

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

Application No. 14-11-003

Exhibit No.: (SDG&E-14-WP-R)

REDACTED PUBLIC VERSION

REVISED WORKPAPERS TO
PREPARED DIRECT TESTIMONY
OF BRADLEY M. BAUGH
ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY

REDACTED PAGE 61 of 472

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

MARCH 2015



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

Exhibit SDG&E-14-WP-R - CS - OPERATIONS, INFORMATION & TECHNOLOGIE

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Overall Summary For Exhibit No. SDG&E-14-WP-R

Area:	CS - OPERATIONS, INFORMATION & TECHNOLOGIES
Witness:	Bradley M. Baugh

Description	In 2013 \$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2013	2014	2015	2016
Non-Shared Services	57,175	60,032	63,246	66,605
Shared Services	976	979	979	979
Total	58,151	61,011	64,225	67,584

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
Witness: Bradley M. Baugh

Summary of Non-Shared Services Workpapers:

Description	In 2013 \$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2013	2014	2015	2016
A. Customer Service Operations	35,633	36,072	36,311	36,479
B. Customer Service Information	21,542	23,960	26,935	30,126
Total	57,175	60,032	63,246	66,605

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Workpaper: VARIOUS

Summary for Category: A. Customer Service Operations

	In 2013\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2013	2014	2015	2016
Labor	26,760	26,974	26,941	27,403
Non-Labor	4,444	4,472	4,845	4,734
NSE	4,431	4,627	4,526	4,343
Total	35,635	36,073	36,312	36,480
FTE	427.8	427.4	421.5	434.9

Workpapers belonging to this Category:

100000.000 Advanced Metering Ops

Labor	7,556	8,480	8,738	8,090
Non-Labor	579	500	681	681
NSE	0	0	0	0
Total	8,135	8,980	9,419	8,771
FTE	94.8	103.8	105.3	100.4

100001.000 Meter Reading

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

100002.000 Billing

Labor	4,768	4,828	5,032	5,508
Non-Labor	305	308	316	331
NSE	0	0	0	0
Total	5,073	5,136	5,348	5,839
FTE	69.8	70.8	73.8	79.8

100003.000 Credit & Collections

Labor	2,228	2,117	2,095	2,257
Non-Labor	481	539	565	592
NSE	0	0	0	0
Total	2,709	2,656	2,660	2,849
FTE	36.1	34.1	33.8	36.3

100004.000 Remittance Processing

Labor	0	0	0	0
Non-Labor	887	882	876	865
NSE	0	3	7	10
Total	887	885	883	875
FTE	0.0	0.0	0.0	0.0

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Workpaper: VARIOUS

	In 2013\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2013	2014	2015	2016
100004.001 Postage				
Labor	0	0	0	0
Non-Labor	0	0	0	0
NSE	4,431	4,624	4,519	4,333
Total	4,431	4,624	4,519	4,333
FTE	0.0	0.0	0.0	0.0
100005.000 Branch Offices				
Labor	1,503	1,300	1,218	1,218
Non-Labor	516	516	516	516
NSE	0	0	0	0
Total	2,019	1,816	1,734	1,734
FTE	28.5	24.4	23.0	23.0
100006.000 CCC Operations				
Labor	8,804	8,348	7,957	8,429
Non-Labor	384	384	384	384
NSE	0	0	0	0
Total	9,188	8,732	8,341	8,813
FTE	174.0	169.7	161.0	170.8
100007.000 CCC Support				
Labor	1,313	1,313	1,313	1,313
Non-Labor	1,009	1,060	1,224	1,082
NSE	0	0	0	0
Total	2,322	2,373	2,537	2,395
FTE	20.3	20.3	20.3	20.3
100012.000 Other Office				
Labor	588	588	588	588
Non-Labor	283	283	283	283
NSE	0	0	0	0
Total	871	871	871	871
FTE	4.3	4.3	4.3	4.3

Note: Totals may include rounding differences.

Beginning of Workpaper
100000.000 - Advanced Metering Ops

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 1. Advanced Metering
 Workpaper: 100000.000 - Advanced Metering Ops

Activity Description:

AMO supports the delivery of customer services on premises, responds to customer inquiries, resolves customer problems, and supports providing accurate and timely bills for all of SDG&E's 2.26 million meters, covering all of San Diego County and South Orange County. There are five distinct areas in the organization including Electric Metering Operations (EMO), Smart Meter Data Operations (SMDO), Quality Assurance & Training, Smart Meter Technical Support (SMTS), and Meter and Network Engineering.

Forecast Explanations:

Labor - Zero-Based

A zero-based forecast method for labor and a base year forecast method for non-labor was used because Smart Meter is still early in its lifecycle, and therefore historical data representing the full scope of Smart Meter O&M order volumes and activity levels are limited. Furthermore, the manual meter reading function has been transitioned to AMO starting in year 2014 (related to hard-to-access meters, complex billing-related meters, etc.) and thus adds activities to AMO that were not present in base year 2013 and recent historical data. For all of these reasons, a zero-based forecasting methodology is deemed to be most appropriate.

Non-Labor - Base YR Rec

See above.

NSE - Base YR Rec

N/A

Summary of Results:

		In 2013\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2009	2010	2011	2012	2013	2014	2015	2016	
Labor		4,681	5,070	4,870	7,311	7,556	8,480	8,738	8,090	
Non-Labor		606	513	552	843	579	500	681	681	
NSE		0	0	0	0	0	0	0	0	
Total		5,287	5,584	5,422	8,154	8,134	8,980	9,419	8,771	
FTE		56.2	60.9	57.7	90.9	94.8	103.8	105.3	100.4	

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 1. Advanced Metering
 Workpaper: 100000.000 - Advanced Metering Ops

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	8,480	8,738	8,090	8,480	8,738	8,090
Non-Labor	Base YR Rec	579	579	579	-79	102	102	500	681	681
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
Total		579	579	579	8,401	8,840	8,192	8,980	9,419	8,771
FTE	Zero-Based	0.0	0.0	0.0	103.8	105.3	100.4	103.8	105.3	100.4

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	544	0	0	544	8.5	1-Sided Adj
Handling remaining manual meter reading after closure of Meter Reading Department 8.5 FTEs @ annual rate of \$64k handling approximately 45,000 read/verify orders annually						
2014	2,255	0	0	2,255	26.2	1-Sided Adj
Field employees handling meter maintenance/testing/compliance work orders (including field portion of apprentice) 26.2 FTEs @ average annual rate of \$86k handling approximately 20,000 O&M orders						
2014	185	0	0	185	2.8	1-Sided Adj
Apprentice Class - 2.8 FTEs Classroom portion @ average annual rate of \$66k						
2014	279	0	0	279	3.0	1-Sided Adj
Instrument Technicians 3 FTEs @ average annual rate of \$93k						
2014	290	0	0	290	4.2	1-Sided Adj
Meter Shop including team lead 4.2 FTEs at average annual rate of \$69k						
2014	4,533	0	0	4,533	55.3	1-Sided Adj
Supporting management 55.3 FTES @ average annual rate of \$82k						
2014	103	0	0	103	2.0	1-Sided Adj
Supporting clerical & technical 2 FTES @ average annual rate of \$51.5k						
2014	430	0	0	430	3.1	1-Sided Adj
Overtime 3.1 Electric Meter Tester regular average annual rate of \$92.5k @ time and a half (more work orders than available field employees).						

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 1. Advanced Metering
 Workpaper: 100000.000 - Advanced Metering Ops

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adi Type</u>
2014	-64	0	0	-64	-0.5	1-Sided Adj
Cost Efficiency 0.46 FTE Electric Meter Tester regular average annual rate of \$92.5k @ time and a half (more work orders than available field employees).						
2014	-75	0	0	-75	-0.8	1-Sided Adj
SMOC - EM Capital Project #13031 - benefit .75 management FTE (Q2-Q4).						
2014	0	-79	0	-79	0.0	1-Sided Adj
Adjustment for one time non-recurring cost for contract / temp labor.						
2014 Total	8,480	-79	0	8,401	103.8	

2015	301	0	0	301	4.7	1-Sided Adj
Handling remaining manual meter reading after closure of Meter Reading Department 4.7 FTEs @ annual rate of \$64k handling approximately 25,000 read/verify orders annually						
2015	2,522	0	0	2,522	29.8	1-Sided Adj
Field employees handling meter maintenance/testing/compliance work orders (including field portion of apprentice) 29.8 FTEs @ average annual rate of \$84.63k handling approximately 23,000 O&M orders						
2015	277	0	0	277	4.2	1-Sided Adj
Apprentice Class 4.2 FTEs classroom portion @ average annual rate of \$66k						
2015	279	0	0	279	3.0	1-Sided Adj
Instrument Technicians 3 FTEs @ average annual rate of \$93k						
2015	290	0	0	290	4.2	1-Sided Adj
Meter Shop including team lead 4.2 FTEs at average annual rate of \$69k						
2015	4,516	0	0	4,516	54.2	1-Sided Adj
Supporting management 54.2 FTES @ average annual rate of \$83.32k						
2015	100	0	0	100	1.0	1-Sided Adj
Principal Engineer to develop and manage repeatable process to test hardware and firmware releases. Sr Engineer AD3 \$100k						

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 1. Advanced Metering
 Workpaper: 100000.000 - Advanced Metering Ops

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adi Type</u>
2015	103	0	0	103	2.0	1-Sided Adj
Supporting clerical & technical 2 FTES @ average annual rate of \$51.5k						
2015	514	0	0	514	3.7	1-Sided Adj
Overtime 3.7 Electric Meter Tester average regular annual rate of \$92.5k @ time and a half (more work orders than available field employees).						
2015	-64	0	0	-64	-0.5	1-Sided Adj
Cost Efficiency - Overtime savings 0.46 Electric Meter Tester average regular annual rate of \$92.53k @ time and a half.						
2015	-100	0	0	-100	-1.0	1-Sided Adj
SMOC - EM Capital Project #13031 - benefit reduction of 1 Mgmt FTE.						
2015	0	-79	0	-79	0.0	1-Sided Adj
Adjustment for one time non-recurring cost for contract / temp labor.						
2015	0	22	0	22	0.0	1-Sided Adj
Extended warranty for smart meter network devices \$110k covering 5-year period 2015-2019 1/5th of \$110K = \$22K						
2015	0	159	0	159	0.0	1-Sided Adj
Annual Software and service fees						
2015 Total	8,738	102	0	8,840	105.3	

2016	209	0	0	209	3.3	1-Sided Adj
Handling remaining manual meter reading after closure of Meter Reading Department 3.27 FTEs @ annual rate of \$64K handling approximately 17,000 read/verify orders annually. See AMO 100000.000 Supplemental Workpaper 1 for a reconciliation of the AMO zero-based labor forecast to the 2013 Adjusted Recorded. (Reference cell D26)						
2016	2,864	0	0	2,864	35.0	1-Sided Adj
Field employees handling meter maintenance/testing/compliance work orders (including field portion of apprentice) 35 FTEs @ average annual rate of \$81.82K handling approximately 23,000 O&M orders. See AMO 100000.000 Supplemental Workpaper 1 for a reconciliation of the AMO zero-based labor forecast to the 2013 Adjusted Recorded. (Reference cell D27)						

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 1. Advanced Metering
 Workpaper: 100000.000 - Advanced Metering Ops

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adi Type</u>
2016	26	0	0	26	0.4	1-Sided Adj
Apprentice Class 0.4 FTEs classroom portion @ average annual rate of \$66K. See AMO 100000.000 Supplemental Workpaper 1 for a reconciliation of the AMO zero-based labor forecast to the 2013 Adjusted Recorded. (Reference cell D28)						
2016	279	0	0	279	3.0	1-Sided Adj
Instrument Technicians 3 FTEs @ average annual rate of \$93K. See AMO 100000.000 Supplemental Workpaper 1 for a reconciliation of the AMO zero-based labor forecast to the 2013 Adjusted Recorded. (Reference cell D31)						
2016	290	0	0	290	4.2	1-Sided Adj
Meter Shop including team lead 4.2 FTEs at average annual rate of \$69K. See AMO 100000.000 Supplemental Workpaper 1 for a reconciliation of the AMO zero-based labor forecast to the 2013 Adjusted Recorded. (Reference cell D29)						
2016	4,568	0	0	4,568	55.0	1-Sided Adj
Supporting management 55 FTEs @ average annual rate of \$83.06K. See AMO 100000.000 Supplemental Workpaper 1 for a reconciliation of the AMO zero-based labor forecast to the 2013 Adjusted Recorded. (Reference cell D25)						
2016	100	0	0	100	1.0	1-Sided Adj
Principal Engineer to develop and manage repeatable process to test hardware and firmware releases. Prin. Engineer annual salary \$100K. See AMO 100000.000 Supplemental Workpaper 1 for a reconciliation of the AMO zero-based labor forecast to the 2013 Adjusted Recorded. (Reference cell D22)						
2016	103	0	0	103	2.0	1-Sided Adj
Supporting clerical & technical 2 FTEs @ average annual rate of \$51.5K. See AMO 100000.000 Supplemental Workpaper 1 for a reconciliation of the AMO zero-based labor forecast to the 2013 Adjusted Recorded. (Reference cell D32)						
2016	-64	0	0	-64	-0.5	1-Sided Adj
Process improvements reduce duplicate field visits - Overtime savings -.46 FTE Electric Meter Tester regular annual rate of \$92.5K @ time and a half. See AMO 100000.000 Supplemental Workpaper 1 for a reconciliation of the AMO zero-based labor forecast to the 2013 Adjusted Recorded. (Reference cell D23)						
2016	-185	0	0	-185	-2.0	1-Sided Adj

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 1. Advanced Metering
 Workpaper: 100000.000 - Advanced Metering Ops

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adi Type</u>
Process improvements - coaching/training to improve performance. Reduction of 2 field FTEs. See AMO 100000.000 Supplemental Workpaper 1 for a reconciliation of the AMO zero-based labor forecast to the 2013 Adjusted Recorded. (Reference cell D24)						
2016	-100	0	0	-100	-1.0	1-Sided Adj
SMOC - EM Project # 13031 benefit Reduction of 1 management FTE. See AMO 100000.000 Supplemental Workpaper 1 for a reconciliation of the AMO zero-based labor forecast to the 2013 Adjusted Recorded. (Reference cell D30)						
2016	0	22	0	22	0.0	1-Sided Adj
Extended warranty for smart meter network devices \$110k covering 5-year period 2015-2019 1/5th of \$110K = \$22K						
2016	0	-79	0	-79	0.0	1-Sided Adj
Adjustment for one time non-recurring cost for contract / temp labor.						
2016	0	159	0	159	0.0	1-Sided Adj
Annual software maintenance and service fees as a result of the implementation of the software solution for the Smart Meter Operations Center (SMOC) – Exception Management (EM) capital project #13031.						
2016 Total	8,090	102	0	8,192	100.4	

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
Witness: Bradley M. Baugh
Category: A. Customer Service Operations
Category-Sub: 1. Advanced Metering
Workpaper: 100000.000 - Advanced Metering Ops

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	3,734	4,113	4,178	6,448	6,599
Non-Labor	1,188	1,188	1,214	825	579
NSE	0	0	0	0	0
Total	4,922	5,301	5,392	7,273	7,178
FTE	48.2	51.9	50.4	80.2	81.4
Adjustments (Nominal \$) **					
Labor	0	0	-100	-197	-78
Non-Labor	-639	-713	-683	4	0
NSE	0	0	0	0	0
Total	-639	-713	-783	-192	-78
FTE	0.0	0.0	-0.8	-2.0	-0.8
Recorded-Adjusted (Nominal \$)					
Labor	3,734	4,113	4,078	6,251	6,521
Non-Labor	548	475	532	830	579
NSE	0	0	0	0	0
Total	4,283	4,588	4,609	7,081	7,100
FTE	48.2	51.9	49.6	78.2	80.6
Vacation & Sick (Nominal \$)					
Labor	577	655	601	906	1,034
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	577	655	601	906	1,034
FTE	8.1	9.0	8.1	12.6	14.1
Escalation to 2013\$					
Labor	370	302	191	154	0
Non-Labor	58	38	21	13	0
NSE	0	0	0	0	0
Total	428	341	212	167	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	4,681	5,070	4,870	7,311	7,556
Non-Labor	606	513	552	843	579
NSE	0	0	0	0	0
Total	5,287	5,584	5,422	8,154	8,134
FTE	56.3	60.9	57.7	90.8	94.7

* 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.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 1. Advanced Metering
 Workpaper: 100000.000 - Advanced Metering Ops

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs					
Years	2009	2010	2011	2012	2013
Labor	0	0	-100	-197	-78
Non-Labor	-639	-713	-683	4	0
NSE	0	0	0	0	0
Total	-639	-713	-783	-192	-78
FTE	0.0	0.0	-0.8	-2.0	-0.8

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	-502	0	0.0	CCTR Transf	To 2100-3106.000	CSCHRAMM2013 1025164552620
Transfer 2009 telemetry non-labor expenses from Advanced Meter Operations - Work Group 100000.000 cost center 2100-0042 to Information Technology USS cost center 2100-3106 (NETWORK/TELECOM SERVICES - SDG&E).							
2009	0	-48	0	0.0	CCTR Transf	To 2100-3501.000	CSCHRAMM2013 1107090718830
Transfer costs associated with Itron maintenance for MV-90 system, from cost center 2100-0042 in work group 100000 Advanced Meter Operations to USS cost center 2100-3501.000 IT Network Hardware Software Maintenance to align costs where activity resides.							
2009	0	-89	0	0.0	CCTR Transf	To 2100-3440.000	CSCHRAMM2013 1107092342123
Transfer costs associated with Kwickview license & maintenance from cost center 2100-0042 in work group 100000 Advanced Meter Operations to cost center 2100-3440 in work group 100011 Customer Programs & Projects to align costs where activity resides.							
2009 Total	0	-639	0	0.0			

2010	0	-568	0	0.0	CCTR Transf	To 2100-3106.000	CSCHRAMM2013 1025164738520
Transfer 2010 telemetry non-labor expenses from Advanced Meter Operations - Work Group 100000.000 cost center 2100-0042 to Information Technology USS cost center 2100-3106 (NETWORK/TELECOM SERVICES - SDG&E).							

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
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Non-Shared Service Workpapers

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 1. Advanced Metering
 Workpaper: 100000.000 - Advanced Metering Ops

<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	0	-50	0	0.0	CCTR Transf	To 2100-3501.000	CSCHRAMM2013 1107090811827
Transfer costs associated with Itron maintenance for MV-90 system, from cost center 2100-0042 in work group 100000 Advanced Meter Operations to USS cost center 2100-3501.000 IT Network Hardware Software Maintenance to align costs where activity resides.							
2010	0	-94	0	0.0	CCTR Transf	To 2100-3440.000	CSCHRAMM2013 1107092439103
Transfer costs associated with Kwickview license & maintenance from cost center 2100-0042 in work group 100000 Advanced Meter Operations to cost center 2100-3440 in work group 100011 Customer Programs & Projects to align costs where activity resides.							
2010 Total	0	-713	0	0.0			

2011	0	-588	0	0.0	CCTR Transf	To 2100-3106.000	CSCHRAMM2013 1025164818390
Transfer 2011 telemetry non-labor expenses from Advanced Meter Operations - Work Group 100000.000 cost center 2100-0042 to Information Technology USS cost center 2100-3106 (NETWORK/TELECOM SERVICES - SDG&E).							
2011	0	-94	0	0.0	CCTR Transf	To 2100-3440.000	CSCHRAMM2013 1107092542680
Transfer costs associated with Kwickview license & maintenance from cost center 2100-0042 in work group 100000 Advanced Meter Operations to cost center 2100-3440 in work group 100011 Customer Programs & Projects to align costs where activity resides.							
2011	-100	0	0	-0.8	CCTR Transf	To 2100-3703.000	CSCHRAMM2013 1107092739560
Transfer labor and FTE for Project Manager position from cost center 2100-3780 in work group 100000 Advanced Meter Operations to cost center 2100-3703 in work group 100008 Residential Services to align costs where function resides.							
2011 Total	-100	-683	0	-0.8			

2012	-113	0	0	-0.8	CCTR Transf	To 2100-3703.000	CSCHRAMM2013 1107092826583
Transfer labor and FTE for Project Manager position from cost center 2100-3780 in work group 100000 Advanced Meter Operations to cost center 2100-3703 in work group 100008 Residential Services to align costs where function resides.							

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
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Non-Shared Service Workpapers

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 1. Advanced Metering
 Workpaper: 100000.000 - Advanced Metering Ops

<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	-82	0	0	-1.3	CCTR Transf	To 2100-3753.000	CSCHRAMM2013 1107092955363
Transfer labor expense associated with Meter Access positions from 2100-3547 in work group 100000 Advanced Meter Operations to cost center 2100-3753 in work group 1FC004.000 CSF Office Support in order to align historical costs with the workgroup in which the activity will be forecasted							
2012	-2	4	0	0.1	1-Sided Adj	N/A	CSCHRAMM2014 0418144019373
One sided adjustment to transfer costs associated with Meter Reading functions in work paper group 100001 to AMO cost center 2100-0035 in work paper group 100000.							
2012 Total	-197	4	0	-2.0			
2013	-54	0	0	-0.8	CCTR Transf	To 2100-3753.000	CSCHRAMM2014 0211164720143
Transfer labor expense associated with Meter Access positions from 2100-3547 in work group 100000 Advanced Meter Operations to cost center 2100-3753 in work group 1FC004.000 CSF Office Support in order to align historical costs with the workgroup in which the activity will be forecasted							
2013	-30	0	0	0.0	1-Sided Adj	N/A	CSCHRAMM2014 0211165152337
Remove one-time costs associated with severance payment.							
2013	6	0	0	0.0	1-Sided Adj	N/A	CSCHRAMM2014 0418144200713
One sided adjustment to transfer costs associated with Meter Reading functions in work paper group 100001 to AMO cost center 2100-0035 in work paper group 100000.							
2013 Total	-78	0	0	-0.8			

Note: Totals may include rounding differences.

Supplemental Workpapers for Workpaper 100000.000

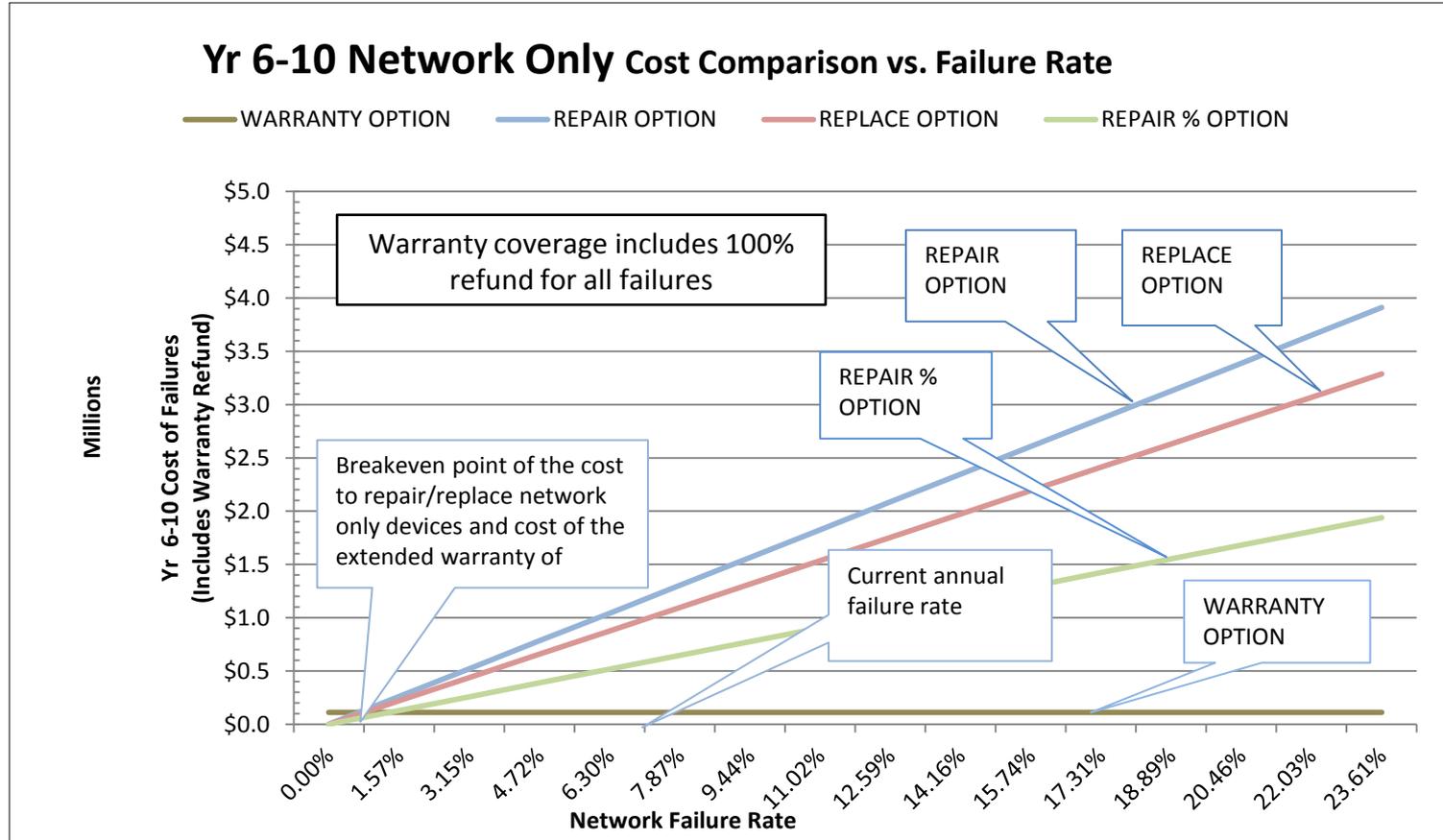
**AMO 100000.000 Supplemental Workpaper 1 -
Reconciliation TY2016 Zero-Based Labor Forecast to 2013 Adjusted Recorded**

	A	B	C	D	E	F	G
1		2013 (\$000)					
2		Labor	Non-Labor	Total	FTE		
3	2013 Adj Rec	\$ 7,556	\$ 579	\$ 8,134	94.8		
4	TY 2016 Forecast	\$ 8,090	\$ 681	\$ 8,771	100.4		
5	Incr/(Decr) from 2013 to 2016	\$ 535	\$ 102	\$ 637	5.8		
6							
7	As shown in the Prepared Direct Testimony of Mr. Brad Baugh Ex. SDGE-14 Table 6	TY 2016 Impact					
8	Smart Meter Extended Warranty		\$22	\$22			
9	Testing Hardware/Firmware Releases (reference cell D22)	\$100		\$100	1.0		
10	Process Improvements – duplicate field visits (reference cell D23)	(\$64)		(\$64)	(0.5)		
11	Process Improvements – coaching/training to improve performance (reference cell D24)	(\$185)		(\$185)	(2.0)		
12	Process Improvements – redistributing workload (reference cell D25)	(\$195)		(\$195)	(2.0)		
13	Meter Reading (reference cell D26)	\$117		\$117	1.8		
14	Resumption of Field Compliance and Other Maintenance Work (reference: sum of cells D27 through D29)	\$862		\$862	8.5		
15	Non-Labor Adjustment		(\$79)	(\$79)			
16	Capital Project Impacts – SMOC-EM Capital Project #13031 labor savings (reference cell D30)	(\$100)		(\$100)	(1.0)		
17	Capital Project Impacts – SMOC-EM Capital Project #13031 annual software maintenance and service fees		\$159	\$159			
18	Total TY2016 Impact	\$535	\$102	\$637	5.8		
19							
20		2013 (\$000)			FTEs		
21	Zero Base Labor Forecast Adjustments as shown in AMO 100000.000 Workpapers	TY 2016 Labor Forecast	2013 Adj. Recorded Labor	Change	TY 2016 FTE Forecast	2013 Adj. Recorded FTE	Change
22	Principal Engineer to develop and manage repeatable process to test hardware and firmware releases. Sr Engineer AD3 \$100k	\$100	\$0	\$100	1.0	-	1.0
23	Process improvements reduce duplicate field visits - Overtime savings -.46 FTE Electric Meter Tester regular annual rate of \$92.5K @ time and a half.	(\$64)	\$0	(\$64)	(0.5)	-	(0.5)
24	Process improvements - coaching/training to improve performance. Reduction of 2 field FTEs.	(\$185)	\$0	(\$185)	(2.0)	-	(2.0)
25	Supporting management 55 FTEs @ average annual rate of \$83.06K.	\$4,568	\$4,763	(\$195)	55.0	57.0	(2.0)
26	Handling remaining manual meter reading after closure of Meter Reading Department. 3.27 FTEs @ annual rate of \$64k handling approximately 17,000 read/verify orders annually	\$209	\$92	\$117	3.3	1.6	1.8
27	Field employees handling meter maintenance/testing/compliance work orders (including field portion of apprentice) 35 FTEs @ average annual rate of \$81.8K handling approximately 23,000 O&M orders.	\$2,864	\$2,225	\$639	35.0	30.0	5.0
28	Apprentice Class 0.4 FTEs classroom portion @ average annual rate of \$66K.	\$26	\$24	\$2	0.4	0.4	-
29	Meter Shop including team lead 4.2 FTEs at average annual rate of \$69K.	\$290	\$69	\$221	4.2	0.8	3.5
30	SMOC - EM Project # 13031 benefit Reduction of 1 management FTE	(\$100)	\$0	(\$100)	(1.0)	-	(1.0)
31	Instrument Technicians 3 FTEs @ average annual rate of \$93K.	\$279	\$279	\$0	3.0	3.0	-
32	Supporting clerical & technical 2 FTES @ average annual rate of \$51.5k	\$103	\$103	\$0	2.0	2.0	-
33	Total	8,090	7,556	535	100.4	94.8	5.8

Smart Meter Extended Warranty Cost Comparisons, Network Device Only

AMO 100000.000 Supplemental Workpaper 2
Smart Meter Extended Warranty Pg. 1 of 2

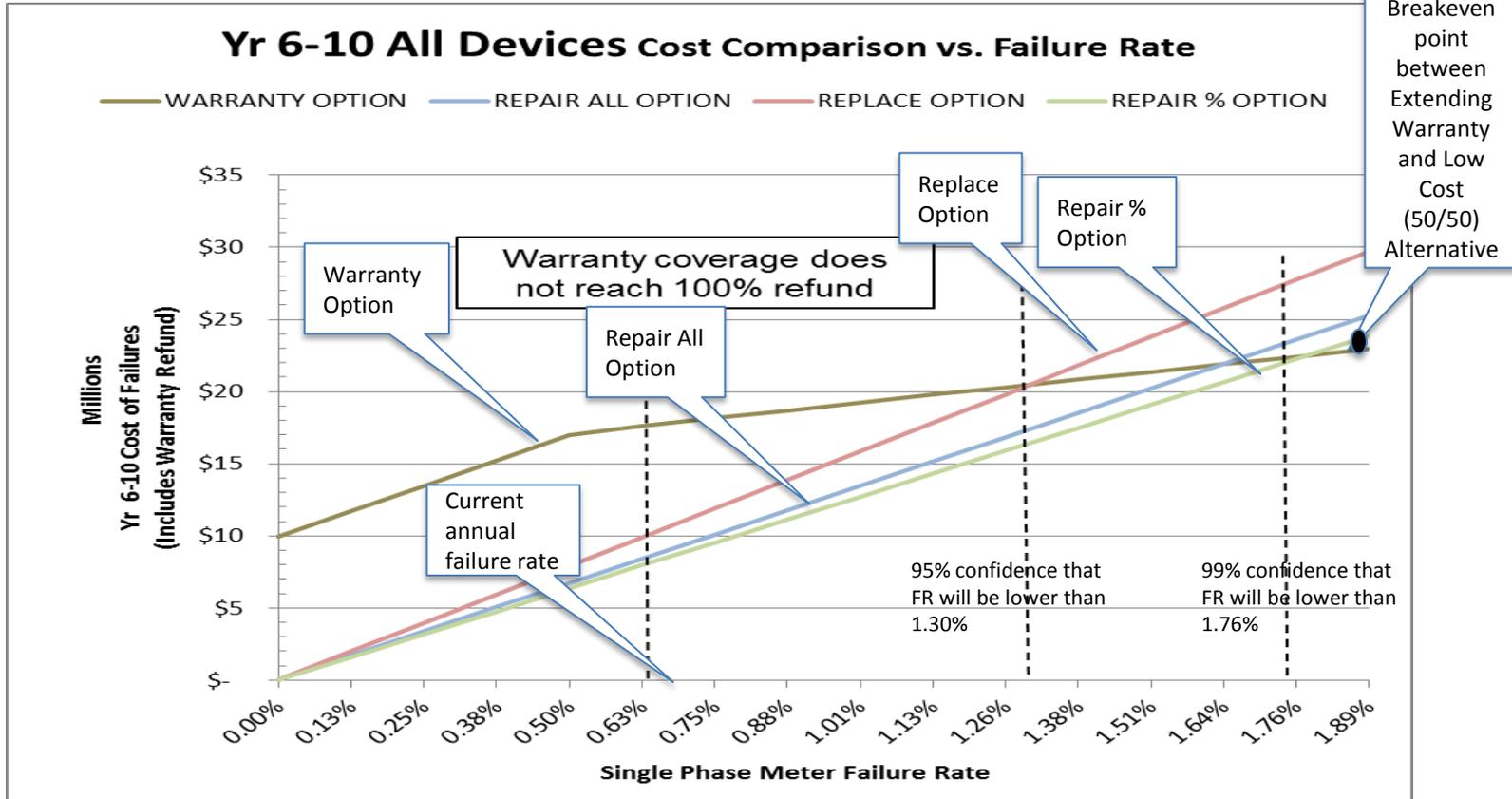
SDG&E/CS - INFORMATION & OFFICE OPERATIONS /E/xh No:SDG&E-14-WP-R/Witness: B. Baugh
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Using the current AFR of 7.87% there is 15% chance that the failure rate of network only devices would be less than 1.57% and that the cost of the Network only warranty would be greater than the cost to repair/replace those network only devices.

Smart Meter Extended Warranty Cost Comparisons, All Devices

AMO 100001.000 Supplemental Workpaper 2
Smart Meter Extended Warranty pg. 2 of 2



- Repair 50%/Replace 50 Option is the most cost effective
- Based on probability distribution there is 99% confidence that the failure rate will be lower than 1.76%

Beginning of Workpaper
100001.000 - Meter Reading

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 2. Meter Reading
 Workpaper: 100001.000 - Meter Reading

Activity Description:

2009-2011 historical Meter Reading activities were for the labor and non-labor costs associated with manual meter reading operations, support and administration. Remaining functions have been transitioned and are being forecasted in Advanced Metering Operations work paper group 100000.000.

Forecast Explanations:

Labor - Zero-Based

N/A

Non-Labor - Zero-Based

N/A

NSE - Zero-Based

N/A

Summary of Results:

		In 2013\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years	2009	2010	2011	2012	2013	2014	2015	2016		
Labor	9,051	6,907	4,162	0	0	0	0	0		
Non-Labor	626	150	89	0	0	0	0	0		
NSE	0	0	0	0	0	0	0	0		
Total	9,677	7,057	4,251	0	0	0	0	0		
FTE	204.6	148.7	86.2	0.0	0.0	0.0	0.0	0.0		

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 2. Meter Reading
 Workpaper: 100001.000 - Meter Reading

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	0	0	0	0	0	0
Non-Labor	Zero-Based	0	0	0	0	0	0	0	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0	0	0
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Forecast Adjustment Details:

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

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
Witness: Bradley M. Baugh
Category: A. Customer Service Operations
Category-Sub: 2. Meter Reading
Workpaper: 100001.000 - Meter Reading

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	7,437	5,561	3,478	-2	45
Non-Labor	599	137	85	4	0
NSE	0	0	0	0	0
Total	8,036	5,699	3,564	3	45
FTE	178.6	126.5	73.9	0.1	0.8
Adjustments (Nominal \$) **					
Labor	-217	42	6	2	-45
Non-Labor	-33	1	0	-4	0
NSE	0	0	0	0	0
Total	-250	43	7	-3	-45
FTE	-3.3	0.3	0.1	-0.1	-0.8
Recorded-Adjusted (Nominal \$)					
Labor	7,220	5,603	3,485	0	0
Non-Labor	566	139	86	0	0
NSE	0	0	0	0	0
Total	7,786	5,741	3,570	0	0
FTE	175.3	126.8	74.0	0.0	0.0
Vacation & Sick (Nominal \$)					
Labor	1,115	893	513	0	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	1,115	893	513	0	0
FTE	29.3	22.0	12.1	0.0	0.0
Escalation to 2013\$					
Labor	716	412	164	0	0
Non-Labor	60	11	3	0	0
NSE	0	0	0	0	0
Total	776	423	167	0	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	9,051	6,907	4,162	0	0
Non-Labor	626	150	89	0	0
NSE	0	0	0	0	0
Total	9,677	7,057	4,251	0	0
FTE	204.6	148.8	86.1	0.0	0.0

* After company-wide exclusions of Non-GRC costs

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

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 2. Meter Reading
 Workpaper: 100001.000 - Meter Reading

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs					
Years	2009	2010	2011	2012	2013
Labor	-217	42	6	2	-45
Non-Labor	-33	1	0.154	-4	0
NSE	0	0	0	0	0
Total	-250	43	7	-3	-45
FTE	-3.3	0.3	0.1	-0.1	-0.8

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	-217	-33	0	-3.3	CCTR Transf	To 2100-3753.000	CSCHRAMM2013 1107093137303

Transfer of Meter Access labor and non-labor expense from cost center 2100-3549 in workgroup 1FC001.000, to cost center 2100-3753 in work group 1FC004.000 to align historical costs with the workgroup in which the activity will be forecasted

2009 Total	-217	-33	0	-3.3			
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2010	42	1	0	0.3	CCTR Transf	From 2200-2359.000	TP4DJS20131121 151948150
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Transfer costs associated with SDG&E AMO Manager into the correct SDG&E cost center.

2010 Total	42	1	0	0.3			
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2011	6	0.154	0	0.1	CCTR Transf	From 2200-2359.000	TP4DJS20131121 152242403
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Two sided adjustment for SDG&E AMO Manager to the the correct SDG&E cost center.

2011 Total	6	0.154	0	0.1			
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2012	2	-4	0	-0.1	1-Sided Adj	N/A	CSCHRAMM2014 0418143400657
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One sided adjustment to move costs to work paper group 100000 AMO where function will be forecasted.

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 2. Meter Reading
 Workpaper: 100001.000 - Meter Reading

<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 Total	2	-4	0	-0.1			
2013	-31	0	0	-0.6	CCTR Transf	To 2100-3792.000	CSCHRAMM2014 0211165529660
Transfer labor and FTE associated with Relief District Crew Dispatcher from cost center 2100-0648 in work group 100001 Meter Reading to cost center 2100-3792 in work group 1ED011 Electric Distribution to align function to where activity resides.							
2013	-8	0	0	-0.2	CCTR Transf	To 2100-0190.000	CSCHRAMM2014 0211170446100
Transfer labor and FTE associated with Environmental Op. Assistant from cost center 2100-0648 in work group 100001 Meter Reading to cost center 2100-0190 in work group 1EV000 Environmental to align function to where activity resides.							
2013	-6	0	0	0.0	1-Sided Adj	N/A	CSCHRAMM2014 0418143230140
One sided adjustment to move costs to work group 100000 AMO where function will be forecasted.							
2013 Total	-45	0	0	-0.8			

Note: Totals may include rounding differences.

Beginning of Workpaper
100002.000 - Billing

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 3. Billing
 Workpaper: 100002.000 - Billing

Activity Description:

Customer billing operations expenses cover the cost of calculating customer bills, maintaining accurate customer account information, issuing special bills that require manual calculations, resolving billing exceptions, addressing customer bill inquiries, and ensuring bills are prepared in accordance with applicable tariffs, statutes, customer contracts and other agreements.

