	6.3	6.3	6.3

Forecast Adjustment Details:

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj Type</u>
2014	0	101	0	101	0.0	1-Sided Adj

This adjustment is to account forecasted Gas Quality and Green House Gas reporting and analysis.

2014 Total	0	101	0	101	0.0	
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2015	0	101	0	101	0.0	1-Sided Adj
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This adjustment is to account forecasted Gas Quality and Green House Gas reporting and analysis.

2015 Total	0	101	0	101	0.0	
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2016	0	101	0	101	0.0	1-Sided Adj
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This adjustment is to account forecasted Gas Quality and Green House Gas reporting and analysis.

2016 Total	0	101	0	101	0.0	
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Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 2. Gas Measurement, Regulation & Pressure Control
 Cost Center: 2200-2248.000 - MEAS AND REG STANDARDS/MAT AND BTU DISTR

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	365	431	461	517	621
Non-Labor	10	29	38	23	22
NSE	0	0	0	0	0
Total	375	459	499	540	642
FTE	4.2	5.0	5.2	5.7	6.8
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	365	431	461	517	621
Non-Labor	10	29	38	23	22
NSE	0	0	0	0	0
Total	375	459	499	540	642
FTE	4.2	5.0	5.2	5.7	6.8
Vacation & Sick (Nominal \$)					
Labor	66	75	77	83	103
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	66	75	77	83	103
FTE	0.8	0.9	0.9	0.9	1.2
Escalation to 2013\$					
Labor	43	37	24	13	0
Non-Labor	1	2	2	1	0
NSE	0	0	0	0	0
Total	44	39	26	14	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	473	543	562	613	724
Non-Labor	11	31	39	23	22
NSE	0	0	0	0	0
Total	484	574	601	637	745
FTE	5.0	5.9	6.1	6.6	8.0

* 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
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 2. Gas Measurement, Regulation & Pressure Control
 Cost Center: 2200-2248.000 - MEAS AND REG STANDARDS/MAT AND BTU DISTR

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.

Beginning of Workpaper
2200-1178.000 - EAC CHEMICAL SECTION

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 3. Engineering Analysis Center
 Cost Center: 2200-1178.000 - EAC CHEMICAL SECTION

Activity Description:

The Engineering Analysis Center Chemical section provides environmental , gas operation, and Btu measurement related analytical services to the operating and customer services organizations. These activities include: - PCB analysis and sample management, hazardous material, gas quality policy and operating procedures, gas composition including inerts through C22+ and HC & H2O dew point, simulated distillation through C40+, sulfur gas analysis, odorization management and test development, line odor seasoning management and training, gas quality testing including, mobile gas operations test vehicle, Btu measurement services, Fugitive and Leakage Gas identification and Verification.

Forecast Explanations:

Labor - 5-YR Average

As the foundation for future labor expense requirements, the 5 year average was chosen. The nature of work performed by the Engineering Analysis Center department, primarily Operations and Engineering Support for Transmission, Storage and Distribution, has proven to be relatively stable over time. The 5 year average best represents the work group's funding requirements. However, new and enhanced regulations 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 work performed by the Engineering Analysis Center department, primarily Operations and Engineering Support for Transmission, Storage and Distribution, has proven to be relatively stable over time. The 5 year average best represents the work group's funding requirements. However, new and enhanced regulations 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 group.

Summary of Results:

		In 2013\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2009	2010	2011	2012	2013	2014	2015	2016	
Labor		1,121	1,199	1,240	1,305	1,216	1,376	1,456	1,536	
Non-Labor		167	291	322	316	322	316	316	316	
NSE		0	0	0	0	0	0	0	0	
Total		1,288	1,490	1,562	1,621	1,539	1,692	1,772	1,852	
FTE		12.5	13.5	14.2	14.7	13.2	15.6	16.6	17.6	

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 3. Engineering Analysis Center
 Cost Center: 2200-1178.000 - EAC CHEMICAL SECTION

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	1	1	0	2	0.01	3	1	0	4	0.01
Directly Allocated	0	0	0	0	0.00	0	0	0	0	0.00
Subj. To % Alloc.	1,215	322	0	1,537	13.14	1,374	315	0	1,689	15.60
Total Incurred	1,216	323	0	1,539	13.15	1,377	316	0	1,693	15.61
% Allocation										
Retained	95.76%	95.76%				94.65%	94.65%			
SEU	4.24%	4.24%				5.35%	5.35%			
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	3	1	0	4	0.01	3	1	0	4	0.01
Directly Allocated	0	0	0	0	0.00	0	0	0	0	0.00
Subj. To % Alloc.	1,454	315	0	1,769	16.60	1,534	315	0	1,849	17.60
Total Incurred	1,457	316	0	1,773	16.61	1,537	316	0	1,853	17.61
% Allocation										
Retained	94.65%	94.65%				94.65%	94.65%			
SEU	5.35%	5.35%				5.35%	5.35%			
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

Allocation percentages from shared services template.

Cost Center Allocation Percentage for 2014

Allocation percentages from shared services template. The methodology used is based on budgeted activities.

Cost Center Allocation Percentage for 2015

Allocation percentages from shared services template. The methodology used is based on budgeted activities.

Cost Center Allocation Percentage for 2016

Allocation percentages from shared services template. The methodology used is based on budgeted activities.

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 3. Engineering Analysis Center
 Cost Center: 2200-1178.000 - EAC CHEMICAL SECTION

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	1,216	1,216	1,216	160	240	320	1,376	1,456	1,536
Non-Labor	5-YR Average	284	284	284	32	32	32	316	316	316
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
Total		1,500	1,500	1,500	192	272	352	1,692	1,772	1,852
FTE	5-YR Average	13.6	13.6	13.6	2.0	3.0	4.0	15.6	16.6	17.6

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	160	32	0	192	2.0	1-Sided Adj

This adjustment is to add two incremental FTEs to cost center 2200-1178 due to the upward pressures to support the new biogas producers in Rule 30 and Certified Unified Public Authority (CUPA) enforcements.

2014 Total	160	32	0	192	2.0	
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2015	240	32	0	272	3.0	1-Sided Adj
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This adjustment is to account for the additional two FTEs from 2014 and one additional FTE to be added in 2015 due to upward pressures in cost center 2200-1178 due to the upward pressures to support the new biogas producers in Rule 30 and Certified Unified Public Authority (CUPA) enforcements.

2015 Total	240	32	0	272	3.0	
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2016	320	32	0	352	4.0	1-Sided Adj
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This adjustment is to account for the two FTEs added in 2014, the one FTE added in 2015, and one incremental FTE to be added in 2016 in cost center 2200-1178 due to the upward pressures to support the new biogas producers in Rule 30 and Certified Unified Public Authority (CUPA) enforcements.

2016 Total	320	32	0	352	4.0	
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Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 3. Engineering Analysis Center
 Cost Center: 2200-1178.000 - EAC CHEMICAL SECTION

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	864	951	1,018	1,101	1,043
Non-Labor	152	271	308	309	322
NSE	0	0	0	0	0
Total	1,016	1,223	1,326	1,410	1,365
FTE	10.5	11.5	12.1	12.6	11.3
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	864	951	1,018	1,101	1,043
Non-Labor	152	271	308	309	322
NSE	0	0	0	0	0
Total	1,016	1,223	1,326	1,410	1,365
FTE	10.5	11.5	12.1	12.6	11.3
Vacation & Sick (Nominal \$)					
Labor	156	166	169	176	173
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	156	166	169	176	173
FTE	2.0	2.1	2.1	2.1	1.9
Escalation to 2013\$					
Labor	101	82	53	28	0
Non-Labor	15	20	14	7	0
NSE	0	0	0	0	0
Total	116	101	67	35	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	1,121	1,199	1,240	1,305	1,216
Non-Labor	167	291	322	316	322
NSE	0	0	0	0	0
Total	1,288	1,490	1,562	1,621	1,539
FTE	12.5	13.6	14.2	14.7	13.2

* 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
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 3. Engineering Analysis Center
 Cost Center: 2200-1178.000 - EAC CHEMICAL SECTION

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.