Forecast Explanations:

Labor - Base YR Rec

A base year forecast method was used because the business has changed significantly due to Smart Meter deployment and is now in a new post-deployment era. Starting in 2012, positions were filled with higher level employees to handle the additional complexities of interval data billed accounts, as forecasted in the Smart Meter business case. Furthermore, 2013 non-labor costs are more reflective of the costs needed to support increasingly complex billing activities. Therefore, the base year provides a reasonable starting point for future expenditures.

Non-Labor - Base YR Rec

See above.

NSE - Base YR Rec

N/A

Summary of Results:

		In 2013\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2009	2010	2011	2012	2013	2014	2015	2016	
Labor		4,322	4,236	4,036	4,687	4,768	4,828	5,032	5,508	
Non-Labor		231	374	328	316	305	308	316	331	
NSE		0	0	0	0	0	0	0	0	
Total		4,553	4,610	4,365	5,003	5,073	5,136	5,348	5,839	
FTE		65.2	66.5	63.7	71.4	69.8	70.8	73.8	79.8	

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 3. Billing
 Workpaper: 100002.000 - Billing

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	4,768	4,768	4,768	60	264	740	4,828	5,032	5,508
Non-Labor	Base YR Rec	305	305	305	3	11	26	308	316	331
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
Total		5,073	5,073	5,073	63	275	766	5,136	5,348	5,839
FTE	Base YR Rec	69.8	69.8	69.8	1.0	4.0	10.0	70.8	73.8	79.8

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	60	3	0	63	1.0	1-Sided Adj

Net Energy Metering: 1 FTE (Associate Billing Analyst) at \$60.4K salary plus \$3K in related non-labor to support the growth of Net Energy Metering and the continued complexities and incremental options of the NEM rates. See Billing 100002.000 Supplemental Workpaper 1 - Net Energy Metering Forecast for additional detail. (Reference cells I19, I20, I21 and I16)

2014 Total	60	3	0	63	1.0	
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2015	181	8	0	189	3.0	1-Sided Adj
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Net Energy Metering: 3 FTEs (Associate Billing Analyst) at \$60.3 salary each plus \$8k in related non-labor to support the growth of Net Energy Metering and the continued complexities and incremental options of the NEM rates. See Billing 100002.000 Supplemental Workpaper 1 - Net Energy Metering Forecast for additional detail. (Reference cells J19, J20, J21 and J16)

2015	83	3	0	86	1.0	1-Sided Adj
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Increased Complexity of Activities: 1 FTE (Project Advisor) at \$83K salary plus \$3K in related non-labor to train all frontline Billing employees on specialized billing processes and to assist with quality assurance to maintain accurate and timely billing. See Billing 100002.000 Supplemental Workpaper 3 -Interval Billing and Training Forecast for additional detail. (Reference cells F14, F15, F16, and F11)

2015 Total	264	11	0	275	4.0	
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2016	241	10	0	251	4.0	1-Sided Adj
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Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 3. Billing
 Workpaper: 100002.000 - Billing

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adi Type</u>
<p>Net Energy Metering: 4 FTEs (Associate Billing Analyst) at \$60.3K salary each plus \$10K in related non-labor to support the growth of Net Energy Metering and the continued complexities and incremental options of the NEM rates. See Billing 100002.000 Supplemental Workpaper 1 - Net Energy Metering Forecast for additional detail. (Reference cells K19, K20, K21, and K16)</p>						
2016	83	3	0	86	1.0	1-Sided Adj
<p>Increased Complexity of Activities: 1 FTE (Project Advisor) at \$83K salary each plus \$3K in related non-labor to train all frontline Billing employees on specialized billing processes and to assist with quality assurance to maintain accurate and timely billing. See Billing 100002.000 Supplemental Workpaper 3 -Interval Billing and Training Forecast for additional detail. (Reference cells G14, G15, G16, and G11)</p>						
2016	251	8	0	259	3.0	1-Sided Adj
<p>New Rate Options and Programs: 3 FTEs (Business Systems Analyst II) at \$83.7K salary each plus \$8K in related non-labor to support customer participation in the new time varying rate options adopted by CPUC Decision 12-12-004 in SDG&E's Dynamic Pricing Application 10-07-009. The analysts will be primarily responsible for technical support and rate configuration for SDG&E's online Energy Management Tool.</p>						
2016	146	5	0	151	2.0	1-Sided Adj
<p>New Rate Options and Programs: 2 FTEs (Billing Analyst) at \$73K salary each plus \$5K in related non-labor to support customer participation in the new time varying rate options adopted by CPUC Decision 12-12-004 in SDG&E's Dynamic Pricing Application 10-07-009. The analysts will be primarily responsible for rate changes, exception processing and escalated customer inquiries. See Billing 100002.000 Supplemental Workpaper 2 - SPP Rate Change Exception Forecast for additional detail. (Reference cells E14, E15, E16, and E12)</p>						
2016	-54	-3	0	-57	-1.0	1-Sided Adj
<p>Capital Project Impacts - Off But Registering Capital Project #14005 labor savings: Reduction of 1 FTE (Customer Accounts Associate) resulting from the implementation of the Off But Registering Billing (OBR) Enhancement capital project #14005. The project will alleviate the manual work involved in the existing OBR process. <\$54K> salary plus <\$3K> in related non-labor.</p>						
2016	73	3	0	76	1.0	1-Sided Adj
<p>Capital Project Impacts - Centralized Calculation Engine Capital Project #14013 labor costs: 1 FTE (Business Systems Analyst I) at \$73K salary plus \$3K in related non-labor due to the implementation of the Centralized Calculation Engine capital project #14013. The additional resource will support the configuration and maintenance of the Centralized Calculation Engine which will be required any time prices change or new rates are introduced.</p>						

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
Witness: Bradley M. Baugh
Category: A. Customer Service Operations
Category-Sub: 3. Billing
Workpaper: 100002.000 - Billing

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adi Type</u>
2016 Total	740	26	0	766	10.0	

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
Witness: Bradley M. Baugh
Category: A. Customer Service Operations
Category-Sub: 3. Billing
Workpaper: 100002.000 - Billing

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	3,497	3,487	3,426	4,141	4,218
Non-Labor	209	346	316	311	305
NSE	0	0	0	0	0
Total	3,707	3,832	3,742	4,453	4,523
FTE	56.6	57.4	55.5	63.1	61.5
Adjustments (Nominal \$) **					
Labor	-50	-50	-46	-134	-102
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	-50	-50	-46	-134	-102
FTE	-0.8	-0.8	-0.8	-1.6	-2.1
Recorded-Adjusted (Nominal \$)					
Labor	3,447	3,437	3,380	4,007	4,115
Non-Labor	209	346	316	311	305
NSE	0	0	0	0	0
Total	3,657	3,782	3,696	4,318	4,421
FTE	55.8	56.6	54.7	61.5	59.4
Vacation & Sick (Nominal \$)					
Labor	532	547	498	581	653
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	532	547	498	581	653
FTE	9.3	9.8	9.0	9.9	10.4
Escalation to 2013\$					
Labor	342	252	159	99	0
Non-Labor	22	28	12	5	0
NSE	0	0	0	0	0
Total	364	280	171	104	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	4,322	4,236	4,036	4,687	4,768
Non-Labor	231	374	328	316	305
NSE	0	0	0	0	0
Total	4,553	4,610	4,365	5,003	5,073
FTE	65.1	66.4	63.7	71.4	69.8

* 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.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 3. Billing
 Workpaper: 100002.000 - Billing

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs					
Years	2009	2010	2011	2012	2013
Labor	-50	-50	-46	-134	-102
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	-50	-50	-46	-134	-102
FTE	-0.8	-0.8	-0.8	-1.6	-2.1

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	-50	0	0	-0.8	CCTR Transf	To 2100-0244.000	CSCHRAMM2013 1104133441967

Transfer labor costs associated with Billing Analyst role that moved from cost center 2100-0008 in work group 100002 (BILLING) to cost center 2100-0244 in work group 1EP003 (SDG&E ELECTRIC & GAS PROCUREMENT) in order to align historical costs with current organization structure.

2009 Total	-50	0	0	-0.8			
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2010	-50	0	0	-0.8	CCTR Transf	To 2100-0244.000	CSCHRAMM2013 1104133610520
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Transfer labor costs associated with Billing Analyst role that moved from cost center 2100-0008 in work group 100002 (BILLING) to cost center 2100-0244 in work group 1EP003 (SDG&E ELECTRIC & GAS PROCUREMENT) in order to align historical costs with current organization structure.

2010 Total	-50	0	0	-0.8			
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2011	-46	0	0	-0.8	CCTR Transf	To 2100-0244.000	CSCHRAMM2013 1104133713100
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Transfer labor costs associated with Billing Analyst role that moved from cost center 2100-0008 in work group 100002 (BILLING) to cost center 2100-0244 in work group 1EP003 (SDG&E ELECTRIC & GAS PROCUREMENT) in order to align historical costs with current organization structure.

2011 Total	-46	0	0	-0.8			
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Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 3. Billing
 Workpaper: 100002.000 - Billing

<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	-53	0	0	-0.8	CCTR Transf	To 2100-0244.000	CSCHRAMM2013 1104133807363
<p>Transfer labor costs associated with Billing Analyst role that moved from cost center 2100-0008 in work group 100002 (Billing) to cost center 2100-0244 in work group 1EP003 (SDG&E ELECTRIC & GAS PROCUREMENT) in order to align historical costs with current organization structure.</p>							
2012	-81	0	0	-0.8	CCTR Transf	To 2100-3490.000	CSCHRAMM2013 1104134137793
<p>Transfer labor costs associated with role that will be part of Credit & Collections from cost center 2100-3480 in work group 100002 (BILLING) to cost center 2100-3490 in work group 100003 (CREDIT & COLLECTIONS) in order to align historical costs with current organization structure.</p>							
2012 Total	-134	0	0	-1.6			
2013	-5	0	0	-0.9	1-Sided Adj	N/A	CSCHRAMM2014 0204171113437
<p>Exclusion for Dynamic Pricing Refundable IO s per filing in Application 10-07-009 (IO 7049031 - DPP PMO O&M)</p>							
2013	-26	0	0	-0.5	1-Sided Adj	N/A	CSCHRAMM2014 0204171201477
<p>Exclusion for Dynamic Pricing Refundable IO s per filing in Application 10-07-009 (IO 7067226 - Billing Support)</p>							
2013	-71	0	0	-0.7	CCTR Transf	To 2100-3490.000	CSCHRAMM2014 0204172222757
<p>Transfer labor costs associated with role that will be part of Credit & Collections from cost center 2100-3480 in work group 100002 (BILLING) to cost center 2100-3490 in work group 100003 (CREDIT COLLECTIONS) in order to align historical costs with current organization structure.</p>							
2013 Total	-102	0	0	-2.1			

Note: Totals may include rounding differences.

Supplemental Workpapers for Workpaper 100002.000

Billing 10002.000 Supplemental Workpaper 1 - Net Energy Metering Forecast

	A	B	C	D	E	F	G	H	I	J	K
1	Year End Totals	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
2	Active NEM Accounts	4,640	5,524	7,926	11,721	15,726	20,987	31,916	44,700	62,600	87,600
3	Percent Growth		19%	43%	48%	34%	33%	52%	40%	40%	40%
4	Average Number of New Customer Per Month		74	200	316	334	438	911	1,065	1,492	2,083
5											
6	Required NEM Tasks										
7	- New Setups						2.0	3.0	4.0	5.0	6.0
8	- Monthly Exception Handling and Maintenance						2.0	3.0	4.0	6.0	8.0
9	Total FTE Requirement						4.0	6.0	8.0	11.0	14.0
10											
11	FTE Reduction From NEM Enhancement Project							0.0	(1.0)	(2.0)	(4.0)
12											
13	FTE Requirement After NEM Enhancement Project							6.0	7.0	9.0	10.0
14											
15	Proposed TY2016 GRC Incremental Increase										
16	(Required to support continued growth rate of 40%)							FTE	1.0	3.0	4.0
17											
18	Forecast Adjustment Assumptions										
19	Associate Billing Analyst (SA2) = Labor \$60,250							Labor	\$60,250	\$180,750	\$241,000
20	Associate Billing Analyst (SA2) = Non-Labor \$2,500							Non-Labor	\$2,500	\$7,500	\$10,000
21								Total	\$62,750	\$188,250	\$251,000
22											
23	Recent Upward Pressures										
24	AB920 - Excess Generation Credits										
25	NEM Combined Technology										
26											
27	Future Upward Pressures										
28	NEM Aggregation										

Billing 100002.000 Supplemental Workpaper 2 - SPP Rate Change Exception Forecast*

	A	B	C	D	E
1	Year End Totals	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>
2	Overall Billing Exceptions	295,276	297,195	300,108	303,709
3	Total Active Accounts	17,277,157	17,389,459	17,559,876	17,770,595
4	Exception Rate	1.71%	1.71%	1.71%	1.71%
5					
6	SPP Active Meters (as of 1/1/16)				106,574
7					
8	Forecasted SPP Exception Rate				3%
9					
10	SPP Exceptions Per Month				3,197
11					
12	FTE Requirement				2.0
13					
14	Billing Analyst = Labor \$73,000				\$146,000
15	Billing Analyst = Non-Labor \$2,500				\$5,000
16				Total	\$151,000
17					
18	*This forecast is based on the projected volume of overall billing exceptions shown above. Due to the				
19	additional complexity, it's reasonable to expect the new SPP rate change process to have a higher				
20	exception rate, in the range of 3-5%, which would require two additional FTEs in 2016.				
21					

Billing 100002.000 Supplemental Workpaper 3 - Interval Billing and Training Forecast

	A	B	C	D	E	F	G
1	Year End Totals	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>
2	Active Interval Billed Meters	8,874	25,843	34,755	64,486	150,629	220,557
3	Percent Growth		191%	34%	86%	134%	46%
4							
5	Required Training Tasks						
6	- Develop Training Material		0.5	0.6	0.8	1.0	1.1
7	- Deliver Training		0.3	0.4	0.5	0.6	0.7
8	- Job Aids and Bulletins		0.2	0.2	0.3	0.4	0.5
9	Total FTE Requirement		1.0	1.2	1.6	2.0	2.3
10							
11	Proposed TY2016 GRC Incremental Increase			FTE	0.0	1.0	1.0
12							
13	Forecast Adjustment Assumptions						
14	Project Advisor (AD1) = Labor \$83,000			Labor	\$0	\$83,000	\$83,000
15	Project Advisor (AD1) = Non-Labor \$3,000			Non-Labor	\$0	\$3,000	\$3,000
16				Total	\$0	\$86,000	\$86,000
17							
18	Recent Upward Pressures						
19	Smart Meter Mass Deployment						
20	Growth of NEM and Electric Vehicle TOU Rates						
21							
22	Future Upward Pressures						
23	Continued Growth of NEM and Electric Vehicle TOU Rates						
24	Optional Small Commercial SPP Rates Starting May 2014						
25	Optional Residential SPP Rates Starting January 2015						
26	Mandatory Small Commercial SPP Rates Starting November 2015						
27							

Beginning of Workpaper
100003.000 - Credit & Collections

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 4. Credit & Collections
 Workpaper: 100003.000 - Credit & Collections

Activity Description:

The Credit and Collections expenses cover the costs to collect final bill payment from customers, perform skip tracing (research to locate a customer after a service termination and the final bill reaches delinquent status), investigate energy theft, bankruptcy processing, activities supporting remittance processing, and developing policy and procedures to reduce bad debt exposure.

Forecast Explanations:

Labor - Base YR Rec

A base year forecast method was used because in 2012 MRP resources transitioned from Smart Meter to Credit and Collections with 2013 representing the first full year of post-Smart Meter deployment. Furthermore, in 2013, new final bill collection and collection agency management software systems were implemented. The latter facilitates the placement of debts owed to SDG&E with collection agencies in a tiered process (primary, secondary, tertiary placements) as well as provides the ability to produce collection agency scorecards that facilitate the efficacy and quality of collection agency efforts. Therefore, the base year provides a reasonable starting point for future expenditures.

Non-Labor - Base YR Rec

See above.

NSE - Base YR Rec

N/A

Summary of Results:

		In 2013\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
		2009	2010	2011	2012	2013	2014	2015	2016	
Years										
Labor	2,024	2,066	2,086	2,123	2,228	2,117	2,095	2,257		
Non-Labor	553	516	537	447	481	539	565	592		
NSE	0	0	0	0	0	0	0	0		
Total	2,577	2,582	2,624	2,570	2,708	2,655	2,659	2,848		
FTE	32.6	33.5	34.2	35.2	36.1	34.1	33.8	36.3		

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 4. Credit & Collections
 Workpaper: 100003.000 - Credit & Collections

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	2,228	2,228	2,228	-111	-133	29	2,117	2,095	2,257
Non-Labor	Base YR Rec	481	481	481	58	84	111	539	565	592
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
Total		2,708	2,708	2,708	-53	-49	140	2,655	2,659	2,848
FTE	Base YR Rec	36.1	36.1	36.1	-2.0	-2.3	0.2	34.1	33.8	36.3

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	0	-68	0	-68	0.0	1-Sided Adj

Collection Systems - reduction for old collection systems licensing costs (\$32K) and new collection system one-time implementation set-up/configuration costs (\$36K): Non-labor reduction of <\$68> comprised of a <\$36K> reduction for one-time implementation costs paid to vendor in 2013 for setting up and configuring new collection agency management system. And a <\$32K> reduction for licensing costs for SDG&E's old collection system.

2014	0	33	0	33	0.0	1-Sided Adj
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Collection Systems - new collection systems software licensing costs: Software licensing costs in the amount of \$33K for new collection agency management system.

2014	0	60	0	60	0.0	1-Sided Adj
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Collection Systems -collection agency commission payments: \$60K non-labor increase in commission payments paid to collection agencies resulting from the implementation of new collection agency management software enabling more payments to be collected.

2014	0	10	0	10	0.0	1-Sided Adj
------	---	----	---	----	-----	-------------

Collection Systems - annual software training and vendor assisted system changes/upgrades: Non-labor cost in the amount of \$10K for annual software training and vendor assisted system changes and upgrades.

2014	14	3	0	17	0.3	1-Sided Adj
------	----	---	---	----	-----	-------------

Customer Growth: Labor in increase of \$14K and non-labor increase of \$3K due to increased credit activities resulting from customer growth. See Credit & Collections 100003.000 Supplemental Workpaper 1 - Customer Growth Calculation for additional detail. (Reference cells C6 and C10)

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 4. Credit & Collections
 Workpaper: 100003.000 - Credit & Collections

<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	14	0	14	0.0	1-Sided Adj
Other - final bill notices: Non-labor cost in the amount of \$14K to mail notices to customers who have final bills that have not been paid.						
2014	-40	0	0	-40	-0.8	1-Sided Adj
Process Improvements - account reconciliation processes: .8 FTE reduction for continuous improvement (Payment Services)						
2014	-85	0	0	-85	-1.5	1-Sided Adj
Process Improvements - collection of delinquent commercial: A reduction of 1.5 FTEs for continuous improvement (Account Management).						
2014	0	6	0	6	0.0	1-Sided Adj
Other - 48 hour disconnection notice for vulnerable customers: 1st Call 6-lanuage letter inserts. (aka 48 Hour Notice)						
2014 Total	-111	58	0	-53	-2.0	
2015	0	-68	0	-68	0.0	1-Sided Adj
Collection Systems - reduction for old collection systems licensing costs (\$32K) and new collection system one-time implementation set-up/configuration costs (\$36K): Non-labor reduction of <\$68> comprised of a <\$36K> reduction for one-time implementation costs paid to vendor in 2013 for setting up and configuring new collection agency management system. And a <\$32K> reduction for licensing costs for SDG&E's old collection system.						
2015	0	33	0	33	0.0	1-Sided Adj
Collection Systems - new collection systems software licensing costs: Software licensing costs in the amount of \$33K for new collection agency management system.						
2015	0	75	0	75	0.0	1-Sided Adj
Collection Systems - collection agency commission payments: \$75K non-labor increase in commission payments paid to collection agencies resulting from the implementation of new collection agency management software enabling more payments to be collected.						
2015	0	10	0	10	0.0	1-Sided Adj
Collection Systems - annual software training and vendor assisted system changes/upgrades: Non-labor cost in the amount of \$10K for annual software training and vendor assisted system changes and upgrades.						

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 4. Credit & Collections
 Workpaper: 100003.000 - Credit & Collections

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adi Type</u>
2015	33	8	0	41	0.7	1-Sided Adj
Customer Growth: Labor in increase of \$33K and non-labor increase of \$8K due to increased credit activities resulting from customer growth. See Credit & Collections 100003.000 Supplemental Workpaper 1 - Customer Growth Calculation for additional detail. (Reference cells D6 and D10)						
2015	0	14	0	14	0.0	1-Sided Adj
Other - final bill notices: Non-labor cost in the amount of \$14K to mail notices to customers who have final bills that have not been paid.						
2015	-53	0	0	-53	-1.0	1-Sided Adj
Process Improvements - account reconciliation processes: 1 FTE reduction for continuous improvement (Payment Services)						
2015	-113	0	0	-113	-2.0	1-Sided Adj
Process Improvements - collection of delinquent commercial: A reduction of 2 FTEs for continuous improvement (Account Management).						
2015	0	12	0	12	0.0	1-Sided Adj
Other - 48 hour disconnection notice for vulnerable customers: 1st Call 6-lanuage letter inserts. (aka 48 Hour Notice)						
2015 Total	-133	84	0	-49	-2.3	
2016	133	5	0	138	2.0	1-Sided Adj
Meter Revenue Protection: 2 FTEs (Meter Revenue Protection Specialists) at \$66.5K annual salary each to perform investigations of energy diversion, meter tampering, and other sources of fraud or energy theft.						
2016	0	-68	0	-68	0.0	1-Sided Adj
Collection Systems - reduction for old collection systems licensing costs (\$32K) and new collection system one-time implementation set-up/configuration costs (\$36K): Non-labor reduction of <\$68> comprised of a <\$36K> reduction for one-time implementation costs paid to vendor in 2013 for setting up and configuring new collection agency management system. And a <\$32K> reduction for licensing costs for SDG&E's old collection system.						
2016	0	33	0	33	0.0	1-Sided Adj

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
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Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 4. Credit & Collections
 Workpaper: 100003.000 - Credit & Collections

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj Type</u>
Collection Systems - new collections systems software licensing costs: Software licensing costs in the amount of \$33K for new collection agency management system.						
2016	0	90	0	90	0.0	1-Sided Adj
Collection Systems - collection agency commission payments: \$90K non-labor increase in commission payments paid to collection agencies resulting from the implementation of new collection agency management software enabling more payments to be collected. See Credit & Collections 100003.000 Supplemental Workpaper 2 - Collection Agency Commissions for additional detail. (Reference cell C24)						
2016	0	10	0	10	0.0	1-Sided Adj
Collection Systems - annual software training and vendor assisted system changes/upgrades: Non-labor cost in the amount of \$10K for annual software training and vendor assisted system changes and upgrades.						
2016	62	15	0	77	1.2	1-Sided Adj
Customer Growth: Labor in increase of \$62K and non-labor increase of \$15K due to increased credit activities resulting from customer growth. See Credit & Collections 100003.000 Supplemental Workpaper 1 - Customer Growth Calculation for additional detail. (Reference cells E6 and E10)						
2016	0	14	0	14	0.0	1-Sided Adj
Other - final bill notices: Non-labor cost in the amount of \$14K to mail notices to customers who have final bills that have not been paid.						
2016	-53	0	0	-53	-1.0	1-Sided Adj
Process Improvements - account reconciliation processes: 1 FTE reduction for continuous improvement (Payment Services)						
2016	-113	0	0	-113	-2.0	1-Sided Adj
Process Improvements - collection of delinquent commercial: A reduction of 2 FTEs for continuous improvement (Account Management).						
2016	0	12	0	12	0.0	1-Sided Adj
Other - 48 hour disconnection notice for vulnerable customers: 1st Call 6-lanuage letter inserts. (aka 48 Hour Notice)						
2016 Total	29	111	0	140	0.2	

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
Witness: Bradley M. Baugh
Category: A. Customer Service Operations
Category-Sub: 4. Credit & Collections
Workpaper: 100003.000 - Credit & Collections

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	1,615	1,676	1,747	1,734	1,852
Non-Labor	467	445	486	410	460
NSE	0	0	0	0	0
Total	2,082	2,121	2,233	2,144	2,312
FTE	27.9	28.6	29.4	29.5	30.1
Adjustments (Nominal \$) **					
Labor	0	0	0	81	71
Non-Labor	33	32	32	29	21
NSE	0	0	0	0	0
Total	33	32	32	111	91
FTE	0.0	0.0	0.0	0.8	0.7
Recorded-Adjusted (Nominal \$)					
Labor	1,615	1,676	1,747	1,815	1,923
Non-Labor	500	478	517	440	481
NSE	0	0	0	0	0
Total	2,115	2,154	2,264	2,255	2,403
FTE	27.9	28.6	29.4	30.3	30.8
Vacation & Sick (Nominal \$)					
Labor	249	267	257	263	305
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	249	267	257	263	305
FTE	4.7	4.9	4.8	4.9	5.4
Escalation to 2013\$					
Labor	160	123	82	45	0
Non-Labor	53	39	20	7	0
NSE	0	0	0	0	0
Total	213	162	102	52	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	2,024	2,066	2,086	2,123	2,228
Non-Labor	553	516	537	447	481
NSE	0	0	0	0	0
Total	2,577	2,582	2,624	2,570	2,708
FTE	32.6	33.5	34.2	35.2	36.2

* 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.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 4. Credit & Collections
 Workpaper: 100003.000 - Credit & Collections

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs					
Years	2009	2010	2011	2012	2013
Labor	0	0	0	81	71
Non-Labor	33	32	32	29	21
NSE	0	0	0	0	0
Total	33	32	32	111	91
FTE	0.0	0.0	0.0	0.8	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	0	29	0	0.0	CCTR Transf	From 2100-0395.001	CSCHRAMM2013 1115140536160
Transfer postage costs associated with red letter notices from cost center 2100-0395.001 in sub work group 100004.001 Remittance Processing Postage to cost center 2100-3490 in work group 100003.000 Credit & Collections to align costs where activity resides.							
2009	0	3	0	0.0	CCTR Transf	From 2100-0395.000	CSCHRAMM2013 1115141053830
Transfer non-labor costs associated with red letter notices from cost center 2100-0395 in work group 100004.000 Remittance Processing to cost center 2100-3490 in work group 100003.000 Credit & Collections to align costs where activity resides.							
2009 Total	0	33	0	0.0			

2010	0	29	0	0.0	CCTR Transf	From 2100-0395.001	CSCHRAMM2013 1115140637743
Transfer postage costs associated with red letter notices from cost center 2100-0395.001 in sub work group 100004.001 Remittance Processing Postage to cost center 2100-3490 in work group 100003.000 Credit & Collections to align costs where activity resides.							
2010	0	3	0	0.0	CCTR Transf	From 2100-0395.000	CSCHRAMM2013 1115141126417
Transfer non-labor costs associated with red letter notices from cost center 2100-0395 in work group 100004.000 Remittance Processing to cost center 2100-3490 in work group 100003.000 Credit & Collections to align costs where activity resides.							
2010 Total	0	32	0	0.0			

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
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Non-Shared Service Workpapers

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 4. Credit & Collections
 Workpaper: 100003.000 - Credit & Collections

<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	3	0	0.0	CCTR Transf	From 2100-0395.000	CSCHRAMM2013 1115141206667
Transfer non-labor costs associated with red letter notices from cost center 2100-0395 in work group 100004.000 Remittance Processing to cost center 2100-3490 in work group 100003.000 Credit & Collections to align costs where activity resides.							
2011	0	29	0	0.0	CCTR Transf	From 2100-0395.001	CSCHRAMM2013 1118142040540
Transfer postage costs associated with red letter notices from cost center 2100-0395.001 in sub work group 100004.001 Remittance Processing Postage to cost center 2100-3490 in work group 100003.000 Credit & Collections to align costs where activity resides.							
2011 Total	0	32	0	0.0			

2012	81	0	0	0.8	CCTR Transf	From 2100-3480.000	CSCHRAMM2013 1104134137793
Transfer labor costs associated with role that will be part of Credit & Collections from cost center 2100-3480 in work group 100002 (BILLING) to cost center 2100-3490 in work group 100003 (CREDIT & COLLECTIONS) in order to align historical costs with current organization structure.							
2012	0	27	0	0.0	CCTR Transf	From 2100-0395.001	CSCHRAMM2013 1115140745967
Transfer postage costs associated with red letter notices from cost center 2100-0395.001 in sub work group 100004.001 Remittance Processing Postage to cost center 2100-3490 in work group 100003.000 Credit & Collections to align costs where activity resides.							
2012	0	3	0	0.0	CCTR Transf	From 2100-0395.000	CSCHRAMM2013 1115141304787
Transfer non-labor costs associated with red letter notices from cost center 2100-0395 in work group 100004.000 Remittance Processing to cost center 2100-3490 in work group 100003.000 Credit & Collections to align costs where activity resides.							
2012 Total	81	29	0	0.8			

2013	71	0	0	0.7	CCTR Transf	From 2100-3480.000	CSCHRAMM2014 0204172222757
Transfer labor costs associated with role that will be part of Credit & Collections from cost center 2100-3480 in work group 100002 (BILLING) to cost center 2100-3490 in work group 100003 (CREDIT COLLECTIONS) in order to align historical costs with current organization structure.							

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
 2016 GRC - REVISED
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Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 4. Credit & Collections
 Workpaper: 100003.000 - Credit & Collections

<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	2	0	0.0	CCTR Transf	From 2100-0395.000	CSCHRAMM2014 0210180643157
Transfer non-labor costs associated with red letter notices from cost center 2100-0395 in work group 100004.000 Remittance Processing to cost center 2100-3490 in work group 100003.000 Credit & Collections to align costs where activity resides.							
2013	0	19	0	0.0	CCTR Transf	From 2100-0395.001	CSCHRAMM2014 0210180830550
Transfer postage costs associated with red letter notices from cost center 2100-0395.001 in sub work group 100004.001 Remittance Processing Postage to cost center 2100-3490 in work group 100003.000 Credit & Collections to align costs where activity resides.							
2013 Total	71	21	0	0.7			

Note: Totals may include rounding differences.

Supplemental Workpapers for Workpaper 100003.000

Credit Collections 100003.000 Supplemental Workpaper 1 - Customer Growth Calculation

	A	B	C	D	E	F
1		Base Year 2013	2014	2015	2016	
2	Meter Growth Rate [1]	0%	0.64%	1.61%	2.81%	
3						
4		Thousands of 2013 Dollars (\$000)				
5	Adjusted Labor [2]	\$ 2,228	\$ 2,103	\$ 2,062	\$ 2,195	
6	Labor forecast adjustments due to growth		\$ 14	\$ 33	\$ 62	
7	Adjusted Labor Forecast		\$ 2,117	\$ 2,095	\$ 2,257	
8						
9	Adjusted Non-Labor [2]	\$ 481	\$ 536	\$ 557	\$ 577	
10	Non-Labor forecast adjustments due to growth		\$ 3	\$ 8	\$ 15	
11	Adjusted Non-Labor Forecast		\$ 539	\$ 565	\$ 592	
12						
13	[1] Represents Electric meter growth as a representation of customer growth, then weighted for Residential and Small C&I customer classes					
14						
15	[2] Adjusted Labor and Non-Labor represents Base Year amounts adjusted for incremental increases and decreases requested in GRC prior					
16	to the addition of Customer Growth amounts.					
17						

Credit Collections 100003.000 Supplemental Workpaper 2 - Collection Agency Commissions

	A	B	C	D	E	F	G	H
1	Test Year Forecast							
2	Beginning in 2014, SDG&E began referral of new agency business to three primary agencies, recalled accounts greater than 9 mos. old from							
3	the existing primary agency and referred them to two secondary agencies, and recalled all accounts with a secondary agency and referred them to a							
4	tertiary agency. Therefore SDG&E's TY2016 forecast is based upon:							
5								
6	1) Agency capacity expanded in TY2016 due increase in number of collection agency.							
7	2) Agency results should increase as a result of:							
8	A) Creating appropriate incentive-based allocation of account referrals (i.e., collection results, minimal complaints/compliance with FDCPA, etc.)							
9	to agencies at all stages of collection process							
10	B) Adding secondary and tertiary account placements during the three year collection cycle							
11								
12	Historical Collection Results							
13								
14	Four Year Average (2009 - 2012)¹	\$1,052,469	b)					
15	Estimated Increase in Collection Results based upon							
16	above	20%						
17	Estimated Test Year Collections Increase	\$210,494	a)					
18	Estimated Collection Agency Recoveries 2016		\$1,262,963	a) + b)				
19	Rounded		\$1,250,000					
20	Estimated 2016 Commission Percentage²		21%					
21	Estimated 2016 Test Year Commissions		\$262,500					
22	Base Year 2013 Commission		\$172,118					
23	Agency Commission Increase Request in TY2016		\$90,382					
24	Rounded		\$90,000					
25								
26	¹ 2008 data not available and 2013 data not representative due to conversion of collection systems							
27	² Estimated based upon mix of recoveries in first three mos. of 2014							

Beginning of Workpaper
100004.000 - Remittance Processing

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 5. Remittance Processing
 Workpaper: 100004.000 - Remittance Processing

Activity Description:

The Remittance Processing workgroup expenses cover the costs of paper, envelopes and vendor fees to deliver customer bills.

Forecast Explanations:

Labor - Base YR Rec

N/A

Non-Labor - Base YR Rec

A base year forecast method was used because this workpaper group includes non-labor costs of software maintenance for My Account, vendor's fees for electronic bill delivery to customers' home banking websites, and billing forms and envelopes for paper bills and notices. These costs are driven by the volumes of bills, notices and payments which are impacted by customer growth as well as customer choice of billing and payment channels. Therefore, the base year provides a reasonable starting point for future expenditures.

NSE - Base YR Rec

See above.

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		1,025	877	886	815	887	882	876	865	
NSE		0	0	0	0	0	3	7	10	
Total		1,025	877	886	815	887	885	883	875	
FTE		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 5. Remittance Processing
 Workpaper: 100004.000 - Remittance Processing

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	0	0	0	0	0	0	0	0	0
Non-Labor	Base YR Rec	887	887	887	-5	-11	-22	882	876	865
NSE	Base YR Rec	0	0	0	3	7	10	3	7	10
Total		887	887	887	-2	-4	-12	885	883	875
FTE	Base YR Rec	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	0	0	3	3	0.0	1-Sided Adj

Software Licensing Costs: \$3K increase for licensing fees for SDG&E s My Account electronic bill payment and presentment software. See Remittance Processing 100004.000 Supplemental Workpaper 2 - Forecast Adjustment Calculations for additional detail. (Reference cell M16)

2014	0	5	0	5	0.0	1-Sided Adj
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Increase of E-Bills Delivered: \$5K increase in costs to vendor to deliver electronic bills to customers' home banking web sites. See Remittance Processing 100004.000 Supplemental Workpaper 2 - Forecast Adjustment Calculations for additional detail. (Reference cell M5)

2014	0	-16	0	-16	0.0	1-Sided Adj
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Forms & Envelopes - reduction due to suppressed and electronic bills: Reduction to costs for forms and envelopes due to suppressed bills (customers have indicated they no longer need a paper bill) and electronic bills in the amount of <\$16K>. See Remittance Processing 100004.000 Supplemental Workpaper 2 - Forecast Adjustment Calculations for additional detail. (Reference cell M11)

2014	0	6	0	6	0.0	1-Sided Adj
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Forms & Envelopes - first call collection notices: Forms and envelopes required for 1st call notices (aka 48-Hour Notices). See Remittance Processing 100004.000 Supplemental Workpaper 3 - 1st Call Notices Forecast Adjustment Calculations for additional detail. (Reference Cell F27)

2014 Total	0	-5	3	-2	0.0	
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Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 5. Remittance Processing
 Workpaper: 100004.000 - Remittance Processing

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adi Type</u>
2015	0	0	7	7	0.0	1-Sided Adj
Software Licensing Costs: \$7K increase for licensing fees for SDG&E s My Account electronic bill payment and presentment software. See Remittance Processing 100004.000 Supplemental Workpaper 2 - Forecast Adjustment Calculations for additional detail. (Reference cell N16)						
2015	0	12	0	12	0.0	1-Sided Adj
Incease of E-Bills Delivered: \$12K increase in costs to vendor to deliver electronic bills to customers' home banking web sites. See Remittance Processing 100004.000 Supplemental Workpaper 2 - Forecast Adjustment Calculations for additional detail. (Reference cell N5)						
2015	0	-34	0	-34	0.0	1-Sided Adj
Forms & Envelopes - reduction due to suppressed and electronic bills: Reduction to costs for forms and envelopes due to suppressed bills (customers have indicated they no longer need a paper bill) and electronic bills in the amount of <\$34K>. See Remittance Processing 100004.000 Supplemental Workpaper 2 - Forecast Adjustment Calculations for additional detail. (Reference cell N11)						
2015	0	11	0	11	0.0	1-Sided Adj
Forms & Envelopes - first call collection notices: Forms and envelopes required for 1st call notices (aka 48-Hour Notices). See Remittance Processing 100004.000 Supplemental Workpaper 3 - 1st Call Notices Forecast Adjustment Calculations for additional detail. (Reference cell G27)						
2015 Total	0	-11	7	-4	0.0	
2016	0	0	10	10	0.0	1-Sided Adj
Software Licensing Costs: \$10K increase for licensing fees for SDG&E's My Account electronic bill payment and presentment software. See Remittance Processing 100004.000 Supplemental Workpaper 2 - Forecast Adjustment Calculations for additional detail. (Reference cell O16)						
2016	0	19	0	19	0.0	1-Sided Adj
Increase of E-Bills Delivered: \$19K increase in costs to vendor to deliver electronic bills to customers' home banking web sites. See Remittance Processing 100004.000 Supplemental Workpaper 2 - Forecast Adjustment Calculations for additional detail. (Reference cell O5)						
2016	0	-52	0	-52	0.0	1-Sided Adj

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 5. Remittance Processing
 Workpaper: 100004.000 - Remittance Processing

<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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Forms & Envelopes - reduction due to suppressed and electronic bills: Reduction to costs for forms and envelopes due to suppressed bills (customers have indicated they no longer need a paper bill) and electronic bills in the amount of <\$52K>. See Remittance Processing 100004.000 Supplemental Workpaper 2 - Forecast Adjustment Calculations for additional detail. (Reference cell O11)

2016	0	11	0	11	0.0	1-Sided Adj
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Forms & Envelopes - first call collection notices: Forms and envelopes required for 1st call notices (aka 48-Hour Notices). See Remittance Processing 100004.000 Supplemental Workpaper 3 - 1st Call Notices Forecast Adjustment Calculations for additional detail. (Reference cell H27)

2016 Total	0	-22	10	-12	0.0	
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Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
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 Category-Sub: 5. Remittance Processing
 Workpaper: 100004.000 - Remittance Processing

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	930	815	855	805	889
NSE	0	0	0	0	0
Total	930	815	855	805	889
FTE	0.0	0.0	0.0	0.0	0.0
Adjustments (Nominal \$) **					
Labor	0	0	0	0	0
Non-Labor	-3	-3	-3	-3	-2
NSE	0	0	0	0	0
Total	-3	-3	-3	-3	-2
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Nominal \$)					
Labor	0	0	0	0	0
Non-Labor	927	811	852	802	887
NSE	0	0	0	0	0
Total	927	811	852	802	887
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	98	66	33	13	0
NSE	0	0	0	0	0
Total	98	66	33	13	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	0	0	0	0	0
Non-Labor	1,025	877	886	815	887
NSE	0	0	0	0	0
Total	1,025	877	886	815	887
FTE	0.0	0.0	0.0	0.0	0.0

* After company-wide exclusions of Non-GRC costs

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

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 5. Remittance Processing
 Workpaper: 100004.000 - Remittance Processing

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs					
Years	2009	2010	2011	2012	2013
Labor	0	0	0	0	0
Non-Labor	-3	-3	-3	-3	-2
NSE	0	0	0	0	0
Total	-3	-3	-3	-3	-2
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	0	-3	0	0.0	CCTR Transf	To 2100-3490.000	CSCHRAMM2013 1115141053830

Transfer non-labor costs associated with red letter notices from cost center 2100-0395 in work group 100004.000 Remittance Processing to cost center 2100-3490 in work group 100003.000 Credit & Collections to align costs where activity resides.

2009 Total **0** **-3** **0** **0.0**

2010	0	-3	0	0.0	CCTR Transf	To 2100-3490.000	CSCHRAMM2013 1115141126417
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Transfer non-labor costs associated with red letter notices from cost center 2100-0395 in work group 100004.000 Remittance Processing to cost center 2100-3490 in work group 100003.000 Credit & Collections to align costs where activity resides.

2010 Total **0** **-3** **0** **0.0**

2011	0	-3	0	0.0	CCTR Transf	To 2100-3490.000	CSCHRAMM2013 1115141206667
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Transfer non-labor costs associated with red letter notices from cost center 2100-0395 in work group 100004.000 Remittance Processing to cost center 2100-3490 in work group 100003.000 Credit & Collections to align costs where activity resides.

2011 Total **0** **-3** **0** **0.0**

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
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 Non-Shared Service Workpapers

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 5. Remittance Processing
 Workpaper: 100004.000 - Remittance Processing

<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	-3	0	0.0	CCTR Transf	To 2100-3490.000	CSCHRAMM2013 1115141304787
Transfer non-labor costs associated with red letter notices from cost center 2100-0395 in work group 100004.000 Remittance Processing to cost center 2100-3490 in work group 100003.000 Credit & Collections to align costs where activity resides.							
2012 Total	0	-3	0	0.0			

2013	0	-2	0	0.0	CCTR Transf	To 2100-3490.000	CSCHRAMM2014 0210180643157
Transfer non-labor costs associated with red letter notices from cost center 2100-0395 in work group 100004.000 Remittance Processing to cost center 2100-3490 in work group 100003.000 Credit & Collections to align costs where activity resides.							
2013 Total	0	-2	0	0.0			

Note: Totals may include rounding differences.

Supplemental Workpapers for Workpaper 100004.000

Remittance Processing 100004.000 Supplemental Workpaper 1 - Historical and Forecast Data

	A	B	C	D	E	F	G	H	I	J	N	O	P
1			Actual	Actual	Actual	Actual	Actual	Forecast	Forecast	Forecast			
2			2009	2010	2011	2012	2013	2014	2015	2016			
3								[A]	[A]	[A]			
4		Total active / forecast electric	1,375,326	1,382,924	1,390,704	1,397,678	1,405,218	1,414,346	1,428,204	1,445,387			
5													
6		Volume											
7		Bills & Notices						[C] = (A x B)	[C] = (A x B)	[C] = (A x B)			
8		RICOH - Grouped Bills	417,088	584,174	857,470	842,264	839,427	848,608	856,922	867,232			
9		MPK- Paper Bills	11,833,261	11,430,810	11,092,421	10,643,744	10,079,842	9,582,194	9,111,942	8,650,641			
10		My Account Suppressed Bills	2,972,042	3,433,257	3,957,104	4,448,597	4,955,778	5,487,662	6,041,303	6,619,872			
11		Consolidator e-Bills Delivered	506,248	624,251	705,512	771,581	872,905	898,110	928,333	961,182			
12		Other Notices	650,133	658,128	598,405	583,026	550,400	509,165	471,307	433,616			
13		Total	16,378,772	16,730,620	17,210,912	17,289,212	17,298,352	17,325,739	17,409,807	17,532,543			
14													
15		Bills & Notices Per Meter						[B]	[B]	[B]			
16		RICOH - Grouped Bills	0.30	0.42	0.62	0.60	0.60	0.60	0.60	0.60			
17		MPK- Paper Bills	8.60	8.27	7.98	7.62	7.17	6.78	6.38	5.99			
18		My Account Suppressed Bills	2.16	2.48	2.85	3.18	3.53	3.88	4.23	4.58			
19		Consolidator e-Bills Delivered	0.37	0.45	0.51	0.55	0.62	0.64	0.65	0.67			
20		Notices	0.47	0.48	0.43	0.42	0.39	0.36	0.33	0.30			
21		Total	11.9	12.10	12.39	12.37	12.31	12.25	12.19	12.13			
22													
23		All Bills Per Meter	11.43	11.62	11.96	11.95	11.92	11.89	11.86	11.83			
24		Notices Per Meter	0.47	0.48	0.43	0.42	0.39	0.36	0.33	0.30			
25													
26		Postal Rate											
27		Bills & Notices						[D]	[D]	[D]			
28		RICOH - Grouped Bills			Average Rate of flat mails	\$0.662	\$0.711	\$0.711	\$0.711	\$0.711			
29		MPK- Paper Bills			Blended rate of regular mails	\$0.364	\$0.385	\$0.385	\$0.385	\$0.385			
30		My Account Suppressed Bills			Blended rate of regular mails	\$0.359	\$0.381	\$0.381	\$0.381	\$0.381			
31		Consolidator e-Bills Delivered			Blended rate of regular mails	\$0.359	\$0.381	\$0.381	\$0.381	\$0.381			
32		Notices			Blended rate of regular mails	\$0.383	\$0.404	\$0.404	\$0.404	\$0.404			
33		Postage											
34		Bills & Notices						[E] = (C x D)	[E] = (C x D)	[E] = (C x D)			
35		RICOH - Grouped Bills	\$321,460	\$437,501	\$526,309	\$534,015	\$555,756	\$603,416	\$609,328	\$616,659			
36		MPK- Paper Bills	\$4,029,466	\$3,965,331	\$4,061,332	\$3,791,483	\$3,664,918	\$3,687,121	\$3,506,174	\$3,328,670			
37		My Account Suppressed Bills	\$984,486	\$1,150,141	\$1,339,895	\$1,555,000	\$1,781,106	\$2,088,603	\$2,299,319	\$2,519,522			
38		Consolidator e-Bills Delivered	\$167,694	\$209,124	\$238,890	\$269,705	\$313,722	\$341,821	\$353,323	\$365,826			
39		Notices	\$229,471	\$234,849	\$216,225	\$216,898	\$210,606	\$205,622	\$190,333	\$175,112			
40		Total	\$5,732,577	\$5,996,946	\$6,382,651	\$6,367,101	\$6,526,108	\$6,926,583	\$6,958,477	\$7,005,789			

Note: Columns A through J are based on the same set of historical and forecast volume data as Postage 100004.001 Supplemental Workpaper 1

REDACTED

Remittance Processing 100004.000 Supplemental Workpaper 2 - Forecast Adjustment Calculations

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1		Volume					Unit cost					Year over Year (Inc/Dec)			
2	Vendor's fees for Consolidator e-Bills Delivered (1)	2013	2014	2015	2016		2013	2014	2015	2016			2014	2015	2016
3	Volume = Bills & Notices: Consolidator e-Bills Delivered (2)											Volume			
4	Costs = Volume x Unit Cost	\$183,310	\$188,603	\$194,950	\$201,848							Costs	\$5,293	\$6,347	\$6,898
5												To the base Year 2013	\$5,293	\$11,640	\$18,538
6															
7		Volume					Unit Cost Savings					Year over Year (Inc/Dec)			
8	Forms & envelopes Savings	2013	2014	2015	2016		2013	2014	2015	2016			2014	2015	2016
9	Volume = Bills & Notices: My Account Suppressed Bills + Consolidator e-Bills Delivered (3)	5,828,683	6,385,772	6,969,636	7,581,054							Volume	557,089	583,864	611,418
10	Savings = Volume x Unit Cost Savings	(\$172,529)	(\$189,019)	(\$206,301)	(\$224,399)		(\$0.0296)	(\$0.0296)	(\$0.0296)	(\$0.0296)		Savings	(\$16,490)	(\$17,282)	(\$18,098)
11												To the base Year 2013	(\$16,490)	(\$33,772)	(\$51,870)
12															
13		Cost										Year over Year (Inc/Dec)			
14	Software (4)	2013	2014	2015	2016								2014	2015	2016
15	Contractual increase of 3% annually	\$109,776	113,070	116,462	119,956							Costs	\$3,293	\$3,392	\$3,494
16												To the base Year 2013	\$3,293	\$6,685	\$10,179
17															
18	(1) - The Fiserv fees are the cost to deliver e-bills to customers' home banking web sites, not email addresses.														
19															
20	(3) - Volume actual / forecast see Supplemental Workpaper 1 Historical and Forecast Data attached to Remittance Processing Workpaper 100004.000 - Reference cells: Sum(G10:G11); Sum(H10:H11); Sum(I10:I11); Sum(J10:J11)														
21	(4) - Oracle is for annual maintenance of the e-docs My Account internal SDG&E EBPP payment platform.														

Remittance Processing 100004.000 Supplemental Workpaper 3 - 1st Call Notices Forecast Adjustment Calculations

	A	B	C	D	E	F	G	H
1	• Effective 05/28/2014 - 1st Call Notices (aka: 48-Hour Notices) will be mailed from Monterey Park Operations;							
2	• Postage will reflect 3-digit rate ¹ - plus, fees for meter - and, certificate of mailing;							
3	• Printing will be on a single sheet - and, duplex.							
4	• Assumptions:							
5	1 Postage							
6		1a.	Postal rate	\$0.4060		3-digit		
7		1b.	Meter fees	\$0.0150				
8		1c.	Certificate of mailing	\$0.0044				
9		1d.	Postage Rate	\$0.4254				
10	2 Printing/Forms/Envelopes							
11		2a.	Form	\$0.0105		letter18		
12		2b.	Envelope	\$0.0109		mailer		
13		2c.	Printing Rate	\$0.0214				
14	3 Volume							
15		3a.	Avg. Monthly Volume	41,800				
16	• Forecasts							
17			Year			2014	2015	2016
18			Number of months			7.142847	12	12
19	Workpaper (WP)			Volume = 3a x # of mos.	[A]	298,571	501,600	501,600
20	1. WP 100004.001			Postage				
21	Postage			1d. Postal rate	[B]	\$0.4254	\$0.4254	\$0.4254
22						[A] x [B] = [C]		
23				Postage forecast	[C]	\$127,012	\$213,381	\$213,381
24	2. WP 100004.000			Forms				
25	Remittance Processing			2c. Printing Rate	[D]	\$0.0214	\$0.0214	\$0.0214
26						[A] x [D] = [E]		
27				Printing Forecast	[E]	\$6,389	\$10,734	\$10,734
28								
29	¹ The 3-digit rate is the 2 nd lowest discounted rate for business mails – for which the 48hr Notices qualify because of its daily limited volume.							

Beginning of Workpaper
100004.001 - Postage

San Diego Gas & Electric Company
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Non-Shared Service Workpapers

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 6. Postage
 Workpaper: 100004.001 - Postage

Activity Description:

The Postage workgroup covers the postage costs to deliver customer bills.

Forecast Explanations:

Labor - Base YR Rec

N/A

Non-Labor - Base YR Rec

N/A

NSE - Base YR Rec

A base year forecast method was used because expenses depend on postage rates which are determined by the USPS and the volume of paper bills and notices which are impacted by customer growth as well as electronic bill adoption levels. Therefore, the base year provides a reasonable starting point for future expenditures.

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		0	0	0	0	0	0	0	0	
NSE		5,059	5,009	4,979	4,597	4,431	4,624	4,519	4,333	
Total		5,059	5,009	4,979	4,597	4,431	4,624	4,519	4,333	
FTE		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
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Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 6. Postage
 Workpaper: 100004.001 - Postage

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	0	0	0	0	0	0	0	0	0
Non-Labor	Base YR Rec	0	0	0	0	0	0	0	0	0
NSE	Base YR Rec	4,431	4,431	4,431	193	88	-98	4,624	4,519	4,333
Total		4,431	4,431	4,431	193	88	-98	4,624	4,519	4,333
FTE	Base YR Rec	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	0	0	13	13	0.0	1-Sided Adj
<p>Postage for Meter Growth: Postage increase in the amount of \$13K due to meter growth. See Postage 100004.001 Supplemental Workpaper 2 - Postage Forecast Calculations for additional detail. (Reference cell H11)</p>						
2014	0	0	388	388	0.0	1-Sided Adj
<p>Increased postage Costs - rate increase: Additional costs in the amount of \$388K due to postage rate increase. See Postage 100004.001 Supplemental Workpaper 2 - Postage Forecast Calculations for additional detail. (Reference cell L11)</p>						
2014	0	0	-202	-202	0.0	1-Sided Adj
<p>Postage Savings - paperless: Offsetting reduction in the amount of <\$202K> to postage costs for electronic billing due to meter growth. See Postage 100004.001 Supplemental Workpaper 2 - Postage Forecast Calculations for additional detail. (Reference cell H18)</p>						
2014	0	0	-133	-133	0.0	1-Sided Adj
<p>Postage Savings - rate increase: Offsetting reduction in the amount of <\$133K> to postage costs for electronic billing due to rate increase. See Postage 100004.001 Supplemental Workpaper 2 - Postage Forecast Calculations for additional detail. (Reference cell L18)</p>						
2014	0	0	127	127	0.0	1-Sided Adj
<p>Increased Postage Costs - first call collection notices: Postage required for 1st call notices (48-Hour Notices) See Postage 100004.001 Supplemental Workpaper 3 - 1st Call Notices Forecast Adjustment Calculations for additional detail. (Reference cell F23)</p>						
2014 Total	0	0	193	193	0.0	

Note: Totals may include rounding differences.

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 Category: A. Customer Service Operations
 Category-Sub: 6. Postage
 Workpaper: 100004.001 - Postage

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adi Type</u>
2015	0	0	46	46	0.0	1-Sided Adj

Posage for Meter Growth: Postage increase in the amount of \$46K due to meter growth. See Postage 100004.001 Supplemental Workpaper 2 - Postage Forecast Calculations for additional detail. (Reference cell I11)

2015	0	0	-414	-414	0.0	1-Sided Adj
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Postage Savings - paperless: Offsetting reduction in the amount of <\$414K> to postage costs for electronic billing due to meter growth. See Postage 100004.001 Supplemental Workpaper 2 - Postage Forecast Calculations for additional detail. (Reference cell I18)

2015	0	0	-144	-144	0.0	1-Sided Adj
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Postage Savings - rate increase: Offsetting reduction in the amount of <\$144K> to postage costs for electronic billing due to rate increase. See Postage 100004.001 Supplemental Workpaper 2 - Postage Forecast Calculations for additional detail. (Reference cell M18)

2015	0	0	387	387	0.0	1-Sided Adj
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Increased postage Costs - rate increase: Additional costs in the amount of \$387K due to postage rate increase. See Postage 100004.001 Supplemental Workpaper 2 - Postage Forecast Calculations for additional detail. (Reference cell M11)

2015	0	0	213	213	0.0	1-Sided Adj
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Increased Postage Costs - first call collection notices: Postage required for 1st call notices (48-Hour Notices) See Postage 100004.001 Supplemental Workpaper 3 - 1st Call Notices Forecast Adjustment Calculations for additional detail. (Reference cell G23)

2015 Total	0	0	88	88	0.0	
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2016	0	0	93	93	0.0	1-Sided Adj
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Posage for Meter Growth: Postage increase in the amount of \$93K due to meter growth. See Postage 100004.001 Supplemental Workpaper 2 - Postage Forecast Calculations for additional detail. (Reference cell J11)

2016	0	0	386	386	0.0	1-Sided Adj
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Increased postage Costs - rate increase: Additional costs in the amount of \$386K due to postage rate increase. See Postage 100004.001 Supplemental Workpaper 2 - Postage Forecast Calculations for additional detail. (Reference cell N11)

Note: Totals may include rounding differences.

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 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 6. Postage
 Workpaper: 100004.001 - Postage

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adi Type</u>
2016	0	0	-636	-636	0.0	1-Sided Adj

Postage Savings - paperless: Offsetting reduction in the amount of <\$636K> to postage costs for electronic billing due to meter growth. See Postage 100004.001 Supplemental Workpaper 2 - Postage Forecast Calculations for additional detail. (Reference cell J18)

2016	0	0	-154	-154	0.0	1-Sided Adj
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Postage Savings - rate increase: Offsetting reduction in the amount of <\$154K> to postage costs for electronic billing due to rate increase. See Postage 100004.001 Supplemental Workpaper 2 - Postage Forecast Calculations for additional detail. (Reference cell N18)

2016	0	0	213	213	0.0	1-Sided Adj
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Increased Postage Costs - first call collection notices: Postage required for 1st call notices (48-Hour Notices) See Postage 100004.001 Supplemental Workpaper 3 - 1st Call Notices Forecast Adjustment Calculations for additional detail. (Reference cell H23)

2016 Total	0	0	-98	-98	0.0	
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Note: Totals may include rounding differences.

San Diego Gas & Electric Company
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Witness: Bradley M. Baugh
Category: A. Customer Service Operations
Category-Sub: 6. Postage
Workpaper: 100004.001 - Postage

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	5,561	4,970	4,722	2,565	4,467
NSE	0	0	0	0	0
Total	5,561	4,970	4,722	2,565	4,467
FTE	0.0	0.0	0.0	0.0	0.0
Adjustments (Nominal \$) **					
Labor	0	0	0	0	0
Non-Labor	-5,561	-4,970	-4,722	-2,565	-4,467
NSE	4,580	4,638	4,804	4,542	4,431
Total	-981	-333	82	1,977	-35
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Nominal \$)					
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	0
NSE	4,580	4,638	4,804	4,542	4,431
Total	4,580	4,638	4,804	4,542	4,431
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	0	0	0	0	0
NSE	479	371	175	55	0
Total	479	371	175	55	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	0
NSE	5,059	5,009	4,979	4,597	4,431
Total	5,059	5,009	4,979	4,597	4,431
FTE	0.0	0.0	0.0	0.0	0.0

* After company-wide exclusions of Non-GRC costs

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

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 6. Postage
 Workpaper: 100004.001 - Postage

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs					
Years	2009	2010	2011	2012	2013
Labor	0	0	0	0	0
Non-Labor	-5,561	-4,970	-4,722	-2,565	-4,467
NSE	4,580	4,638	4,804	4,542	4,431
Total	-981	-333	82	1,977	-35
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	0	-29	0	0.0	CCTR Transf	To 2100-3490.000	CSCHRAMM2013 1115140536160
Transfer postage costs associated with red letter notices from cost center 2100-0395.001 in sub work group 100004.001 Remittance Processing Postage to cost center 2100-3490 in work group 100003.000 Credit & Collections to align costs where activity resides.							
2009	0	0	-951	0.0	1-Sided Adj	N/A	TPMTT20131030 145738853
To true-up postage expenses							
2009	0	-5,532	5,532	0.0	1-Sided Adj	N/A	TPMTT20131030 152101027
To move postage expenses to NSE							
2009 Total	0	-5,561	4,580	0.0			

2010	0	-29	0	0.0	CCTR Transf	To 2100-3490.000	CSCHRAMM2013 1115140637743
Transfer postage costs associated with red letter notices from cost center 2100-0395.001 in sub work group 100004.001 Remittance Processing Postage to cost center 2100-3490 in work group 100003.000 Credit & Collections to align costs where activity resides.							
2010	0	-4,941	4,941	0.0	1-Sided Adj	N/A	TPMTT20131030 153433930
To move postage expenses to NSE							
2010	0	0	-303	0.0	1-Sided Adj	N/A	TPMTT20131030 153935793
To true-up postage expenses							

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 6. Postage
 Workpaper: 100004.001 - Postage

<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 Total	0	-4,970	4,638	0.0			
2011	0	-29	0	0.0	CCTR Transf	To 2100-3490.000	CSCHRAMM2013 1118142040540
							Transfer postage costs associated with red letter notices from cost center 2100-0395.001 in sub work group 100004.001 Remittance Processing Postage to cost center 2100-3490 in work group 100003.000 Credit & Collections to align costs where activity resides.
2011	0	-4,693	4,693	0.0	1-Sided Adj	N/A	TSU20131030154 820780
							To move postage expenses to NSE
2011	0	0	111	0.0	1-Sided Adj	N/A	TSU20131030155 020057
							To true-up postage expenses
2011 Total	0	-4,722	4,804	0.0			
2012	0	-27	0	0.0	CCTR Transf	To 2100-3490.000	CSCHRAMM2013 1115140745967
							Transfer postage costs associated with red letter notices from cost center 2100-0395.001 in sub work group 100004.001 Remittance Processing Postage to cost center 2100-3490 in work group 100003.000 Credit & Collections to align costs where activity resides.
2012	0	-2,539	2,539	0.0	1-Sided Adj	N/A	TSU20131030155 226893
							To move postage expenses to NSE
2012	0	0	2,004	0.0	1-Sided Adj	N/A	TSU20131030155 323840
							To true-up postage expenses
2012 Total	0	-2,565	4,542	0.0			
2013	0	-19	0	0.0	CCTR Transf	To 2100-3490.000	CSCHRAMM2014 0210180830550
							Transfer postage costs associated with red letter notices from cost center 2100-0395.001 in sub work group 100004.001 Remittance Processing Postage to cost center 2100-3490 in work group 100003.000 Credit & Collections to align costs where activity resides.
2013	0	-4,448	4,448	0.0	1-Sided Adj	N/A	TPMTT20140206 202915687
							To move postage expenses to NSE

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
 2016 GRC - REVISED
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Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 6. Postage
 Workpaper: 100004.001 - Postage

<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	0	-17	0.0	1-Sided Adj	N/A	TPMTT20140206 203416130
To true-up postage expenses							
2013 Total	0	-4,467	4,431	0.0			

Note: Totals may include rounding differences.

Supplemental Workpapers for Workpaper 100004.001

Postage 100004.001 Supplemental Workpaper 1 - Historical and Forecast Data

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1			Actual	Actual	Actual	Actual	Actual	Forecast	Forecast	Forecast									
2			2009	2010	2011	2012	2013	2014	2015	2016									
3	Total active electric meters		1,375,326	1,382,924	1,390,704	1,397,678	1,405,218	1,414,346	1,428,204	1,445,387									
4	Volume		Bills & Notices Volume Forecast [Active Electric Meter Forecast X Bills & Notices Per Meter Forecast]							Bills & Notices Volume Forecast Change Year over Year				Note: Columns A through J are based on the same set of historical and forecast volume data as Remittance Processing 100004.000 Supplemental Workpaper 1					
5	Bills & Notices Volume		2009	2010	2011	2012	2013	2014	2015	2016	2014	2015	2016						
6		RICOH - Grouped Bills	417,088	584,174	857,470	842,264	839,427	848,608	856,922	867,232	9,181	8,314	10,310						
7		MPK - Paper Bills	11,833,261	11,430,810	11,092,421	10,643,744	10,079,842	9,582,194	9,111,942	8,650,641	(497,648)	(470,252)	(461,301)						
8		My Account Suppressed Bills	2,972,042	3,433,257	3,957,104	4,448,597	4,955,778	5,487,662	6,041,303	6,619,872	531,884	553,641	578,569						
9		Consolidator e-Bills Delivered	506,248	624,251	705,512	771,581	872,905	898,110	928,333	961,182	25,205	30,223	32,849						
10		Notices	650,133	658,128	598,405	583,026	550,400	509,165	471,307	433,616	(41,235)	(37,858)	(37,691)						
11		Total	16,378,772	16,730,620	17,210,912	17,289,212	17,298,352	17,325,739	17,409,807	17,532,543	27,387	84,068	122,736						
12	MPK Bills & Notices = [Sum of Rows 7 through 10]						16,458,925	16,477,131	16,552,885	16,665,311	18,206	75,754	112,426						
13	Combined Electronic Bills = [Sum Rows 8 and 9]						5,828,683	6,385,772	6,969,636	7,581,054	557,089	583,864	611,418						
14	Bills & Notices Per Meter Forecast [2013 Bills & Notices Per Meter + Bills & Notices Per Meter Change]							Bills & Notices Per Meter Change Year over Year [2013 -2012 Bills & Notices Per Meter change + Forecasted incr/dec]											
15	Bills & Notices Per Meter		2009	2010	2011	2012	2013	2014	2015	2016	2013	2014	2015	2016					
16		RICOH - Grouped Bills	0.30	0.42	0.62	0.60	0.60	0.60	0.60	0.60	0.00	0.000	0.000	0.000					
17		MPK - Paper Bills	8.60	8.27	7.98	7.62	7.17	6.78	6.38	5.99	-0.45	-0.395	-0.395	-0.395					
18		My Account Suppressed Bills	2.16	2.48	2.85	3.18	3.53	3.88	4.23	4.58	0.35	0.350	0.350	0.350					
19		Consolidator e-Bills Delivered	0.37	0.45	0.51	0.55	0.62	0.64	0.65	0.67	0.07	0.015	0.015	0.015					
20		Notices	0.47	0.48	0.43	0.42	0.39	0.36	0.33	0.30	-0.03	-0.030	-0.030	-0.030					
21		Total	11.9	12.10	12.39	12.37	12.31	12.25	12.19	12.13	-0.06	-0.06	-0.06	-0.06					
22	All Bills Per Meter		11.43	11.62	11.96	11.95	11.92	11.89	11.86	11.83									
23	Notices Per Meter		0.47	0.48	0.43	0.42	0.39	0.36	0.33	0.30									
24	Postal Rate							Postal Rate Forecast [2013 Postal Rate + 2014 Postal Rate Increase]			Postal Rate Increase Effective January 2014 No change in 2015 & 2016		2013 Blended Postal Rates						
25	Bills & Notices					2013	2014	2015	2016	2014	2015	2016	2014	2015	2016				
26		RICOH - Grouped Bills				Average Rate of flat mails	\$0.662	\$0.711	\$0.711	\$0.711	\$0.049	\$0.000	\$0.000	\$0.6621	\$0.6621	\$0.6621			[2013 Postage Expense Ricoh - Grouped Bills (G33) divided by 2013 Ricoh Group Bill Volume (G6)]
27		MPK - Paper Bills				Blended rate of regular mails	\$0.364	\$0.385	\$0.385	\$0.385	\$0.021	\$0.000	\$0.000	\$0.3630	\$0.3630	\$0.3630			MPK Bills & Notices Postage
28		My Account Suppressed Bills				Blended rate of regular mails	\$0.359	\$0.381	\$0.381	\$0.381	\$0.021	\$0.000	\$0.000	\$0.3630	\$0.3630	\$0.3630			[2013 MPK Bills & Notices Postage Expense (G39) / 2013 MPK Bills & Notices Volume (G12)]
29		Consolidator e-Bills Delivered				Blended rate of regular mails	\$0.359	\$0.381	\$0.381	\$0.381	\$0.021	\$0.000	\$0.000	\$0.3630	\$0.3630	\$0.3630			
30		Notices				Blended rate of regular mails	\$0.383	\$0.404	\$0.404	\$0.404	\$0.021	\$0.000	\$0.000	\$0.3630	\$0.3630	\$0.3630			
31	Postage							Postage Forecast [Active Electric Meters Forecast X Postal Rate Forecast]			Incremental Postage w Rate Increase Year over Year Change [2014 - 2013 = Change]			Impact Due to Growth Year over Year [Bills Per Meter Forecast Change X 2013 Blended Postal Rates]			Impact Due to Rate Increase Year over Year [Incremental Postage w Rate Increase - Impact Due to Growth]		
32	Bills & Notices		2009	2010	2011	2012	2013	2014	2015	2016	2014	2015	2016	2014	2015	2016	2014	2015	2016
33		RICOH - Grouped Bills	\$321,460	\$437,501	\$526,309	\$534,015	\$555,756	\$603,416	\$609,328	\$616,659	\$47,660	\$5,912	\$7,331	\$6,079	\$5,505	\$6,826	\$41,581	\$407	\$505
34		MPK - Paper Bills	\$4,029,466	\$3,965,331	\$4,061,332	\$3,791,483	\$3,664,918	\$3,687,121	\$3,506,174	\$3,328,670	\$22,203	(\$180,947)	(\$177,504)	(\$180,646)	(\$170,701)	(\$167,452)	\$202,849	(\$10,246)	(\$10,052)
35		My Account Suppressed Bills	\$984,486	\$1,150,141	\$1,339,895	\$1,555,000	\$1,781,106	\$2,088,603	\$2,299,319	\$2,519,522	\$307,497	\$210,716	\$220,203	\$193,074	\$200,972	\$210,021	\$114,423	\$9,744	\$10,182
36		Consolidator e-Bills Delivered	\$167,694	\$209,124	\$238,890	\$269,705	\$313,722	\$341,821	\$353,323	\$365,826	\$28,099	\$11,502	\$12,503	\$9,149	\$10,971	\$11,924	\$18,950	\$531	\$579
37		Notices	\$229,471	\$234,849	\$216,225	\$216,898	\$210,606	\$205,622	\$190,333	\$175,112	(\$4,984)	(\$15,289)	(\$15,221)	(\$14,968)	(\$13,742)	(\$13,682)	\$9,984	(\$1,547)	(\$1,539)
38		Total	\$5,732,577	\$5,996,946	\$6,382,651	\$6,367,101	\$6,526,108	\$6,926,583	\$6,958,477	\$7,005,789	\$400,475	\$31,894	\$47,312	\$12,688	\$33,005	\$47,637	\$387,787	(\$1,111)	(\$325)
39	MPK Bills & Notices Postage = [Sum of Rows 34 through 37]						\$5,970,352	\$6,323,167	\$6,349,149	\$6,389,130	\$352,815	\$25,982	\$39,981	\$6,609	\$27,500	\$40,811	\$346,206	(\$1,518)	(\$830)
40	Combined Electronic Bills Savings = [Sum of Rows 35 and 36] X -1										(\$335,596)	(\$222,218)	(\$232,706)	(\$202,223)	(\$211,943)	(\$221,945)	(\$133,373)	(\$10,275)	(\$10,761)
41	Total Postage																		
42	Postage RICOH - Grouped Bills, MPK Paper Bills, and Notices [Sum of Rows 33, 34 and 37]						\$4,431,280	\$4,496,159	\$4,305,835	\$4,120,441									
43	1st Call Notices (see Remittance Processing 100004.001 Supplemental Workpaper 3 - 1st Call Notices)							\$127,012	\$213,381	\$213,381									
44	Total Postage Request							\$4,623,171	\$4,519,216	\$4,333,822									

Postage 100004.001 Supplemental Workpaper 2 - Postage Forecast Calculations

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Summary¹													
2		Incremental Postage Required Year over Year				Break-down =>		Impact due to electric meter growth Year Over Year			Impact due to rate increase Year Over Year			
3		2014	2015	2016				2014	2015	2016	2014	2015	2016	
4						Volume ²		9,181	8,314	10,310	9,181	8,314	10,310	
5	RICOH - Grouped Bills	\$47,660	\$5,912	\$7,331		RICOH - Grouped Bills ³		\$6,079	\$5,505	\$6,826	\$41,581	\$407	\$505	
6						Volume ⁴		18,206	75,754	112,426	18,206	75,754	112,426	
7						MPK - Bills & Notices ⁵		\$6,609	\$27,500	\$40,811	\$346,206	-\$1,518	-\$830	
8	MPK - Bills & Notices	\$352,815	\$25,982	\$39,981		MPK - Bills & Notices ⁵		\$6,609	\$27,500	\$40,811	\$346,206	-\$1,518	-\$830	
9						Year-over-Year total		\$12,688	\$33,005	\$47,637	\$387,787	(\$1,111)	(\$325)	
10	Year-over-Year Total	\$400,475	\$31,894	\$47,312		Year-over-Year total		\$12,688	\$33,005	\$47,637	\$387,787	(\$1,111)	(\$325)	
11	To the Base Year 2013	\$400,475	\$432,369	\$479,681		To the base year of 2013		\$12,688	\$45,693	\$93,330	\$387,787	\$386,676	\$386,351	
12														
13														
14		Incremental Postage Savings Year Over Year				Break-down =>		Impact due to electric meter growth Year Over Year			Impact due to rate increase Year Over Year			
15		2014	2015	2016				2014	2015	2016	2014	2015	2016	
16						Volume ⁶		557,089	583,864	611,418	557,089	583,864	611,418	
17	Combined Electronic Bills Year-over Year	(\$335,596)	(\$222,218)	(\$232,706)		Combined Electronic Bills Year-over Year ⁷		(\$202,223)	(\$211,943)	(\$221,945)	(\$133,373)	(\$10,275)	(\$10,761)	
18	To the Base Year 2013	(\$335,596)	(\$557,814)	(\$790,520)		To the base year of 2013		(\$202,223)	(\$414,166)	(\$636,111)	(\$133,373)	(\$143,648)	(\$154,409)	
19														
20	¹ Does not include 1st Call Notices. See Postage 100004.001 Supplemental Workpaper 3 1st Call Notices Calculations for details. Reference cells F23, G23, H23													
21	² See Postage 100004.001 Supplemental Workpaper 1 - Historical and Forecast Data for detail. Reference cells: K6, L6, M6.													
22	³ See Postage 100004.001 Supplemental Workpaper 1 - Historical and Forecast Data for detail. Reference cells: N33, O33, P33, Q33, R33, S33													
23	⁴ See Postage 100004.001 Supplemental Workpaper 1 - Historical and Forecast Data for detail. Reference cells: K12, L12, M12.													
24	⁵ See Postage 100004.001 Supplemental Workpaper 1 - Historical and Forecast Data for detail. Reference cells: N39, O39, P39, Q39, R39, S39													
25	⁶ See Postage 100004.001 Supplemental Workpaper 1 - Historical and Forecast Data for detail. Reference cells: K13, L13, M13.													
26	⁷ See Postage 100004.001 Supplemental Workpaper 1 - Historical and Forecast Data for detail. Reference cells: N40, O40, P40, Q40, R40, S40													
27														

Postage 100004.001 Supplemental Workpaper 3 - 1st Call Notices Forecast Adjustment Calculations

	A	B	C	D	E	F	G	H
1	• Effective 05/28/2014 - 1st Call Notices (aka: 48-Hour Notices) will be mailed from Monterey Park Operations;							
2	• Postage will reflect 3-digit rate ¹ - plus, fees for meter - and, certificate of mailing;							
3	• Printing will be on a single sheet - and, duplex.							
4	• Assumptions:							
5	1 Postage							
6		1a.	Postal rate	\$0.4060		3-digit		
7		1b.	Meter fees	\$0.0150				
8		1c.	Certificate of mailing	\$0.0044				
9		1d.	Postage Rate	\$0.4254				
10	2 Printing/Forms/Envelopes							
11		2a.	Form	\$0.0105		letter18		
12		2b.	Envelope	\$0.0109		mailer		
13		2c.	Printing Rate	\$0.0214				
14	3 Volume							
15		3a.	Avg. Monthly Volume	41,800				
16	• Forecasts							
17			Year			2014	2015	2016
18			Number of months			7.142847	12	12
19	Workpaper (WP)			Volume = 3a x # of mos.	[A]	298,571	501,600	501,600
20	1. WP 100004.001			Postage				
21	Postage			1d. Postal rate	[B]	\$0.4254	\$0.4254	\$0.4254
22						[A] x [B] = [C]		
23				Postage forecast	[C]	\$127,012	\$213,381	\$213,381
24	2. WP 100004.000			Forms				
25	Remittance Processing			2c. Printing Rate	[D]	\$0.0214	\$0.0214	\$0.0214
26						[A] x [D] = [E]		
27				Printing Forecast	[E]	\$6,389	\$10,734	\$10,734
28								
29	¹ The 3-digit rate is the 2 nd lowest discounted rate for business mails – for which the 48hr Notices qualify because of its daily limited volume.							

Postage 100004.001 Supplemental Workpaper 4
USPS Postal News - Postal Rate Increase - Pg. 1 of 2



POSTAL NEWS

FOR IMMEDIATE RELEASE
Sept. 25, 2013

Contact: Katina Fields
202-268-6229 (o)
202-534-6320 (c)
katina.w.fields@usps.gov
usps.com/news
Release No. 13-077



U.S. Postal Service Announces New Prices for 2014

Price increases expected to generate \$2 billion in new revenue to improve financial situation

WASHINGTON — The United States Postal Service today announced proposed price changes, including an increase in the price of a First-Class Mail single-piece letter from 46 cents to 49 cents. The proposed changes, which would go into effect in January 2014, are intended to generate \$2 billion in incremental annual revenue for the Postal Service.

Highlights of the new single-piece First-Class Mail pricing, effective Jan. 26, 2014 include:

- Letters (1 oz.) — 3-cent increase to 49 cents
- Letters additional ounces — 1-cent increase to 21 cents
- Letters to all international destinations (1 oz.) — \$1.15
- Postcards — 1-cent increase to 34 cents

Stamp prices have stayed consistent with the average annual rate of inflation of 4.2 percent since the Postal Service was formed in 1971.

Pricing for Standard Mail, Periodicals, Package Services and Extra Services also will be adjusted as part of a filing to the Postal Regulatory Commission (PRC) scheduled to take place Sept. 26.

The Governors of the Postal Service voted Sept. 24 to seek price increases above the typical annual increases associated with changes in the Consumer Price Index (CPI).

In a letter disseminated to customers today, Board of Governors Chairman Mickey Barnett described the "precarious financial condition" of the Postal Service and the "uncertain path toward enactment of postal reform legislation" as primary reasons for seeking price changes above the CPI increase. He also indicated that the price adjustment above the CPI increase is necessary in order to ensure that the Postal Service will be able to maintain and continue the development of postal services of the type and quality which America needs.

"Of the options currently available to the Postal Service to align costs and revenues, increasing postage prices is a last resort that reflects extreme financial challenges," said Barnett in the letter. "However, if these financial challenges were alleviated by the timely enactment of laws that close a \$20 billion budget gap, the Postal Service would reconsider its pricing strategy. We are encouraged by the recent introduction of comprehensive postal reform legislation in Congress, and despite an uncertain legislative process, we are hopeful that legislation can be enacted this year."

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Except in exceptional or extraordinary circumstances, postage price increases are capped at the rate of inflation as measured by the CPI-U. The Postal Service is filing a price increase above CPI-U due to extraordinary and exceptional circumstances which have contributed to continued financial losses. The Postal Service recorded a \$15.9 billion net loss last fiscal year and expects to record a loss of roughly \$6 billion in the current fiscal year, and has an intolerably low level of available liquidity even after defaulting on its obligation to make prefunding payments for retiree health benefits.

The PRC will review the prices before they become effective Jan. 26, 2014, and must agree the prices are consistent with applicable law. The new price proposals are scheduled to be filed Sept. 26 and will be available on the PRC website at www.prc.gov and also will be available at <http://pe.usps.com>.

The full text of the Board chairman's letter sent to postal customers about the pricing decision will be available later today at the following link:

http://about.usps.com/news/national-releases/2013/pr13_chairman-letter.htm.

The Postal Service receives no tax dollars for operating expenses and relies on the sale of postage, products and services to fund its operations.

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For reporters interested in speaking with a regional Postal Service public relations professional, please go to <http://about.usps.com/news/media-contacts/usps-local-media-contacts.pdf>.

Please Note: For broadcast quality video and audio, photo stills and other media resources, visit the USPS Newsroom at <http://about.usps.com/news/welcome.htm>.

A self-supporting government enterprise, the U.S. Postal Service is the only delivery service that reaches every address in the nation: 152 million residences, businesses and Post Office Boxes. The Postal Service receives no tax dollars for operating expenses and relies on the sale of postage, products and services to fund its operations. With more than 31,000 retail locations and the most frequently visited website in the federal government, usps.com, the Postal Service has annual revenue of more than \$65 billion and delivers nearly 40 percent of the world's mail. If it were a private-sector company, the U.S. Postal Service would rank 42nd in the 2012 Fortune 500. The Postal Service has been named the Most Trusted Government Agency for seven years and the fourth Most Trusted Business in the nation by the Ponemon Institute.

Follow the Postal Service on twitter.com/USPS and at facebook.com/USPS

Postage 100004.001 Supplemental Workpaper 4
USPS Postal News - Postal Rate Increase - Pg. 2 of 2

Beginning of Workpaper
100005.000 - Branch Offices

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 7. Branch Offices
 Workpaper: 100005.000 - Branch Offices

Activity Description:

The Branch Office and Authorized Pay Location operations expenses cover the cost of providing payment collection and other services to those customers who prefer to be face-to-face for payments, service requests and information.