Beginning of Workpaper
2200-0302.000 - BUSINESS PROCESS & INFOGRAPHICS SOLUTIONS

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 4. Asset and Data Management
 Cost Center: 2200-0302.000 - BUSINESS PROCESS & INFOGRAPHICS SOLUTIONS

Activity Description:

The activities associated with this cost center include the labor and expenses associated with the new re-organized Business Process and Infographic Solutions group. These expenses include the GIS team lead, one administrative support individual, one project specialist and one Sr. GIS analyst. Activities managed include: Compiling test script inventory for software release cycles, administration, developing business solutions related to asset management software, and developing reports, maps, and other essential data deliverables to meet increased demand for customized information visualization and data analytics.

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.

Non-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.

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		256	220	113	175	135	180	180	180	
Non-Labor		12	9	3	8	6	8	8	8	
NSE		0	0	0	0	0	0	0	0	
Total		268	230	116	183	141	188	188	188	
FTE		3.1	2.8	2.1	2.4	1.6	2.4	2.4	2.4	

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 4. Asset and Data Management
 Cost Center: 2200-0302.000 - BUSINESS PROCESS & INFOGRAPHICS SOLUTIONS

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	2	0	0	2	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.	133	6	0	139	1.58	179	8	0	187	2.39
Total Incurred	135	6	0	141	1.58	179	8	0	187	2.39
% Allocation										
Retained	95.90%	95.90%				89.62%	89.62%			
SEU	4.10%	4.10%				10.38%	10.38%			
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.	179	8	0	187	2.39	179	8	0	187	2.39
Total Incurred	179	8	0	187	2.39	179	8	0	187	2.39
% Allocation										
Retained	89.62%	89.62%				89.62%	89.62%			
SEU	10.38%	10.38%				10.38%	10.38%			
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

Allocation percentage from shared services template.

Cost Center Allocation Percentage for 2014

Allocation percentages from shared services template. The methodology used is based on the FTEs supported.

Cost Center Allocation Percentage for 2015

Allocation percentages from shared services template. The methodology used is based on the FTEs supported.

Cost Center Allocation Percentage for 2016

Allocation percentages from shared services template. The methodology used is based on the FTEs supported.

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 4. Asset and Data Management
 Cost Center: 2200-0302.000 - BUSINESS PROCESS & INFOGRAPHICS SOLUTIONS

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	180	180	180	0	0	0	180	180	180
Non-Labor	5-YR Average	8	8	8	0	0	0	8	8	8
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
Total		188	188	188	0	0	0	188	188	188
FTE	5-YR Average	2.4	2.4	2.4	0.0	0.0	0.0	2.4	2.4	2.4

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.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 4. Asset and Data Management
 Cost Center: 2200-0302.000 - BUSINESS PROCESS & INFOGRAPHICS SOLUTIONS

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	197	175	93	148	116
Non-Labor	11	9	3	8	6
NSE	0	0	0	0	0
Total	208	184	96	155	122
FTE	2.6	2.4	1.8	2.0	1.4
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	197	175	93	148	116
Non-Labor	11	9	3	8	6
NSE	0	0	0	0	0
Total	208	184	96	155	122
FTE	2.6	2.4	1.8	2.0	1.4
Vacation & Sick (Nominal \$)					
Labor	36	31	15	24	19
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	36	31	15	24	19
FTE	0.5	0.4	0.3	0.3	0.2
Escalation to 2013\$					
Labor	23	15	5	4	0
Non-Labor	1	1	0	0	0
NSE	0	0	0	0	0
Total	24	16	5	4	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	256	220	113	175	135
Non-Labor	12	9	3	8	6
NSE	0	0	0	0	0
Total	268	230	116	183	141
FTE	3.1	2.8	2.1	2.3	1.6

* 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
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 4. Asset and Data Management
 Cost Center: 2200-0302.000 - BUSINESS PROCESS & INFOGRAPHICS SOLUTIONS

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.

Beginning of Workpaper
2200-0303.000 - CADD APPLICATIONS

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 4. Asset and Data Management
 Cost Center: 2200-0303.000 - CADD APPLICATIONS

Activity Description:

Expenditures covered in this cost center accounts for labor and expenses to support computer programs and systems not provided by the Company's Information Technology group.
 The work included within this cost center is to Manage, develop, and support Specialized Computer Aided (CAD) Drafting for Engineering Applications; Manage and support the Gas CAD OU and policies; Manage and support hardware, file management, and back-end processes; Manage help desk tickets and client support calls; Manage, develop and maintain the FCD Document Library & Publish Gas Standards; Develop and maintain Gas Operations Internal Websites.
 Expenditures covered in this cost center accounts for labor and expenses to support computer programs and systems not provided by the Company's Information Technology group.
 The work included within this cost center is to manage, develop, and support Specialized Computer Aided (CAD) Drafting for Engineering Applications; Manage and support the Gas CAD OU and policies; Manage and support hardware, file management, and back-end processes; Manage help desk tickets and client support calls; Manage, develop and maintain the FCD Document Library & Publish Gas Standards; Develop and maintain Gas Operations Internal Websites.

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, new and unique information systems implementations to meet compliance and strategic initiatives are emerging thus additional staffing and resources are required. 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. This forecasting methodology serves to more accurately even out the work variations that occur. However, new and unique information systems implementations to meet compliance and strategic initiatives are emerging thus additional staffing and resources are required. 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 cost center.

Summary of Results:

		In 2013\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2009	2010	2011	2012	2013	2014	2015	2016	
Labor		355	335	292	258	627	598	710	922	
Non-Labor		5	42	15	333	205	320	320	120	
NSE		0	0	0	0	0	0	0	0	
Total		360	377	307	592	832	919	1,031	1,043	
FTE		4.0	3.9	3.4	3.0	7.4	6.3	7.3	9.3	

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 4. Asset and Data Management
 Cost Center: 2200-0303.000 - CADD APPLICATIONS

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	2	84	0	86	0.00	1	17	0	18	0.00
Directly Allocated	0	0	0	0	0.00	0	0	0	0	0.00
Subj. To % Alloc.	625	121	0	746	7.39	598	304	0	902	6.34
Total Incurred	627	205	0	832	7.39	599	321	0	920	6.34
% Allocation										
Retained	91.85%	91.85%				91.85%	91.85%			
SEU	8.15%	8.15%				8.15%	8.15%			
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	1	17	0	18	0.00	1	17	0	18	0.00
Directly Allocated	0	0	0	0	0.00	0	0	0	0	0.00
Subj. To % Alloc.	710	304	0	1,014	7.34	922	104	0	1,026	9.34
Total Incurred	711	321	0	1,032	7.34	923	121	0	1,044	9.34
% Allocation										
Retained	91.85%	91.85%				91.85%	91.85%			
SEU	8.15%	8.15%				8.15%	8.15%			
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

Allocation percentages from the shared services template.

Cost Center Allocation Percentage for 2014

Allocation percentages from shared services template. The methodology used is based on the budgeted activities.

Cost Center Allocation Percentage for 2015

Allocation percentages from shared services template. The methodology used is based on the budgeted activities.

Cost Center Allocation Percentage for 2016

Allocation percentages from shared services template. The methodology used is based on the budgeted activities.

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 4. Asset and Data Management
 Cost Center: 2200-0303.000 - CADD APPLICATIONS

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	373	373	373	225	337	549	598	710	922
Non-Labor	5-YR Average	120	120	120	200	200	0	320	320	120
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
Total		494	494	494	425	537	549	919	1,031	1,043
FTE	5-YR Average	4.3	4.3	4.3	2.0	3.0	5.0	6.3	7.3	9.3

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	225	200	0	425	2.0	1-Sided Adj

This adjustment is to include additional resources requested to support the Computer Aided Drafting (CAD) Applications group to implement unique information system over the next 3 years to meet compliance and strategic initiatives. The new systems include (1) a Storage 3D Modeling system and data capture to meet regulatory compliance; (2) an Engineering Design CAD solution to meet regulatory compliance and Win7 strategic initiative, and (3) develop a work order sketching CAD system to meet new business requirements being driven by compliance, Win7, Construction Planning and Design (CPD) and Graphic Work Design (GWD) applications. These resources represent system implementation needs as well as continued support in the years to come.

2014 Total	225	200	0	425	2.0	
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2015	112	200	0	312	1.0	1-Sided Adj
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This adjustment is to include additional resources requested to support the Computer Aided Drafting (CAD) Applications group to implement unique information system over the next 3 years to meet compliance and strategic initiatives. The new systems include (1) a Storage 3D Modeling system and data capture to meet regulatory compliance; (2) an Engineering Design CAD solution to meet regulatory compliance and Win7 strategic initiative, and (3) develop a work order sketching CAD system to meet new business requirements being driven by compliance, Win7, Construction Planning and Design (CPD) and Graphic Work Design (GWD) applications. These resources represent system implementation needs as well as continued support in the years to come.