Forecast Explanations:

Labor - Base YR Rec

A base year forecast method was used because 2013 was the basis for the analysis for process improvements in the Branch Offices. Therefore, the base year provides a reasonable starting point for future expenditures.

Non-Labor - Base YR Rec

See above.

NSE - Base YR Rec

N/A

Summary of Results:

		In 2013\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2009	2010	2011	2012	2013	2014	2015	2016	
Labor		1,430	1,402	1,458	1,409	1,503	1,300	1,218	1,218	
Non-Labor		526	469	521	485	516	516	516	516	
NSE		0	0	0	0	0	0	0	0	
Total		1,955	1,871	1,978	1,894	2,019	1,816	1,734	1,734	
FTE		28.5	26.9	28.3	27.3	28.5	24.4	23.0	23.0	

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 7. Branch Offices
 Workpaper: 100005.000 - Branch Offices

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	1,503	1,503	1,503	-203	-285	-285	1,300	1,218	1,218
Non-Labor	Base YR Rec	516	516	516	0	0	0	516	516	516
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
Total		2,019	2,019	2,019	-203	-285	-285	1,816	1,734	1,734
FTE	Base YR Rec	28.5	28.5	28.5	-4.1	-5.5	-5.5	24.4	23.0	23.0

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	-203	0	0	-203	-4.1	1-Sided Adj

Process Improvements: Reduction of 4.1 FTEs across Branch Offices (effective 4/14). Cost efficiencies from maximizing workforce utilizing new tool/staffing model. See Branch Offices 100005.000 Supplemental Workpaper 1 - Process Improvements - Branch Office Capacity Model for additional details. (Reference cell F19)

2014 Total	-203	0	0	-203	-4.1	
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2015	-285	0	0	-285	-5.5	1-Sided Adj
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Process Improvements: Reduction of 5.5 FTEs across Branch Offices. Cost efficiencies from maximizing workforce utilizing new tool/staffing model. See Branch Offices 100005.000 Supplemental Workpaper 1 - Process Improvements - Branch Office Capacity Model for additional details. (Reference cell H19)

2015 Total	-285	0	0	-285	-5.5	
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2016	-285	0	0	-285	-5.5	1-Sided Adj
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Process Improvements: Reduction of 5.5 FTEs across Branch Offices. Cost efficiencies from maximizing workforce utilizing new tool/staffing model. See Branch Offices 100005.000 Supplemental Workpaper 1 - Process Improvements - Branch Office Capacity Model for additional details. (Reference cell H19)

2016 Total	-285	0	0	-285	-5.5	
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Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 7. Branch Offices
 Workpaper: 100005.000 - Branch Offices

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	1,141	1,137	1,220	1,205	1,297
Non-Labor	476	434	501	478	516
NSE	0	0	0	0	0
Total	1,616	1,572	1,722	1,682	1,813
FTE	24.4	23.0	24.3	23.5	24.2
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	1,141	1,137	1,220	1,205	1,297
Non-Labor	476	434	501	478	516
NSE	0	0	0	0	0
Total	1,616	1,572	1,722	1,682	1,813
FTE	24.4	23.0	24.3	23.5	24.2
Vacation & Sick (Nominal \$)					
Labor	176	181	180	175	206
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	176	181	180	175	206
FTE	4.1	4.0	4.0	3.8	4.2
Escalation to 2013\$					
Labor	113	84	57	30	0
Non-Labor	50	35	19	7	0
NSE	0	0	0	0	0
Total	163	119	77	37	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	1,430	1,402	1,458	1,409	1,503
Non-Labor	526	469	521	485	516
NSE	0	0	0	0	0
Total	1,955	1,871	1,978	1,894	2,019
FTE	28.5	27.0	28.3	27.3	28.4

* 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.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 7. Branch Offices
 Workpaper: 100005.000 - Branch Offices

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 Workpapers for Workpaper 100005.000

Branch Offices 100005.000 Supplemental Workpaper 1 - Process Improvements - Branch Office Capacity Model

	A	B	C	D	E	F	G	H
1	Original Headcount							
2	ESS	24						
3	Supervisor	6						
4	TOTAL	30						
5								
6		5.5 FTE Reductions						
7	2014 partial year savings (effective April 1)	203,110						
8	2015-2016 Annual savings	285,000						
9								
10								
11								
12	TY 2016 GRC based upon 5.5 FTE's							
13		Original Headcount¹	Reductions²	Reduced Headcount³	2014 FTE Reductions	2014 Savings (3/4 year)	2015-2016 FTE Reductions	2015-2016 Savings (Full-Year)
14	Escondido	5	(1.5)	3.0	(1.1)	55,394	(1.5)	77,727
15	El Cajon	5	(2.0)	3.0	(1.5)	73,858	(2.0)	103,636
16	Chula Vista	6	(1.0)	5.0	(0.8)	36,929	(1.0)	51,818
17	Market Creek	4	-	4.0	-	-	-	-
18	National City ⁴	4	(1.0)	3.0	(0.8)	36,929	(1.0)	51,818
19	TOTAL	24.0	(5.5)	18.0	(4.1)	203,110	(5.5)	285,000
20								
21	¹ Does not include Supervisor roles, only ESS'							
22	² 5.5 full-time employee's moved to other groups							
23	³ Headcount based off of analyses and observations of employees' transaction volumes including processing payments, registering customers in company programs,							
24	⁴ Savings resulting from National City Branch Office closure shown in Branch Offices 100005 Supplemental Workpaper 2 are in addition to these savings.							
25								

Branch Offices 10005.000 Supplemental Workpaper 2 - Closure of Branch Offices (pg. 1 of 3)

	A	B	C	D	E	F	G
1		Annual Savings					
2	Labor	National City	Downtown	Oceanside		Oceanside - Estimated Additional Annual APL Non-Labor Costs	
3	Call center staffing for virtual ESS	\$ -	\$ 8,849	\$ 8,849		Checkfree	\$ 152
4	Monthly audits	\$ -	\$ 1,794	\$ 1,794		Training	\$ 293
5	Bi-monthly office visits	\$ -	\$ 1,269	\$ 1,269		Audits	\$ 880
6	Daily inquiries to supervisors	\$ -	\$ 561	\$ 561		Telephone	\$ 50
7	Management employee	\$ 74,500	\$ -	\$ -		Mileage	\$ 594
8	Full and part-time employees	\$ 21,000	\$ -	\$ -		Office supplies	\$ 50
9	Subtotal	\$ 95,500	\$ 12,473	\$ 12,473		Total	\$ 2,020
10	Non-labor					Estimated annual APL costs for increased volume from closures (See pg. 2 of 3 for detail)	
11	Service agreement	\$ -	\$ 84,625	\$ 33,403		National City	\$ 33,119
12	Lease agreement	\$ 84,816	\$ 38,196	\$ 36,180		Downtown	\$ 25,592
13	ADA remediation	\$ 1,214	\$ 15,263	\$ 794		Oceanside	\$ 11,152
14	ExpressPay maintenance agreement	\$ 7,275	\$ 6,747	\$ 6,747		Total	\$ 69,863
15	Aromored transportation fees	\$ 4,119	\$ 3,888	\$ 3,888			
16	Training	\$ -	\$ 3,029	\$ -		Cost to Achieve	
17	Telephone	\$ 910	\$ 423	\$ 332		Annual Savings	
18	ADA surveys	\$ 450	\$ 450	\$ 450		Closure of three branch offices	\$ 472,017
19	Mileage	\$ 3,220	\$ 224	\$ 1,186		Estimated annual costs of one APL in Oceanside	\$ (2,020)
20	Bank fees	\$ 265	\$ 265	\$ 265		Estimated annual APL costs for increased volume	\$ (69,863)
21	Security for Pricing Challenge	\$ 2,482	\$ -	\$ -		Subtotal	\$ 400,135
22	Computer equipment	\$ 501	\$ -	\$ -		One Time Costs (See pg. 3 of 3 for detail)	
23	Office supplies	\$ 4,955	\$ 240	\$ 240		One time communication costs	\$ (85,065)
24	Facility maintenance	\$ 4,530	\$ -	\$ -		Total	\$ 315,070
25	Subtotal	\$ 114,738	\$ 153,349	\$ 83,485			
26							
27	Total	\$ 210,238	\$ 165,822	\$ 95,958			
28	Total (Annual Savings closure of National City, Downtown, and Oceanside Branch Offices)			\$ 472,017			

Branch Offices 100005.000 Supplemental Workpaper 2 - Closure of Branch Offices (pg. 2 of 3)

	A	B
1	Additional APL Costs	
2		
3	National City	
4	2013 Transactions	109,302
5	Volume to be moved to self-service (25%)	27,326
6	Volume to be moved to nearby APLs (30%) ¹	32,791
7	Volume to be moved to nearby branch offices (45%)	49,186
8		
9	National City Additional APL Costs²	\$ 33,119
10		
11	Downtown	
12	2013 Transactions	33,785
13	Volume to be moved to self-service (25%)	8,446
14	Volume to be moved to nearby APLs (75%)	25,339
15		
16	Downtown Additional APL Costs²	\$ 25,592
17		
18	Oceanside	
19	2013 Transactions	14,722
20	Volume to be moved to self-service (25%)	3,681
21	Volume to remain at converted APL (75%) ³	11,042
22		
23	Oceanside Additional APL Costs²	\$ 11,152
24		
25	Total Additional APL Costs	\$ 69,863
26		
27	¹ Based off statistics from temporary closure in 2009 at National City Branch Office where 30% moved to S&S Travel located next to the National City Branch Office	
28	² Based off of 2013 APL Cost per Transaction of \$1.01	
29	³ Oceanside Branch Office to be converted to an APL	

Branch Offices 100005.000 Supplemental Workpaper 2 - Closure of Branch Offices (pg. 3 of 3)

	A	B	C	D	E	F	G
1	Communications Costs						
3	Direct Mail Letter			National City	Downtown	Oceanside	
4	Cost for Quantity of 5,000 (one time cost)		QTY	10,000	5,000	5,000	
5	Spanish translation	\$ 300		\$ 300	\$ 300	\$ 300	
6	Tagalog translation	\$ 300		\$ 300	\$ -	\$ -	
7	Postage	\$ 1,800		\$ 3,600	\$ 1,800	\$ 1,800	
8	Printing	\$ 50		\$ 100	\$ 50	\$ 50	
9	Total	\$ 2,450		\$ 4,300	\$ 2,150	\$ 2,150	
10	Newspaper Advertising						
11	Ad development	\$ 5,000		\$ 5,000	\$ 5,000	\$ 5,000	
12	Placement Costs	\$ 15,000		\$ 15,000	\$ 15,000	\$ 15,000	
13	Total	\$ 20,000		\$ 20,000	\$ 20,000	\$ 20,000	
14	Insert Cards - Cost for Quantity of 12,500						
15	(5,000 English, 5,000 Spanish, 2,500 Tagalog)		QTY	12,500	5,000	5,000	
16	Design - English	\$ 480		\$ 480	\$ 480	\$ 480	
17	Design - Spanish	\$ 480		\$ 480	\$ 480	\$ 480	
18	Design - Tagalog	\$ 480		\$ 480	\$ -	\$ -	
19	Spanish translation	\$ 300		\$ 300	\$ 300	\$ 300	
20	Tagalog translation	\$ 300		\$ 300	\$ -	\$ -	
21	Printing - English	\$ 700		\$ 700	\$ 350	\$ 350	
22	Printing - Spanish	\$ 700		\$ 700	\$ 350	\$ 350	
23	Printing - Tagalog	\$ 350		\$ 350	\$ -	\$ -	
24	Total	\$ 3,790		\$ 3,790	\$ 1,960	\$ 1,960	
25	Fact Sheets - Cost for Quantity of 12,500						
26	(5,000 English, 5,000 Spanish, 2,500 Tagalog)		QTY	12,500	5,000	5,000	
27	Design - English	\$ 600		\$ 600	\$ 600	\$ 600	
28	Design - Spanish	\$ 600		\$ 600	\$ 600	\$ 600	
29	Design - Tagalog	\$ 600		\$ 600	\$ -	\$ -	
30	Spanish translation	\$ 300		\$ 300	\$ 300	\$ 300	
31	Tagalog translation	\$ 300		\$ 300	\$ -	\$ -	
32	Printing - English	\$ 745		\$ 745	\$ 373	\$ 373	
33	Printing - Spanish	\$ 745		\$ 745	\$ 373	\$ 373	
34	Printing - Tagalog	\$ 375		\$ 375	\$ -	\$ -	
35	Total	\$ 4,265		\$ 4,265	\$ 2,245	\$ 2,245	
36				National City	Downtown	Oceanside	Total
37	Total Communication Costs			\$ 32,355	\$ 26,355	\$ 26,355	\$ 85,065

Beginning of Workpaper
100006.000 - CCC Operations

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 8. Customer Contact Center Operations
 Workpaper: 100006.000 - CCC Operations

Activity Description:

The Customer Contact Center (CCC) expenses cover the costs of answering customer telephone calls; responding to incoming email from customers; responding to customer inquiries through on-line chat features; answering written customer correspondence regarding customer account activity; following up on all California Public Utilities Commission telephone referrals and informal and formal customer complaints; and, responding to other customer account related inquiries.

Forecast Explanations:

Labor - Zero-Based

A zero-based forecast method was used for CCC Operations labor because of the dynamics of various communication channels (phone, Interactive Voice Response ["IVR"] and web) and progressive improvements in self-service, additional coaching of ESSs, additional focus on effective call handling, and standardized call scripting that all impact the ESS FTE requirements. The forecast was built using CCC workforce management software and based on projected call volume, level of service ("LOS"), average handle time ("AHT"), agent occupancy, and shrinkage .

The base year actual performance results were used over historical averages to forecast the ESS-handled call volumes because 2013 is the best representation of what we expect for 2014-2016. The 2013 individual "transactions per electric meter" were applied to projected electric meters to obtain transaction volumes. The 2013 base year actual performance results were preferred over historical averages because changes in customer preferences of communication channel, new channel offer (CHAT), and self-service channel improvements (IVR, web and mobile) have fluctuated and thereby impacted ESS-handled calls in the last five years.

Non-Labor - Base YR Rec

A base year forecast method was used for the CCC Operations non-labor by applying the base year non-labor cost per FTE and multiplying that times the number of forecasted FTEs. These non-labor expenses primarily consist of employee related expense, office supplies, office furniture, and headsets. (Communications, annual software maintenance, and telecommunication costs are captured under the CCC Support non-labor category).

NSE - Base YR Rec

N/A

Summary of Results:

		In 2013\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2009	2010	2011	2012	2013	2014	2015	2016	
Labor		9,271	8,941	8,591	8,551	8,804	8,348	7,957	8,429	
Non-Labor		94	322	236	357	384	384	384	384	
NSE		0	0	0	0	0	0	0	0	
Total		9,365	9,264	8,827	8,908	9,188	8,732	8,341	8,813	
FTE		187.8	179.5	168.6	165.8	174.0	169.7	161.0	170.8	

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 8. Customer Contact Center Operations
 Workpaper: 100006.000 - CCC Operations

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	8,348	7,957	8,429	8,348	7,957	8,429
Non-Labor	Base YR Rec	384	384	384	0	0	0	384	384	384
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
Total		384	384	384	8,348	7,957	8,429	8,732	8,341	8,813
FTE	Zero-Based	0.0	0.0	0.0	169.7	161.0	170.8	169.7	161.0	170.8

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	8,565	0	0	8,565	174.2	1-Sided Adj

Labor forecast for CSRs/ESSs Associate Supervisors Supervisors, and Manager to support forecasted workload. Forecasted ESS Call Volume equals 1.47 (2013 calls per active meter) times 1,414,346 forecasted electric meters = 2,080,069 ESS handled calls. See CCC Operations100006.000 Supplemental Workpapers 1 through 3 - Historical Performances, Call Volume Forecast, and e-Workforce Management FTE Requirements respectively for additional detail.

FTE forecast =
 122.0 FT ESS's - \$5.889M (\$23.12 hr.)
 33.2 Part time ESS's - \$1.280M (\$18.47 hr.)
 19 Management Staff (Manager, Assoc. Supervisors and Supervisors) - \$1.396M

2014	-48	0	0	-48	-1.0	1-Sided Adj
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Capital Project Impacts - IVR 2014 Capital Project #14023: CSR/ESS labor benefits from Interactive Voice Response (IVR) 2014 capital project #14023 due to a reduction in the number of calls to the Customer Contact Center as more transactions will be diverted to the IVR for self-service.

-1 FTE (one-fourth of full-year benefit of 4 FTE's).
 (1 FTE x 2088 hrs x \$23.12/hr. = \$48K)

2014	-97	0	0	-97	-2.0	1-Sided Adj
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Capital Project Impacts - SEAd Phase 1 Capital Project #13009: CSR/ESS labor benefits from the Smart Energy Advisor desktop (SEAd) Phase 1 capital project #13009. This project will make it easier for CSRs/ESSs to obtain customer information and guide the conversation with customers, thus reducing the average handle time.

-2.0 FTE's (44% of 4.5 FTE full year benefit)
 (2.0 FTE's x 2088 hrs x \$23.12/hr. = \$97K)

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 8. Customer Contact Center Operations
 Workpaper: 100006.000 - CCC Operations

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adi Type</u>
2014	-72	0	0	-72	-1.5	1-Sided Adj

Change in Operating Hours: Change in operating hours per AL. 2585-E/2279-G. effective May 2014, implemented July 2014
 (1.5 FTE's x 2088 hrs x \$23.12/hr. = \$72K)

2014 Total	8,348	0	0	8,348	169.7	
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2015	8,647	0	0	8,647	175.3	1-Sided Adj
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Labor forecast for CSRs/ESSs Associate Supervisors Supervisors, and Manager to support forecasted workload. Forecasted ESS Call Volume equals 1.47 (2013 calls per active meter) times 1,428,204 forecasted electric meters = 2,100,450 ESS handled calls. See CCC Operations 100006.000 Supplemental Workpapers 1 through 3 - Historical Performances, Call Volume Forecast, and e-Workforce Management FTE Requirements respectively for additional detail.

FTE forecast =
 126.0 FT ESS's - \$6,083M (\$23.12 hr.)
 30.3 Part time ESS's - \$1.168M (\$18.47 hr.)
 19 Management Staff (Manager, Assoc. Supervisors and Supervisors) - \$1.396M

2015	-193	0	0	-193	-4.0	1-Sided Adj
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Capital Project Impacts - IVR 2014 Capital Project #14023: CSR/ESS labor benefits from IVR 2014 capital project #14023 due to a reduction in the number of calls to the Customer Contact Center as more transactions will be diverted to the IVR for self-service.

-4 FTE s (full-year benefit).
 (4 FTE's x 2088 hrs x \$23.12 hr. = \$193K)

2015	-352	0	0	-352	-7.3	1-Sided Adj
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Capital Project Impacts - SEAd Phase 1 Capital Project #13009 and SEAd Phase 2 Capital Project #14017: CSR/ESS labor benefits from the Smart Energy Advisor desktop (SEAd) Phase1 capital project #13009 and SEAd Phase 2 capital project #14017. These projects will make it easier for CSRs/ESSs to obtain customer information and guide the conversation with customers, thus reducing the average handle time.

Savings from SEAd Phase 1 (Capital Project #13009): -4.5 FTE (full year benefit).
 (4.5 FTE's x 2088 hrs x \$23.12/hr = \$217K)
 Savings from SEAd Phase 2 (Capital Project #14017) : -2.8FTE (full year benefit).
 (2.8 FTE's x 2088 hrs x \$23.12/hr = \$135K)

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 8. Customer Contact Center Operations
 Workpaper: 100006.000 - CCC Operations

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adi Type</u>
2015	-145	0	0	-145	-3.0	1-Sided Adj

Change in Operating Hours: Change in operating hours per AL. 2585-E/2279-G effective May 2014, implemented in July 2014
 (3.0 FTE's x 2088 hrs x \$23.12/hr. = \$145K)

2015 Total	7,957	0	0	7,957	161.0	
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2016	8,758	0	0	8,758	177.6	1-Sided Adj
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Labor forecast for CSRs/ESSs Associate Supervisors Supervisors, and Manager to support forecasted workload. Forecasted ESS Call Volume equals 1.47 (2013 calls per active meter) times 1,445,387 forecasted electric meters = 2,125,721 ESS handled calls. See CCC Operations 100006.000 Supplemental Workpapers 1 through 3 - Historical Performances, Call Volume Forecast, and e-Workforce Management FTE Requirements respectively for additional detail.

FTE forecast =

128.3 FT ESS's - \$6,194M (\$23.12 hr.)

30.3 Part time ESS's - \$1.168M (\$18.47 hr.)

19 Management Staff (Manager, Assoc. Supervisors and Supervisors) - \$1.396M

2016	-193	0	0	-193	-4.0	1-Sided Adj
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Capital Project Impacts - IVR 2014 Capital Project #14023: CSR/ESS labor benefits from IVR Phase 4 capital project #14023 due to a reduction in the number of calls to the Customer Contact Center as more transactions will be diverted to the IVR for self-service.

-4 FTE s (full-year benefit).

(4 FTE's x 2088 hrs x \$23.12 hr. = \$193K)

See CCC Operations 100006.000 Supplemental Workpaper 4 - TY2016 - FTE Forecast Adjustment Calculations Summary for additional detail. (Reference Row 17)

2016	-352	0	0	-352	-7.3	1-Sided Adj
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Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 8. Customer Contact Center Operations
 Workpaper: 100006.000 - CCC Operations

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adi Type</u>
<p>Capial Project Impacts - SEAd Phase 1 Captial Project #13009 and SEAd Phase 2 Capital Project #14017: CSR/ESS labor benefits from the Smart Energy Advisor Desktop (SEAd) Phase 1 capital project #13009 and SEAd Phase 2 capital project #14017. These projects will make it easier for CSRs/ESSs to obtain customer information and guide the conversation with customers, thus reducing the average handle time.</p> <p>Savings from SEAd Phase 1 (Capital Project #13009): -4.5 FTE (full year benefit). (4.5 FTE's x 2088 hrs x \$23.12/hr = \$217K) Savings from SEAd Phase 2 (Capital Project #14017) : -2.8FTE (full year benefit). (2.8 FTE's x 2088 hrs x \$23.12/hr = \$135K)</p> <p>See CCC Operations 100006.000 Supplemental Workpaper 4 - TY2016 FTE Forecast Adjustment Calculations Summary for additional detail. (Reference Rows 18 and 19)</p>						
2016	48	0	0	48	1.0	1-Sided Adj
<p>Customer Outreach Safety Checks: 1 FTE (CSR/ESS) at \$48K annual salary to respond to customer inquiries and/or scheduling appointments as the result of proactively offering free gas appliance checks to residential customers. Details can be found in the Direct Testimony of Sara Franke, Customer Service Field witness (Ex. SDGE-13). See CCC Operations Supplemental Workpaper 4 - TY2016 FTE Forecast Adjustment Calculations Summary for additional detail. (Reference Row 14)</p>						
2016	241	0	0	241	5.0	1-Sided Adj
<p>New Rate Options and Programs: Assist Residential Customers with time varying rate options. (eg. SPP and Rate Reform) Estimate 80,000 calls from customers who are interested in the enrollment requiring 5 FTE to support the enrollment.</p> <p>(5.0 FTE's x 2088 hrs x \$23.12/hr. = \$241K)</p> <p>See CCC Operations 100006.000 Supplemental Workpaper 4 - TY2016 FTE Forecast Adjustment Calculations Summary for additional detail. (Reference row 15)</p>						
2016	72	0	0	72	1.5	1-Sided Adj
<p>CARE Enrollment: CCC to take calls and process CARE enrollments. Add 1.5 FTE to support this activities. (1.5 FTE x 2088 hrs x \$23.12/hr = \$72K) See CCC Operations 100006.000 Supplemental Workpaper 4 - TY2016 FTE Forecast Adjustment Calculations Summary for additional detail. (Reference Row 16)</p>						
2016	-145	0	0	-145	-3.0	1-Sided Adj

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 8. Customer Contact Center Operations
 Workpaper: 100006.000 - CCC Operations

<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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Change in Operating Hours: Change in operating hours per AL. 2585-E/2279-G effective May 2014, implemented in July 2014
 (3.0 FTE's x 2088 hrs x \$23.12/hr. = \$145K)
 See CCC Operations 100006.000 Supplemental Workpaper 4 - TY2016 FTE Forecast Adjustment Calculations Summary for additional detail. (Reference Row 10)

2016 Total	8,429	0	0	8,429	170.8	
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Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 8. Customer Contact Center Operations
 Workpaper: 100006.000 - CCC Operations

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	7,343	7,153	7,325	7,342	7,523
Non-Labor	85	298	227	352	384
NSE	0	0	0	0	0
Total	7,429	7,451	7,553	7,693	7,908
FTE	160.1	151.6	146.7	138.9	145.0
Adjustments (Nominal \$) **					
Labor	52	101	-132	-31	75
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	52	101	-132	-31	75
FTE	0.8	1.4	-1.9	3.9	3.1
Recorded-Adjusted (Nominal \$)					
Labor	7,395	7,254	7,194	7,311	7,599
Non-Labor	85	298	227	352	384
NSE	0	0	0	0	0
Total	7,481	7,552	7,421	7,663	7,983
FTE	160.9	153.0	144.8	142.8	148.1
Vacation & Sick (Nominal \$)					
Labor	1,142	1,155	1,060	1,059	1,205
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	1,142	1,155	1,060	1,059	1,205
FTE	26.9	26.5	23.8	23.1	25.9
Escalation to 2013\$					
Labor	733	533	338	180	0
Non-Labor	9	24	9	5	0
NSE	0	0	0	0	0
Total	742	557	346	186	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	9,271	8,941	8,591	8,551	8,804
Non-Labor	94	322	236	357	384
NSE	0	0	0	0	0
Total	9,365	9,264	8,827	8,908	9,188
FTE	187.8	179.5	168.6	165.9	174.0

* After company-wide exclusions of Non-GRC costs

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

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 8. Customer Contact Center Operations
 Workpaper: 100006.000 - CCC Operations

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs					
Years	2009	2010	2011	2012	2013
Labor	52	101	-132	-31	75
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	52	101	-132	-31	75
FTE	0.8	1.4	-1.9	3.9	3.1

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	-13	0	0	-0.2	CCTR Transf	To 2100-3516.000	CSCHRAMM2013 1107224436920
Transfer labor/FTE costs associated with Project Advisor function from cost center 2100-0013 in work paper group 100006 CCC Operations to cost center 2100-3516 in work paper group 100007 CCC Support to align function where it resides.							
2009	54	0	0	0.8	CCTR Transf	From 2100-3512.000	CSCHRAMM2013 1121182648267
Transfer costs associated with Customer Contact Center (CCC) Supervisor from 2100-3512 in work group 100007 CCC Support to cost center 2100-0013 in work group 100006 CCC Operations to align function where it resides.							
2009	11	0	0	0.2	CCTR Transf	From 2100-3515.000	CSCHRAMM2013 1121182727487
Transfer costs associated with Customer Contact Center (CCC) Associate Supervisor from 2100-3515 in work group 100007 CCC Support to cost center 2100-0013 in work group 100006 CCC Operations to align function where it resides.							
2009 Total	52	0	0	0.8			

2010	-11	0	0	-0.2	CCTR Transf	To 2100-3517.000	CSCHRAMM2013 1107224607510
Transfer labor / FTE costs associated with Quality Observation Specialist function from cost center 2100-0013 in work paper group 100006 CCC Operations to cost center 2100-3517 in work paper group 100007 CCC Support to align function where it resides.							
2010	111	0	0	1.6	CCTR Transf	From 2100-3512.000	CSCHRAMM2013 1121182859997
Transfer costs associated with Customer Contact Center (CCC) Supervisor and Associate Supervisor from 2100-3512 in work group 100007 CCC Support to cost center 2100-0013 in work group 100006 CCC Operations to align function where it resides.							

Note: Totals may include rounding differences.

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Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 8. Customer Contact Center Operations
 Workpaper: 100006.000 - CCC Operations

<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 Total	101	0	0	1.4			
2011	-64	0	0	-0.8	CCTR Transf	To 2100-3518.000	CSCHRAMM2013 1107223003443
Transfer labor/FTE costs associated with Business Advisor function from cost center 2100-0013 in work group 100006 CCC Operations to cost center 2100-3518 in work group 100007 CCC Support where function resides.							
2011	-32	0	0	-0.6	CCTR Transf	To 2100-3517.000	CSCHRAMM2013 1107224744710
Transfer labor / FTE costs associatiated with Quality Observation Specialist function from cost center 2100-0013 in work paper group 100006 CCC Operations to cost center 2100-3517 in work paper group 100007 CCC Support to align function where it resides.							
2011	-93	0	0	-1.3	CCTR Transf	To 2100-3516.000	CSCHRAMM2013 1107225014550
Transfer labor / FTE costs associatiated with Complaint Resolution Supervisor, and Ops Support Analyst functions from 2100-0013 in work paper group 100006 CCC Operations to cost center 2100-3516 in work paper group 100007 CCC Support to align functions where they resides.							
2011	58	0	0	0.8	CCTR Transf	From 2100-3512.000	CSCHRAMM2013 1121182957867
Transfer costs associated with Customer Contact Center (CCC) Supervisor and Associate Supervisor from 2100-3512 in work group 100007 CCC Support to cost center 2100-0013 in work group 100006 CCC Operations to align function where it resides.							
2011 Total	-132	0	0	-1.9			
2012	249	0	0	7.2	CCTR Transf	From 2100-3515.000	CSCHRAMM2013 1107222126730
Transfer labor / FTE costs associated with Energy Service Specialist Trainees labor from CC 2100-3515 in work paper group 100007 CCC Support to cost center 2100-0013 in work group 100006 CCC Operations to align costs where activity resides.							
2012	-70	0	0	-0.6	CCTR Transf	To 2100-3455.000	CSCHRAMM2013 1107222801067
Transfer labor / FTE costs associated with Project Manager function from 2100-0013 in work group 100006 CCC Operations to cost center 2100-3455 in work group 100008 Residential Services to align costs where function resides.							
2012	-70	0	0	-0.8	CCTR Transf	To 2100-3518.000	CSCHRAMM2013 1107223338207
Transfer labor/FTE costs associated with Business Advisor function from cost center 2100-0013 in work group 100006 CCC Operations to cost center 2100-3518 in work group 100007 CCC Support where function resides.							

Note: Totals may include rounding differences.

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Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 8. Customer Contact Center Operations
 Workpaper: 100006.000 - CCC Operations

<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	-19	0	0	-0.4	CCTR Transf	To 2100-3515.000	CSCHRAMM2013 1107225941373
Transfer labor / FTE costs associatiated with Training Coordinator function from cost center 2100-0013 in work paper group 100006 CCC Operations to cost center 2100-3515 in work paper group 100007 CCC Support to align function where it resides.							
2012	-121	0	0	-1.5	CCTR Transf	To 2100-3516.000	CSCHRAMM2013 1107230101007
Transfer labor / FTE costs associatiated with CCC Ops Support Analyst, Complaint Resolution Supervisor, and Service Coordinator functions from cost center 2100-0013 in work paper group 100006 CCC Operations to cost center 2100-3516 in work paper group 100007 CCC Support to align functions where they resides.							
2012 Total	-31	0	0	3.9			

2013	-132	0	0	-2.1	CCTR Transf	To 2100-3515.000	CSCHRAMM2014 0213173127597
Transfer labor associated with CCC Support function from cost center 2100-0013 in work group 100006 CCC Operations to cost center 2100-3515 in work group 100007 CCC Support, to align costs where activity resides.							
2013	156	0	0	4.5	CCTR Transf	From 2100-3515.000	CSCHRAMM2014 0213173755263
Transfer labor associated with CCC Operations function from cost center 2100-3515 in work group 100007 CCC Support to cost center 2100-0013 in work group 100006 CCC Operations, to align costs where activity resides.							
2013	51	0	0	0.7	CCTR Transf	From 2100-3517.000	CSCHRAMM2014 0213173922533
Transfer labor associated with CCC Operations function from cost center 2100-3517 in work group 100007 CCC Support to cost center 2100-0013 in work group 100006 CCC Operations, to align costs where activity resides.							
2013 Total	75	0	0	3.1			

Note: Totals may include rounding differences.

Supplemental Workpapers for Workpaper 100006.000

Customer Contact Center Operations 100006.000 Supplemental Workpaper 1 - Historical Performances

	A	B	C	D	E	F	G	H
1		2009	2010	2011	2012	2013	5-year average	Comments
2	Transaction Statistics							
3	ESS-ans w/ VH	2,436,338	2,353,875	2,242,137	2,127,497	2,066,645	2,245,298	ESS-handled calls including virtual holds
4	IVR SS	406,549	565,140	522,581	521,666	535,836	510,354	IVR self-service transactions
5	Web and Mobile SS	3,083	12,808	41,811	63,620	171,461	58,557	Increase in Web SS in 2013 was from full automation of WEX by adding Turn-on, Turn-off, ASO to Web.
6	Email	137,762	163,718	158,485	156,330	62,209	135,701	The large reduction in email from 2012 to 2013 was due to the automation/transfer of Web Enabled Channel (WEX) to Web SS. ESS stopped processing customer requests in KANA for Turn-on, Shut-off, Appliance Service Order requests. Those requests became Web SS transactions.
7	Chat	0	0	0	0	4,295	859	Chat functionality was introduced in 2013.
8	Abandoned	119,214	114,837	89,352	91,789	98,530	102,744	
9	Pay-by-Phone	81,870	74,163	59,502	58,514	54,340	65,678	
10	ESS-ans w/ VH + IVR SS	2,842,887	2,919,015	2,764,718	2,649,163	2,602,481	2,755,653	
11	ESS-ans w/ VH + IVR SS + Web and Mobile SS	2,845,970	2,931,823	2,806,529	2,712,783	2,773,942	2,814,209	
12	ESS-ans w/ VH + IVR SS + Web and Mobile SS + Email + Chat	2,983,732	3,095,541	2,965,014	2,869,113	2,840,446	2,950,769	Total CCC Contacts
13								
14	Transaction rate per Electric Meter							
15	Electric Meters (EM)	1,375,326	1,382,924	1,390,704	1,397,678	1,405,218	1,390,370	Ken Shiermeyer Ex. SDG&E-31
16	ESS-ans w/ VH per EM	1.77	1.70	1.61	1.52	1.47	1.62	
17	IVR SS calls per EM	0.30	0.41	0.38	0.37	0.38	0.37	
18	Web and Mobile SS per EM	0.00	0.01	0.03	0.05	0.12	0.04	
19	Email per EM	0.10	0.12	0.11	0.11	0.11	0.10	
20	Chat per EM	0.00	0.00	0.00	0.00	0.00	0.00	
21	Pay-by-Phone per EM	0.06	0.05	0.04	0.04	0.04	0.05	
22								
23								
24								
25	Performance Metrics							
26	IVR & Web SS rate	14.39%	19.71%	20.11%	21.58%	25.50%	20.26%	Total self-service rate equals sum of (IVR SS and Web SS) divided by the sum of (IVR SS, Web SS and CSR-ans w/ VH)
27	AHT	273	258	259	273	274	267	Calculated values from Data Warehouse LOS table
28	ESS LOS	72.32%	70.97%	71.86%	64.96%	68.86%	69.79%	Agent LOS. Calculated values from DW LOS table
29	ESS&IVR LOS	76.12%	76.38%	77.01%	71.63%	75.04%	75.24%	Agent and IVR LOS. Calculated values from DW LOS table
30	Occupancy			87.27%	87.85%	85.53%	86.88%	Partial data for 2011. Using 2013 occupancy rate which is the better indicator of future occupancy rate
31	Abandoned rate	4.66%	4.65%	3.83%	4.14%	4.55%	4.37%	Abandoned calls divided by the sum of (Abandoned and CSR-ans w/ VH)
32	Shrinkage					30.53%		
33								
34								

Customer Contact Center Operations 100006.000 Supplemental Workpaper 2 - Call Volume Forecast

	A	B	C	D	E	F
1	Zero Base forecast method: 2013 individual "transactions per electric meter" times forecasted electric meters to obtain transactions forecasts.					
2						
3	Transactions Forecast					
4		2013 actual	2014 fcst	2015 fcst	2016 fcst	Comment
5	Electric Meters (EM)	1,405,218	1,414,346	1,428,204	1,445,387	Ken Shiermeyer Ex. SDG&E-31
6	ESS-ans w/ VH per EM	1.47	1.47	1.47	1.47	
7	IVR SS calls per EM	0.38	0.38	0.38	0.38	
8	Web and Mobile SS per EM	0.12	0.12	0.12	0.12	
9	Email per EM	0.04	0.04	0.04	0.04	
10	Chat	0.00	0.00	0.00	0.00	
11	Pay-by-Phone per EM	0.04	0.04	0.04	0.04	
12						
13	ESS-ans w/ VH	2,066,645	2,080,069	2,100,450	2,125,721	used in EWFM runs
14	IVR SS	535,836	539,317	544,601	551,153	
15	Web and Mobile SS	171,461	172,575	174,266	176,362	
16	Email	62,209	62,613	63,227	63,987	
17	Chat	4,295	4,323	4,365	4,418	
18	Pay-by-Phone	54,340	54,693	55,229	55,893	
19	ESS-ans w/ VH + IVR SS + Web and Mobile SS	2,773,942	2,791,961	2,819,317	2,853,237	
20	ESS-ans w/ VH + IVR SS + Web and Mobile SS + Email + Chat	2,840,446	2,858,897	2,886,909	2,921,642	Total Customer Contacts
21						
22	Performance Metrics					
23		2013 actual	2014 fcst	2015 fcst	2016 fcst	
24	IVR & Web SS rate	25.50%	25.50%	25.50%	25.50%	
25	AHT	274	274	274	274	used in EWFM runs
26	ESS LOS	68.86%	70.00%	70.00%	70.00%	used in EWFM runs
27	ESS&IVR LOS	75.04%	77.00%	77.00%	77.00%	
28	Occupancy	85.53%	85.53%	85.53%	85.53%	used in EWFM runs
29	Abandoned rate	4.55%	4.55%	4.55%	4.55%	
30	Shrinkage	30.53%	30.53%	30.53%	30.53%	used in EWFM runs

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Customer Contact Center Operations 100006.000 Supplemental Workpaper 3 - e-Workforce Management FTE Requirements