2015	225	0	0	225	2.0	1-Sided Adj
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Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 4. Asset and Data Management
 Cost Center: 2200-0303.000 - CADD APPLICATIONS

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adi Type</u>
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This adjustment is to include resources requested in 2014 to support the Computer Aided Drafting (CAD) Applications group to implement unique information system over the next 3 years to meet compliance and strategic initiatives. The new systems include (1) a Storage 3D Modeling system and data capture to meet regulatory compliance; (2) an Engineering Design CAD solution to meet regulatory compliance and Win7 strategic initiative, and (3) develop a work order sketching CAD system to meet new business requirements being driven by compliance, Win7, Construction Planning and Design (CPD) and Graphic Work Design (GWD) applications. These resources represent system implementation needs as well as continued support in the years to come.

2015 Total	337	200	0	537	3.0	
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2016	212	0	0	212	2.0	1-Sided Adj
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This adjustment is to include the resources requested in 2014 to support the Computer Aided Drafting (CAD) Applications group to implement unique information system over the next 3 years to meet compliance and strategic initiatives. The new systems include (1) a Storage 3D Modeling system and data capture to meet regulatory compliance; (2) an Engineering Design CAD solution to meet regulatory compliance and Win7 strategic initiative, and (3) develop a work order sketching CAD system to meet new business requirements being driven by compliance, Win7, Construction Planning and Design (CPD) and Graphic Work Design (GWD) applications. These resources represent system implementation needs as well as continued support in the years to come.

2016	112	0	0	112	1.0	1-Sided Adj
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This adjustment is to include the resource requested in 2015 to support the Computer Aided Drafting (CAD) Applications group to implement unique information system over the next 3 years to meet compliance and strategic initiatives. The new systems include (1) a Storage 3D Modeling system and data capture to meet regulatory compliance; (2) an Engineering Design CAD solution to meet regulatory compliance and Win7 strategic initiative, and (3) develop a work order sketching CAD system to meet new business requirements being driven by compliance, Win7, Construction Planning and Design (CPD) and Graphic Work Design (GWD) applications. These resources represent system implementation needs as well as continued support in the years to come.

2016	225	0	0	225	2.0	1-Sided Adj
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Note: Totals may include rounding differences.

Southern California Gas Company
 2016 GRC - APP
 Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 4. Asset and Data Management
 Cost Center: 2200-0303.000 - CADD APPLICATIONS

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adi Type</u>
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This adjustment is to include additional resources requested to support the Computer Aided Drafting (CAD) Applications group to implement unique information system over the next 3 years to meet compliance and strategic initiatives. The new systems include (1) a Storage 3D Modeling system and data capture to meet regulatory compliance; (2) an Engineering Design CAD solution to meet regulatory compliance and Win7 strategic initiative, and (3) develop a work order sketching CAD system to meet new business requirements being driven by compliance, Win7, Construction Planning and Design (CPD) and Graphic Work Design (GWD) applications. These resources represent system implementation needs as well as continued support in the years to come.

2016 Total	549	0	0	549	5.0	
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Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 4. Asset and Data Management
 Cost Center: 2200-0303.000 - CADD APPLICATIONS

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	273	266	240	218	538
Non-Labor	5	39	15	326	205
NSE	0	0	0	0	0
Total	278	305	254	544	743
FTE	3.4	3.3	2.9	2.6	6.3
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	273	266	240	218	538
Non-Labor	5	39	15	326	205
NSE	0	0	0	0	0
Total	278	305	254	544	743
FTE	3.4	3.3	2.9	2.6	6.3
Vacation & Sick (Nominal \$)					
Labor	49	46	40	35	89
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	49	46	40	35	89
FTE	0.6	0.6	0.5	0.4	1.1
Escalation to 2013\$					
Labor	32	23	12	6	0
Non-Labor	0	3	1	7	0
NSE	0	0	0	0	0
Total	32	26	13	13	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	355	335	292	258	627
Non-Labor	5	42	15	333	205
NSE	0	0	0	0	0
Total	360	377	307	592	832
FTE	4.0	3.9	3.4	3.0	7.4

* 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.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 4. Asset and Data Management
 Cost Center: 2200-0303.000 - CADD APPLICATIONS

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.

Beginning of Workpaper
2200-0306.000 - WORK MANAGEMENT & DATABASES DEVELOPMENT

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 4. Asset and Data Management
 Cost Center: 2200-0306.000 - WORK MANAGEMENT & DATABASES DEVELOPMENT

Activity Description:

Activities associated with this cost center include the support of Work Management Systems for Meter and Regulation (M&R), System Protection Specialists (SPS) and Work Order Tracking (WOT) applications, AutoSol Enterprise System (AES), and MyProjects enterprise system. Also the support of the Technical Services Group in Miramar (SDGE); specifically the Electronic Data Management System (EDMS) and the Cathodic Protection Data Management (CPDM) applications.

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, new and unique work management and database development are required to comply thus additional staffing and resources are required. 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. This forecasting methodology serves to more accurately even out the work variations that occur. However, new and unique work management and database development are required to comply thus additional staffing and resources are required. 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 cost center.

Summary of Results:

		In 2013\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2009	2010	2011	2012	2013	2014	2015	2016	
Labor		542	465	486	510	545	875	1,040	1,376	
Non-Labor		20	254	642	486	512	1,001	601	601	
NSE		0	0	0	0	0	0	0	0	
Total		562	719	1,128	997	1,057	1,876	1,641	1,977	
FTE		6.9	5.9	6.1	6.2	6.6	10.8	12.8	15.8	

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 4. Asset and Data Management
 Cost Center: 2200-0306.000 - WORK MANAGEMENT & DATABASES DEVELOPMENT

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	1	0	0	1	0.00
Directly Allocated	0	0	0	0	0.00	0	0	0	0	0.00
Subj. To % Alloc.	545	512	0	1,057	6.64	874	1,001	0	1,875	10.75
Total Incurred	545	512	0	1,057	6.64	875	1,001	0	1,876	10.75
% Allocation										
Retained	90.18%	90.18%				90.21%	90.21%			
SEU	9.82%	9.82%				9.79%	9.79%			
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	1	0	0	1	0.00	1	0	0	1	0.00
Directly Allocated	0	0	0	0	0.00	0	0	0	0	0.00
Subj. To % Alloc.	1,039	601	0	1,640	12.75	1,375	601	0	1,976	15.75
Total Incurred	1,040	601	0	1,641	12.75	1,376	601	0	1,977	15.75
% Allocation										
Retained	90.21%	90.21%				90.21%	90.21%			
SEU	9.79%	9.79%				9.79%	9.79%			
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

Allocation percentage from the 2013 shared services template.

Cost Center Allocation Percentage for 2014

Allocation percentages from shared services template. The methodology used is based on the total miles of Transmission pipeline and total number of customer Meters.

Cost Center Allocation Percentage for 2015

Allocation percentages from shared services template. The methodology used is based on the total miles of Transmission pipeline and total number of customer Meters.

Cost Center Allocation Percentage for 2016

Allocation percentages from shared services template. The methodology used is based on the total miles of Transmission pipeline and total number of customer Meters.

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 4. Asset and Data Management
 Cost Center: 2200-0306.000 - WORK MANAGEMENT & DATABASES DEVELOPMENT

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	510	510	510	365	530	866	875	1,040	1,376
Non-Labor	5-YR Average	383	383	383	618	218	218	1,001	601	601
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
Total		893	893	893	983	748	1,084	1,876	1,641	1,977
FTE	5-YR Average	6.4	6.4	6.4	4.4	6.4	9.4	10.8	12.8	15.8

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	365	618	0	983	4.4	1-Sided Adj

This adjustment is to account for the labor and non-labor in 2014. The non-labor incremental of \$618K is to show the forecasted \$1M planned in this cost center. The labor increase of 4.4 FTEs is to account for the employees that are planned to work in O&M related projects for maintenance of the programs described in the supplemental work paper. The major focus of the development projects shifted the activities that are universally applicable to all Gas Operations in SCG and SDG and cannot be strictly categorized as refundable work; thus it will be allocated to the general O&M spending accounts.

2014 Total	365	618	0	983	4.4	
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2015	365	218	0	583	4.4	1-Sided Adj
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This adjustment is to account for the labor from 2014 and the planned non-labor in 2015. The non-labor incremental of \$218K is to show the forecasted \$600K planned in this cost center. The labor increase of 4.4 FTEs is to account for the employees that are planned to work in O&M related projects for maintenance of the programs described in the supplemental work paper. The major focus of the development projects shifted the activities that are universally applicable to all Gas Operations in SCG and SDG and cannot be strictly categorized as refundable work; thus the FTEs will be allocated to the general O&M spending accounts.

2015	165	0	0	165	2.0	1-Sided Adj
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This adjustment is for two incremental FTEs for 2015 requested to support the development of the on-line enterprise system MyProjects which address recognition of deficiencies in the high pressure pipeline construction inspection data collection.

2015 Total	530	218	0	748	6.4	
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Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 4. Asset and Data Management
 Cost Center: 2200-0306.000 - WORK MANAGEMENT & DATABASES DEVELOPMENT

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adi Type</u>
2016	412	218	0	630	5.0	1-Sided Adj

This adjustment is for three incremental FTEs in 2016 and to account for the two FTES in 2015 requested to support the development of the on-line enterprise system named MyProjects which address recognition of deficiencies in the high pressure pipeline construction inspection data collection.

2016	454	0	0	454	4.4	1-Sided Adj
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This adjustment is to account for the labor from 2014. The labor increase of 4.4 FTEs is to account for the employees that are planned to work in O&M related projects for maintenance of the programs described in the supplemental work paper. The major focus of the development projects shifted the activities that are universally applicable to all Gas Operations in SCG and SDG and cannot be strictly categorized as refundable work; thus the FTEs will be allocated to the general O&M spending accounts.

2016 Total	866	218	0	1,084	9.4	
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Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 4. Asset and Data Management
 Cost Center: 2200-0306.000 - WORK MANAGEMENT & DATABASES DEVELOPMENT

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	418	369	399	430	468
Non-Labor	18	237	615	476	512
NSE	0	0	0	0	0
Total	436	606	1,014	906	979
FTE	5.8	5.0	5.2	5.3	5.7
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	418	369	399	430	468
Non-Labor	18	237	615	476	512
NSE	0	0	0	0	0
Total	436	606	1,014	906	979
FTE	5.8	5.0	5.2	5.3	5.7
Vacation & Sick (Nominal \$)					
Labor	76	65	66	69	78
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	76	65	66	69	78
FTE	1.1	0.9	0.9	0.9	1.0
Escalation to 2013\$					
Labor	49	32	21	11	0
Non-Labor	2	17	27	11	0
NSE	0	0	0	0	0
Total	51	49	48	22	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	542	465	486	510	545
Non-Labor	20	254	642	486	512
NSE	0	0	0	0	0
Total	562	719	1,128	997	1,057
FTE	6.9	5.9	6.1	6.2	6.7

* 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
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 4. Asset and Data Management
 Cost Center: 2200-0306.000 - WORK MANAGEMENT & DATABASES DEVELOPMENT

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	0.025	0.082	0
NSE	0	0	0	0	0
Total	0	0	0.025	0.082	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	0	0.025	0	0.0	CCTR Transf	From 2200-0304.000	MGONZALX2013 1205113331427
This adjustment is to transfer the historical cost from cost center 2200-0304 to cost center 2200-0306 because the activities and functions in these two cost centers have been merged.							
2011 Total	0	0.025	0	0.0			
2012	0	0.082	0	0.0	CCTR Transf	From 2200-0304.000	MGONZALX2013 1205113409590
This adjustment is to transfer the historical cost from cost center 2200-0304 to cost center 2200-0306 because the activities and functions of these two cost centers have now merged.							
2012 Total	0	0.082	0	0.0			
2013 Total	0	0	0	0.0			

Note: Totals may include rounding differences.

Supplemental Workpapers for Workpaper 2200-0306.000

Beginning of Workpaper
2200-0308.000 - CONTRACT/MAINTENANCE

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 4. Asset and Data Management
 Cost Center: 2200-0308.000 - CONTRACT/MAINTENANCE

Activity Description:

Expenditures covered in this cost center account for the non-labor costs for software licenses and maintenance contracts for Operations Technology. Operations Technology manages, administers and maintains hardware, software and back-end processes that support the systems and applications of various organizations at SCG and SDG&E including Safety, Distribution, Customer Service, Environmental, Transmission and Gas Engineering.

Forecast Explanations:

Labor - 5-YR Average

There is no labor expense requirements for this cost center; however, since the historical data represents the trend expected the 5 year average methodology was chosen.

Non-Labor - 5-YR Average

The non-labor expense requirements for this cost center have been consistent over recorded historical data. This trend is expected to continue. As such the 5 year average methodology was chosen as best representing the future expense requirements.

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		0	0	0	0	0	0	0	0	
Non-Labor		619	602	448	313	418	480	480	480	
NSE		0	0	0	0	0	0	0	0	
Total		619	602	448	313	418	480	480	480	
FTE		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 4. Asset and Data Management
 Cost Center: 2200-0308.000 - CONTRACT/MAINTENANCE

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	19	0	19	0.00
Directly Allocated	0	0	0	0	0.00	0	0	0	0	0.00
Subj. To % Alloc.	0	418	0	418	0.00	0	461	0	461	0.00
Total Incurred	0	418	0	418	0.00	0	480	0	480	0.00
% Allocation										
Retained	93.69%	93.69%				93.80%	93.80%			
SEU	6.31%	6.31%				6.20%	6.20%			
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	19	0	19	0.00	0	19	0	19	0.00
Directly Allocated	0	0	0	0	0.00	0	0	0	0	0.00
Subj. To % Alloc.	0	461	0	461	0.00	0	461	0	461	0.00
Total Incurred	0	480	0	480	0.00	0	480	0	480	0.00
% Allocation										
Retained	93.80%	93.80%				93.80%	93.80%			
SEU	6.20%	6.20%				6.20%	6.20%			
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

Allocation Percentages from the shared services template.

Cost Center Allocation Percentage for 2014

Allocation percentages from the shared services template. Methodology used is based on the total miles of Transmission pipeline.

Cost Center Allocation Percentage for 2015

Allocation percentages from the shared services template. Methodology used is based on the total miles of Transmission pipeline.

Cost Center Allocation Percentage for 2016

Allocation percentages from the shared services template. Methodology used is based on the total miles of Transmission pipeline.

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 4. Asset and Data Management
 Cost Center: 2200-0308.000 - CONTRACT/MAINTENANCE

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	0	0	0	0	0	0	0	0	0
Non-Labor	5-YR Average	480	480	480	0	0	0	480	480	480
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
Total		480	480	480	0	0	0	480	480	480
FTE	5-YR Average	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.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 4. Asset and Data Management
 Cost Center: 2200-0308.000 - CONTRACT/MAINTENANCE

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	563	561	429	306	418
NSE	0	0	0	0	0
Total	563	561	429	306	418
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	563	561	429	306	418
NSE	0	0	0	0	0
Total	563	561	429	306	418
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	56	41	19	7	0
NSE	0	0	0	0	0
Total	56	41	19	7	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	0	0	0	0	0
Non-Labor	619	602	448	313	418
NSE	0	0	0	0	0
Total	619	602	448	313	418
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.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 4. Asset and Data Management
 Cost Center: 2200-0308.000 - CONTRACT/MAINTENANCE

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.

**Beginning of Workpaper
2200-2376.000 - ESS GIS**

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
Witness: Raymond K. Stanford
Category: A. General Engineering
Category-Sub: 4. Asset and Data Management
Cost Center: 2200-2376.000 - ESS GIS

Activity Description:

The activities associated with the Gas Business and Technology Support Enterprise Geographic Information System (eGIS) and High Pressure Pipeline Database (HPPDB) include the following:

- Provide synchronization of HPPDB and eGIS
- Convert and reconcile linear asset data to geographic format and verify pipeline geometry, HCAs and class locations.
- Provide integration and applications to make GIS data, Maintenance Management data and Document Management data quickly and easily available for end users.

In addition, the activities associated with the Gas Business and Technology Support DMS include the following:

- Convert and reconcile various existing electronic and non-electronic data sources into a single robust data base in order to manage, store, preserve and deliver key documents and information.
- Verify that documentation is linked to asset data in GIS and Maintenance Management Systems.