	A	B	C	D	E	F	G	H	I	J	
1	Preparation for and recording e-Workforce Management (eWFM) runs:										
2	1. Calculate 3-year average monthly call volumes and percentages from 2011, 2012 and 2013 actuals										
3	2. Calculate monthly call volumes using 3-year average monthly call percentages and annual call volumes for 2013, 2014 fcst, 2015 fcst, 2016 fcst										
4	3. Provide the LOS team with the list of eWFM test cases including monthly call volumes, target AHT, ESS LOS, occupancy and shrinkage										
5	4. Use the highest monthly staffing requirement for annual staffing requirements										
6	5. Summarize eWFM run results										
7											
8	Step 1: Calculate 3-year average monthly call volumes from 2011, 2012 and 2013 actuals										
9	ESS-ans w/VH										
10	Month	2011	2012	2013	3-Y Average	% of total					
11	Jan	182,796	183,988	199,025	188,603	8.79%					
12	Feb	174,697	171,649	171,423	172,590	8.04%					
13	Mar	197,848	178,636	178,670	185,051	8.63%					
14	Apr	176,232	159,544	177,858	171,211	7.98%					
15	May	177,747	167,734	167,027	170,836	7.96%					
16	Jun	183,132	171,997	161,598	172,242	8.03%					
17	Jul	180,001	175,358	174,111	176,490	8.23%					
18	Aug	202,990	192,075	179,042	191,369	8.92%					
19	Sep	197,455	169,143	168,536	178,378	8.31%					
20	Oct	194,715	194,007	176,540	188,421	8.78%					
21	Nov	191,992	188,802	154,172	178,322	8.31%					
22	Dec	182,532	174,564	158,643	171,913	8.01%					
23	Total ESS Calls w/VH	2,242,137	2,127,497	2,066,645	2,145,426	100.00%					
24											
25	Step 2: Calculate monthly call volumes from 3-year average monthly call percentages and annual call volumes for 2013, 2014 fcst, 2015 fcst, 2016 fcst										
26											
27	Month	2013 ACTUAL	2014 FCST	2015 FCST	2016 FCST						
28	Jan	181,677	182,858	184,649	186,871						
29	Feb	166,252	167,332	168,972	171,004						
30	Mar	178,256	179,414	181,172	183,352						
31	Apr	164,924	165,996	167,622	169,639						
32	May	164,563	165,632	167,255	169,267						
33	Jun	165,917	166,995	168,632	170,660						
34	Jul	170,009	171,114	172,790	174,869						
35	Aug	184,342	185,539	187,357	189,611						
36	Sep	171,828	172,944	174,639	176,740						
37	Oct	181,502	182,681	184,471	186,690						
38	Nov	171,774	172,890	174,584	176,684						
39	Dec	165,600	166,676	168,309	170,334						
40	Total ESS Calls w/VH	2,066,645	2,080,069	2,100,450	2,125,721						
41											
42	Steps 3, 4, 5: EWFM Test Cases and Results										
43		ESS Call Volume Forecast	2013 Base Year Performance Metrics								
44	Test cases	Total ESS Calls w/VH	AHT	ESS LOS	Occupancy	Shrinkage	eWFM FTE requirement	Email & Chat support	Special Service Desk	Total ESS requirement	
45	Y2013	2,066,645	274	68.86%	85.53%	30.53%	147.51	3	4	154.5	
46	2014 FCST	2,080,069	274	70.00%	85.53%	30.53%	148.16	3	4	155.2	
47	2015 FCST	2,100,450	274	70.00%	85.53%	30.53%	149.29	3	4	156.3	
48	2016 FCST	2,125,721	274	70.00%	85.53%	30.53%	151.60	3	4	158.6	

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Customer Contact Center Operations 100006.000 Supplemental Workpaper 4 - TY2016 FTE Forecast Adjustment Calculations Summary

	A	B	C	D	E	F	G	H
1	Process for calculating ESS FTE forecast adjustments:							
2	1. The Zero-based TY2016 labor forecast was determined by the eWFM application based on a set of input values for call volume, AHT, LOS, occupancy and shrinkage using 2013 base year performance metrics.							
3	2. Calculate the number of "call*seconds" per FTE by taking forecasted call volume x 2013 base year AHT. The numbers are presented in Table 1.							
4	3. For the Change in Operating Hours, 3 FTE will be eliminated without any changes in call volume or AHT. Therefore the number "call*seconds" per FTE will increase after the initiative implemented in 2014; calculation and result are shown in Table 1. The "call*seconds" per FTE will be later used to calculate FTE addition or reduction for each individual forecast adjustment.							
5	4. For each individual forecast adjustment that changes the call volume or the Average Handle Time (AHT), FTE impact is calculated by dividing the total "call*seconds" change by the "call*seconds" per FTE after the implementation of the Operating Hour Change initiative; calculation and result are presented in Table 2.							
6								
7	Table 1							
8	Scenario	(A) TY2016 Call volume	(B) AHT in seconds	(C) = (A) * (B) call*seconds	(D) FTE requirements	(E) = (C) / (D) call*seconds per FTE	TY2016 Labor Forecast (\$000)	Comments
9	TY2016 Requirements - eWFM	2,125,721	274	582,447,554	151.6	3,842,002	\$7,362	TY2016 before any upward/downward pressures. Note: cell G10 includes the costs associated with the eWFM FTE forecast of 151.6 plus the 7 additional FTE's required for Email & Chat Support and the Special Service Desk forecast for a total ESS FTE forecast of 158.6. TY2016 ESS Zero-based Labor Forecast Calculation: (128.3 Full-Time FTEs x \$23.12 hrly rate x 2088 hours = \$6.194M) plus (30.3 Part-time FTEs x \$18.47 hrly rate x 2088 hours = \$1.168M) = \$7.362M
10	After Operating Hour Change implemented in 2014	2,125,721	274	582,447,554	148.6	3,919,566	-\$145	Reduce 3 of 15 positions currently working the shifts between 8 p.m. and 7 a.m. therefore the number of call*seconds per FTE increases. (Note: The e-WFM FTE requirement of 148.6 shown in cell E11 does not include the 7 additional FTE's required for Email & Chat Support and the Special Service Desk.) TY2016 ESS Labor Forecast Adjustment Calculation: (3 FTEs x \$23.12 hrly. rate x 2088 hrs. = \$145K)
11								
12	Table 2							
13	Forecast Adjustment	(A) Change in call volume	(B) Change in AHT in seconds	(C) = (A) * (B) Change in call*seconds	(D) call*seconds per FTE	(E) = (C) / (D) FTE change	TY2016 Labor Forecast (\$000)	Comments
14	Customer Outreach Safety Checks	17,000	242	4,114,000	3,919,566	1.0	\$48	Estimated 17,000 customers will call. Lowered the AHT from the Seasonal Appliance Service Order average of 252 seconds to 242 seconds. It was assumed that only 40% of callers will schedule for the safety check therefore the average call duration will be shorter. TY2016 ESS Labor Forecast Adjustment Calculation (1 FTE x \$23.12 hrly. rate x 2088 hrs. = \$48K)
15	New Rate Options and Programs	80,000	244	19,520,000	3,919,566	5.0	\$241	Estimated 80,000 customers will call. Lowered the AHT from the Billing Calls average of 254 seconds to 244 seconds. It was assumed that call duration will be shorter because the agents will be equipped with tools and standardized guidances to assist customers. TY2016 ESS Labor Forecast Adjustment Calculation (5 FTEs x \$23.12 hrly. rate x 2088 hrs. = \$241K)
16	CARE Enrollment	20,000	290	5,800,000	3,919,566	1.5	\$72	Estimated agents will process 20,000 CARE applications at an AHT of 290 seconds per application. TY2016 ESS Labor Forecast Adjustment Calculation (1.5 FTE x \$23.12 hrly. rate x 2088 hrs. = \$72K)
17	IVR 2014 Capital Project #14023	(57,000)	274	(15,618,000)	3,919,566	(4.0)	-\$193	Estimated 57,000 calls will be avoided and employed the system average AHT of 274 seconds for the estimate. TY2016 ESS Labor Forecast Adjustment Calculation (-4 FTEs x \$23.12 hrly. rate x 2088 hrs. = -\$193)
18	SEAd Phase 1 Capital Project #13009	2,185,721	(8)	(17,485,768)	3,919,566	(4.5)	-\$217	Call volume is the total of 2016 base and all upward/downward pressures. Estimated the project will lower the overall AHT by 8 seconds. TY2016 ESS Labor Forecast Adjustment Calculation (-4.5 FTEs x \$23.12 hrly. rate x 2088 hrs. = -\$217)
19	SEAd Phase 2 Capital Project #14017	2,185,721	(5)	(10,928,605)	3,919,566	(2.8)	-\$135	Call volume is the total of 2016 base and all upward/downward pressures. Estimated the project will lower the overall AHT by 5 seconds. TY2016 ESS Labor Forecast Adjustment Calculation (-2.8 FTEs x \$23.12 hrly. rate x 2088 hrs. = -\$135)

eWFM FTE - See CCC Operations 100006.000 Supplemental Workpaper 3 -eWFM FTE Requirements G48

**Beginning of Workpaper
100007.000 - CCC Support**

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Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 9. Customer Contact Center Support
 Workpaper: 100007.000 - CCC Support

Activity Description:

Customer Contact Center (CCC) Support work group activities include resource planning and scheduling; technology support; training; quality assurance; policy and procedures support; planning and analysis functions; and clerical support. And also includes the costs associated with software licensing and maintenance, and telephone expenses.

Forecast Explanations:

Labor - Base YR Rec

A base year forecast method was used because the workgroup experienced reorganizational changes that began in 2010 and completed in 2012. The changes consisted of moving the Level of Service ("LOS") team from SoCalGas to SDG&E in 2010. In addition, three new positions were added in 2012 to: (1) support analytics, and review processes and enhancements for CCC systems including IVR, ClickFox, Nexedia and Data Warehouse; (2) monitor real-time level of service, call volume forecasting, resource planning and dispatch for the ESSs; and (3) to assist in training, coordination, planning and scheduling. Therefore, the base year provides a reasonable starting point for future expenditures.

Non-Labor - Base YR Rec

See above.

NSE - Base YR Rec

N/A

Summary of Results:

		In 2013\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
		2009	2010	2011	2012	2013	2014	2015	2016	
Years										
Labor	1,300	1,154	1,300	1,403	1,313	1,313	1,313	1,313		
Non-Labor	993	1,251	1,088	903	1,009	1,060	1,224	1,082		
NSE	0	0	0	0	0	0	0	0		
Total	2,293	2,405	2,389	2,306	2,322	2,373	2,537	2,395		
FTE	19.7	18.0	19.5	21.7	20.3	20.3	20.3	20.3		

Note: Totals may include rounding differences.

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Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 9. Customer Contact Center Support
 Workpaper: 100007.000 - CCC 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	Base YR Rec	1,313	1,313	1,313	0	0	0	1,313	1,313	1,313
Non-Labor	Base YR Rec	1,009	1,009	1,009	51	215	73	1,060	1,224	1,082
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
Total		2,322	2,322	2,322	51	215	73	2,373	2,537	2,395
FTE	Base YR Rec	20.3	20.3	20.3	0.0	0.0	0.0	20.3	20.3	20.3

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	36	0	36	0.0	1-Sided Adj
Upgrade Aspect/EWFM software used for forecasting and scheduling ESS						
2014	0	15	0	15	0.0	1-Sided Adj
Upgrade Nexidia software used for call analytics						
2014 Total	0	51	0	51	0.0	
2015	0	25	0	25	0.0	1-Sided Adj
Acquire additional NICE (call recording) licenses						
2015	0	117	0	117	0.0	1-Sided Adj
Call Recording Replacement Project						
2015	0	73	0	73	0.0	1-Sided Adj
Capital Project Impacts: Annual software maintenance fee resulting from the implementation of the SEAd Capital Projects #13009 and #14017.						
2015 Total	0	215	0	215	0.0	
2016	0	73	0	73	0.0	1-Sided Adj
Capital Project Impacts: Annual software maintenance fee resulting from the implementation of the SEAd Capital Projects #13009 and #14017.						

Note: Totals may include rounding differences.

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Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
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Category-Sub: 9. Customer Contact Center Support
Workpaper: 100007.000 - CCC Support

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adi Type</u>
2016 Total	0	73	0	73	0.0	

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
Witness: Bradley M. Baugh
Category: A. Customer Service Operations
Category-Sub: 9. Customer Contact Center Support
Workpaper: 100007.000 - CCC Support

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	1,807	1,741	1,137	1,239	1,135
Non-Labor	1,078	1,384	1,285	889	907
NSE	0	0	0	0	0
Total	2,885	3,125	2,422	2,128	2,042
FTE	24.2	22.9	16.8	23.2	19.5
Adjustments (Nominal \$) **					
Labor	-770	-805	-48	-39	-2
Non-Labor	-180	-227	-237	0	102
NSE	0	0	0	0	0
Total	-950	-1,032	-285	-39	101
FTE	-7.3	-7.5	0.0	-4.5	-2.3
Recorded-Adjusted (Nominal \$)					
Labor	1,037	936	1,089	1,200	1,134
Non-Labor	898	1,157	1,048	889	1,009
NSE	0	0	0	0	0
Total	1,936	2,093	2,137	2,089	2,143
FTE	16.9	15.4	16.8	18.7	17.2
Vacation & Sick (Nominal \$)					
Labor	160	149	160	174	180
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	160	149	160	174	180
FTE	2.8	2.7	2.7	3.0	3.0
Escalation to 2013\$					
Labor	103	69	51	30	0
Non-Labor	95	94	41	14	0
NSE	0	0	0	0	0
Total	197	162	92	43	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	1,300	1,154	1,300	1,403	1,313
Non-Labor	993	1,251	1,088	903	1,009
NSE	0	0	0	0	0
Total	2,293	2,405	2,389	2,306	2,322
FTE	19.7	18.1	19.5	21.7	20.2

* 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.

San Diego Gas & Electric Company
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Non-Shared Service Workpapers

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 9. Customer Contact Center Support
 Workpaper: 100007.000 - CCC Support

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs					
Years	2009	2010	2011	2012	2013
Labor	-770	-805	-48	-39	-2
Non-Labor	-180	-227	-237	0	102
NSE	0	0	0	0	0
Total	-950	-1,032	-285	-39	101
FTE	-7.3	-7.5	0.0	-4.5	-2.3

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	-109	0	0.0	1-Sided Adj	N/A	CSCHRAMM2013 1107221046890
Exclude Katz patent infringement settlement charges from cost center 2100-0019 in work group 100007 CCC Support.							
2009	-304	-3	0	-3.8	CCTR Transf	To 2100-0642.000	CSCHRAMM2013 1107221220710
Transfer labor, FTE, and non-labor costs associated with IT Tech Support function from cost center 2100-0019 in Work Paper Group 100007 CCC Support to cost center 2100-0642 in Work Paper Group 1IT001 Information Technology to align function where activity resides.							
2009	-232	-5	0	-1.8	CCTR Transf	To 2100-0642.000	CSCHRAMM2013 1107221601690
Transfer labor, FTE, and non-labor costs associated with IT Tech Manager function from cost center 2100-0019 in Work Paper Group 100007 CCC Support to cost center 2100-0642 in Work Paper Group 1IT001 Information Technology to align function where activity resides.							
2009	0	-34	0	0.0	CCTR Transf	To 2200-0404.000	CSCHRAMM2013 1107223742667
Transfer costs associated with software maintenance (Kana) charged to SCG billing internal order 7037650 from cost center 2100-0019 in work group 100007 SDG&E CCC Support to SCG cost center 2200-0404 in work group 200001 SCG CCC Support where activity resides.							
2009	13	0	0	0.2	CCTR Transf	From 2100-0013.000	CSCHRAMM2013 1107224436920
Transfer labor/FTE costs associatiated with Project Advisor function from cost center 2100-0013 in work paper group 100006 CCC Operations to cost center 2100-3516 in work paper group 100007 CCC Support to align function where it resides.							

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 9. Customer Contact Center Support
 Workpaper: 100007.000 - CCC Support

<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	-182	0	0	-0.9	CCTR Transf	To 2200-0401.000	CSCHRAMM2013 1121182148840
Transfer costs associated with SCG Customer Contact Center (CCC) Director from cost center 2100-3510 in work group 100007 SDG&E CCC Support to SCG cost center 2200-0401 in work group 200001 SCG CCC Support where activity resides.							
2009	-54	0	0	-0.8	CCTR Transf	To 2100-0013.000	CSCHRAMM2013 1121182648267
Transfer costs associated with Customer Contact Center (CCC) Supervisor from 2100-3512 in work group 100007 CCC Support to cost center 2100-0013 in work group 100006 CCC Operations to align function where it resides.							
2009	-11	0	0	-0.2	CCTR Transf	To 2100-0013.000	CSCHRAMM2013 1121182727487
Transfer costs associated with Customer Contact Center (CCC) Associate Supervisor from 2100-3515 in work group 100007 CCC Support to cost center 2100-0013 in work group 100006 CCC Operations to align function where it resides.							
2009	0	-29	0	0.0	CCTR Transf	From 2200-0404.000	RMCHRIST20131 112082722763
Transfer costs associated with software ,computer maintenance charged to SDG&E billing internal order 300589479 from cost center 2200-0404 in work group 200001 SCG Support to SDG&E cost center 2100-0019 in work group 100007 SDG&E CCC Support where activity resides.							
2009 Total	-770	-180	0	-7.3			
2010	-298	-12	0	-3.5	CCTR Transf	To 2100-0642.000	CSCHRAMM2013 1107221328560
Transfer labor, FTE, and non-labor costs associated with IT Tech Support function from cost center 2100-0019 in Work Paper Group 100007 CCC Support to cost center 2100-0642 in Work Paper Group 11T001 Information Technology to align function where activity resides.							
2010	-226	-6	0	-1.7	CCTR Transf	To 2100-0642.000	CSCHRAMM2013 1107221705560
Transfer labor, FTE, and non-labor costs associated with IT Tech Manager function from cost center 2100-0019 in Work Paper Group 100007 CCC Support to cost center 2100-0642 in Work Paper Group 11T001 Information Technology to align function where activity resides.							
2010	0	-303	0	0.0	CCTR Transf	To 2200-0404.000	CSCHRAMM2013 1107223849000
Transfer costs associated with software maintenance (Kana, Nexidia) charged to SCG billing internal order 7037650 from cost center 2100-0019 in work group 100007 SDG&E CCC Support to SCG cost center 2200-0404 in work group 200001 SCG CCC Support where activity resides. .							

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 9. Customer Contact Center Support
 Workpaper: 100007.000 - CCC Support

<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	11	0	0	0.2	CCTR Transf	From 2100-0013.000	CSCHRAMM2013 1107224607510
Transfer labor / FTE costs associatiated with Quality Observation Specialist function from cost center 2100-0013 in work paper group 100006 CCC Operations to cost center 2100-3517 in work paper group 100007 CCC Support to align function where it resides.							
2010	-181	0	0	-0.9	CCTR Transf	To 2200-0401.000	CSCHRAMM2013 1121182235890
Transfer costs associated with SCG Customer Contact Center (CCC) Director from cost center 2100-3510 in work group 100007 SDG&E CCC Support to SCG cost center 2200-0401 in work group 200001 SCG CCC Support where activity resides.							
2010	-111	0	0	-1.6	CCTR Transf	To 2100-0013.000	CSCHRAMM2013 1121182859997
Transfer costs associated with Customer Contact Center (CCC) Supervisor and Associate Supervisor from 2100-3512 in work group 100007 CCC Support to cost center 2100-0013 in work group 100006 CCC Operations to align function where it resides.							
2010	0	94	0	0.0	CCTR Transf	From 2200-0404.000	RMCHRIST20131 111111508593
Transfer costs associated with software, computer maintenance charged to SDG&E billing internal order 300589479 from cost center 2200-0404 in work group 200001 SCG CCC Support to SDG&E cost center 2100-0019 in work group 100007 SDG&E CCC Support where activity resides.							
2010 Total	-805	-227	0	-7.5			

2011	-163	-7	0	-1.7	CCTR Transf	To 2100-0642.000	CSCHRAMM2013 1107221427490
Transfer labor, FTE, and non-labor costs associated with IT Tech Support function from cost center 2100-0019 in Work Paper Group 100007 CCC Support to cost center 2100-0642 in Work Paper Group 11T001 Information Technology to align function where activity resides.							
2011	-6	-0.506	0	-0.1	CCTR Transf	To 2100-0642.000	CSCHRAMM2013 1107221831967
Transfer labor, FTE, and non-labor costs associated with IT Tech Manager function from cost center 2100-0019 in Work Paper Group 100007 CCC Support to cost center 2100-0642 in Work Paper Group 11T001 Information Technology to align function where activity resides.							
2011	64	0	0	0.8	CCTR Transf	From 2100-0013.000	CSCHRAMM2013 1107223003443
Transfer labor/FTE costs associated with Business Advisor function from cost center 2100-0013 in work group 100006 CCC Operations to cost center 2100-3518 in work group 100007 CCC Support where function resides.							

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 9. Customer Contact Center Support
 Workpaper: 100007.000 - CCC Support

<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	-261	0	0.0	CCTR Transf	To 2200-0404.000	CSCHRAMM2013 1107224215740
<p>Transfer costs associated with software, computer maintenance (Kana, Nexidia, NARC, Avaya, and Nice) charged to SCG billing internal order 7054940 from cost center 2100-0019 in work group 100007 SDG&E CCC Support to SCG cost center 2200-0404 in work group 200001 SCG CCC Support where activity resides.</p>							
2011	32	0	0	0.6	CCTR Transf	From 2100-0013.000	CSCHRAMM2013 1107224744710
<p>Transfer labor / FTE costs associated with Quality Observation Specialist function from cost center 2100-0013 in work paper group 100006 CCC Operations to cost center 2100-3517 in work paper group 100007 CCC Support to align function where it resides.</p>							
2011	93	0	0	1.3	CCTR Transf	From 2100-0013.000	CSCHRAMM2013 1107225014550
<p>Transfer labor / FTE costs associated with Complaint Resolution Supervisor, and Ops Support Analyst functions from 2100-0013 in work paper group 100006 CCC Operations to cost center 2100-3516 in work paper group 100007 CCC Support to align functions where they resides.</p>							
2011	-10	0	0	-0.1	CCTR Transf	To 2200-0401.000	CSCHRAMM2013 1121182349287
<p>Transfer costs associated with SCG Customer Contact Center (CCC) Director from cost center 2100-3510 in work group 100007 SDG&E CCC Support to SCG cost center 2200-0401 in work group 200001 SCG CCC Support where activity resides.</p>							
2011	-58	0	0	-0.8	CCTR Transf	To 2100-0013.000	CSCHRAMM2013 1121182957867
<p>Transfer costs associated with Customer Contact Center (CCC) Supervisor and Associate Supervisor from 2100-3512 in work group 100007 CCC Support to cost center 2100-0013 in work group 100006 CCC Operations to align function where it resides.</p>							
2011	0	32	0	0.0	CCTR Transf	From 2200-0404.000	RMCHRIST20131 111111548373
<p>Transfer costs associated with software, computer maintenance charged to SDG&E billing internal order 300589479 from cost center 2200-0404 in work group 200001 SCG CCC Support to SDG&E cost center 2100-0019 in work group 100007 SDG&E CCC Support where activity resides.</p>							
2011 Total	-48	-237	0	0.0			

2012	-249	0	0	-7.2	CCTR Transf	To 2100-0013.000	CSCHRAMM2013 1107222126730
<p>Transfer labor / FTE costs associated with Energy Service Specialist Trainees labor from CC 2100-3515 in work paper group 100007 CCC Support to cost center 2100-0013 in work group 100006 CCC Operations to align costs where activity resides.</p>							

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 9. Customer Contact Center Support
 Workpaper: 100007.000 - CCC Support

<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	70	0	0	0.8	CCTR Transf	From 2100-0013.000	CSCHRAMM2013 1107223338207
Transfer labor/FTE costs associated with Business Advisor function from cost center 2100-0013 in work group 100006 CCC Operations to cost center 2100-3518 in work group 100007 CCC Support where function resides.							
2012	19	0	0	0.4	CCTR Transf	From 2100-0013.000	CSCHRAMM2013 1107225941373
Transfer labor / FTE costs associatiated with Training Coordinator function from cost center 2100-0013 in work paper group 100006 CCC Operations to cost center 2100-3515 in work paper group 100007 CCC Support to align function where it resides.							
2012	121	0	0	1.5	CCTR Transf	From 2100-0013.000	CSCHRAMM2013 1107230101007
Transfer labor / FTE costs associatiated with CCC Ops Support Analyst, Complaint Resolution Supervisor, and Service Coordinator functions from cost center 2100-0013 in work paper group 100006 CCC Operations to cost center 2100-3516 in work paper group 100007 CCC Support to align functions where they resides.							
2012 Total	-39	0	0	-4.5			
2013	74	0	0	0.8	CCTR Transf	From 2100-3455.000	CSCHRAMM2014 0205184637780
Transfer labor and FTE associated with Customer Contact Center Business Analyst function from cost center 2100-3455 in Work Paper Group 100008 (Residential Services) to cost center 2100-3518 In Work Paper Group 100007 (Customer Contact Center - Support) to align costs where function resides.							
2013	132	0	0	2.1	CCTR Transf	From 2100-0013.000	CSCHRAMM2014 0213173127597
Transfer labor associated with CCC Support function from cost center 2100-0013 in work group 100006 CCC Operations to cost center 2100-3515 in work group 100007 CCC Support, to align costs where activity resides.							
2013	-156	0	0	-4.5	CCTR Transf	To 2100-0013.000	CSCHRAMM2014 0213173755263
Transfer labor associated with CCC Operations function from cost center 2100-3515 in work group 100007 CCC Support to cost center 2100-0013 in work group 100006 CCC Operations, to align costs where activity resides.							
2013	-51	0	0	-0.7	CCTR Transf	To 2100-0013.000	CSCHRAMM2014 0213173922533
Transfer labor associated with CCC Operations function from cost center 2100-3517 in work group 100007 CCC Support to cost center 2100-0013 in work group 100006 CCC Operations, to align costs where activity resides.							

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
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Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
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 Category-Sub: 9. Customer Contact Center Support
 Workpaper: 100007.000 - CCC Support

<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	60	0	0.0	CCTR Transf	From 2100-3167.000	CSCHRAMM2014 0514141403607
Transfer non-labor costs associated with Live Chat from Communications Work Group 100010 cost center 2100-3167 to CCC Support Work Group 100007 cost center 2100-0019 to align costs where activity/ function resides.							
2013	0	43	0	0.0	CCTR Transf	From 2200-0404.000	RMCHRIST20140 210135428873
Transfer SDG&E portion of Aspect Expense from cost center 2200-0404 in work group 200001 CCC-Support to cost center 2100-0119 in work group 100007 CCC-Support SDG&E.							
2013 Total	-2	102	0	-2.3			

Note: Totals may include rounding differences.

**Beginning of Workpaper
100012.000 - Other Office**

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 10. Other Office
 Workpaper: 100012.000 - Other Office

Activity Description:

The Customer Service Other Office work group contains the Vice President of Customer Services and a Business Planning & Budget Project Manager. The Vice President provides oversight and leadership for all Customer Services activities. The Business Planning & Budgets Project Manager provides support and guidance to the Customer Service organization in all aspects of budget planning, outlooks, key performance indicators and acts as a liaison between operations and the financial department of the company.

Forecast Explanations:

Labor - Base YR Rec

A base year forecast method was used because 2013 represents the current activity level and is not expected to change. Furthermore, this workgroup has a small number of FTEs whose work is not cyclical in nature and should remain constant for 2014 through TY 2016. Therefore, the base year provides a reasonable starting point for future expenditures.

Non-Labor - Base YR Rec

See above.

NSE - Base YR Rec

N/A

Summary of Results:

		In 2013\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2009	2010	2011	2012	2013	2014	2015	2016	
Labor		516	400	423	437	588	588	588	588	
Non-Labor		312	49	462	1,007	283	283	283	283	
NSE		0	0	0	0	0	0	0	0	
Total		828	449	885	1,443	871	871	871	871	
FTE		3.4	2.8	3.2	3.1	4.3	4.3	4.3	4.3	

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 10. Other Office
 Workpaper: 100012.000 - Other Office

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	588	588	588	0	0	0	588	588	588
Non-Labor	Base YR Rec	283	283	283	0	0	0	283	283	283
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
Total		871	871	871	0	0	0	871	871	871
FTE	Base YR Rec	4.3	4.3	4.3	0.0	0.0	0.0	4.3	4.3	4.3

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 Total	0	0	0	0	0.0	
2015 Total	0	0	0	0	0.0	
2016 Total	0	0	0	0	0.0	

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
Witness: Bradley M. Baugh
Category: A. Customer Service Operations
Category-Sub: 10. Other Office
Workpaper: 100012.000 - Other Office

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	726	581	420	409	593
Non-Labor	1,029	255	632	1,445	733
NSE	0	0	0	0	0
Total	1,755	836	1,052	1,854	1,326
FTE	4.0	3.6	3.5	3.2	4.6
Adjustments (Nominal \$) **					
Labor	-314	-257	-66	-35	-86
Non-Labor	-746	-210	-187	-454	-450
NSE	0	0	0	0	0
Total	-1,061	-467	-252	-489	-535
FTE	-1.1	-1.2	-0.8	-0.5	-0.9
Recorded-Adjusted (Nominal \$)					
Labor	412	325	354	373	507
Non-Labor	282	45	445	991	283
NSE	0	0	0	0	0
Total	694	370	799	1,364	790
FTE	2.9	2.4	2.7	2.7	3.7
Vacation & Sick (Nominal \$)					
Labor	64	52	52	54	80
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	64	52	52	54	80
FTE	0.5	0.4	0.4	0.4	0.6
Escalation to 2013\$					
Labor	41	24	17	9	0
Non-Labor	30	4	17	15	0
NSE	0	0	0	0	0
Total	71	27	34	25	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	516	400	423	437	588
Non-Labor	312	49	462	1,007	283
NSE	0	0	0	0	0
Total	828	449	885	1,443	871
FTE	3.4	2.8	3.1	3.1	4.3

* 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.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 10. Other Office
 Workpaper: 100012.000 - Other Office

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs					
Years	2009	2010	2011	2012	2013
Labor	-314	-257	-66	-35	-86
Non-Labor	-746	-210	-187	-454	-450
NSE	0	0	0	0	0
Total	-1,061	-467	-252	-489	-535
FTE	-1.1	-1.2	-0.8	-0.5	-0.9

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	-85	-724	0	-0.1	CCTR Transf	To 2100-0058.000	CSCHRAMM2013 1030113343797
Transfer associated fire safety communications dollars to Communications cost center 2100-0058 in Work Group 100010 where activity resides.							
2009	-230	-22	0	-1.0	CCTR Transf	To 2200-2282.000	CSCHRAMM2013 1030114445713
Transfer associated SCG Shared Services VP Customer Solutions labor and non-labor historical dollars from cost center 2100-3701 in Work Group 100012 to the SCG USS cost center 2200-2282 where activity resides.							
2009 Total	-314	-746	0	-1.1			

2010	-27	-63	0	-0.2	CCTR Transf	To 2100-0058.000	CSCHRAMM2013 1030113527273
Transfer associated fire safety communications dollars to Communications cost center 2100-0058 in Work Group 100010 where activity resides.							
2010	-230	-48	0	-1.0	CCTR Transf	To 2200-2282.000	CSCHRAMM2013 1030114607590
Transfer associated SCG Shared Services VP Customer Solutions labor and non-labor historical dollars from cost center 2100-3701 in Work Group 100012 to the SCG USS cost center 2200-2282 where activity resides.							
2010	0	-99	0	0.0	1-Sided Adj	N/A	CSCHRAMM2013 1104171542260
Exclusion for Dynamic Pricing 100 % Refundable per filing in Application 10-07-009.							
Reference Internal Order: 7049031							

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 10. Other Office
 Workpaper: 100012.000 - Other Office

<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 Total	-257	-210	0	-1.2			
2011	-13	-9	0	-0.1	CCTR Transf	To 2200-2282.000	CSCHRAMM2013 1030114650473
Transfer associated SCG Shared Services VP Customer Solutions labor and non-labor historical dollars from cost center 2100-3701 in Work Group 100012 to the SCG USS cost center 2200-2282 where activity resides.							
2011	-52	-178	0	-0.7	1-Sided Adj	N/A	CSCHRAMM2013 1104172805513
Exclusion for Dynamic Pricing 100% Refundable per filing in Application 10-07-009. Reference Internal Orders: 7049029, 7049031, 7049033, 7049035, 7053694							
2011 Total	-66	-187	0	-0.8			
2012	0	-83	0	0.0	1-Sided Adj	N/A	CSCHRAMM2013 1030114902377
Exclude legal/audit fees which were a one time fee and non-recurring.							
2012	-35	-371	0	-0.5	1-Sided Adj	N/A	CSCHRAMM2013 1104173749297
Exclusion for Dynamic Pricing 100% Refundable per filing in Application 10-07-009. Reference Internal Orders: 7049029, 7049031, 7053694							
2012 Total	-35	-454	0	-0.5			
2013	-37	-15	0	-0.4	1-Sided Adj	N/A	CSCHRAMM2014 0205094357247
Exclusion for Dynamic Pricing Refundable IO s per filing in Application 10-07-009 (IO 7049031 - DPP PMO)							
2013	-32	0	0	-0.3	1-Sided Adj	N/A	CSCHRAMM2014 0205094544823
Exclusion for Dynamic Pricing Refundable IO s per filing in Application 10-07-009 (IO 7049035 - DPP COE)							
2013	-16	0	0	-0.2	1-Sided Adj	N/A	CSCHRAMM2014 0205094718737
Exclusion for Dynamic Pricing Refundable IO s per filing in Application 10-07-009 (IO 7049037 - DPP Customer Experience)							

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
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Non-Shared Service Workpapers

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations
 Category-Sub: 10. Other Office
 Workpaper: 100012.000 - Other Office

<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	-356	0	0.0	1-Sided Adj	N/A	CSCHRAMM2014 0205095120080
Exclusion for Dynamic Pricing Refundable IO s per filing in Application 10-07-009 (IO 7049029 - DPP Facilities)							
2013	0	-78	0	0.0	CCTR Transf	To 2100-0058.000	CSCHRAMM2014 0513140915767
Transfer non-labor costs associated with mobile applications from cost center 2100-0004 in work group 100012 Other Office to cost center 2100-0058 in work group 100010 Communications & Research to align costs where the function resides.							
2013 Total	-86	-450	0	-0.9			

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
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Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
Witness: Bradley M. Baugh
Category: B. Customer Service Information
Workpaper: VARIOUS

Summary for Category: B. Customer Service Information

	In 2013\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2013	2014	2015	2016
Labor	10,618	11,259	11,659	12,673
Non-Labor	10,923	12,700	15,270	17,447
NSE	0	0	5	5
Total	21,541	23,959	26,934	30,125
FTE	117.6	124.4	128.4	139.6

Workpapers belonging to this Category:

100008.000 Residential Customer Services

Labor	2,578	2,578	2,578	2,903
Non-Labor	2,997	2,559	2,684	3,703
NSE	0	0	0	0
Total	5,575	5,137	5,262	6,606
FTE	25.1	25.1	25.1	28.6

100009.000 C&I Services

Labor	4,417	4,594	4,591	4,826
Non-Labor	887	887	887	962
NSE	0	0	0	0
Total	5,304	5,481	5,478	5,788
FTE	52.2	54.0	54.0	56.5

100010.000 Communications Research & Web

Labor	2,204	2,668	2,768	3,023
Non-Labor	5,736	7,951	10,396	11,264
NSE	0	0	0	0
Total	7,940	10,619	13,164	14,287
FTE	23.9	28.9	29.9	32.9

100011.000 Customer Programs & Projects

Labor	1,419	1,419	1,722	1,921
Non-Labor	1,303	1,303	1,303	1,518
NSE	0	0	5	5
Total	2,722	2,722	3,030	3,444
FTE	16.4	16.4	19.4	21.6

Note: Totals may include rounding differences.

Beginning of Workpaper
100008.000 - Residential Customer Services

San Diego Gas & Electric Company
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Non-Shared Service Workpapers

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: B. Customer Service Information
 Category-Sub: 1. Residential Customer Services
 Workpaper: 100008.000 - Residential Customer Services

Activity Description:

The Residential Customer Services (RCS) represents a department formed in 2012 with the objective of centralizing key functional groups that deliver, manage or support Residential Customers. The formation of the RCS department involved combining various functions that were previously located in other SDG&E Customer Service departments to provide a more synergistic working group focused on delivering and enhancing the overall customer experience for the approximately 1.25 million residential residences in the region. The key subgroups within the new RCS department are the Customer Contact Center (CCC), Residential Marketing and Outreach groups, the Customer Assistance group, Residential Support Services, Electric Clean Transportation, and Residential Products and Services. Note the expenses for the CCC can be found in Workgroups 100006 and 100007.

Forecast Explanations:

Labor - Base YR Rec

A base year forecast method was used because it represents the first full year the RCS department was operational. Labor increases were needed to support services for the rapidly growing electric vehicle and residential photovoltaic markets. In addition, several changes to electric rates in 2013 required an increase in education and outreach resources to address significant increases in customers' utility bills which will continue with activities such as NEM reform and residential rate reform. The associated spike in non-labor expenses included the launch of a new customer behavioral program (Manage Act Save program) designed to encourage energy management behaviors, and increased education on rate structures and how they impact utility bills. These activities are needed to help customers gain a more holistic understanding of how to mitigate potential bill increases. Therefore, the base year provides a reasonable starting point for future expenditures.

Non-Labor - Base YR Rec

See above.

NSE - Base YR Rec

N/A

Summary of Results:

		In 2013\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2009	2010	2011	2012	2013	2014	2015	2016	
Labor		1,688	1,422	1,833	2,471	2,578	2,578	2,578	2,903	
Non-Labor		1,768	1,422	1,616	1,635	2,997	2,559	2,684	3,703	
NSE		0	0	0	0	0	0	0	0	
Total		3,457	2,844	3,449	4,105	5,576	5,138	5,263	6,607	
FTE		17.4	15.0	19.1	25.5	25.1	25.1	25.1	28.6	

Note: Totals may include rounding differences.

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Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: B. Customer Service Information
 Category-Sub: 1. Residential Customer Services
 Workpaper: 100008.000 - Residential Customer 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	2,578	2,578	2,578	0	0	325	2,578	2,578	2,903
Non-Labor	Base YR Rec	2,997	2,997	2,997	-438	-313	706	2,559	2,684	3,703
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
Total		5,576	5,576	5,576	-438	-313	1,031	5,138	5,263	6,607
FTE	Base YR Rec	25.1	25.1	25.1	0.0	0.0	3.5	25.1	25.1	28.6

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	-438	0	-438	0.0	1-Sided Adj

Adjustment for Manage Act Save: (\$438K) reduction for one-time non-recurring third party development costs for a customer engagement multi-channel platform to deliver customer energy insight to targeted customer groups. (Manage Act Save)

2014 Total	0	-438	0	-438	0.0	
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2015	0	-438	0	-438	0.0	1-Sided Adj
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Adjustment for Manage Act Save: (\$438K) reduction for one-time non-recurring third party development costs for a customer engagement multi-channel platform to deliver customer energy insight to targeted customer groups. (Manage Act Save)

2015	0	75	0	75	0.0	1-Sided Adj
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Plug-In Electric Vehicle Outreach & Education: Incremental non-labor in the amount of \$75K to fund education and outreach related to electric vehicles including contract labor to attend community events, collateral design and materials, website tools, and online targeted messaging. These activities comply with the California Public Utilities Commission's directives in proceeding R.09-08-099 and R.13-11-007.

2015	0	50	0	50	0.0	1-Sided Adj
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Rate Reform: Collateral for rate reform.

2015 Total	0	-313	0	-313	0.0	
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Note: Totals may include rounding differences.

San Diego Gas & Electric Company
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Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: B. Customer Service Information
 Category-Sub: 1. Residential Customer Services
 Workpaper: 100008.000 - Residential Customer Services

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adi Type</u>
2016	0	-438	0	-438	0.0	1-Sided Adj

Adjustment for Manage Act Save: (\$438K) decrement for one-time non-recurring third party development costs for a customer engagement multi-channel platform to deliver customer energy insight to targeted customer groups. (Manage Act Save)

2016	0	100	0	100	0.0	1-Sided Adj
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Plug-In electric Vehicle Outreach and Education: Incremental non-labor in the amount of \$100K to fund education and outreach related to electric vehicles including contract labor to attend community events, collateral design and materials, website tools, and online targeted messaging. These activities comply with the California Public Utilities Commission's directives in proceeding R.09-08-099.

2016	95	3	0	98	1.0	1-Sided Adj
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Energy Management Tool - Product Manager: 1 FTE (Product Manager) at \$95 annual salary and related non-labor at \$3K. Project Manager will be responsible for managing the vendor contract for SDG&E's online Energy Management Tool including the release of new product features, oversight of production defects and the facilitation of new change requests related to product enhancements.

2016	0	424	0	424	0.0	1-Sided Adj
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Energy Management Tool - licensing hosting and maintenance fees: Annual vendor hosting and maintenance fees in the amount of \$424K for SDG&E's online Energy Management Tool. See Residential Customer Services 100008.000 Supplemental Workpaper 1 - Calculations for Aclara/Batch Rate Comparison Annual Hosting and Maintenance Fees and 5 Year License Term fees for details. (Reference cell D15)

2016	0	327	0	327	0.0	1-Sided Adj
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Customer Data Analytics and Technical Studies - tools and consulting services: Incremental increase in non-labor in the amount of \$327K for maintenance of customer segmentation and analytics tools. The tools help to ensure we are communicating with customers in a manner in which they prefer about topics they have elected to hear about.

2016	230	7	0	237	2.5	1-Sided Adj
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Customer Data Analytics and Technical Studies - tools and consulting services: 2.5 FTEs (\$230K) and associated non-labor (\$7K) to support customer data analytics for current and future time variant rates. These positions will perform analytics work as it relates to targeted marketing and the effectiveness of the marketing in the future. The positions include: 1 FTE (Senior Market Analyst) at \$90K annual salary; .5 FTE (Business Systems Advisor) at \$44K representing 50% of the annual salary; and 1 FTE (Project Manager II) at \$96K annual salary.

Note: Totals may include rounding differences.

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 Witness: Bradley M. Baugh
 Category: B. Customer Service Information
 Category-Sub: 1. Residential Customer Services
 Workpaper: 100008.000 - Residential Customer Services

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adi Type</u>
2016	0	158	0	158	0.0	1-Sided Adj

Energy management Tool - licensing hosting and maintenance fees: One-fifth of the license renewal costs for SDG&E's online Energy Management Tool and batch processing of customer information (5 year term). The online Energy Management Tool and batch processing of customer rate comparison information was implemented in response to the California Public Utilities Commission's Decision 12-12-004 in SDG&E's Dynamic Pricing Application 10-07-009. See Residential Customer Services 100008.000 Supplemental Workpaper - Calculations for Aclara/Batch Rate Comparison Annual Hosting and Mainenenace Fees and 5 Year License Term fees for details. (Reference cell D23)

2016	0	50	0	50	0.0	1-Sided Adj
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Rate Reform: Collateral for Rate Reform

2016	0	75	0	75	0.0	1-Sided Adj
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Energy Management Tool - batch rate comparisons: Incremental costs for increased licensing fees to offer rate comparisons to a larger residential population.

2016 Total	325	706	0	1,031	3.5	
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Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
Witness: Bradley M. Baugh
Category: B. Customer Service Information
Category-Sub: 1. Residential Customer Services
Workpaper: 100008.000 - Residential Customer Services

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	1,386	1,394	1,956	2,492	2,800
Non-Labor	1,537	1,232	2,266	2,725	3,915
NSE	0	0	0	0	0
Total	2,923	2,626	4,222	5,217	6,715
FTE	15.9	15.0	20.9	26.5	27.6
Adjustments (Nominal \$) **					
Labor	-39	-241	-421	-380	-574
Non-Labor	63	84	-711	-1,115	-918
NSE	0	0	0	0	0
Total	24	-157	-1,132	-1,495	-1,492
FTE	-1.0	-2.2	-4.5	-4.5	-6.2
Recorded-Adjusted (Nominal \$)					
Labor	1,347	1,154	1,535	2,112	2,225
Non-Labor	1,600	1,315	1,556	1,610	2,997
NSE	0	0	0	0	0
Total	2,947	2,469	3,090	3,722	5,223
FTE	14.9	12.8	16.4	22.0	21.4
Vacation & Sick (Nominal \$)					
Labor	208	184	226	306	353
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	208	184	226	306	353
FTE	2.5	2.2	2.7	3.5	3.7
Escalation to 2013\$					
Labor	134	85	72	52	0
Non-Labor	168	106	60	25	0
NSE	0	0	0	0	0
Total	302	191	132	77	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	1,688	1,422	1,833	2,471	2,578
Non-Labor	1,768	1,422	1,616	1,635	2,997
NSE	0	0	0	0	0
Total	3,457	2,844	3,449	4,105	5,576
FTE	17.4	15.0	19.1	25.5	25.1

* After company-wide exclusions of Non-GRC costs

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

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
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Non-Shared Service Workpapers

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: B. Customer Service Information
 Category-Sub: 1. Residential Customer Services
 Workpaper: 100008.000 - Residential Customer Services

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs					
Years	2009	2010	2011	2012	2013
Labor	-39	-241	-421	-380	-574
Non-Labor	63	84	-711	-1,115	-918
NSE	0	0	0	0	0
Total	24	-157	-1,132	-1,495	-1,492
FTE	-1.0	-2.2	-4.5	-4.5	-6.2

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	0	66	0	0.0	CCTR Transf	From 2100-0650.000	CSCHRAMM2013 1022110957087
Transfer non-labor costs associated with brochures / fulfillment from cost center 2100-0650 in work group 100011 Customer Programs & Projects to cost center 2100-3593 in work group 100008 Residential Services to align activity where it resides.							
2009	-84	-2	0	-0.9	CCTR Transf	To 2100-3584.000	CSCHRAMM2013 1030181032860
Transfer labor, FTE, and non-labor associated with Project Manager of Customer Services Projects function from cost center 2100-3593 in Work Paper Group 100008 (Residential Services) to cost center 2100-3584 In Work Paper Group 100011 (Customer Programs & Projects) where function resides.							
2009	-85	-3	0	-0.9	CCTR Transf	To 2100-0006.000	CSCHRAMM2013 1030181311083
Transfer labor, FTE, and non-labor associated with Project Manager Customer Service Strategy function from cost center 2100-3593 in Work Paper Group 100008 (Residential Services) to USS cost center 2100-0006 (Customer Service Strategy) where function resides.							
2009	130	2	0	0.8	CCTR Transf	From 2100-3434.000	CSCHRAMM2013 1111145243463
Transfer labor, FTE, and non-labor costs associated with Electric Vehicle Manager from USS cost center 2100-3434 Planning & Development Director to NSS cost center 2100-3675 in work group 100008 to align costs in where function resides.							
2009 Total	-39	63	0	-1.0			

Note: Totals may include rounding differences.

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Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: B. Customer Service Information
 Category-Sub: 1. Residential Customer Services
 Workpaper: 100008.000 - Residential Customer Services

<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	-85	-0.643	0	-0.8	CCTR Transf	To 2100-0006.000	CSCHRAMM2013 1030181506603
Transfer labor, FTE, and non-labor associated with Project Manager Customer Service Strategy function from cost center 2100-3593 in Work Paper Group 100008 (Residential Services) to USS cost center 2100-0006 (Customer Service Strategy) where function resides.							
2010	-80	-4	0	-0.8	CCTR Transf	To 2100-3584.000	CSCHRAMM2013 1030181631797
Transfer labor, FTE, and non-labor associated with Project Manager of Customer Services Projects function from cost center 2100-3593 in Work Paper Group 100008 (Residential Services) to cost center 2100-3584 In Work Paper Group 100011 (Customer Programs & Projects) where function resides.							
2010	-76	-3	0	-0.6	1-Sided Adj	N/A	CSCHRAMM2013 1104181605337
Exclusion for Dynamic Pricing 100% Refundable per filing in Application 10-07-009. Reference Internal Orders: 7049031, 7049035, 7049039, 7049060							
2010	0	92	0	0.0	CCTR Transf	From 2100-0650.000	CSCHRAMM2013 1107163134693
Transfer non-labor costs associated with brochures / fulfillment from cost center 2100-0650 in work group 100011 Customer Programs & Projects to cost center 2100-3593 in work group 100008 Residential Services to align activity where it resides.							
2010 Total	-241	84	0	-2.2			
2011	-83	-9	0	-0.8	CCTR Transf	To 2100-3584.000	CSCHRAMM2013 1030182031727
Transfer labor, FTE, and non-labor associated with Project Manager of Customer Services Projects function from cost center 2100-3593 in Work Paper Group 100008 (Residential Services) to cost center 2100-3584 In Work Paper Group 100011 (Customer Programs & Projects) where function resides.							
2011	-438	-793	0	-4.5	1-Sided Adj	N/A	CSCHRAMM2013 1104182604460
Exclusion for Dynamic Pricing 100% Refundable per filing in Application 10-07-009. Reference Internal Orders: 7049031, 7049035, 7049036, 7049037, 7049039, 7049060							
2011	100	0	0	0.8	CCTR Transf	From 2100-3780.000	CSCHRAMM2013 1107092739560
Transfer labor and FTE for Project Manager position from cost center 2100-3780 in work group 100000 Advanced Meter Operations to cost center 2100-3703 in work group 100008 Residential Services to align costs where function resides.							

Note: Totals may include rounding differences.

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Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: B. Customer Service Information
 Category-Sub: 1. Residential Customer Services
 Workpaper: 100008.000 - Residential Customer Services

<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	92	0	0.0	CCTR Transf	From 2100-0650.000	CSCHRAMM2013 1107163252047
Transfer non-labor costs associated with brochures / fulfillment from cost center 2100-0650 in work group 100011 Customer Programs & Projects to cost center 2100-3593 in work group 100008 Residential Services to align activity where it resides.							
2011 Total	-421	-711	0	-4.5			

2012	-68	-0.819	0	-0.7	CCTR Transf	To 2100-3584.000	CSCHRAMM2013 1030182531353
Transfer labor, FTE, and non-labor associated with Project Manager of Customer Services Projects function from cost center 2100-3593 in Work Paper Group 100008 (Residential Services) to cost center 2100-3584 In Work Paper Group 100011 (Customer Programs & Projects) where function resides.							

2012	-495	-1,226	0	-5.2	1-Sided Adj	N/A	CSCHRAMM2013 1104182730710
Exclusion for Dynamic Pricing 100% Refundable per filing in Application 10-07-009.							
Reference Internal Orders: 7049031, 7049035, 7049036, 7049037, 7049039							

2012	113	0	0	0.8	CCTR Transf	From 2100-3780.000	CSCHRAMM2013 1107092826583
Transfer labor and FTE for Project Manager position from cost center 2100-3780 in work group 100000 Advanced Meter Operations to cost center 2100-3703 in work group 100008 Residential Services to align costs where function resides.							

2012	0	112	0	0.0	CCTR Transf	From 2100-0650.000	CSCHRAMM2013 1107163345293
Transfer non-labor costs associated with brochures / fulfillment from cost center 2100-0650 in work group 100011 Customer Programs & Projects to cost center 2100-3593 in work group 100008 Residential Services to align activity where it resides.							

2012	70	0	0	0.6	CCTR Transf	From 2100-0013.000	CSCHRAMM2013 1107222801067
Transfer labor / FTE costs associated with Project Manager function from 2100-0013 in work group 100006 CCC Operations to cost center 2100-3455 in work group 100008 Residential Services to align costs where function resides.							

2012 Total	-380	-1,115	0	-4.5			
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2013	-39	-1	0	-0.4	1-Sided Adj	N/A	CSCHRAMM2014 0205183907233
Exclusion for Dynamic Pricing Refundable IO s per filing in Application 10-07-009 (Reference Internal Order: 7049031)							

Note: Totals may include rounding differences.

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Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: B. Customer Service Information
 Category-Sub: 1. Residential Customer Services
 Workpaper: 100008.000 - Residential Customer Services

<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	-2	0	0.0	1-Sided Adj	N/A	CSCHRAMM2014 0205184017767
Exclusion for Dynamic Pricing Refundable IO s per filing in Application 10-07-009 (Reference Internal Order: 7049036)							
2013	-0.115	0	0	0.0	1-Sided Adj	N/A	CSCHRAMM2014 0205184055633
Exclusion for Dynamic Pricing Refundable IO s per filing in Application 10-07-009 (Reference Internal Order: 7049035)							
2013	-129	-129	0	-1.4	1-Sided Adj	N/A	CSCHRAMM2014 0205184222797
Exclusion for Dynamic Pricing Refundable IO s per filing in Application 10-07-009 (Reference Internal Orders: 7049035, 7049037, 7049039, 7067162, 7049060)							
2013	-334	-925	0	-3.6	1-Sided Adj	N/A	CSCHRAMM2014 0205184317957
Exclusion for Dynamic Pricing Refundable IO s per filing in Application 10-07-009 (Reference Internal Order: 7049035, 7049036, 7049037, 7049039, 7049040)							
2013	-74	0	0	-0.8	CCTR Transf	To 2100-3518.000	CSCHRAMM2014 0205184637780
Transfer labor and FTE associated with Customer Contact Center Business Analyst function from cost center 2100-3455 in Work Paper Group 100008 (Residential Services) to cost center 2100-3518 In Work Paper Group 100007 (Customer Contact Center - Support) to align costs where function resides.							
2013	0	139	0	0.0	CCTR Transf	From 2100-0650.000	CSCHRAMM2014 0211124020870
Transfer of Customer Fulfillment brochures costs from cost center 2100-0650 in Work Group 100011 Customer Programs & Projects to cost center 2100-3593 in Work Group 100008 Residential Services to align activity where it currently resides.							
2013 Total	-574	-918	0	-6.2			

Note: Totals may include rounding differences.

Supplemental Workpapers for Workpaper 100008.000

Residential Customer Services 100008-000 Supplemental Workpaper 1
Calculations for Aclara/Batch Rate Comparison Annual Hosting, Maintenance Fees and 5 Year License Fees

	A	B	C	D	E	F	G	H	I	J
1		2016			2017			2018		
2		O&M			O&M			O&M		
3		Hosting	Maintenance	Total	Hosting	Maintenance	Total	Hosting	Maintenance	Total
4	Aclara Original Contract	\$ 138,100	\$ 163,844	\$ 301,944	\$ 53,479	\$ 63,448	\$ 116,927	\$ -	\$ -	\$ -
5	Aclara Annual Renewal	\$ -	\$ -	\$ -	\$ 92,167	\$ 165,900	\$ 258,067	\$ 148,198	\$ 266,756	\$ 414,954
6	Sub-total	\$ 138,100	\$ 163,844	\$ 301,944	\$ 145,646	\$ 229,348	\$ 374,994	\$ 148,198	\$ 266,756	\$ 414,954
7	Batch RC - Original	\$ 18,500	\$ 37,000	\$ 55,500	\$ 7,708	\$ 15,417	\$ 23,125	\$ -	\$ -	\$ -
8	Batch Rate Comparison (BRC) Annual Renewal	\$ -	\$ -	\$ -	\$ 12,790	\$ 25,568	\$ 38,358	\$ 20,566	\$ 41,111	\$ 61,677
9	Sub Total	\$ 18,500	\$ 37,000	\$ 55,500	\$ 20,498	\$ 40,985	\$ 61,483	\$ 20,566	\$ 41,111	\$ 61,677
10	Total	\$ 156,600	\$ 200,844	\$ 357,444	\$ 166,144	\$ 270,333	\$ 436,477	\$ 168,764	\$ 307,867	\$ 476,631
11										
12		2016 Total (D10)	2017 Total (G10)	2018 Total (J10)	Total Costs for Hosting & Maintenance (2016-2018)	Forecast Adjustment 1/3rd of total Costs (E13)				
13		\$ 357,444	\$436,477	\$476,631	\$1,270,552	\$423,517				
14										
15	TY2016 Forecast Aclara / BRC Hosting & Maintenance as shown in Residential Customer Services 100008.000 Workpapers forecast adjustment in TY2016				\$ 423,517					
16										
17		License Renewal 5 yr term [A]	Term (Yr) [B]	1/5th of License Renewal [C] = (A/B)						
18	Aclara	\$ 606,263	5	\$ 121,253						
19	Aclara Batch RC	\$ 185,000	5	\$ 37,000						
20	Total TY2016 Forecast - 5 Year License as shown in Residential Customer Services 100008.000 Workpapers forecast adjustments in TY2016.				\$ 158,253					
21										
22	Total Energy Management Tool - licensing, hosting, and maintenance fees, as referenced in testimony Table 34.				\$ 581,770					

Beginning of Workpaper
100009.000 - C&I Services

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: B. Customer Service Information
 Category-Sub: 2. Commercial & Industrial Services
 Workpaper: 100009.000 - C&I Services

Activity Description:

Commercial, Industrial & Governmental Services provides a number of necessary customer support services to commercial customers, including agricultural, industrial, and governmental entities and some customer services to residential customers. Its primary objective is to support the energy service and information needs of San Diego's diverse business population both proactively and reactively. Provide the information and tools to assist them in understanding their rate and service options, managing their energy costs, acquiring or modifying their energy service needs, and safely dealing with unplanned service disruptions.

Forecast Explanations:

Labor - Base YR Rec

A base year forecast method was used because in late 2012 C&I reorganized to include a Customer Experience & Engagement team and in mid-2013 a Small and Medium Business team was established. Therefore, the base year provides a reasonable starting point for future expenditures.

Non-Labor - Base YR Rec

See above.

NSE - Base YR Rec

N/A

Summary of Results:

		In 2013\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2009	2010	2011	2012	2013	2014	2015	2016	
Labor		4,599	4,563	4,311	4,447	4,417	4,594	4,591	4,826	
Non-Labor		665	579	894	958	887	887	887	962	
NSE		0	0	0	0	0	0	0	0	
Total		5,265	5,142	5,205	5,405	5,305	5,482	5,479	5,789	
FTE		53.7	53.0	50.1	52.3	52.2	54.0	54.0	56.5	

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: B. Customer Service Information
 Category-Sub: 2. Commercial & Industrial Services
 Workpaper: 100009.000 - C&I 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	4,417	4,417	4,417	177	174	409	4,594	4,591	4,826
Non-Labor	Base YR Rec	887	887	887	0	0	75	887	887	962
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
Total		5,305	5,305	5,305	177	174	484	5,482	5,479	5,789
FTE	Base YR Rec	52.2	52.2	52.2	1.8	1.8	4.3	54.0	54.0	56.5

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	75	0	0	75	1.0	1-Sided Adj

New Rate Options and Programs: 1 FTE (Business System Analyst) at \$75K annual salary to support the goals and objectives of the newly developed Small and Medium Business team.

2014	107	0	0	107	1.0	1-Sided Adj
------	-----	---	---	-----	-----	-------------

Improving Outage Activities - Project Manager: 1 FTE (Project Manager) at \$107K annual salary to manage and coordinate leading to improved outage management and communication processes.

2014	-5	0	0	-5	-0.2	1-Sided Adj
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Process Improvements: (\$5K) reduction due to process improvement identified in the Planned Outage area. 16% of one FTE for 9 months of the year in 2014.

2014 Total	177	0	0	177	1.8	
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2015	75	0	0	75	1.0	1-Sided Adj
------	----	---	---	----	-----	-------------

New Rate Options and Programs: 1 FTE (Business System Analyst) at \$75K annual salary to support the goals and objectives of the newly developed Small and Medium Business team.

2015	107	0	0	107	1.0	1-Sided Adj
------	-----	---	---	-----	-----	-------------

Improving Outage Activities - Project Manager: 1 FTE (Project Manager) at \$107K annual salary to manage and coordinate leading to improved outage management and communication processes.

2015	-8	0	0	-8	-0.2	1-Sided Adj
------	----	---	---	----	------	-------------

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: B. Customer Service Information
 Category-Sub: 2. Commercial & Industrial Services
 Workpaper: 100009.000 - C&I Services

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj Type</u>
Process Improvements: (\$8K) reduction due to process improvements identified in the Planned Outage area. 20% of one FTE.						
2015 Total	174	0	0	174	1.8	
2016	125	0	0	125	1.5	1-Sided Adj
New Rate Option and Programs: 1 FTE (Business System Analyst) at \$75K annual salary and .5 FTE (Project Specialist) at \$100K annual salary to support the goals and objectives of the newly developed Small and Medium Business team.						
2016	107	0	0	107	1.0	1-Sided Adj
Improving Outage Activities - Project Manager: 1 FTE (Project Manager) at \$107K annual salary to manage and coordinate leading to improved outage management and communication processes.						
2016	185	0	0	185	2.0	1-Sided Adj
New Rate Options and Programs: Incremental increase in labor of \$185K and 2 FTE s to support the goals and objectives of the newly developed Small and Medium Business team. The 2 FTEs include a Customer Energy Specialist at \$88K annual salary and an Account Executive at \$97K annual salary.						
2016	-8	0	0	-8	-0.2	1-Sided Adj
Process Improvements: (\$8K) reduction due to process improvements identified in the Planned Outage area. 20% of one FTE.						
2016	0	75	0	75	0.0	1-Sided Adj
Software Licensing Costs: Annual software hosting fees for the CPP-D capital project #13021.						
2016 Total	409	75	0	484	4.3	

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: B. Customer Service Information
 Category-Sub: 2. Commercial & Industrial Services
 Workpaper: 100009.000 - C&I Services

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	3,669	3,702	3,610	3,802	3,813
Non-Labor	602	536	861	944	887
NSE	0	0	0	0	0
Total	4,271	4,237	4,471	4,746	4,700
FTE	46.0	45.2	43.0	45.0	44.4
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	3,669	3,702	3,610	3,802	3,813
Non-Labor	602	536	861	944	887
NSE	0	0	0	0	0
Total	4,271	4,237	4,471	4,746	4,700
FTE	46.0	45.2	43.0	45.0	44.4
Vacation & Sick (Nominal \$)					
Labor	566	589	532	551	605
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	566	589	532	551	605
FTE	7.7	7.8	7.1	7.3	7.8
Escalation to 2013\$					
Labor	364	272	169	94	0
Non-Labor	63	43	33	15	0
NSE	0	0	0	0	0
Total	427	315	203	109	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	4,599	4,563	4,311	4,447	4,417
Non-Labor	665	579	894	958	887
NSE	0	0	0	0	0
Total	5,265	5,142	5,205	5,405	5,305
FTE	53.7	53.0	50.1	52.3	52.2

* 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.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: B. Customer Service Information
 Category-Sub: 2. Commercial & Industrial Services
 Workpaper: 100009.000 - C&I 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
100010.000 - Communications Research & Web

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: B. Customer Service Information
 Category-Sub: 3. Communications, Research & Web
 Workpaper: 10O010.000 - Communications Research & Web

Activity Description:

The Customer Communications, Research and Web expenses cover the costs associated with developing and implementing mass outreach communications, providing oversight and management of the SDG&E web site, providing oversight of the development of outreach materials, conducting qualitative and quantitative research, engaging customers through social media channels, and providing key services through mobile application development and management.

Forecast Explanations:

Labor - Base YR Rec

A base year forecast method was used because there were new, major communications topics related to rates and energy pricing that had not been included at that scale in previous years, and these efforts will continue in the future as rate reform progresses. Also, there were new technologies introduced, such as texting, a new development platform for the mobile application, and a focus on a need for mobile friendly communications which will also continue to shape future communications. Therefore, the base year provides a reasonable starting point for future expenditures.

Non-Labor - Base YR Rec

See above.

NSE - Base YR Rec

N/A

Summary of Results:

		In 2013\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2009	2010	2011	2012	2013	2014	2015	2016	
Labor		1,839	1,468	2,047	2,482	2,204	2,668	2,768	3,023	
Non-Labor		4,738	3,197	3,689	5,764	5,736	7,951	10,396	11,264	
NSE		0	0	0	0	0	0	0	0	
Total		6,578	4,665	5,735	8,246	7,940	10,619	13,164	14,287	
FTE		20.5	16.9	23.4	27.6	23.9	28.9	29.9	32.9	

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: B. Customer Service Information
 Category-Sub: 3. Communications, Research & Web
 Workpaper: 100010.000 - Communications Research & Web

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	2,204	2,204	2,204	464	564	819	2,668	2,768	3,023
Non-Labor	Base YR Rec	5,736	5,736	5,736	2,215	4,660	5,528	7,951	10,396	11,264
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
Total		7,940	7,940	7,940	2,679	5,224	6,347	10,619	13,164	14,287
FTE	Base YR Rec	23.9	23.9	23.9	5.0	6.0	9.0	28.9	29.9	32.9

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	85	0	0	85	1.0	1-Sided Adj

Social Media Advisor: 1 FTE (Social Media Advisor) at \$85K annual salary to assist SDG&E in using social media channels and tools to engage with customers and stakeholders on behalf of SDG&E. The main duties will center on providing excellent customer service via SDG&E's social channels, including Twitter, Facebook, LinkedIn, Google+ and more.

2014	0	50	0	50	0.0	1-Sided Adj
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Mobile Application Capabilities: \$50K in non-labor to maintain and enhance SDG&E s mobile application. This would include providing more capabilities to connect with our customers on the device of their choice while simplifying and enhancing the online user experience.

2014	379	0	0	379	4.0	1-Sided Adj
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Customer Research Activities - labor: 4 FTEs to routinely conduct customer surveys and measure results to understand drivers for customer decisions and make changes to better serve our customers. This includes 3 FTEs (Sr. Research Analysts) at \$98K annual salary each and 1 FTE (Research Analyst) at \$85K annual salary.

2014	0	2,075	0	2,075	0.0	1-Sided Adj
------	---	-------	---	-------	-----	-------------

Customer Research Activities - surveys: \$2.1M non-labor cost for ongoing research activities related to customer segmentation, assessing customer needs and interest in new products and services, understanding customer drivers towards alternatives, and transactional measurement with enhancements to the Connections Survey, which measures various transactions customers have with SDG&E.

See Communications, Research, Web 100010.000 Supplemental Workpaper 2 - Forecast Calculations for New Surveys. (Reference cell B7)

2014	0	90	0	90	0.0	1-Sided Adj
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Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: B. Customer Service Information
 Category-Sub: 3. Communications, Research & Web
 Workpaper: 100010.000 - Communications Research & Web

<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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Social Media Tools: \$90K in non-labor for additional licensing and social media analytics tools including Cision, Clickfox and building out of Google Analytics.

2014 Total	464	2,215	0	2,679	5.0	
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2015	85	0	0	85	1.0	1-Sided Adj
------	----	---	---	----	-----	-------------

Social Media Advisor: 1 FTE (Social Media Advisor) at \$85K annual salary to assist SDG&E in using social media channels and tools to engage with customers and stakeholders on behalf of SDG&E. The main duties will center on providing excellent customer service via SDG&E's social channels, including Twitter, Facebook, LinkedIn, Google+ and more.

2015	379	0	0	379	4.0	1-Sided Adj
------	-----	---	---	-----	-----	-------------

Customer Research Activities - labor: 4 FTEs to routinely conduct customer surveys and measure results to understand drivers for customer decisions and make changes to better serve our customers. This includes 3 FTEs (Sr. Research Analysts) at \$98K annual salary each and 1 FTE (Research Analyst) at \$85K annual salary.

2015	0	1,650	0	1,650	0.0	1-Sided Adj
------	---	-------	---	-------	-----	-------------

Customer Research Activities - surveys: \$1.65M non-labor cost for ongoing research activities for transactional measurement with enhancements to the Connections Survey, which measures various transactions customers have with SDG&E.

See Communications, Research, Web 100010.000 Supplemental Workpaper 2 - Forecast Calculations for New Surveys. (Reference cell C7)

2015	0	50	0	50	0.0	1-Sided Adj
------	---	----	---	----	-----	-------------

Mobile Application Capabilities: \$50K in non-labor to maintain and enhance SDG&E's mobile application. This would include providing more capabilities to connect with our customers on the device of their choice while simplifying and enhancing the online user experience.

2015	100	0	0	100	1.0	1-Sided Adj
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Social Media Advisor: 1 FTE Website Content Management at \$100K annual salary to provide on-going management of the My Account Content Management System for information contained on SDG&E's website.

2015	0	2,870	0	2,870	0.0	1-Sided Adj
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New Rate Options and Programs: Rate Reform Communications includes mass media/online communications / research / email / directmail / bill inserts

2015	0	90	0	90	0.0	1-Sided Adj
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Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: B. Customer Service Information
 Category-Sub: 3. Communications, Research & Web
 Workpaper: 100010.000 - Communications Research & Web

<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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Social Media Tools: \$90K in non-labor for additional licensing and social media analytics tools including Cision, Clickfox and building out of Google Analytics.

2015 Total	564	4,660	0	5,224	6.0	
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2016	0	1,842	0	1,842	0.0	1-Sided Adj
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Customer Research Activities - surveys: \$1.842M non-labor cost for ongoing research activities to assess customer needs and interest in new products and services, understand customer drivers towards alternatives, and transactional measurement with enhancements to the Connections Survey, which measures various transactions customers have with SDG&E. See Communications, Research, Web 100010.000 Supplemental Workpaper 2 - Forecast Calculations for New Surveys. (Reference cell D7)

2016	85	0	0	85	1.0	1-Sided Adj
------	----	---	---	----	-----	-------------

Social Media Advisor: 1 FTE (Social Media Advisor) at \$85K annual salary to assist SDG&E in using social media channels and tools to engage with customers and stakeholders on behalf of SDG&E. The main duties will center on providing excellent customer service via SDG&E's social channels, including Twitter, Facebook, LinkedIn, Google+ and more.

2016	379	0	0	379	4.0	1-Sided Adj
------	-----	---	---	-----	-----	-------------

Customer Research Activities - labor: 4 FTEs to routinely conduct customer surveys and measure results to understand drivers for customer decisions and make changes to better serve our customers. This includes 3 FTEs (Sr. Research Analysts) at \$98K annual salary each and 1 FTE (Research Analyst) at \$85K annual salary.

2016	255	0	0	255	3.0	1-Sided Adj
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Ongoing SPP activities: 3 FTEs (Senior Communications Advisor Senior Research Analyst and Web Business Technologist) to support the new time varying rate options adopted by CPUC Decision 12-12-004 in SDG&E's Dynamic Pricing Application 10-07-009 as well as other new rate options, such as rate reform.

2016	0	50	0	50	0.0	1-Sided Adj
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Mobile Application Capabilities: \$50K in non-labor to maintain and enhance SDG&E's mobile application. This would include providing more capabilities to connect with our customers on the device of their choice while simplifying and enhancing the online user experience.

2016	100	0	0	100	1.0	1-Sided Adj
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My Account Content Management System: 1 FTE Website Content Management at \$100K annual salary to provide on-going management of the My Account Content Management System for information contained on SDG&E's website.

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: B. Customer Service Information
 Category-Sub: 3. Communications, Research & Web
 Workpaper: 100010.000 - Communications Research & Web

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adi Type</u>
2016	0	19	0	19	0.0	1-Sided Adj
Enhanced Customer educations While on Customer Premises: \$19K in non-labor to create and mail to customers information about SDG&E's free gas appliance check program. Details can be found in the Direct Testimony of Sara Franke, Customer Service Field witness (Exh. SDGE-13)						
2016	0	281	0	281	0.0	1-Sided Adj
Customer Outreach Safety Checks: \$281K in non-labor to prepare My Account and Carbon Monoxide customer collateral. The collateral will be left with customers by Customer Service Field employees. Details regarding the program can be found in the Direct Testimony of Sara Franke, Customer Service Field witness.						
2016	0	376	0	376	0.0	1-Sided Adj
SPP Event Notifications and Goals and Alerts: \$376K in non-labor to distribute to customers event notifications and alerts (tier crossing notification, spending threshold alert, consumption alert, weekly energy use summary) via email and text. See Communications, Research, & Web 100010.000 Supplemental Workpaper 1- SPP Event Notifications, and Goals and Alerts TY2016 Forecast Calculations for additional detail. (Reference Row 10)						
2016	0	2,870	0	2,870	0.0	1-Sided Adj
New Rate options and Programs: Rate Reform Communications includes mass media/online communications / research / email / directmail / bill inserts						
2016	0	90	0	90	0.0	1-Sided Adj
Social Media Tools: \$90K in non-labor for additional licensing and social media analytics tools including Cision, Clickfox and building out of Google Analytics.						
2016 Total	819	5,528	0	6,347	9.0	

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
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Non-Shared Service Workpapers

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: B. Customer Service Information
 Category-Sub: 3. Communications, Research & Web
 Workpaper: 100010.000 - Communications Research & Web

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	1,757	1,590	1,728	2,122	2,045
Non-Labor	3,724	2,944	3,551	5,676	5,718
NSE	0	0	0	0	0
Total	5,481	4,533	5,279	7,798	7,763
FTE	22.0	18.7	20.2	23.8	22.1
Adjustments (Nominal \$) **					
Labor	-289	-421	-182	-224	-143
Non-Labor	563	14	0	0	18
NSE	0	0	0	0	0
Total	273	-407	-182	-224	-125
FTE	-4.4	-4.6	-2.4	-2.9	-1.8
Recorded-Adjusted (Nominal \$)					
Labor	1,467	1,168	1,546	1,898	1,902
Non-Labor	4,287	2,957	3,551	5,676	5,736
NSE	0	0	0	0	0
Total	5,754	4,126	5,097	7,574	7,638
FTE	17.6	14.1	17.8	20.9	20.3
Vacation & Sick (Nominal \$)					
Labor	227	186	228	275	302
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	227	186	228	275	302
FTE	2.9	2.4	2.9	3.4	3.6
Escalation to 2013\$					
Labor	145	86	73	47	0
Non-Labor	451	239	138	89	0
NSE	0	0	0	0	0
Total	597	325	210	135	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	1,839	1,440	1,846	2,219	2,204
Non-Labor	4,738	3,197	3,689	5,764	5,736
NSE	0	0	0	0	0
Total	6,578	4,637	5,535	7,984	7,940
FTE	20.5	16.5	20.7	24.3	23.9

* 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.

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Non-Shared Service Workpapers

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: B. Customer Service Information
 Category-Sub: 3. Communications, Research & Web
 Workpaper: 100010.000 - Communications Research & Web

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs					
Years	2009	2010	2011	2012	2013
Labor	-289	-421	-182	-224	-143
Non-Labor	563	14	-0.222	0	18
NSE	0	0	0	0	0
Total	273	-407	-182	-224	-125
FTE	-4.4	-4.6	-2.4	-2.9	-1.8

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	85	724	0	0.1	CCTR Transf	From 2100-3562.000	CSCHRAMM2013 1030113343797
Transfer associated fire safety communications dollars to Communications cost center 2100-0058 in Work Group 100010 where activity resides.							
2009	-203	-121	0	-2.8	CCTR Transf	To 2200-2215.000	CSCHRAMM2013 1107140850350
Transfer labor, FTE, and non-labor costs associated with SCG Cust Communication function from NSS cost center 2100-3166 in work paper group 100010 SDG&E Customer Communications & Research to SCG cost center 2200-2215 in work paper group 2IN001 SCG Customer Communications, Research & E-Services to align costs where function resides.							
2009	-80	-26	0	-0.8	CCTR Transf	To 2200-2321.000	CSCHRAMM2013 1107142356347
Transfer labor, FTE, and non-labor costs associated with SCG Customer Communications Web function from NSS cost center 2100-3167 in work paper group 100010 SDG&E Customer Communications & Research to SCG cost center 2200-2321 in work paper group 2IN001 SCG Customer Communications, Research, & E-Services to align costs where function resides.							
2009	-91	-14	0	-0.9	CCTR Transf	To 2200-2215.000	CSCHRAMM2013 1107143326533
Transfer labor, FTE, and non-labor costs associated with SCG Customer Communications Director function from NSS cost center 2100-3168 in work paper group 100010 SDG&E Customer Communications & Research to SCG cost center 2200-2215 in work paper group 2IN001 SCG Customer Communications, Research, & E-Services to align costs where function resides.							
2009 Total	-289	563	0	-4.4			

Note: Totals may include rounding differences.

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 Witness: Bradley M. Baugh
 Category: B. Customer Service Information
 Category-Sub: 3. Communications, Research & Web
 Workpaper: 100010.000 - Communications Research & Web

<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	27	63	0	0.2	CCTR Transf	From 2100-3562.000	CSCHRAMM2013 1030113527273
Transfer associated fire safety communications dollars to Communications cost center 2100-0058 in Work Group 100010 where activity resides.							
2010	-299	-26	0	-3.4	CCTR Transf	To 2200-2215.000	CSCHRAMM2013 1107141052203
Transfer labor, FTE, and non-labor costs associated with SCG Cust Communication function from NSS cost center 2100-3166 in work paper group 100010 SDG&E Customer Communications & Research to SCG cost center 2200-2215 in work paper group 2IN001 SCG Customer Communications, Research & E-Services to align costs where function resides.							
2010	-74	-19	0	-0.6	CCTR Transf	To 2200-2215.000	CSCHRAMM2013 1107141339123
Transfer labor, FTE, and non-labor costs associated with SCG Customer Communications Director function from NSS cost center 2100-3783 in work paper group 100010 SDG&E Customer Communications & Research to SCG cost center 2200-2215 in work paper group 2IN001 SCG Customer Communications, Research, & E-Services to align costs where function resides.							
2010	-14	-0.994	0	-0.1	CCTR Transf	To 2200-2321.000	CSCHRAMM2013 1107143136813
Transfer labor, FTE, and non-labor costs associated with SCG Customer Communications Web function from NSS cost center 2100-3167 in work paper group 100010 SDG&E Customer Communications & Research to SCG cost center 2200-2321 in work paper group 2IN001 SCG Customer Communications, Research, & E-Services to align costs where function resides.							
2010	-24	-2	0	-0.2	CCTR Transf	To 2200-2143.000	CSCHRAMM2013 1107143616713
Transfer labor, FTE, and non-labor costs associated with SCG Customer Communications E-Services function from NSS cost center 2100-3168 in work paper group 100010 SDG&E Customer Communications & Research to SCG cost center 2200-2143 in work paper group 2IN001 SCG Customer Communications, Research, & E-Services to align costs where function resides.							
2010	-14	-0.469	0	-0.2	CCTR Transf	To 2200-2320.000	CSCHRAMM2013 1108132301157
Transfer labor, FTE, and non-labor costs associated with SCG Customer Communications function from NSS cost center 2100-3783 in work paper group 100010 SDG&E Customer Communications & Research to SCG cost center 2200-2320 in work paper group 2IN001 SCG Customer Communications, Research, & E-Services to align costs where function resides.							
2010	-23	0	0	-0.3	1-Sided Adj	N/A	KHART20150207 073423100
Exclusion for Dynamic Pricing Refundable IO s per filing in Application 10-07-009.							

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
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Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: B. Customer Service Information
 Category-Sub: 3. Communications, Research & Web
 Workpaper: 100010.000 - Communications Research & Web

<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 Total	-421	14	0	-4.6			
2011	-9	-0.161	0	-0.1	CCTR Transf	To 2200-2215.000	CSCHRAMM2013 1107141128757
Transfer labor, FTE, and non-labor costs associated with SCG Cust Communication function from NSS cost center 2100-3166 in work paper group 100010 SDG&E Customer Communications & Research to SCG cost center 2200-2215 in work paper group 2IN001 SCG Customer Communications, Research & E-Services to align costs where function resides.							
2011	-6	-0.061	0	0.0	CCTR Transf	To 2200-2215.000	CSCHRAMM2013 1107141556187
Transfer labor, FTE, and non-labor costs associated with SCG Customer Communications Director function from NSS cost center 2100-3783 in work paper group 100010 SDG&E Customer Communications & Research to SCG cost center 2200-2215 in work paper group 2IN001 SCG Customer Communications, Research, & E-Services to align costs where function resides.							
2011	-168	0	0	-2.3	1-Sided Adj	N/A	KHART20150207 073910273
Exclusion for Dynamic Pricing Refundable IO s per filing in Application 10-07-009.							
2011 Total	-182	-0.222	0	-2.4			
2012	-224	0	0	-2.9	1-Sided Adj	N/A	KHART20150207 074015797
Exclusion for Dynamic Pricing Refundable IO s per filing in Application 10-07-009.							
2012 Total	-224	0	0	-2.9			
2013	-68	0	0	-0.9	1-Sided Adj	N/A	CSCHRAMM2014 0211182930493
Exclusion for Dynamic Pricing Refundable IO s per filing in Application 10-07-009 (Reference Internal Order: 7049037)							
2013	-68	0	0	-0.8	1-Sided Adj	N/A	CSCHRAMM2014 0211183016480
Exclusion for Dynamic Pricing Refundable IO s per filing in Application 10-07-009 (Reference Internal Order: 7049037)							
2013	-8	0	0	-0.1	1-Sided Adj	N/A	CSCHRAMM2014 0211183100583
Exclusion for Dynamic Pricing Refundable IO s per filing in Application 10-07-009 (Reference Internal Order: 7049031)							

Note: Totals may include rounding differences.