Furthermore, the activities associated with the Gas Business and Technology Support SAP / Maximo applications include the following:

- Verify asset data is properly classified and maintained in Maintenance Management System - MMS (Maximo, SAP) system in order to better support M&I needs
- Convert and reconcile existing data into appropriate form.
- Verify that asset data is properly recorded in the Maintenance Management system as it is changed in the field as well as verify that proper maintenance plans are established for assets.

Forecast Explanations:

Labor - Base YR Rec

The ESS GIS group is a relatively new department with insufficient historical data to provide meaningful trends and averages. Therefore, the 2013 baseline level with identified incremental requirements to implement the SAP, GIS, Maximo, DMS interfaces and the High Pressure Synchronization project serves as the best means to forecast ongoing funding needs.

Non-Labor - Base YR Rec

The ESS GIS group is a relatively new department with insufficient historical data to provide meaningful trends and averages. Therefore, the 2013 baseline level with identified incremental requirements to implement the SAP, GIS, Maximo, DMS interfaces and the High Pressure Synchronization project serves as the best means to forecast ongoing funding needs.

NSE - Base YR Rec

There are no non-standard escalation expenses in this work paper group.

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 4. Asset and Data Management
 Cost Center: 2200-2376.000 - ESS GIS

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	454	891	1,153	1,365	1,368	
Non-Labor		0	0	0	312	129	752	1,374	759	
NSE		0	0	0	0	0	0	0	0	
Total		0	0	0	766	1,020	1,905	2,739	2,127	
FTE		0.0	0.0	0.0	5.4	11.2	13.5	15.8	16.5	

Note: Totals may include rounding differences.

Southern California Gas Company
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Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 4. Asset and Data Management
 Cost Center: 2200-2376.000 - ESS GIS

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	4	0	0	4	0.00	4	0	0	4	0.00
Directly Allocated	0	0	0	0	0.00	0	0	0	0	0.00
Subj. To % Alloc.	887	129	0	1,016	11.16	1,149	752	0	1,901	13.46
Total Incurred	891	129	0	1,020	11.16	1,153	752	0	1,905	13.46
% Allocation										
Retained	89.86%	89.86%				86.85%	86.85%			
SEU	10.14%	10.14%				13.15%	13.15%			
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	4	0	0	4	0.00	4	0	0	4	0.00
Directly Allocated	0	0	0	0	0.00	0	0	0	0	0.00
Subj. To % Alloc.	1,361	1,374	0	2,735	15.76	1,364	759	0	2,123	16.46
Total Incurred	1,365	1,374	0	2,739	15.76	1,368	759	0	2,127	16.46
% Allocation										
Retained	86.85%	86.85%				86.85%	86.85%			
SEU	13.15%	13.15%				13.15%	13.15%			
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

2013 shared Services template

Cost Center Allocation Percentage for 2014

Allocation percentages from shared services template. The methodology used is based on the total miles of Distribution pipeline.

Cost Center Allocation Percentage for 2015

Allocation percentages from shared services template. The methodology used is based on the total miles of Distribution pipeline.

Cost Center Allocation Percentage for 2016

Allocation percentages from shared services template. The methodology used is based on the total miles of Distribution pipeline.

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 4. Asset and Data Management
 Cost Center: 2200-2376.000 - ESS GIS

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	Base YR Rec	891	891	891	262	474	477	1,153	1,365	1,368
Non-Labor	Base YR Rec	129	129	129	623	1,245	630	752	1,374	759
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
Total		1,020	1,020	1,020	885	1,719	1,107	1,905	2,739	2,127
FTE	Base YR Rec	11.2	11.2	11.2	2.3	4.6	5.3	13.5	15.8	16.5

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	80	2	0	82	1.0	1-Sided Adj

This adjustment is to include one incremental FTE to support the O&M portion of the Capital Gas GIS projects sponsored in the Information Technology (IT) witness area.

2014	182	621	0	803	1.3	1-Sided Adj
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Adjustment to include the incremental resource of 1.3 FTE in 2014 to support the enhancement of SoCalGas and SDG&E's GIS and CAD systems to enable improvements for high pressure and storage integrity and safety management. Labor includes (90% of \$175K direct plus V&S, the other 10% is in SDG&E).

2014 Total	262	623	0	885	2.3	
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2015	160	4	0	164	2.0	1-Sided Adj
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The activities associated with the Gas Business and Adjustment due to technology Support for 2 FTEs one in 2014 and one in 2015.

2015	314	1,241	0	1,555	2.6	1-Sided Adj
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Adjustment to include the incremental 2.6 FTE in 2015 to support the enhancement of SoCalGas and SDG&E's GIS and CAD systems to enable improvements for high pressure and storage integrity and safety management. Labor includes (90% SCG of \$175K direct plus V&S, the other 10% is in SDGE).

2015 Total	474	1,245	0	1,719	4.6	
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Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 4. Asset and Data Management
 Cost Center: 2200-2376.000 - ESS GIS

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adi Type</u>
2016	320	10	0	330	4.0	1-Sided Adj

Four FTEs total. 1 in 2014 1 in 2015 and 2 in 2016. - Provide integration and applications to make GIS data, Maintenance Management data and Document Management data quickly and easily available for end users.

2016	157	620	0	777	1.3	1-Sided Adj
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Adjustment to include the incremental resource of 1.3 FTE in 2016 to support the enhancement of SoCalGas and SDG&E's GIS and CAD systems to enable improvements for high pressure and storage integrity and safety management. Labor includes (90% of \$175K direct plus V&S, the other 10% is included in SDG&E).

2016 Total	477	630	0	1,107	5.3	
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Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 4. Asset and Data Management
 Cost Center: 2200-2376.000 - ESS GIS

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	0	0	0	383	764
Non-Labor	0	0	0	305	129
NSE	0	0	0	0	0
Total	0	0	0	688	893
FTE	0.0	0.0	0.0	4.6	9.5
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	383	764
Non-Labor	0	0	0	305	129
NSE	0	0	0	0	0
Total	0	0	0	688	893
FTE	0.0	0.0	0.0	4.6	9.5
Vacation & Sick (Nominal \$)					
Labor	0	0	0	61	127
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	61	127
FTE	0.0	0.0	0.0	0.8	1.6
Escalation to 2013\$					
Labor	0	0	0	10	0
Non-Labor	0	0	0	7	0
NSE	0	0	0	0	0
Total	0	0	0	17	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	0	0	0	454	891
Non-Labor	0	0	0	312	129
NSE	0	0	0	0	0
Total	0	0	0	766	1,020
FTE	0.0	0.0	0.0	5.4	11.1

* 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.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: A. General Engineering
 Category-Sub: 4. Asset and Data Management
 Cost Center: 2200-2376.000 - ESS GIS

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.

**Supplemental Work paper for Cost Center 2200-0306:
Work Management & Databases Development Department**

*Prepared by Lev Berkovich and Paul Rashti
May 2014*

Objective

To provide justification for the additional FTEs forecasted in cost center 2200-0306. The incremental forecast is for the enhancements to SoCalGas' Document and Data Management software, applications, and data mining programs that are utilized company-wide by different operation groups in support of pipeline safety and regulatory compliance.

Background

During and prior to the last five years, SoCalGas and SDG&E have launched several document and data management infrastructure improvements and inspections program, such as the mechanical gauge replacement program, Transmission Integrity Management Program (TIMP), and the Distribution Integrity Management Program (DIMP). These programs initiated and provided funding for the development of company-wide work management and databases, such as the Pipeline Document Management System (PDMS) and the Construction Field Inspections Data Collection System (MyProjects) that now require on-going maintenance and operation by the Work Management and Database Development team.

Justification

The Work Management and Database Development team executed the Design and Development phases for the above-mentioned projects. **Five (5) FTE participated in the projects and were funded through such refundable and/or capital accounts.**

In 2014, the major focus of the development projects shifted to the activities that are universally applicable to all Gas Operations in SoCalGas and SDG&E to general O&M spending accounts because these programs are now fully operational and required the on-going maintenance. Thus, there will be additional **five (5) employees, who equate to the requested 4.4 FTEs in the 2200-0306 work papers, charging their labor to the O&M.**

In addition, the staff that supports the existing systems can no longer keep pace with the mounting number of additional applications, databases, and end-user support demands of an increasingly complex system that serves Distribution, Transmission, and Storage.