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 Workpaper: 100010.000 - Communications Research & Web

<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	78	0	0.0	CCTR Transf	From 2100-0004.000	CSCHRAMM2014 0513140915767
Transfer non-labor costs associated with mobile applications from cost center 2100-0004 in work group 100012 Other Office to cost center 2100-0058 in work group 100010 Communications & Research to align costs where the function resides.							
2013	0	-60	0	0.0	CCTR Transf	To 2100-0019.000	CSCHRAMM2014 0514141403607
Transfer non-labor costs associated with Live Chat from Communications Work Group 100010 cost center 2100-3167 to CCC Support Work Group 100007 cost center 2100-0019 to align costs where activity/ function resides.							
2013 Total	-143	18	0	-1.8			

Note: Totals may include rounding differences.

Supplemental Workpapers for Workpaper 100010.000

Communications, Research, & Web 100010.000 Supplemental Workpaper 1 - SPP Event Notifications, and Goals and Alerts TY2016 Forecast Calculations

	A	B	C	D	E	F	G	H
1	SPP Event Notifications and Goals and Alerts Transaction Costs							
2	<i>Alert</i>	<i># Emails</i>	<i>Email Cost</i>	<i># Texts</i>	<i>Cost</i>	<i>Total Cost</i>	<i>2016 -2018 Total Cost</i>	<i>Assumptions</i>
3	Energy Use Summary (WAE)	3,640,000	\$ 65,520	N/A	N/A	\$ 65,520	\$ 168,480	Account level subscriptions - assumes total of 50,000 accounts enrolled at year end 2015, and that an additional 10,000 enroll each year. Assumes emails sent once per week.
4	Energy Usage Alerts (Electric and Gas)	294,000	\$ 5,292	210,000	\$ 25,200	\$ 30,492	\$ 78,408	Meter level subscription - assumes 25,000 meters enrolled at year-end 2015, and that an additional 5,000 enroll each year. Assumes 50% of these enrolled customers want email only, 30% want text only and 20% want both. Assumes each meter only meets the trigger threshold once per month.
5	Spending Alert	462,000	\$ 8,316	330,000	\$ 39,600	\$ 47,916	\$ 117,612	Account level subscription - assumes 35,000 accounts enrolled at year-end 2015, and that an additional 10,000 accounts enroll each year. Assumes 50% of these enrolled customers want email only, 30% want text only and 20% want both. Assumes each account only meets the trigger threshold once per month.
6	Electric Consumption Alert	1,058,400	\$ 19,051	756,000	\$ 90,720	\$ 109,771	\$ 282,269	Meter level subscription - assumes 30,000 meters enrolled at year-end 2015, and that an additional 6,000 meters enroll each year. Assumes 50% of these enrolled customers want email only, 30% want text only and 20% want both. Assumes each meter meets the trigger three times per month.
7	Reduce Your Use Day Alerts	510,000	\$ 9,180	714,000	\$ 85,680	\$ 94,860	\$ 267,840	Meter level subscription - assumes 120,000 small business meters enrolled at year-end 2015, 30,000 residential customers enrolled in 2016 and an additional 10,000 residential customers enroll each year. Assumes 6 Reduce Your Use day notifications. Assumes 30% want email only, 50% want text only, 20% want both. Assumes customers can only sign up one email address and one text phone number per meter.
8	New Alert		\$ 21,472		\$ 60,300	\$ 81,772	\$ 214,782	Discussion currently underway about new alert options to provide additional value to customers.
9	Total	5,964,400	\$ 128,831	2,010,000	\$ 301,500	\$ 430,331	\$ 1,129,391	
10	Note: The TY 2016 GRC forecast includes one third of the total costs for 2016 through 2018 or \$376,000.							
11								
12	Key Assumptions							
13	120,000 small business meters							
14	1,250,000 residential meters							
15	Only non-labor costs included							
16	Assumes goals and alerts are only sent to one email address and one phone number per meter							
17	Emails cost \$0.018 each							
18	Text costs \$0.12 each							
19								

Communications, Research, Web 100010.000 Supplemental Workpaper 2 Forecast Calculations for New Surveys

	A	B	C	D	E
1		Forecast			
2	Survey	2014	2015	2016	
3	New Segmentation Survey	\$275,000		\$91,667	
4	Refresh Voice of Customer Survey	\$150,000		\$100,000	
5	New Competitive Survey	\$150,000	\$150,000	\$150,000	
6	Enhanced Customer Connections Survey	\$1,500,000	\$1,500,000	\$1,500,000	
7	Total	\$2,075,000	\$1,650,000	\$1,841,667	
8					
9					
10	Survey Frequency is the Basis for the TY2016 Forecast:				
11	Survey	Frequency	Cost	%	\$
12	New Segmentation Survey	Once every 3 years (1x every 3Yrs)	\$275,000	33%	\$91,667
13	Refresh Voice of Customer Survey	Every other year (2x every 3 Yrs)	\$150,000	67%	\$100,000
14	New Competitive Survey	Every Year	\$150,000	100%	\$150,000
15	Enhanced Customer Connections Survey	Every Year	\$1,500,000	100%	\$1,500,000
16					\$1,841,667
17					

Beginning of Workpaper
100011.000 - Customer Programs & Projects

San Diego Gas & Electric Company
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Non-Shared Service Workpapers

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: B. Customer Service Information
 Category-Sub: 4. Customer Programs & Projects
 Workpaper: 100011.000 - Customer Programs & Projects

Activity Description:

The Customer Programs and Projects (CP&P) expenses cover the costs to administer social programs, such as Energy Efficiency and Demand Response Programs including analytical, technical and Regulatory support; manage the Office of Customer privacy in support of SDG&E's privacy goals and objectives; oversee the delivery of major Customer Service projects and initiatives; and strategy development and business integration of technology including Home Area Network support.

Forecast Explanations:

Labor - Base YR Rec

A base year forecast method was used because during 2012 and 2013 the group expanded to include new activities requiring additional resources to support those activities. These new activities included managing the Office of Customer Privacy in support of SDG&E's privacy goals and objectives; overseeing the delivery of major Customer Services projects and initiatives; and business integration of technology including HAN support. Furthermore, the group took on new activities such as conducting a third party privacy audit. Therefore, the base year provides a reasonable starting point for future expenditures.

Non-Labor - Base YR Rec

See above.

NSE - Base YR Rec

N/A

Summary of Results:

		In 2013\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2009	2010	2011	2012	2013	2014	2015	2016	
Labor		905	942	976	1,453	1,419	1,419	1,722	1,921	
Non-Labor		1,393	853	808	973	1,303	1,303	1,303	1,518	
NSE		0	0	0	0	0	0	5	5	
Total		2,298	1,795	1,784	2,425	2,721	2,721	3,029	3,443	
FTE		11.1	11.9	11.9	17.6	16.4	16.4	19.4	21.6	

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
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Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: B. Customer Service Information
 Category-Sub: 4. Customer Programs & Projects
 Workpaper: 100011.000 - Customer Programs & 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	Base YR Rec	1,419	1,419	1,419	0	303	502	1,419	1,722	1,921
Non-Labor	Base YR Rec	1,303	1,303	1,303	0	0	215	1,303	1,303	1,518
NSE	Base YR Rec	0	0	0	0	5	5	0	5	5
Total		2,721	2,721	2,721	0	308	722	2,721	3,029	3,443
FTE	Base YR Rec	16.4	16.4	16.4	0.0	3.0	5.2	16.4	19.4	21.6

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 Total	0	0	0	0	0.0	
2015	133	0	0	133	1.0	1-Sided Adj
<p>Other - program office: 1 FTE (50% of Program Manager and 50% of Project Manager) to support the delivery of major Customer Service capital projects including project organization, risk management, planning, monitoring, budgeting, communicating, staffing, and quality assurance. 50% of Program Manager's annual salary = \$68K and 50% of Project Manager's annual salary = \$65K.</p>						
2015	0	0	5	5	0.0	1-Sided Adj
<p>Other - software maintenance agreement: \$5K for the Consumer Products Index annual increase provided for in the software maintenance agreement for SDG&E's service order routing system.</p>						
2015	170	0	0	170	2.0	1-Sided Adj
<p>Customer Privacy Office: 2 FTE (Program Advisors) at \$85K annual salary to support customer privacy initiatives, manage third party data requests from inception to final delivery, manage the Energy Data Portal and associated website support customer privacy initiatives.</p>						
2015 Total	303	0	5	308	3.0	
2016	199	0	0	199	2.2	1-Sided Adj

Note: Totals may include rounding differences.

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Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: B. Customer Service Information
 Category-Sub: 4. Customer Programs & Projects
 Workpaper: 100011.000 - Customer Programs & Projects

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adi Type</u>
<p>Ongoing SPP and CPP-D Activities: 2.2 FTEs (Program Assistant Program Advisor and 20% of Program Manager) to support customer participation in the new time varying rate options adopted by CPUC Decision 12-12-004 in SDG&E's Dynamic Pricing Application 10-07-009. In addition, these resources will support CPP-D for medium business customers.. Cost of FTEs: \$67K annual salary for Program Assistant; \$109K annual salary for Program Advisor; and \$23K representing 20% of Program Manager's annual salary.</p>						
2016	0	82	0	82	0.0	1-Sided Adj
<p>Ongoing SPP and CPP-D Activities: Non-labor costs in the amount of \$82K to manage two new demand response programs: 1) the Smart Pricing Program adopted by CPUC Decision 12-12-004 in SDG&E's Dynamic Pricing Application 10-07-009. 2) Default Critical Peak Pricing for medium commercial customers adopted by California Public Utilities Commission Decision 08-02-034 in SDG&E's Rate Design Window Application 07-01-047.</p>						
2016	170	0	0	170	2.0	1-Sided Adj
<p>Customer Privacy Office: 2 FTE (Program Advisors) at \$85K annual salary to support customer privacy initiatives, manage third party data requests from inception to final delivery, manage the Energy Data Portal and associated website support customer privacy initiatives.</p>						
2016	0	133	0	133	0.0	1-Sided Adj
<p>Privacy Audit: Cost for independent privacy audit mandated by CPUC Decision 11-07-056 and Decision 12-08-045 in proceeding R.08-12-009. Audit shall be performed once every GRC cycle. Total cost for audit: \$400K / 3 = \$133K.</p>						
2016	0	0	5	5	0.0	1-Sided Adj
<p>Other - software maintenance agreement: \$5K for the Consumer Products Index annual increase provided for in the software maintenance agreement for SDG&E's service order routing system.</p>						
2016	133	0	0	133	1.0	1-Sided Adj
<p>Other - program office: 1 FTE (50% of Program Manager and 50% of Project Manager) to support the delivery of Customer Service capital projects including project organization, risk management, planning, monitoring, budgeting, communicating, staffing, and quality assurance. 50% of Program Manager's annual salary = \$68K and 50% of Project Manager's annual salary = \$65K.</p>						
2016 Total	502	215	5	722	5.2	

Note: Totals may include rounding differences.

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Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: B. Customer Service Information
 Category-Sub: 4. Customer Programs & Projects
 Workpaper: 100011.000 - Customer Programs & Projects

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	772	1,022	1,000	1,337	1,372
Non-Labor	977	619	584	1,165	1,005
NSE	0	0	0	0	0
Total	1,749	1,642	1,583	2,502	2,377
FTE	10.8	13.1	13.0	16.3	16.2
Adjustments (Nominal \$) **					
Labor	-50	-258	-182	-96	-148
Non-Labor	284	169	194	-207	297
NSE	0	0	0	0	0
Total	233	-89	11	-303	150
FTE	-1.3	-3.0	-2.8	-1.1	-2.2
Recorded-Adjusted (Nominal \$)					
Labor	722	764	817	1,242	1,224
Non-Labor	1,261	789	778	958	1,303
NSE	0	0	0	0	0
Total	1,982	1,553	1,595	2,200	2,527
FTE	9.5	10.1	10.2	15.2	14.0
Vacation & Sick (Nominal \$)					
Labor	111	122	120	180	194
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	111	122	120	180	194
FTE	1.6	1.8	1.7	2.5	2.5
Escalation to 2013\$					
Labor	72	56	38	31	0
Non-Labor	133	64	30	15	0
NSE	0	0	0	0	0
Total	204	120	69	46	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	905	942	976	1,453	1,419
Non-Labor	1,393	853	808	973	1,303
NSE	0	0	0	0	0
Total	2,298	1,795	1,784	2,425	2,721
FTE	11.1	11.9	11.9	17.7	16.5

* After company-wide exclusions of Non-GRC costs

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

Note: Totals may include rounding differences.

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2016 GRC - REVISED
Non-Shared Service Workpapers

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: B. Customer Service Information
 Category-Sub: 4. Customer Programs & Projects
 Workpaper: 100011.000 - Customer Programs & Projects

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs					
Years	2009	2010	2011	2012	2013
Labor	-50	-258	-182	-96	-148
Non-Labor	284	169	194	-207	297
NSE	0	0	0	0	0
Total	233	-89	11	-303	150
FTE	-1.3	-3.0	-2.8	-1.1	-2.2

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	0	-66	0	0.0	CCTR Transf	To 2100-3593.000	CSCHRAMM2013 1022110957087
Transfer non-labor costs associated with brochures / fulfillment from cost center 2100-0650 in work group 100011 Customer Programs & Projects to cost center 2100-3593 in work group 100008 Residential Services to align activity where it resides.							
2009	84	2	0	0.9	CCTR Transf	From 2100-3593.000	CSCHRAMM2013 1030181032860
Transfer labor, FTE, and non-labor associated with Project Manager of Customer Services Projects function from cost center 2100-3593 in Work Paper Group 100008 (Residential Services) to cost center 2100-3584 In Work Paper Group 100011 (Customer Programs & Projects) where function resides.							
2009	0	89	0	0.0	CCTR Transf	From 2100-0042.000	CSCHRAMM2013 1107092342123
Transfer costs associated with Kwickview license & maintenance from cost center 2100-0042 in work group 100000 Advanced Meter Operations to cost center 2100-3440 in work group 100011 Customer Programs & Projects to align costs where activity resides.							
2009	-134	258	0	-2.2	1-Sided Adj	N/A	CSCHRAMM2013 1107153730513
Exclusion for reimbursable California Energy Commission (CEC) New Solar Homes Program. The agreement number for this activity between SDG&E and the CEC is 400-07-006-01.							
2009	-0.701	-0.025	0	0.0	1-Sided Adj	N/A	CSCHRAMM2013 1107153911983
Exclusion for Refundable Billing IO's to SCG.							
2009 Total	-50	284	0	-1.3			

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: B. Customer Service Information
 Category-Sub: 4. Customer Programs & Projects
 Workpaper: 100011.000 - Customer Programs & 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>
2010	80	4	0	0.8	CCTR Transf	From 2100-3593.000	CSCHRAMM2013 1030181631797
Transfer labor, FTE, and non-labor associated with Project Manager of Customer Services Projects function from cost center 2100-3593 in Work Paper Group 100008 (Residential Services) to cost center 2100-3584 In Work Paper Group 100011 (Customer Programs & Projects) where function resides.							
2010	0	94	0	0.0	CCTR Transf	From 2100-0042.000	CSCHRAMM2013 1107092439103
Transfer costs associated with Kwickview license & maintenance from cost center 2100-0042 in work group 100000 Advanced Meter Operations to cost center 2100-3440 in work group 100011 Customer Programs & Projects to align costs where activity resides.							
2010	-113	212	0	-2.2	1-Sided Adj	N/A	CSCHRAMM2013 1107154030130
Exclusion for reimbursable California Energy Commission (CEC) New Solar Homes Program. The agreement number for this activity between SDG&E and CEC is 400-07-006-01.							
2010	0	-92	0	0.0	CCTR Transf	To 2100-3593.000	CSCHRAMM2013 1107163134693
Transfer non-labor costs associated with brochures / fulfillment from cost center 2100-0650 in work group 100011 Customer Programs & Projects to cost center 2100-3593 in work group 100008 Residential Services to align activity where it resides.							
2010	-83	-42	0	-0.7	CCTR Transf	To 2200-2059.000	CSCHRAMM2013 1108072410047
Transfer labor, FTE, and non-labor costs associated with SCG RDD Project Manager function from cost center 2100-4018 in work group 100011 Customer Programs & Projects to SCG cost center 2200-2059 in work group 2RD001 SCG CS - Technologies RDD to align costs where function resides. Reference internal orders: 7025532, 7043704							
2010	-142	-8	0	-0.9	CCTR Transf	To 2200-2286.000	CSCHRAMM2013 1108074345013
Transfer costs associated with Biofuels Market Development Manager function from cost center 2100-3642 in work paper group 100011 Customer Programs and Projects to SoCalGas USS cost center 2200-2286 Biofuels Market Development to align costs with where function resides due to reorganization.							
2010 Total	-258	169	0	-3.0			

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: B. Customer Service Information
 Category-Sub: 4. Customer Programs & Projects
 Workpaper: 100011.000 - Customer Programs & 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	83	9	0	0.8	CCTR Transf	From 2100-3593.000	CSCHRAMM2013 1030182031727
Transfer labor, FTE, and non-labor associated with Project Manager of Customer Services Projects function from cost center 2100-3593 in Work Paper Group 100008 (Residential Services) to cost center 2100-3584 In Work Paper Group 100011 (Customer Programs & Projects) where function resides.							
2011	0	94	0	0.0	CCTR Transf	From 2100-0042.000	CSCHRAMM2013 1107092542680
Transfer costs associated with Kwickview license & maintenance from cost center 2100-0042 in work group 100000 Advanced Meter Operations to cost center 2100-3440 in work group 100011 Customer Programs & Projects to align costs where activity resides.							
2011	-116	201	0	-2.2	1-Sided Adj	N/A	CSCHRAMM2013 1107154339633
Exclusion for reimbursable California Energy Commission (CEC) New Solar Homes Program. The agreement number for this activity between SDG&E and CEC is 400-07-006-01.							
2011	0	-92	0	0.0	CCTR Transf	To 2100-3593.000	CSCHRAMM2013 1107163252047
Transfer non-labor costs associated with brochures / fulfillment from cost center 2100-0650 in work group 100011 Customer Programs & Projects to cost center 2100-3593 in work group 100008 Residential Services to align activity where it resides.							
2011	-21	-0.365	0	-0.4	1-Sided Adj	N/A	CSCHRAMM2013 1107171302763
Exclusion for Dynamic Pricing 100% Refundable per filing in Application 10-07-009.							
Reference Internal Orders: 7049033, 7049039							
2011	-120	-19	0	-0.9	CCTR Transf	To 2200-2059.000	CSCHRAMM2013 1108072649737
Transfer labor, FTE, and non-labor costs associated with SCG RDD Project Manager function from cost center 2100-4018 in work group 100011 Customer Programs & Projects to SCG cost center 2200-2059 in work group 2RD001 SCG CS - Technologies RDD to align costs where function resides. Reference internal orders: 7025532, 7043704							
2011	-9	-0.114	0	-0.1	CCTR Transf	To 2200-2286.000	CSCHRAMM2013 1108074520380
Transfer costs associated with Biofuels Market Development Manager function from cost center 2100-3642 in work paper group 100011 Customer Programs and projects to SoCalGas USS cost center 2200-2286 Biofuels Market Development to align costs with where function resides due to reorganization.							
2011 Total	-182	194	0	-2.8			

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: B. Customer Service Information
 Category-Sub: 4. Customer Programs & Projects
 Workpaper: 100011.000 - Customer Programs & 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	68	0.819	0	0.7	CCTR Transf	From 2100-3593.000	CSCHRAMM2013 1030182531353
Transfer labor, FTE, and non-labor associated with Project Manager of Customer Services Projects function from cost center 2100-3593 in Work Paper Group 100008 (Residential Services) to cost center 2100-3584 In Work Paper Group 100011 (Customer Programs & Projects) where function resides.							
2012	-42	-75	0	-0.9	1-Sided Adj	N/A	CSCHRAMM2013 1107154502643
Exclusion for reimbursable California Energy Commission (CEC) New Solar Homes Program. The agreement number for this activity between SDG&E and CEC is 400-07-006-01.							
2012	0	-112	0	0.0	CCTR Transf	To 2100-3593.000	CSCHRAMM2013 1107163345293
Transfer non-labor costs associated with brochures / fulfillment from cost center 2100-0650 in work group 100011 Customer Programs & Projects to cost center 2100-3593 in work group 100008 Residential Services to align activity where it resides.							
2012	-5	0	0	0.0	1-Sided Adj	N/A	CSCHRAMM2013 1107171502423
Exclusion for Dynamic Pricing 100% Refundable per filing in Application 10-07-009. Reference Internal Orders: 7049033							
2012	0	-1	0	0.0	1-Sided Adj	N/A	CSCHRAMM2013 1107172337537
Exclusion for Refundable Billing internal order's to SCG.							
2012	-117	-21	0	-0.9	CCTR Transf	To 2200-2059.000	CSCHRAMM2013 1108072905180
Transfer labor, FTE, and non-labor costs associated with SCG RDD Project Manager function from cost center 2100-4018 in work group 100011 Customer Programs & Projects to SCG cost center 2200-2059 in work group 2RD001 SCG CS - Technologies RDD to align costs where function resides. Reference internal orders: 7025532, 7043704							
2012 Total	-96	-207	0	-1.1			
2013	-61	0	0	-0.5	1-Sided Adj	N/A	CSCHRAMM2014 0211123001470
Exclusion for Refundable Billing Internal Order to SCG (Reference IO 7043704)							
2013	0	26	0	0.0	1-Sided Adj	N/A	CSCHRAMM2014 0211123046070
Exclusion for Refundable IO (CPUC Energy Division Pmts) accrual reversal (Reference IO 70428128)							

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: B. Customer Service Information
 Category-Sub: 4. Customer Programs & Projects
 Workpaper: 100011.000 - Customer Programs & 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	426	0	0.0	1-Sided Adj	N/A	CSCHRAMM2014 0211123130540
Exclusion for reimbursable California Energy Commission (CEC) New Solar Homes Program (Reference IO 7028662). The agreement number for this activity between -SDG&E and the -CEC is 400-07-006-01.							
2013	0	-0.582	0	0.0	1-Sided Adj	N/A	CSCHRAMM2014 0211123212220
Exclusion for reimbursable California Energy Commission (CEC) New Solar Homes Program (Reference IO 7028662). The agreement number for this activity between -SDG&E and the -CEC is 400-07-006-01.							
2013	-49	0	0	-1.0	1-Sided Adj	N/A	CSCHRAMM2014 0211123252727
Exclusion for reimbursable California Energy Commission (CEC) New Solar Homes Program (Reference IO 7028662). The agreement number for this activity between -SDG&E and the -CEC is 400-07-006-01.							
2013	0	-0.335	0	0.0	1-Sided Adj	N/A	CSCHRAMM2014 0211123417567
Exclusion for reimbursable California Energy Commission (CEC) New Solar Homes Program (Reference IO 7028662). The agreement number for this activity between -SDG&E and the -CEC is 400-07-006-01.							
2013	0	-0.166	0	0.0	1-Sided Adj	N/A	CSCHRAMM2014 0211123453290
Exclusion for Dynamic Pricing Refundable IO s per filing in Application 10-07-009 (Refernce IO 7049036)							
2013	0	-0.245	0	0.0	1-Sided Adj	N/A	CSCHRAMM2014 0211123541270
Exclusion for Dynamic Pricing Refundable IO s per filing in Application 10-07-009 (Refernce IO 7049036)							
2013	-30	-1	0	-0.6	1-Sided Adj	N/A	CSCHRAMM2014 0211123635480
Exclusion for reimbursable California Energy Commission (CEC) New Solar Homes Program. The agreement number for this activity between -SDG&E and the CEC is 400-07-006-01.							
2013	-2	0	0	0.0	1-Sided Adj	N/A	CSCHRAMM2014 0211123857400
Exclusion for Dynamic Pricing Refundable IO s per filing in Application 10-07-009 (Refernce IO 7067162)							
2013	0	-139	0	0.0	CCTR Transf	To 2100-3593.000	CSCHRAMM2014 0211124020870
Transfer of Customer Fulfillment brochures costs from cost center 2100-0650 in Work Group 100011 Customer Programs & Projects to cost center 2100-3593 in Work Group 100008 Residential Services to align activity where it currently resides.							

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: B. Customer Service Information
 Category-Sub: 4. Customer Programs & Projects
 Workpaper: 100011.000 - Customer Programs & 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	-6	-12	0	-0.1	CCTR Transf	To 2200-2059.001	CSCHRAMM2014 0212111921920
Transfer labor FTE and non-labor costs associated with SoCalGas RD&D Project Manager function from cost center 2100-4018 in work group 100011 Customer Programs & Projects to SoCalGas cost center 2200-2059.001 in work group 2RD001.001 SoCalGas CS - Technologies RD&D Refundable to align costs where function resides. Reference internal orders: 7025532, 7043704							
2013 Total	-148	297	0	-2.2			

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
Witness: Bradley M. Baugh

Summary of Shared Services Workpapers:

Description	In 2013 \$ (000) Incurred Costs			
	Adjusted-Recorded 2013	Adjusted-Forecast		
		2014	2015	2016
A. Customer Service Operations Shared Services	376	376	376	376
B. CS Technologies, Policies, and Solutions SS	600	603	603	603
Total	976	979	979	979

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations Shared Services
 Cost Center: VARIOUS

Summary for Category: A. Customer Service Operations Shared Services

	In 2013\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2013	2014	2015	2016
Labor	360	360	360	360
Non-Labor	16	16	16	16
NSE	0	0	0	0
Total	376	376	376	376
FTE	3.0	3.0	3.0	3.0

Cost Centers belonging to this Category:

2100-0006.000 Customer Service Strategies

Labor	113	113	113	113
Non-Labor	8	8	8	8
NSE	0	0	0	0
Total	121	121	121	121
FTE	1.0	1.0	1.0	1.0

2100-3461.000 Business Planning & Budgets Customer Service

Labor	122	122	122	122
Non-Labor	3	3	3	3
NSE	0	0	0	0
Total	125	125	125	125
FTE	1.0	1.0	1.0	1.0

2100-3511.000 CCC Strategy and Analysis Manager

Labor	125	125	125	125
Non-Labor	5	5	5	5
NSE	0	0	0	0
Total	130	130	130	130
FTE	1.0	1.0	1.0	1.0

Note: Totals may include rounding differences.

Beginning of Workpaper
2100-0006.000 - Customer Service Strategies

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations Shared Services
 Category-Sub: 1. Customer Service Strategies
 Cost Center: 2100-0006.000 - Customer Service Strategies

Activity Description:

The Customer Services Strategies Project Manager shared service cost center provides support for continuous improvement initiatives, SCG Strategic Initiative support, and planning / case management for SDG&E and SCG Customer Service TY2016 GRC.

Forecast Explanations:

Labor - Base YR Rec

A base year forecast method was used because 2013 represents the current activity level and is not expected to change. Furthermore, this workgroup has a small number of FTEs whose work is not cyclical in nature and should remain constant for 2014 through 2016. Therefore, the base year provides a reasonable starting point for future expenditures.

Non-Labor - Base YR Rec

See above.

NSE - Base YR Rec

N/A

Summary of Results:

		In 2013\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2009	2010	2011	2012	2013	2014	2015	2016	
Labor		108	105	111	109	113	113	113	113	
Non-Labor		3	1	8	9	8	8	8	8	
NSE		0	0	0	0	0	0	0	0	
Total		111	106	119	117	121	121	121	121	
FTE		1.0	0.9	1.0	1.0	1.0	1.0	1.0	1.0	

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations Shared Services
 Category-Sub: 1. Customer Service Strategies
 Cost Center: 2100-0006.000 - Customer Service Strategies

Cost Center Allocations (Incurred Costs):

	2013 Adjusted-Recorded					2014 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	0	0	0	0	0.00	0	0	0	0	0.00
Directly Allocated	0	0	0	0	0.00	0	0	0	0	0.00
Subj. To % Alloc.	113	8	0	121	1.05	113	8	0	121	1.05
Total Incurred	113	8	0	121	1.05	113	8	0	121	1.05
% Allocation										
Retained	57.96%	57.96%				50.00%	50.00%			
SEU	42.04%	42.04%				50.00%	50.00%			
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	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.	113	8	0	121	1.05	113	8	0	121	1.05
Total Incurred	113	8	0	121	1.05	113	8	0	121	1.05
% Allocation										
Retained	50.00%	50.00%				50.00%	50.00%			
SEU	50.00%	50.00%				50.00%	50.00%			
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

The percentage allocation for this cost center should be shared equally between SDG&E and SCG, as the Project Manager supports both utilities GRC efforts, and strategic process improvements. 2013 actual percentage was 58% retained 42% allocated.

Cost Center Allocation Percentage for 2014

The percentage allocation for this cost center should be shared equally between SDG&E and SCG, as the Project Manager supports both utilities GRC efforts, and strategic process improvements.

Cost Center Allocation Percentage for 2015

The percentage allocation for this cost center should be shared equally between SDG&E and SCG, as the Project Manager supports both utilities GRC efforts, and strategic process improvements.

Cost Center Allocation Percentage for 2016

The percentage allocation for this cost center should be shared equally between SDG&E and SCG, as the Project Manager supports both utilities GRC efforts, and strategic process improvements.

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations Shared Services
 Category-Sub: 1. Customer Service Strategies
 Cost Center: 2100-0006.000 - Customer Service Strategies

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	113	113	113	0	0	0	113	113	113
Non-Labor	Base YR Rec	8	8	8	0	0	0	8	8	8
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
Total		121	121	121	0	0	0	121	121	121
FTE	Base YR Rec	1.0	1.0	1.0	0.0	0.0	0.0	1.0	1.0	1.0

Forecast Adjustment Details:

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

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
Witness: Bradley M. Baugh
Category: A. Customer Service Operations Shared Services
Category-Sub: 1. Customer Service Strategies
Cost Center: 2100-0006.000 - Customer Service Strategies

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	168	167	102	93	98
Non-Labor	21	17	8	8	8
NSE	0	0	0	0	0
Total	188	184	110	102	105
FTE	1.0	1.0	1.0	0.9	0.9
Adjustments (Nominal \$) **					
Labor	-82	-83	-9	0	0
Non-Labor	-18	-16	0	0	0
NSE	0	0	0	0	0
Total	-100	-99	-9	0	0
FTE	-0.1	-0.2	-0.1	0.0	0.0
Recorded-Adjusted (Nominal \$)					
Labor	85	85	93	93	98
Non-Labor	3	1	8	8	8
NSE	0	0	0	0	0
Total	88	85	101	102	105
FTE	0.9	0.8	0.9	0.9	0.9
Vacation & Sick (Nominal \$)					
Labor	13	14	14	14	15
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	13	14	14	14	15
FTE	0.1	0.1	0.1	0.1	0.2
Escalation to 2013\$					
Labor	9	7	4	2	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	10	7	4	2	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	108	105	111	109	113
Non-Labor	3	1	8	9	8
NSE	0	0	0	0	0
Total	111	106	119	117	121
FTE	1.0	0.9	1.0	1.0	1.1

* After company-wide exclusions of Non-GRC costs

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

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations Shared Services
 Category-Sub: 1. Customer Service Strategies
 Cost Center: 2100-0006.000 - Customer Service Strategies

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs					
Years	2009	2010	2011	2012	2013
Labor	-82	-83	-9	0	0
Non-Labor	-18	-16	0	0	0
NSE	0	0	0	0	0
Total	-100	-99	-9	0	0
FTE	-0.1	-0.2	-0.1	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	-3	0	0	0.0	CCTR Transf	To 2200-0342.000	CSCHRAMM2013 1030132022020
Performance Management & Organizational Strategy Director transferred to SCG CCTR 2200-0342 during January of 2011. Transfer historical dollars to SCG USS cost center 2200-0342 where the function resides.							
2009	-82	-10	0	-0.5	CCTR Transf	To 2200-0342.000	CSCHRAMM2013 1030132117850
Performance Management & Organizational Strategy Director transferred to SCG CCTR 2200-0342 during January of 2011. Transfer historical dollars to SCG USS cost center 2200-0342 where the function resides.							
2009	-82	-10	0	-0.5	CCTR Transf	To 2200-0342.000	CSCHRAMM2013 1030132324477
Performance Management & Organizational Strategy Director transferred to SCG CCTR 2200-0342 during January of 2011. Transfer historical dollars to SCG USS cost center 2200-0342 where the function resides.							
2009	85	3	0	0.9	CCTR Transf	From 2100-3593.000	CSCHRAMM2013 1030181311083
Transfer labor, FTE, and non-labor associated with Project Manager Customer Service Strategy function from cost center 2100-3593 in Work Paper Group 100008 (Residential Services) to USS cost center 2100-0006 (Customer Service Strategy) where function resides.							
2009 Total	-82	-18	0	-0.1			

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations Shared Services
 Category-Sub: 1. Customer Service Strategies
 Cost Center: 2100-0006.000 - Customer Service Strategies

<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	-21	-1	0	-0.1	CCTR Transf	To 2200-0342.000	CSCHRAMM2013 1030132632230
Performance Management & Organizational Strategy Director transferred to SCG CCTR 2200-0342 during January of 2011. Transfer historical dollars to SCG USS cost center 2200-0342 where the function resides.							
2010	-146	-15	0	-0.9	CCTR Transf	To 2200-0342.000	CSCHRAMM2013 1030132818700
Performance Management & Organizational Strategy Director transferred to SCG CCTR 2200-0342 during January of 2011. Transfer historical dollars to SCG USS cost center 2200-0342 where the function resides.							
2010	85	0.643	0	0.8	CCTR Transf	From 2100-3593.000	CSCHRAMM2013 1030181506603
Transfer labor, FTE, and non-labor associated with Project Manager Customer Service Strategy function from cost center 2100-3593 in Work Paper Group 100008 (Residential Services) to USS cost center 2100-0006 (Customer Service Strategy) where function resides.							
2010 Total	-83	-16	0	-0.2			
2011	-9	0	0	-0.1	CCTR Transf	To 2200-0342.000	CSCHRAMM2013 1030133000520
Performance Management & Organizational Strategy Director transferred to SCG CCTR 2200-0342 during January of 2011. Transfer historical dollars to SCG USS cost center 2200-0342 where the function resides.							
2011 Total	-9	0	0	-0.1			
2012 Total	0	0	0	0.0			
2013 Total	0	0	0	0.0			

Note: Totals may include rounding differences.

Beginning of Workpaper
2100-3461.000 - Business Planning & Budgets Customer Service

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations Shared Services
 Category-Sub: 2. Business Planning & Budgets Customer Service
 Cost Center: 2100-3461.000 - Business Planning & Budgets Customer Service

Activity Description:

Business Planning & Budgets Customer Service manages the business planning work and provides supervision to the planners who support SCG Customer Service Office Operations and some SDG&E functions. SDG&E functions supported include Remittance Processing, Natural Gas Vehicles, and Business Solutions. Furthermore, this workgroup provides oversight, guidance, compliance, budget tracking, reporting and forecasting.

Forecast Explanations:

Labor - Base YR Rec

A base year forecast method was used because 2013 represents the current activity level and is not expected to change. Furthermore, this workgroup has a small number of FTEs whose work is not cyclical in nature and should remain constant for 2014 through TY 2016. Therefore, the base year provides a reasonable starting point for future expenditures.

Non-Labor - Base YR Rec

See above.

NSE - Base YR Rec

N/A

Summary of Results:

		In 2013\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
		2009	2010	2011	2012	2013	2014	2015	2016	
Years										
Labor	220	212	115	112	122	122	122	122		
Non-Labor	1	1	2	2	3	3	3	3		
NSE	0	0	0	0	0	0	0	0		
Total	221	213	117	114	125	125	125	125		
FTE	2.0	2.0	1.1	1.0	1.0	1.0	1.0	1.0		

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations Shared Services
 Category-Sub: 2. Business Planning & Budgets Customer Service
 Cost Center: 2100-3461.000 - Business Planning & Budgets Customer Service

Cost Center Allocations (Incurred Costs):

	2013 Adjusted-Recorded					2014 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	0	0	0	0	0.00	0	0	0	0	0.00
Directly Allocated	0	0	0	0	0.00	0	0	0	0	0.00
Subj. To % Alloc.	122	3	0	125	1.04	122	3	0	125	1.04
Total Incurred	122	3	0	125	1.04	122	3	0	125	1.04
% Allocation										
Retained	2.85%	2.85%				3.47%	3.47%			
SEU	97.15%	97.15%				96.53%	96.53%			
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.	122	3	0	125	1.04	122	3	0	125	1.04
Total Incurred	122	3	0	125	1.04	122	3	0	125	1.04
% Allocation										
Retained	3.47%	3.47%				3.47%	3.47%			
SEU	96.53%	96.53%				96.53%	96.53%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
Witness: Bradley M. Baugh
Category: A. Customer Service Operations Shared Services
Category-Sub: 2. Business Planning & Budgets Customer Service
Cost Center: 2100-3461.000 - Business Planning & Budgets Customer Service

Cost Center Allocation Percentage Drivers/Methodology:

Cost Center Allocation Percentage for 2013

Allocation for Business Planning and Budget manger is based on budget distribution between companies as the manager provides oversight, guidance, compliance, budget tracking, reporting, and forecasting for SCG Customer Service Office Operations and SDG&E functions such as Remittance Processing, Natural Gas Vehicles, and Business Solutions.

Cost Center Allocation Percentage for 2014

Allocation for Business Planning and Budget manger is based on budget distribution between companies as the manager provides oversight, guidance, compliance, budget tracking, reporting, and forecasting for SCG Customer Service Office Operations and SDG&E functions such as Remittance Processing, Natural Gas Vehicles, and Business Solutions.

Cost Center Allocation Percentage for 2015

Allocation for Business Planning and Budget manger is based on budget distribution between companies as the manager provides oversight, guidance, compliance, budget tracking, reporting, and forecasting for SCG Customer Service Office Operations and SDG&E functions such as Remittance Processing, Natural Gas Vehicles, and Business Solutions.

Cost Center Allocation Percentage for 2016

Allocation for Business Planning and Budget manger is based on budget distribution between companies as the manager provides oversight, guidance, compliance, budget tracking, reporting, and forecasting for SCG Customer Service Office Operations and SDG&E functions such as Remittance Processing, Natural Gas Vehicles, and Business Solutions.

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations Shared Services
 Category-Sub: 2. Business Planning & Budgets Customer Service
 Cost Center: 2100-3461.000 - Business Planning & Budgets Customer Service

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	122	122	122	0	0	0	122	122	122
Non-Labor	Base YR Rec	3	3	3	0	0	0	3	3	3
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
Total		125	125	125	0	0	0	125	125	125
FTE	Base YR Rec	1.0	1.0	1.0	0.0	0.0	0.0	1.0	1.0	1.0

Forecast Adjustment Details:

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

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations Shared Services
 Category-Sub: 2. Business Planning & Budgets Customer Service
 Cost Center: 2100-3461.000 - Business Planning & Budgets Customer Service

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	174	171	97	96	105
Non-Labor	1	1	2	2	3
NSE	0	0	0	0	0
Total	175	172	99	98	109
FTE	1.7	1.7	0.9	0.9	0.9
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	174	171	97	96	105
Non-Labor	1	1	2	2	3
NSE	0	0	0	0	0
Total	175	172	99	98	109
FTE	1.7	1.7	0.9	0.9	0.9
Vacation & Sick (Nominal \$)					
Labor	27	27	14	14	17
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	27	27	14	14	17
FTE	0.3	0.3	0.2	0.1	0.2
Escalation to 2013\$					
Labor	19	14	4	2	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	19	14	4	2	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	220	212	115	112	122
Non-Labor	1	1	2	2	3
NSE	0	0	0	0	0
Total	221	213	117	114	125
FTE	2.0	2.0	1.1	1.0	1.1

* After company-wide exclusions of Non-GRC costs

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

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations Shared Services
 Category-Sub: 2. Business Planning & Budgets Customer Service
 Cost Center: 2100-3461.000 - Business Planning & Budgets Customer Service

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
2100-3511.000 - CCC Strategy and Analysis Manager

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations Shared Services
 Category-Sub: 3. CCC Strategy and Analysis Manager
 Cost Center: 2100-3511.000 - CCC Strategy and Analysis Manager

Activity Description:

The CCC Strategy & Analysis manger provides oversight to the SCG Customer Contact Center budget planning group The main focus of this position is on strategies and planning activities for the SCG Customer Contact Centers.