The Team's headcount was not increased since early 2000, despite the fact that the Team is supporting many additional applications. As an example, the Team has been developing MyProjects enterprise system to address recognized deficiencies in collecting high-pressure pipeline construction inspection data and supporting documentation. This system, once fully deployed will have up to 300 on-line and up to 150 mobile users. Fully developed, MyProjects will include, but not limited to the following:

- My Projects (currently in production and available from the Gas Line webpage)
 - Provides a tool for PMs to submit design requests and upload supporting documents to Eng Design or MRC
 - Allows PMs to create a "shell" request for work being done by outside vendors
 - Allows Team Leads in Eng Design to assign and track work

- Allows PM to see the who is working on their request and interact with Designer (permanent trail of conversations)
- Review pdf copies of drawings (IFR, IFB, IFC) in a central repository
- Submit project NOP to Accounting
- Generate reports of drawing status vs. NOP and can create an aging
- Allow PMs to load required construction supporting documents (e.g., PO, MTR, DDS, Test Char, etc.) to My Projects as a temporary holding area based on Table 1 of the Map Maintenance Requirements for High Pressure Gas Lines 192.0025 gas standard
- PMs can now upload the required documents to PDMS with a few keystrokes (no longer requiring a central person to upload)
- My Project Mobile Inspection
- Uses data previously entered to build a Material List from each drawings
- Provides material order status and allows the association of PO and MTRs to project
- Allows detailed Material Receiving including the assignment of Joint and Fitting Numbers, collection of Heat Numbers, Joint Lengths, etc.
- Allows PMs to assign Construction Inspection Requests to Construction Inspectors for completion on mobile devices (connected or disconnected to Company network)
- Project Weld Inspection Report
- Daily Inspection Log
- Field Bend Tally
- Coating Inspection
- Backfill Inspection
- Casing Inspection
- Strength Test Inspection
- Note:
- Material verification and form validation are included in every Inspection
- All Inspections require and electronic approval
- All pertinent Gas Standards are automatically down loaded to each mobile device with automatic updating
- Inspection data can be shared on or offline with other Inspectors or Surveyors
- Allows initial Material Reconciliation
- Quantity (received, installed, returned, salvaged, transferred out, etc.)
- Material supporting documentation

To handle the existing and newly developed applications with multiple servers and databases systems, staffing needs to increase by 5.0 FTE, and these FTE would be dedicated solely to this support function.

Benefits of Investment

- Improved Pipeline Safety and Infrastructure Inspection capabilities
- Increased Efficiency for the High Pressure Pipeline Construction Data and Document collection
- Improved Completeness and Readiness of Data for Regulatory Reporting
- Improved Compliance with Pipeline Safety Regulations

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Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: B. Pipeline Design & Gas Standards
 Cost Center: 2200-0322.000

Summary for Category: B. Pipeline Design & Gas Standards

	In 2013\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2013	2014	2015	2016
Labor	655	733	783	793
Non-Labor	83	101	101	109
NSE	0	0	0	0
Total	<u>738</u>	<u>834</u>	<u>884</u>	<u>902</u>
FTE	7.0	7.2	7.4	7.7

Cost Centers belonging to this Category:

2200-0322.000 PIPELINE DESIGN & GAS STANDARDS

Labor	655	733	783	793
Non-Labor	83	101	101	109
NSE	0	0	0	0
Total	<u>738</u>	<u>834</u>	<u>884</u>	<u>902</u>
FTE	7.0	7.2	7.4	7.7

Note: Totals may include rounding differences.

Beginning of Workpaper
2200-0322.000 - PIPELINE DESIGN & GAS STANDARDS

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: B. Pipeline Design & Gas Standards
 Category-Sub: 1. Pipeline Design & Gas Standards
 Cost Center: 2200-0322.000 - PIPELINE DESIGN & GAS STANDARDS

Activity Description:

This group develops and manages engineering gas standards, develops publishing criteria, 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. The gas standards comprise the policy and procedures which govern the design, operations, and maintenance of the Transmission and distribution systems and are based on the relevant regulatory codes. This department also facilitates integration of SoCalGas and SDG&E Gas Standards yet to be combined into single comprehensive documents. SoCalGas Gas Engineering is the owner of all the engineering standards for the two utilities.

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 to the distribution and transmission operations organizations of SoCalGas and 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.

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 SoCalGas and 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		622	511	517	558	655	733	783	793	
Non-Labor		135	93	98	46	83	101	101	109	
NSE		0	0	0	0	0	0	0	0	
Total		757	604	615	604	737	833	883	901	
FTE		6.0	4.8	5.0	5.5	7.0	7.2	7.4	7.7	

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: B. Pipeline Design & Gas Standards
 Category-Sub: 1. Pipeline Design & Gas Standards
 Cost Center: 2200-0322.000 - PIPELINE DESIGN & GAS 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	19	0	0	19	0.22	20	33	0	53	0.17
Directly Allocated	0	0	0	0	0.00	0	0	0	0	0.00
Subj. To % Alloc.	636	83	0	719	6.78	713	68	0	781	6.98
Total Incurred	655	83	0	738	7.00	733	101	0	834	7.15
% Allocation										
Retained	85.87%	85.87%				86.65%	86.65%			
SEU	14.13%	14.13%				13.35%	13.35%			
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	20	33	0	53	0.17	20	33	0	53	0.17
Directly Allocated	0	0	0	0	0.00	0	0	0	0	0.00
Subj. To % Alloc.	763	68	0	831	7.18	773	76	0	849	7.48
Total Incurred	783	101	0	884	7.35	793	109	0	902	7.65
% Allocation										
Retained	86.65%	86.65%				86.65%	86.65%			
SEU	13.35%	13.35%				13.35%	13.35%			
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

Allocation percentages from shared services template

Cost Center Allocation Percentage for 2014

Allocation percentages from shared services template. The methodology used is based on the total miles of Transmission and Distribution pipeline.

Cost Center Allocation Percentage for 2015

Allocation percentages from shared services template. The methodology used is based on the total miles of Transmission and Distribution pipeline.

Cost Center Allocation Percentage for 2016

Allocation percentages from shared services template. The methodology used is based on the total miles of Transmission and Distribution pipeline.

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: B. Pipeline Design & Gas Standards
 Category-Sub: 1. Pipeline Design & Gas Standards
 Cost Center: 2200-0322.000 - PIPELINE DESIGN & GAS 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	573	573	573	160	210	220	733	783	793
Non-Labor	5-YR Average	91	91	91	10	10	18	101	101	109
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
Total		663	663	663	170	220	238	833	883	901
FTE	5-YR Average	5.7	5.7	5.7	1.5	1.7	2.0	7.2	7.4	7.7

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	50	0	0	50	0.5	1-Sided Adj

This adjustment is to add a part time intern support the management of Gas Standard database per upper pressures and increased reporting requirements from the CPUC audits.

2014	110	10	0	120	1.0	1-Sided Adj
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This adjustment is to add one full time employee to manage Gas Standard database per upper pressures and increased reporting requirements from the CPUC audits.

2014 Total	160	10	0	170	1.5	
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2015	100	0	0	100	0.7	1-Sided Adj
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Adjustment to account for the 2014 intern in support of Gas Standards.

2015	110	10	0	120	1.0	1-Sided Adj
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This adjustment is to add one full time employee to manage Gas Standard database per upper pressures and increased reporting requirements from the CPUC audits.

2015 Total	210	10	0	220	1.7	
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2016	110	8	0	118	1.0	1-Sided Adj
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This adjustment is to add one full time employee to manage Gas Standard database per upper pressures and increased reporting requirements from the CPUC audits. This employee will also support the Design Data Sheet upgrades.

Note: Totals may include rounding differences.

Southern California Gas Company
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 Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: B. Pipeline Design & Gas Standards
 Category-Sub: 1. Pipeline Design & Gas Standards
 Cost Center: 2200-0322.000 - PIPELINE DESIGN & GAS STANDARDS

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adi Type</u>
2016	110	10	0	120	1.0	1-Sided Adj

This adjustment is to add one full time employee to manage Gas Standard database per upper pressures and increased reporting requirements from the CPUC audits.

2016 Total	220	18	0	238	2.0	
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Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: B. Pipeline Design & Gas Standards
 Category-Sub: 1. Pipeline Design & Gas Standards
 Cost Center: 2200-0322.000 - PIPELINE DESIGN & GAS STANDARDS

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	480	405	425	471	562
Non-Labor	123	87	93	45	83
NSE	0	0	0	0	0
Total	602	492	518	516	644
FTE	5.0	4.1	4.3	4.7	6.0
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	480	405	425	471	562
Non-Labor	123	87	93	45	83
NSE	0	0	0	0	0
Total	602	492	518	516	644
FTE	5.0	4.1	4.3	4.7	6.0
Vacation & Sick (Nominal \$)					
Labor	87	71	71	75	93
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	87	71	71	75	93
FTE	0.9	0.7	0.7	0.8	1.0
Escalation to 2013\$					
Labor	56	35	22	12	0
Non-Labor	12	6	4	1	0
NSE	0	0	0	0	0
Total	68	41	26	13	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	622	511	517	558	655
Non-Labor	135	93	98	46	83
NSE	0	0	0	0	0
Total	757	604	615	604	737
FTE	5.9	4.8	5.0	5.5	7.0

* 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
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: B. Pipeline Design & Gas Standards
 Category-Sub: 1. Pipeline Design & Gas Standards
 Cost Center: 2200-0322.000 - PIPELINE DESIGN & GAS 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.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: C. Pipeline Safety & Compliance
 Cost Center: 2200-2473.000

Summary for Category: C. Pipeline Safety & Compliance

	In 2013\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2013	2014	2015	2016
Labor	221	281	331	441
Non-Labor	44	44	88	94
NSE	0	0	0	0
Total	<u>265</u>	<u>325</u>	<u>419</u>	<u>535</u>
FTE	2.1	3.1	4.1	4.1

Cost Centers belonging to this Category:

2200-2473.000 PIPELINE SAFETY & COMPLIANCE MANAGER

Labor	221	281	331	441
Non-Labor	44	44	88	94
NSE	0	0	0	0
Total	<u>265</u>	<u>325</u>	<u>419</u>	<u>535</u>
FTE	2.1	3.1	4.1	4.1

Note: Totals may include rounding differences.

Beginning of Workpaper
2200-2473.000 - PIPELINE SAFETY & COMPLIANCE MANAGER

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: C. Pipeline Safety & Compliance
 Category-Sub: 1. Pipeline Safety & Compliance
 Cost Center: 2200-2473.000 - PIPELINE SAFETY & COMPLIANCE MANAGER

Activity Description:

The Pipeline Safety & Compliance department manages and coordinates SEU activities related to the General Order 112-E CPUC and DOT regulations. Provides counsel, guidance and information to Engineering & Operations and Field Services groups on pipeline safety issues relative to CPUC & DOT regulations. Specific activities associated with this work group include representing SoCalGas and SDG&E in all interactions with the CPUC Utility Safety and Reliability Branch related to natural gas operations as well as provide direction and guidance to utility personnel to assure compliance with DOT/CPUC pipeline regulatory operations.

Forecast Explanations:

Labor - Base YR Rec

As the foundation for future labor expense requirements, the base year method was selected. This forecasting methodology serves to more accurately represent this work group. However, new State regulations and enhancements are emerging and thus requiring additional staffing and resources to comply. These incremental costs have been identified and added to the base year.

Non-Labor - Base YR Rec

As the foundation for future non-labor expense requirements, the base year method was selected. This forecasting methodology serves to more accurately represent this work group. However, new State regulations and enhancements are emerging and thus requiring additional staffing and resources to comply. These incremental costs have been identified and added to the base year.

NSE - Base YR Rec

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	221	281	331	441	
Non-Labor		0	0	0	0	44	44	88	94	
NSE		0	0	0	0	0	0	0	0	
Total		0	0	0	0	266	326	420	536	
FTE		0.0	0.0	0.0	0.0	2.1	3.1	4.1	4.1	

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: C. Pipeline Safety & Compliance
 Category-Sub: 1. Pipeline Safety & Compliance
 Cost Center: 2200-2473.000 - PIPELINE SAFETY & COMPLIANCE MANAGER

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	3	0	0	3	0.00	3	0	0	3	0.00
Directly Allocated	0	0	0	0	0.00	0	0	0	0	0.00
Subj. To % Alloc.	219	44	0	263	2.08	279	44	0	323	3.08
Total Incurred	222	44	0	266	2.08	282	44	0	326	3.08
% Allocation										
Retained	80.00%	80.00%				80.00%	80.00%			
SEU	20.00%	20.00%				20.00%	20.00%			
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	3	0	0	3	0.00	3	0	0	3	0.00
Directly Allocated	0	0	0	0	0.00	0	0	0	0	0.00
Subj. To % Alloc.	329	88	0	417	4.08	439	94	0	533	4.08
Total Incurred	332	88	0	420	4.08	442	94	0	536	4.08
% Allocation										
Retained	80.00%	80.00%				80.00%	80.00%			
SEU	20.00%	20.00%				20.00%	20.00%			
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

Allocation percentage from the shared services template.

Cost Center Allocation Percentage for 2014

Allocation percentage was obtained from the shared services template.

Cost Center Allocation Percentage for 2015

Allocation percentage was obtained from the shared services template.

Cost Center Allocation Percentage for 2016

Allocation percentage was obtained from the shared services template.

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: C. Pipeline Safety & Compliance
 Category-Sub: 1. Pipeline Safety & Compliance
 Cost Center: 2200-2473.000 - PIPELINE SAFETY & COMPLIANCE MANAGER

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	Base YR Rec	221	221	221	60	110	220	281	331	441
Non-Labor	Base YR Rec	44	44	44	0	44	50	44	88	94
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
Total		266	266	266	60	154	270	326	420	536
FTE	Base YR Rec	2.1	2.1	2.1	1.0	2.0	2.0	3.1	4.1	4.1

Forecast Adjustment Details:

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj Type</u>
2014	60	0	0	60	1.0	1-Sided Adj

Adjustment is due to the inclusion of a partial FTE hired in 2014.

2014 Total	60	0	0	60	1.0	
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2015	110	44	0	154	2.0	1-Sided Adj
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Adjustment to add one incremental FTE in 2015 to cost center 2200-2473 to support Pipeline Safety and Compliance due to increased state regulations and enhancements. This adjustment also includes the employee hired in 2014.

2015 Total	110	44	0	154	2.0	
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2016	110	6	0	116	1.0	1-Sided Adj
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Adjustment to add one incremental FTE to cost center 2200-2473 to support Pipeline Safety and Compliance.

2016	110	44	0	154	1.0	1-Sided Adj
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Adjustment to include the 2015 incremental FTE to cost center 2200-2473 to support Pipeline Safety and Compliance.

2016 Total	220	50	0	270	2.0	
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Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: C. Pipeline Safety & Compliance
 Category-Sub: 1. Pipeline Safety & Compliance
 Cost Center: 2200-2473.000 - PIPELINE SAFETY & COMPLIANCE MANAGER

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	0	0	0	0	190
Non-Labor	0	0	0	0	44
NSE	0	0	0	0	0
Total	0	0	0	0	234
FTE	0.0	0.0	0.0	0.0	1.8
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	190
Non-Labor	0	0	0	0	44
NSE	0	0	0	0	0
Total	0	0	0	0	234
FTE	0.0	0.0	0.0	0.0	1.8
Vacation & Sick (Nominal \$)					
Labor	0	0	0	0	32
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	0	32
FTE	0.0	0.0	0.0	0.0	0.3
Escalation to 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
Recorded-Adjusted (Constant 2013\$)					
Labor	0	0	0	0	221
Non-Labor	0	0	0	0	44
NSE	0	0	0	0	0
Total	0	0	0	0	266
FTE	0.0	0.0	0.0	0.0	2.1

* 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.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: C. Pipeline Safety & Compliance
 Category-Sub: 1. Pipeline Safety & Compliance
 Cost Center: 2200-2473.000 - PIPELINE SAFETY & COMPLIANCE MANAGER

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.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: D. Public Awareness
 Cost Center: 2200-2417.000

Summary for Category: D. Public Awareness

	In 2013\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2013	2014	2015	2016
Labor	-39	185	233	245
Non-Labor	213	50	100	150
NSE	0	0	0	0
Total	<u>174</u>	<u>235</u>	<u>333</u>	<u>395</u>
FTE	-0.3	1.8	2.0	2.5

Cost Centers belonging to this Category:

2200-2417.000 SHARED PUBLIC AWARENESS ACTIVITIES

Labor	-39	185	233	245
Non-Labor	213	50	100	150
NSE	0	0	0	0
Total	<u>174</u>	<u>235</u>	<u>333</u>	<u>395</u>
FTE	-0.3	1.8	2.0	2.5

Note: Totals may include rounding differences.

Beginning of Workpaper
2200-2417.000 - SHARED PUBLIC AWARENESS ACTIVITIES

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: D. Public Awareness
 Category-Sub: 1. Public Awareness
 Cost Center: 2200-2417.000 - SHARED PUBLIC AWARENESS ACTIVITIES

Activity Description:

The activities associated with this work paper include the Public Awareness shared services provided to both SoCalGas and SDG&E. 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 - Zero-Based

As the foundation for future labor expense requirements, zero base was chosen. The nature of work by the Public Awareness group in the last five years has seen increased variations that occur in this program. However, with a more stable economy and anticipation of emerging mandates, additional staffing and resources are required to comply. These incremental costs have been identified and included in the forecast.

Non-Labor - Zero-Based

As the foundation for future non-labor expense requirements, zero base was chosen. The nature of work by the Public Awareness group in the last five years has seen increased variations that occur in this program. However, with a more stable economy and anticipation of emerging mandates, additional staffing and resources are required to comply. These incremental costs have been identified and included in the forecast.

NSE - Zero-Based

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	182	-39	185	233	245	
Non-Labor		0	0	0	58	213	50	100	150	
NSE		0	0	0	0	0	0	0	0	
Total		0	0	0	239	174	235	333	395	
FTE		0.0	0.0	0.0	1.5	-0.3	1.8	2.0	2.5	

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: D. Public Awareness
 Category-Sub: 1. Public Awareness
 Cost Center: 2200-2417.000 - SHARED PUBLIC AWARENESS ACTIVITIES

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	-39	210	0	171	-0.34	0	0	0	0	0.00
Directly Allocated	0	0	0	0	0.00	0	0	0	0	0.00
Subj. To % Alloc.	0	2	0	2	0.00	185	50	0	235	1.80
Total Incurred	-39	212	0	173	-0.34	185	50	0	235	1.80
% Allocation										
Retained	85.87%	85.87%				86.65%	86.65%			
SEU	14.13%	14.13%				13.35%	13.35%			
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.	233	100	0	333	2.00	245	150	0	395	2.50
Total Incurred	233	100	0	333	2.00	245	150	0	395	2.50
% Allocation										
Retained	86.65%	86.65%				86.65%	86.65%			
SEU	13.35%	13.35%				13.35%	13.35%			
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

Allocation percentages from shared services template.

Cost Center Allocation Percentage for 2014

Allocation percentages from shared services template. The methodology used is based on the total miles of Transmission and Distribution pipeline.

Cost Center Allocation Percentage for 2015

Allocation percentages from shared services template. The methodology used is based on the total miles of Transmission and Distribution pipeline.

Cost Center Allocation Percentage for 2016

Allocation percentages from shared services template. The methodology used is based on the total miles of Transmission and Distribution pipeline.

Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: D. Public Awareness
 Category-Sub: 1. Public Awareness
 Cost Center: 2200-2417.000 - SHARED PUBLIC AWARENESS ACTIVITIES

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	Zero-Based	0	0	0	185	233	245	185	233	245
Non-Labor	Zero-Based	0	0	0	50	100	150	50	100	150
NSE	Zero-Based	0	0	0	0	0	0	0	0	0
Total		0	0	0	235	333	395	235	333	395
FTE	Zero-Based	0.0	0.0	0.0	1.8	2.0	2.5	1.8	2.0	2.5

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	185	50	0	235	1.8	1-Sided Adj

This one-sided adjustment represents the 2014 forecast for the Public Awareness Shared Service cost center. The labor is based on the salaries for one Public Awareness Manager (estimated at \$100K per year) and one additional employee to be hired in 2014, including V&S. The non-labor forecast of \$50K represents expenses related to the communication and travel.

2014 Total	185	50	0	235	1.8	
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2015	233	100	0	333	2.0	1-Sided Adj
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This one-sided adjustment represents the 2015 forecast for the Public Awareness Shared Service cost center. The labor is based on the salaries for one Public Awareness Manager (estimated at \$116K per year) and one additional employee hired in 2014, including V&S. The non-labor forecast of \$100K represents expenses related to the communication and travel.

2015 Total	233	100	0	333	2.0	
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2016	245	150	0	395	2.5	1-Sided Adj
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This one-sided adjustment represents the 2016 forecast for the Public Awareness Shared Service cost center. The labor is based on the salaries for one Public Awareness Manager (estimated at \$122K per year) and one additional employee hired in 2014, including V&S. The non-labor forecast of \$150K represents expenses related to the communication and travel.

2016 Total	245	150	0	395	2.5	
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Note: Totals may include rounding differences.

Southern California Gas Company
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: D. Public Awareness
 Category-Sub: 1. Public Awareness
 Cost Center: 2200-2417.000 - SHARED PUBLIC AWARENESS ACTIVITIES

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	0	0	0	153	-34
Non-Labor	0	0	0	56	213
NSE	0	0	0	0	0
Total	0	0	0	210	179
FTE	0.0	0.0	0.0	1.3	-0.3
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	153	-34
Non-Labor	0	0	0	56	213
NSE	0	0	0	0	0
Total	0	0	0	210	179
FTE	0.0	0.0	0.0	1.3	-0.3
Vacation & Sick (Nominal \$)					
Labor	0	0	0	25	-6
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	25	-6
FTE	0.0	0.0	0.0	0.2	0.0
Escalation to 2013\$					
Labor	0	0	0	4	0
Non-Labor	0	0	0	1	0
NSE	0	0	0	0	0
Total	0	0	0	5	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	0	0	0	182	-39
Non-Labor	0	0	0	58	213
NSE	0	0	0	0	0
Total	0	0	0	239	174
FTE	0.0	0.0	0.0	1.5	-0.3

* 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
2016 GRC - APP
Shared Services Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
 Witness: Raymond K. Stanford
 Category: D. Public Awareness
 Category-Sub: 1. Public Awareness
 Cost Center: 2200-2417.000 - SHARED PUBLIC AWARENESS ACTIVITIES

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.

Southern California Gas Company
2016 GRC - APP
Non-Shared Service Workpapers

Area: ENGINEERING, EMERGENCY SERVICES & LAND
Witness: Raymond K. Stanford

Appendix A: List of Non-Shared Cost Centers

Cost Center	Sub	Description
2200-0301	000	ENG ANALYSIS CTR MGR
2200-0304	000	MAXIMO
2200-0307	000	WEB/DATABASE/SERVER SUPPORT
2200-0313	000	GEOGRAPHIC SERVICES
2200-0314	000	GIS SUPERVISOR
2200-0315	000	LAND SERVICES
2200-0316	000	GAS PROCESS ENGINEERING
2200-0317	000	PROJECT & CONSTRUCTION MANAGEMENT
2200-0324	000	OPERATIONS RD&D PROGRAM
2200-0613	000	EMERGENCY SERVICES NORTH
2200-1179	000	EAC-MATERIAL AND EQUIPMENT
2200-1180	000	EAC-AIR QUALITY AND COMPRESSOR SERVICES
2200-1199	000	ENGINEERING ANALYSIS CENTER ADMINISTRATI
2200-1200	000	EAC-APPLIED TECHNOLOGIES
2200-1335	000	DESIGN DRAFTING
2200-2064	000	MEASUREMENT TECH RD&D
2200-2065	000	MATERIALS/CORROSION RD&D
2200-2066	000	PIPELINE DESIGN RD&D
2200-2067	000	FIELD TECHNOLOGIES RD&D
2200-2213	000	SCG PUBLIC AWARENESS
2200-2241	000	DIR EMERGENCY SERVICES
2200-2265	000	NGV & ELECTRICAL FIELD MAINTENANCE
2200-2271	000	CIVIL/STRUCTURAL & HAZARD MITIGATION ENG
2200-2331	000	SVP OPERATIONS
2200-2368	000	LAND AND RIGHT OF WAY
2200-2391	000	DIRECTOR PLANNING & PROJECT DEVELOPMENT
2200-2393	000	PROJECT MANAGER - ALISO CANYON
2200-2394	000	PROJECT MANAGER-PLANNING & DEVELOPMENT
2200-2472	000	GEOGRAPHIC ANALYSIS & SURVEY