Forecast Explanations:

Labor - Base YR Rec

A base year forecast method was used because 2013 represents the current activity level and is not expected to change. Furthermore, this workgroup has a small number of FTEs whose work is not cyclical in nature and should remain constant for 2014 through TY 2016. Therefore, the base year provides a reasonable starting point for future expenditures.

Non-Labor - Base YR Rec

See above.

NSE - Base YR Rec

N/A

Summary of Results:

		In 2013\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2009	2010	2011	2012	2013	2014	2015	2016	
Labor		122	123	124	123	125	125	125	125	
Non-Labor		3	2	4	11	5	5	5	5	
NSE		0	0	0	0	0	0	0	0	
Total		125	125	128	133	130	130	130	130	
FTE		1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations Shared Services
 Category-Sub: 3. CCC Strategy and Analysis Manager
 Cost Center: 2100-3511.000 - CCC Strategy and Analysis 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	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.	125	5	0	130	1.01	125	5	0	130	1.01
Total Incurred	125	5	0	130	1.01	125	5	0	130	1.01
% Allocation										
Retained	0.00%	0.00%				0.00%	0.00%			
SEU	100.00%	100.00%				100.00%	100.00%			
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	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.	125	5	0	130	1.01	125	5	0	130	1.01
Total Incurred	125	5	0	130	1.01	125	5	0	130	1.01
% Allocation										
Retained	0.00%	0.00%				0.00%	0.00%			
SEU	100.00%	100.00%				100.00%	100.00%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
Witness: Bradley M. Baugh
Category: A. Customer Service Operations Shared Services
Category-Sub: 3. CCC Strategy and Analysis Manager
Cost Center: 2100-3511.000 - CCC Strategy and Analysis Manager

Cost Center Allocation Percentage Drivers/Methodology:

Cost Center Allocation Percentage for 2013

The CCC Strategy & Analysis manger provides oversight of the SCG Customer Contact Center budget planning group. The main focus of this position is on strategies and planning activities for the SCG Customer Contact Centers. Therefore it is reasonable to allocate 100% to SCG, as the CCC Strategy and Analysis Manager soley supports SCG.

Cost Center Allocation Percentage for 2014

The CCC Strategy & Analysis manger provides oversight of the SCG Customer Contact Center budget planning group. The main focus of this position is on strategies and planning activities for the SCG Customer Contact Centers. Therefore it is reasonable to allocate 100% to SCG, as the CCC Strategy and Analysis Manager soley supports SCG.

Cost Center Allocation Percentage for 2015

The CCC Strategy & Analysis manger provides oversight of the SCG Customer Contact Center budget planning group. The main focus of this position is on strategies and planning activities for the SCG Customer Contact Centers. Therefore it is reasonable to allocate 100% to SCG, as the CCC Strategy and Analysis Manager soley supports SCG.

Cost Center Allocation Percentage for 2016

The CCC Strategy & Analysis manger provides oversight of the SCG Customer Contact Center budget planning group. The main focus of this position is on strategies and planning activities for the SCG Customer Contact Centers. Therefore it is reasonable to allocate 100% to SCG, as the CCC Strategy and Analysis Manager soley supports SCG.

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations Shared Services
 Category-Sub: 3. CCC Strategy and Analysis Manager
 Cost Center: 2100-3511.000 - CCC Strategy and Analysis 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	125	125	125	0	0	0	125	125	125
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		130	130	130	0	0	0	130	130	130
FTE	Base YR Rec	1.0	1.0	1.0	0.0	0.0	0.0	1.0	1.0	1.0

Forecast Adjustment Details:

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

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
Witness: Bradley M. Baugh
Category: A. Customer Service Operations Shared Services
Category-Sub: 3. CCC Strategy and Analysis Manager
Cost Center: 2100-3511.000 - CCC Strategy and Analysis Manager

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	97	99	104	105	108
Non-Labor	2	2	4	10	5
NSE	0	0	0	0	0
Total	99	101	108	116	113
FTE	0.9	0.9	0.9	0.9	0.9
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	97	99	104	105	108
Non-Labor	2	2	4	10	5
NSE	0	0	0	0	0
Total	99	101	108	116	113
FTE	0.9	0.9	0.9	0.9	0.9
Vacation & Sick (Nominal \$)					
Labor	15	16	15	15	17
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	15	16	15	15	17
FTE	0.1	0.2	0.1	0.1	0.2
Escalation to 2013\$					
Labor	11	8	5	2	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	11	8	5	2	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	122	123	124	123	125
Non-Labor	3	2	4	11	5
NSE	0	0	0	0	0
Total	125	125	128	133	130
FTE	1.0	1.1	1.0	1.0	1.1

* After company-wide exclusions of Non-GRC costs

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

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: A. Customer Service Operations Shared Services
 Category-Sub: 3. CCC Strategy and Analysis Manager
 Cost Center: 2100-3511.000 - CCC Strategy and Analysis 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.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: B. CS Technologies, Policies, and Solutions SS
 Cost Center: VARIOUS

Summary for Category: B. CS Technologies, Policies, and Solutions SS

	In 2013\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2013	2014	2015	2016
Labor	343	343	343	343
Non-Labor	257	260	260	260
NSE	0	0	0	0
Total	600	603	603	603
FTE	2.9	2.9	2.9	2.9

Cost Centers belonging to this Category:

2100-3434.000 Planning & Development

Labor	259	259	259	259
Non-Labor	246	246	246	246
NSE	0	0	0	0
Total	505	505	505	505
FTE	1.8	1.8	1.8	1.8

2100-3709.000 Low Emissions Vehicle Program

Labor	84	84	84	84
Non-Labor	11	14	14	14
NSE	0	0	0	0
Total	95	98	98	98
FTE	1.1	1.1	1.1	1.1

Note: Totals may include rounding differences.

Beginning of Workpaper
2100-3434.000 - Planning & Development

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: B. CS Technologies, Policies, and Solutions SS
 Category-Sub: 1. Planning & Development
 Cost Center: 2100-3434.000 - Planning & Development

Activity Description:

The purpose of the Planning & Development group is to provide analytical and execution support for initiatives in four strategic priority area: operational excellence, development and deployment of clean energy solutions for customers, advocacy for sensible policies and regulations that support ratepayer interests and advance Commission policy, maintaining a properly skilled workforce. This group also manages various external information services on a company-wide basis.

Forecast Explanations:

Labor - Base YR Rec

A base year forecast method because 2013 represents the current activity level and is not expected to change. Furthermore, this workgroup has a small number of FTEs whose work is not cyclical in nature and should remain constant for 2014 through TY 2016. Therefore, the base year provides a reasonable starting point for future expenditures.

Non-Labor - Base YR Rec

See above.

NSE - Base YR Rec

N/A

Summary of Results:

		In 2013\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2009	2010	2011	2012	2013	2014	2015	2016	
Labor		579	388	353	276	259	259	259	259	
Non-Labor		397	279	249	366	246	246	246	246	
NSE		0	0	0	0	0	0	0	0	
Total		976	667	602	642	505	505	505	505	
FTE		4.0	3.3	2.9	2.2	1.8	1.8	1.8	1.8	

Note: Totals may include rounding differences.

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

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: B. CS Technologies, Policies, and Solutions SS
 Category-Sub: 1. Planning & Development
 Cost Center: 2100-3434.000 - 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	11	0	11	0.00	0	11	0	11	0.00
Directly Allocated	0	0	0	0	0.00	0	0	0	0	0.00
Subj. To % Alloc.	259	235	0	494	1.80	259	235	0	494	1.80
Total Incurred	259	246	0	505	1.80	259	246	0	505	1.80
% Allocation										
Retained	31.12%	31.12%				13.77%	13.77%			
SEU	68.88%	68.88%				86.23%	86.23%			
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	11	0	11	0.00	0	11	0	11	0.00
Directly Allocated	0	0	0	0	0.00	0	0	0	0	0.00
Subj. To % Alloc.	259	235	0	494	1.80	259	235	0	494	1.80
Total Incurred	259	246	0	505	1.80	259	246	0	505	1.80
% Allocation										
Retained	13.77%	13.77%				13.77%	13.77%			
SEU	86.23%	86.23%				86.23%	86.23%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

Note: Totals may include rounding differences.

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Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
Witness: Bradley M. Baugh
Category: B. CS Technologies, Policies, and Solutions SS
Category-Sub: 1. Planning & Development
Cost Center: 2100-3434.000 - Planning & Development

Cost Center Allocation Percentage Drivers/Methodology:

Cost Center Allocation Percentage for 2013

The Planning & Development Director Group allocation methodology was based on the Director assessment of time spent completing specific activities and the allocation of this time between the utilities.

Cost Center Allocation Percentage for 2014

The purpose of the Planning & Development group is to provide analytical and execution support for initiatives in four strategic priority area: operational excellence, development and deployment of clean energy solutions for customers, advocacy for sensible policies and regulations that support ratepayer interests and advance Commission policy, maintaining a properly skilled workforce. Labor is allocated based on revenue shares for the gas operations of SCG and SDG&E which is the best proxy for the joint benefit of joint analysis and development tasks. Non-labor is based on line-item determination of beneficiary of planned expenses such as retainer information services.

Cost Center Allocation Percentage for 2015

The purpose of the Planning & Development group is to provide analytical and execution support for initiatives in four strategic priority area: operational excellence, development and deployment of clean energy solutions for customers, advocacy for sensible policies and regulations that support ratepayer interests and advance Commission policy, maintaining a properly skilled workforce. Labor is allocated based on revenue shares for the gas operations of SCG and SDG&E which is the best proxy for the joint benefit of joint analysis and development tasks. Non-labor is based on line-item determination of beneficiary of planned expenses such as retainer information services.

Cost Center Allocation Percentage for 2016

The purpose of the Planning & Development group is to provide analytical and execution support for initiatives in four strategic priority area: operational excellence, development and deployment of clean energy solutions for customers, advocacy for sensible policies and regulations that support ratepayer interests and advance Commission policy, maintaining a properly skilled workforce. Labor is allocated based on revenue shares for the gas operations of SCG and SDG&E which is the best proxy for the joint benefit of joint analysis and development tasks. Non-labor is based on line-item determination of beneficiary of planned expenses such as retainer information services.

Note: Totals may include rounding differences.

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Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: B. CS Technologies, Policies, and Solutions SS
 Category-Sub: 1. Planning & Development
 Cost Center: 2100-3434.000 - 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	259	259	259	0	0	0	259	259	259
Non-Labor	Base YR Rec	246	246	246	0	0	0	246	246	246
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
Total		505	505	505	0	0	0	505	505	505
FTE	Base YR Rec	1.8	1.8	1.8	0.0	0.0	0.0	1.8	1.8	1.8

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 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.

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Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: B. CS Technologies, Policies, and Solutions SS
 Category-Sub: 1. Planning & Development
 Cost Center: 2100-3434.000 - Planning & Development

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	686	438	312	237	224
Non-Labor	368	266	254	382	260
NSE	0	0	0	0	0
Total	1,054	704	567	620	484
FTE	5.2	3.9	2.6	1.9	1.5
Adjustments (Nominal \$) **					
Labor	-228	-126	-16	0	0
Non-Labor	-6	-6	-15	-23	-14
NSE	0	0	0	0	0
Total	-234	-131	-31	-23	-14
FTE	-1.7	-1.1	-0.1	0.0	0.0
Recorded-Adjusted (Nominal \$)					
Labor	458	312	296	237	224
Non-Labor	362	261	239	359	246
NSE	0	0	0	0	0
Total	820	573	536	596	469
FTE	3.5	2.8	2.5	1.9	1.5
Vacation & Sick (Nominal \$)					
Labor	71	50	44	34	35
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	71	50	44	34	35
FTE	0.6	0.5	0.4	0.3	0.3
Escalation to 2013\$					
Labor	50	26	13	5	0
Non-Labor	34	18	9	6	0
NSE	0	0	0	0	0
Total	84	44	23	11	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	579	388	353	276	259
Non-Labor	397	279	249	366	246
NSE	0	0	0	0	0
Total	976	667	602	642	505
FTE	4.1	3.3	2.9	2.2	1.8

* 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.

San Diego Gas & Electric Company
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Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: B. CS Technologies, Policies, and Solutions SS
 Category-Sub: 1. Planning & Development
 Cost Center: 2100-3434.000 - Planning & Development

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs					
Years	2009	2010	2011	2012	2013
Labor	-228	-126	-16	-0.185	0
Non-Labor	-6	-6	-15	-23	-14
NSE	0	0	0	0	0
Total	-234	-131	-31	-23	-14
FTE	-1.7	-1.1	-0.1	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	-130	-2	0	-0.8	CCTR Transf	To 2100-3675.000	CSCHRAMM2013 1111145243463
Transfer labor, FTE, and non-labor costs associated with Electric Vehicle Manager from USS cost center 2100-3434 Planning & Development Director to NSS cost center 2100-3675 in work group 100008 to align costs in where function resides.							
2009	-98	-4	0	-0.9	CCTR Transf	To 2200-2229.000	CSCHRAMM2013 1111160839487
Transfer labor FTE and non-labor costs associated with Strategic Project Manager roles from SDG&E USS cost center 2100-3434 Planning & Development Director to SoCalGas USS cost center 2200-2229 Business Strategy and Development to align functions where they reside due to re-organization.							
2009 Total	-228	-6	0	-1.7			

2010	0	-0.245	0	0.0	CCTR Transf	To 2200-2059.000	CSCHRAMM2013 1111145422993
Transfer non-labor costs associated with SCG RD&D Projects from SDG&E USS cost center 2100-3434 Planning & Development Director to SCG cost center 2200-2059 in work group 2RD001 SCG CS - Technologies RDD to align costs where function resides. Reference Billing Internal Order: 7023552.							
2010	-126	-5	0	-1.1	CCTR Transf	To 2200-2229.000	CSCHRAMM2013 1111160929823
Transfer labor FTE and non-labor costs associated with Strategic Project Manager roles from SDG&E USS cost center 2100-3434 Planning & Development Director to SoCalGas USS cost center 2200-2229 Business Strategy and Development to align functions where they reside due to reorganization.							

Note: Totals may include rounding differences.

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Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: B. CS Technologies, Policies, and Solutions SS
 Category-Sub: 1. Planning & Development
 Cost Center: 2100-3434.000 - 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>
2010 Total	-126	-6	0	-1.1			
2011	0	-15	0	0.0	CCTR Transf	To 2200-2059.000	CSCHRAMM2013 1111145520303
Transfer non-labor costs associated with SCG RD&D Projects from SDG&E USS cost center 2100-3434 Planning & Development Director to SCG cost cennter 2200-2059 in work group 2RD001 SCG CS - Technologies RDD to align costs where function resides. Reference Billing Internal Order: 7023552.							
2011	-12	0	0	-0.1	1-Sided Adj	N/A	CSCHRAMM2013 1111161325340
Exclusion -Non GRC FERC 426.5 - Reference internal order: 406300							
2011	-4	0	0	0.0	1-Sided Adj	N/A	CSCHRAMM2013 1111161410207
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	-16	-15	0	-0.1			
2012	0	-23	0	0.0	CCTR Transf	To 2200-2059.000	CSCHRAMM2013 1111152435053
Transfer non-labor costs associated with SCG RD&D Projects from SDG&E USS cost center 2100-3434 Planning & Development Director to SCG cost cennter 2200-2059 in work group 2RD001 SCG CS - Technologies RDD to align costs where function resides. Reference Internal Order: 7023552.							
2012	-0.185	0	0	0.0	1-Sided Adj	N/A	CSCHRAMM2013 1111161459873
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	-0.185	-23	0	0.0			
2013	0	-14	0	0.0	CCTR Transf	To 2200-2059.001	CSCHRAMM2014 0212112041200
Transfer non-labor costs associated with SoCalGas RD&D Refundable Program from shared service cost center 2100-3434.000 SoCalGas cost center 2200-2059.001 in work group 2RD001.001 SoCalGas CS - Technologies RD&D Refundable to align costs where function resides. Reference internal order: 7025532							

Note: Totals may include rounding differences.

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Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
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Category: B. CS Technologies, Policies, and Solutions SS
Category-Sub: 1. Planning & Development
Cost Center: 2100-3434.000 - 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	0	-14	0	0.0			

Note: Totals may include rounding differences.

Beginning of Workpaper
2100-3709.000 - Low Emissions Vehicle Program

San Diego Gas & Electric Company
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Shared Services Workpapers

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: B. CS Technologies, Policies, and Solutions SS
 Category-Sub: 2. Low Emissions Vehicle Program
 Cost Center: 2100-3709.000 - Low Emissions Vehicle Program

Activity Description:

The Low Emissions Vehicle Program shared service cost center supports the SDG&E Low Emission Vehicle Program; providing Natural Gas Vehicle (NGV) utility account management, customer information, education, and training services to the general public, operators of NGVs, operators of NGV refueling stations, government agencies, and others throughout the service territories of both SoCalGas and SDG&E.

Forecast Explanations:

Labor - Base YR Rec

A base year forecast method was used because 2013 represents the current activity level and is not expected to change. Furthermore, this workgroup has a small number of FTEs whose work is not cyclical in nature and should remain constant for 2014 through TY 2016. Therefore, the base year provides a reasonable starting point for future expenditures.

Non-Labor - Base YR Rec

See explanation above

NSE - Base YR Rec

N/A

Summary of Results:

		In 2013\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2009	2010	2011	2012	2013	2014	2015	2016	
Labor		114	8	76	80	84	84	84	84	
Non-Labor		23	1	9	10	11	14	14	14	
NSE		0	0	0	0	0	0	0	0	
Total		137	9	85	90	95	98	98	98	
FTE		0.8	0.0	1.0	1.0	1.1	1.1	1.1	1.1	

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
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Shared Services Workpapers

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: B. CS Technologies, Policies, and Solutions SS
 Category-Sub: 2. Low Emissions Vehicle Program
 Cost Center: 2100-3709.000 - Low Emissions Vehicle Program

Cost Center Allocations (Incurred Costs):

	2013 Adjusted-Recorded					2014 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	0	0	0	0	0.00	0	0	0	0	0.00
Directly Allocated	0	0	0	0	0.00	0	0	0	0	0.00
Subj. To % Alloc.	84	11	0	95	1.05	84	14	0	98	1.05
Total Incurred	84	11	0	95	1.05	84	14	0	98	1.05
% Allocation										
Retained	84.30%	84.30%				88.61%	88.61%			
SEU	15.70%	15.70%				11.39%	11.39%			
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.	84	14	0	98	1.05	84	14	0	98	1.05
Total Incurred	84	14	0	98	1.05	84	14	0	98	1.05
% Allocation										
Retained	88.61%	88.61%				88.61%	88.61%			
SEU	11.39%	11.39%				11.39%	11.39%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
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Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
Witness: Bradley M. Baugh
Category: B. CS Technologies, Policies, and Solutions SS
Category-Sub: 2. Low Emissions Vehicle Program
Cost Center: 2100-3709.000 - Low Emissions Vehicle Program

Cost Center Allocation Percentage Drivers/Methodology:

Cost Center Allocation Percentage for 2013

This cost center includes all costs associated with the NGV Program at SoCalGas and SDG&E, which provides customer information, education and training to operators of NGVs and NGV refueling stations. The shared service allocation is based on NGV meters counts. 6 Mtrs SCG 28 Mtrs SDG&E

Cost Center Allocation Percentage for 2014

This cost center includes all costs associated with the NGV Program at SoCalGas and SDG&E, which provides customer information, education and training to operators of NGVs and NGV refueling stations. The shared service allocation is based on NGV meters counts. 5 Mtrs SCG 32 Mtrs SDG&E

Cost Center Allocation Percentage for 2015

This cost center includes all costs associated with the NGV Program at SoCalGas and SDG&E, which provides customer information, education and training to operators of NGVs and NGV refueling stations. The shared service allocation is based on NGV meters counts. 5 Mtrs SCG 32 Mtrs SDG&E

Cost Center Allocation Percentage for 2016

This cost center includes all costs associated with the NGV Program at SoCalGas and SDG&E, which provides customer information, education and training to operators of NGVs and NGV refueling stations. The shared service allocation is based on NGV meters counts. 5 Mtrs SCG 32 Mtrs SDG&E

Note: Totals may include rounding differences.

San Diego Gas & Electric Company
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Shared Services Workpapers

Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: B. CS Technologies, Policies, and Solutions SS
 Category-Sub: 2. Low Emissions Vehicle Program
 Cost Center: 2100-3709.000 - Low Emissions Vehicle Program

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	84	84	84	0	0	0	84	84	84
Non-Labor	Base YR Rec	11	11	11	3	3	3	14	14	14
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
Total		95	95	95	3	3	3	98	98	98
FTE	Base YR Rec	1.1	1.1	1.1	0.0	0.0	0.0	1.1	1.1	1.1

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	0	3	0	3	0.0	1-Sided Adj

Increase in reimbursable expenses due to increased travel.

2014 Total	0	3	0	3	0.0	
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2015	0	3	0	3	0.0	1-Sided Adj
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Increase in reimbursable expenses due to increased travel.

2015 Total	0	3	0	3	0.0	
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2016	0	3	0	3	0.0	1-Sided Adj
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Increase in reimbursable expenses due to increased travel.

2016 Total	0	3	0	3	0.0	
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Note: Totals may include rounding differences.

San Diego Gas & Electric Company
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Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
Witness: Bradley M. Baugh
Category: B. CS Technologies, Policies, and Solutions SS
Category-Sub: 2. Low Emissions Vehicle Program
Cost Center: 2100-3709.000 - Low Emissions Vehicle Program

Determination of Adjusted-Recorded (Incurred Costs):

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
Recorded (Nominal \$)*					
Labor	81	0	64	69	73
Non-Labor	20	0	9	10	11
NSE	0	0	0	0	0
Total	102	0	73	79	84
FTE	0.6	0.0	0.8	0.9	0.9
Adjustments (Nominal \$) **					
Labor	8	7	0	0	0
Non-Labor	1	1	0	0	0
NSE	0	0	0	0	0
Total	9	7	0	0	0
FTE	0.1	0.0	0.0	0.0	0.0
Recorded-Adjusted (Nominal \$)					
Labor	90	7	64	69	73
Non-Labor	21	1	9	10	11
NSE	0	0	0	0	0
Total	111	7	73	79	84
FTE	0.7	0.0	0.8	0.9	0.9
Vacation & Sick (Nominal \$)					
Labor	14	1	9	10	11
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	14	1	9	10	11
FTE	0.1	0.0	0.1	0.1	0.2
Escalation to 2013\$					
Labor	10	1	3	1	0
Non-Labor	2	0	0	0	0
NSE	0	0	0	0	0
Total	12	1	3	2	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013\$)					
Labor	114	8	76	80	84
Non-Labor	23	1	9	10	11
NSE	0	0	0	0	0
Total	137	9	85	90	95
FTE	0.8	0.0	0.9	1.0	1.1

* 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.

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Area: CS - OPERATIONS, INFORMATION & TECHNOLOGIES
 Witness: Bradley M. Baugh
 Category: B. CS Technologies, Policies, and Solutions SS
 Category-Sub: 2. Low Emissions Vehicle Program
 Cost Center: 2100-3709.000 - Low Emissions Vehicle Program

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs					
Years	2009	2010	2011	2012	2013
Labor	8	7	0	0	0
Non-Labor	0.716	0.795	0	0	0
NSE	0	0	0	0	0
Total	9	7	0	0	0
FTE	0.1	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	8	0.716	0	0.1	CCTR Transf	From 2200-0234.000	EPANAMEN2013 1108195740530

Transfer labor FTE and non-labor costs associated with Account Executive roles from SoCalGas USS cost center 2200-0234 NGV Program to SDG&E USS cost center 2100-3709 to align functions where they reside and will be forecast.

2009 Total	8	0.716	0	0.1
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2010	7	0.795	0	0.0	CCTR Transf	From 2200-0234.000	EPANAMEN2013 1108195903987
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Transfer labor FTE and non-labor costs associated with Account Executive roles from SoCalGas USS cost center 2200-0234 NGV Program to SDG&E USS cost center 2100-3709 to align functions where they reside and will be forecast.

2010 Total	7	0.795	0	0.0
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2011 Total	0	0	0	0.0
-------------------	----------	----------	----------	------------

2012 Total	0	0	0	0.0
-------------------	----------	----------	----------	------------

2013 Total	0	0	0	0.0
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Note: Totals may include rounding differences.

Supplemental Workpapers for Workpaper 2100-3709.000

RESPONSES TO INFORMAL DATA REQUESTS & DEFICIENCIES¹

ORA INFORMAL-SDG&E/SOCALGAS-DR-05,

SDG&E-ORA-DEF-009-TLG, and

SDG&E-ORA-DEF-040-TLG

Supporting the Request of Bradley M. Baugh

Customer Service Operations, Information and Technologies

¹ Changes reflected in these revised workpapers include historical adjustments to 2010, 2011, and 2012 in workpaper group 100010.000 Communications and Research and adjustments to 2014 and 2015 forecasts in workpaper group 100009.000 C&I Services. These changes have also been incorporated into previously submitted informal data request and deficiency responses that are attached as supplemental workpapers: “ORA Informal Data Request ORA INFORMAL-SDG&E/SoCalGas-DR-05 Question 2 Attachments”; “ORA Deficiency Data Request SDG&E-ORA-DEF-009-TLG Question B.1”; “ORA Deficiency SDG&E-ORA-DEF-040 Summary Tab”; “ORA Deficiency SDG&E-ORA-DEF-040 Details by Workgroup”; “ORA Deficiency SDG&E-ORA-DEF-040 High Level Roadmap”. Updates have also been made to reflect testimony and workpaper page number references accordingly.

ORA INFORMAL-SDG&E/SOCALSGAS-DR-05

Question 2 Attachment

Supporting the Request of Bradley M. Baugh

Customer Service Operations, Information and Technologies

San Diego Gas & Electric Company
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ORA Informal Data Request ORA INFORMAL-SDG&E/SoCalGas-DR-05 Question 2 Attachments

Witness Name	Bradley M. Baugh								
Constant 2013\$ in Thousands									
	Adjusted Recorded					Forecast		Workpaper Page	
	2009	2010	2011	2012	2013	2014	2015	2016	
SDG&E									
Exh No:SDG&E-14-WP									
OM Total	61,785	55,241	53,627	56,705	58,154	61,010	64,224	67,584	
NSS	60,213	54,121	52,577	55,608	57,178	60,031	63,245	66,605	
100000.000 - Advanced Metering Ops									
Labor	4,681	5,070	4,870	7,311	7,556	8,480	8,738	8,090	
NLbr	608	514	552	842	579	500	681	681	
NSE	0	0	0	0	0	0	0	0	
100000.000 Total	5,289	5,584	5,422	8,153	8,135	8,980	9,419	8,771	Page 6 of 472
100001.000 - Meter Reading									
Labor	9,050	6,907	4,162	(1)	0	0	0	0	
NLbr	626	150	89	0	0	0	0	0	
NSE	0	0	0	0	0	0	0	0	
100001.000 Total	9,676	7,057	4,251	(1)	0	0	0	0	Page 21 of 472
100002.000 - Billing									
Labor	4,321	4,237	4,037	4,687	4,768	4,828	5,032	5,508	
NLbr	231	374	328	316	305	308	316	331	
NSE	0	0	0	0	0	0	0	0	
100002.000 Total	4,552	4,611	4,365	5,003	5,073	5,136	5,348	5,839	Page 27 of 472
100003.000 - Credit & Collections									
Labor	2,025	2,066	2,086	2,123	2,227	2,116	2,094	2,256	
NLbr	553	516	537	447	480	538	564	591	
NSE	0	0	0	0	0	0	0	0	
100003.000 Total	2,578	2,582	2,623	2,570	2,707	2,654	2,658	2,847	Page 39 of 472
100004.000 - Remittance Processing									
Labor	0	0	0	0	0	0	0	0	
NLbr	1,025	877	886	815	887	882	876	865	
NSE	0	0	0	0	0	3	7	10	
100004.000 Total	1,025	877	886	815	887	885	883	875	Page 52 of 472
100004.001 - Postage									
Labor	0	0	0	0	0	0	0	0	
NLbr	(1)	(1)	0	0	0	0	0	0	
NSE	5,059	5,008	4,979	4,597	4,431	4,624	4,519	4,333	
100004.001 Total	5,058	5,007	4,979	4,597	4,431	4,624	4,519	4,333	Page 64 of 472
100005.000 - Branch Offices									
Labor	1,430	1,402	1,458	1,409	1,503	1,300	1,218	1,218	
NLbr	526	470	520	485	516	516	516	516	
NSE	0	0	0	0	0	0	0	0	
100005.000 Total	1,956	1,872	1,978	1,894	2,019	1,816	1,734	1,734	Page 79 of 472
100006.000 - CCC Operations									
Labor	9,271	8,941	8,590	8,551	8,804	8,348	7,957	8,429	
NLbr	94	322	236	357	384	384	384	384	
NSE	0	0	0	0	0	0	0	0	
100006.000 Total	9,365	9,263	8,826	8,908	9,188	8,732	8,341	8,813	Page 89 of 472
100007.000 - CCC Support									
Labor	1,299	1,153	1,301	1,404	1,312	1,313	1,313	1,313	
NLbr	993	1,251	1,088	903	1,010	1,060	1,224	1,082	
NSE	0	0	0	0	0	0	0	0	
100007.000 Total	2,292	2,404	2,389	2,307	2,322	2,373	2,537	2,395	Page 105 of 472

Note: Totals may include rounding differences.

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ORA Informal Data Request ORA INFORMAL-SDG&E/SoCalGas-DR-05 Question 2 Attachments

Witness Name	Bradley M. Baugh								
Constant 2013\$ in Thousands									
	Adjusted Recorded					Forecast		Workpaper Page	
	2009	2010	2011	2012	2013	2014	2015	2016	
100008.000 - Residential Customer Services									
Labor	1,688	1,421	1,832	2,471	2,579	2,578	2,578	2,903	
NLbr	1,769	1,421	1,616	1,634	2,998	2,560	2,685	3,703	
NSE	0	0	0	0	0	0	0	0	
100008.000 Total	3,457	2,842	3,448	4,105	5,577	5,138	5,263	6,607	Page 124 of 472
100009.000 - C&I Services									
Labor	4,599	4,563	4,311	4,447	4,418	4,594	4,591	4,826	
NLbr	665	579	894	958	887	887	887	962	
NSE						0	0	0	
100009.000 Total	5,264	5,142	5,205	5,405	5,305	5,482	5,479	5,789	Page 136 of 472
100010.000 - Communications Research & Web									
Labor	1,839	1,440	1,846	2,219	2,204	2,668	2,768	3,023	
NLbr	4,737	3,195	3,689	5,764	5,736	7,952	10,397	11,265	
NSE	0	0	0	0	0	0	0	0	
100010.000 Total	6,576	4,637	5,535	7,984	7,940	10,620	13,165	14,288	Page 142 of 472
100011.000 - Customer Programs & Projects									
Labor	905	943	976	1,453	1,419	1,418	1,721	1,920	
NLbr	1,391	852	808	973	1,304	1,303	1,303	1,518	
NSE	0	0	0	0	0	0	5	5	
100011.000 Total	2,296	1,795	1,784	2,425	2,723	2,721	3,029	3,443	Page 156 of 472
100012.000 - Other Office									
Labor	517	400	423	437	588	587	587	587	
NLbr	312	48	463	1,006	283	283	283	283	
NSE	0	0	0	0	0	0	0	0	
100012.000 Total	829	448	886	1,443	871	870	870	870	Page 116 of 472
USS	1,572	1,120	1,050	1,097	976	979	979	979	
2100-0006.000 - Customer Service Strategies									
Labor	108	105	111	109	113	113	113	113	
NLbr	3	1	8	8	8	8	8	8	
NSE	0	0	0	0	0	0	0	0	
2100-0006.000 Total	111	106	119	117	121	121	121	121	Page 169 of 472
2100-3434.000 - Planning & Development									
Labor	580	388	353	276	259	259	259	259	
NLbr	398	279	248	366	246	246	246	246	
NSE	0	0	0	0	0	0	0	0	
2100-3434.000 Total	978	667	601	642	505	505	505	505	Page 191 of 472
2100-3461.000 - Business Planning & Budgets Customer Service									
Labor	220	212	115	112	122	122	122	122	
NLbr	1	1	2	2	3	3	3	3	
NSE					0	0	0	0	
2100-3461.000 Total	221	213	117	114	125	125	125	125	Page 176 of 472
2100-3511.000 - CCC Strategy and Analysis Manager									
Labor	122	123	124	123	125	125	125	125	
NLbr	3	2	4	11	5	5	5	5	
NSE					0	0	0	0	
2100-3511.000 Total	125	125	128	134	130	130	130	130	Page 183 of 472
2100-3709.000 - Low Emissions Vehicle Program									
Labor	114	8	76	80	84	84	84	84	
NLbr	23	1	9	10	11	14	14	14	
NSE	0	0			0	0	0	0	
2100-3709.000 Total	137	9	85	90	95	98	98	98	Page 200 of 472

Note: Totals may include rounding differences.

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**ORA INFORMAL DATA REQUEST
ORA INFORMAL-SDG&E/SOCALGAS-DR-05
SDG&E/SOCALGAS 2016 GRC – A.14-11-XXX
SDG&E/SOCALGAS RESPONSE
DATE RECEIVED: AUGUST 15, 2014
DATE RESPONDED: AUGUST 20, 2014**

SDG&E

Question 3

**Copies of IT Capital Workpapers
Supporting the Request of Bradley M. Baugh**

**(CUSTOMER SERVICE OPERATIONS, INFORMATION,
and TECHNOLOGIES)**

Provided to ORA witness Tamera Godfrey

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

Application No. 14-11-____
Exhibit No.: (SDG&E-19-CWP)

CAPITAL WORKPAPERS TO
PREPARED DIRECT TESTIMONY
OF STEPHEN J. MIKOVITS
ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

NOVEMBER 2014



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Overall Summary For Exhibit No. SDG&E-19-CWP

Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits

In 2013 \$ (000)			
Adjusted-Forecast			
	2014	2015	2016
A. CS - Field & SCG Mtr Reading	121	0	0
B. CS - Operations, Information, and Technologies	26,743	26,317	15,579
C. Electric Distribution	15,029	5,954	2,372
D. Facilities	0	112	1,288
E. Gas Distribution	0	1,160	0
F. Procurement	2,658	2,438	986
G. Information Technology	49,723	26,103	15,163
Total	94,274	62,084	35,388

Note: Totals may include rounding differences.

SDG&E/INFORMATION TECHNOLOGY/Exh No:SDG&E-19-CWP/Witness: S. Mikovits

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SDG&E/CS - INFORMATION & OFFICE OPERATIONS /Exh No:SDG&E-14-WP-R/Witness: B. Baugh

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San Diego Gas & Electric Company
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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Category: B. CS - Operations, Information, and Technologies
Workpaper: VARIOUS

Summary for Category: B. CS - Operations, Information, and Technologies

	In 2013\$ (000)			
	Adjusted-Recorded	Adjusted-Forecast		
	2013	2014	2015	2016
Labor	0	7,308	9,674	4,938
Non-Labor	0	19,435	16,643	10,641
NSE	0	0	0	0
Total	0	26,743	26,317	15,579
FTE	0.0	71.5	95.7	48.6

00831B PT15009 EBPP Tech Refresh

Labor	0	0	272	1,140
Non-Labor	0	0	1,808	2,751
NSE	0	0	0	0
Total	0	0	2,080	3,891
FTE	0.0	0.0	2.7	11.2

00832A PT14006 Branch Office Technical and Security Improvements

Labor	0	0	0	0
Non-Labor	0	0	824	0
NSE	0	0	0	0
Total	0	0	824	0
FTE	0.0	0.0	0.0	0.0

00833D PT15012 I-Avenue Replacement

Labor	0	0	1,093	90
Non-Labor	0	0	1,855	155
NSE	0	0	0	0
Total	0	0	2,948	245
FTE	0.0	0.0	10.7	0.9

00831A PT15007 SDGE.com Redesign

Labor	0	0	286	0
Non-Labor	0	0	0	0
NSE	0	0	0	0
Total	0	0	286	0
FTE	0.0	0.0	2.8	0.0

00831J PT14015 C&I Business Portal

Labor	0	0	0	1,476
Non-Labor	0	0	0	5,871
NSE	0	0	0	0
Total	0	0	0	7,347
FTE	0.0	0.0	0.0	14.5

Note: Totals may include rounding differences.

SDG&E/INFORMATION TECHNOLOGY/Exh No:SDG&E-19-CWP/Witness: S. Mikovits

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Category: B. CS - Operations, Information, and Technologies
Workpaper: VARIOUS

	In 2013\$ (000)			
	Adjusted-Recorded	Adjusted-Forecast		
	2013	2014	2015	2016
00831L PT14023 IVR Phase 4 SDGE				
Labor	0	395	0	0
Non-Labor	0	156	0	0
NSE	0	0	0	0
Total	0	551	0	0
FTE	0.0	3.9	0.0	0.0
00831O PT11013 SCG My Account Accessibility Phase 3				
Labor	0	7	0	0
Non-Labor	0	106	0	0
NSE	0	0	0	0
Total	0	113	0	0
FTE	0.0	0.1	0.0	0.0
00831P PT12051 SDG&E My Account Accessibility				
Labor	0	859	329	0
Non-Labor	0	3,845	1,258	0
NSE	0	0	0	0
Total	0	4,704	1,587	0
FTE	0.0	8.4	3.2	0.0
03849C PT15800 Bill Re-Design 2015				
Labor	0	0	1,449	1,094
Non-Labor	0	0	480	300
NSE	0	0	0	0
Total	0	0	1,929	1,394
FTE	0.0	0.0	14.2	10.7
00831M PT14040 Direct Access Service Request (DASR) Upgrade				
Labor	0	0	239	0
Non-Labor	0	0	134	0
NSE	0	0	0	0
Total	0	0	373	0
FTE	0.0	0.0	2.3	0.0
00831N PT14065 CCA - Community Choice Aggregation				
Labor	0	0	2,950	0
Non-Labor	0	0	0	0
NSE	0	0	0	0
Total	0	0	2,950	0
FTE	0.0	0.0	29.9	0.0
03849A PT14039 CEN Phase 4 - System Enhancements				
Labor	0	0	291	291
Non-Labor	0	0	164	164
NSE	0	0	0	0
Total	0	0	455	455
FTE	0.0	0.0	2.9	2.9

Note: Totals may include rounding differences.

SDG&E/INFORMATION TECHNOLOGY/Exh No:SDG&E-19-CWP/Witness: S. Mikovits

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Category: B. CS - Operations, Information, and Technologies
Workpaper: VARIOUS

	In 2013\$ (000)			
	Adjusted-Recorded	Adjusted-Forecast		
	2013	2014	2015	2016
03851D PT13003 GRC Phase 2				
Labor	0	456	0	0
Non-Labor	0	182	0	0
NSE	0	0	0	0
Total	0	638	0	0
FTE	0.0	4.5	0.0	0.0
03851F PT13021 Critical Peak Pricing Default (CPP_D)				
Labor	0	1,204	1,021	0
Non-Labor	0	4,027	6,424	0
NSE	0	0	0	0
Total	0	5,231	7,445	0
FTE	0.0	11.8	10.0	0.0
04843A PT14843 Smart Meter IT Phase 3 Billing				
Labor	0	392	0	0
Non-Labor	0	525	0	0
NSE	0	0	0	0
Total	0	917	0	0
FTE	0.0	3.8	0.0	0.0
10872A PTSP Smart Peak Pricing				
Labor	0	698	0	0
Non-Labor	0	1,236	0	0
NSE	0	0	0	0
Total	0	1,934	0	0
FTE	0.0	6.8	0.0	0.0
13849A PT13026 Reduce your Use Opt In				
Labor	0	306	0	0
Non-Labor	0	692	0	0
NSE	0	0	0	0
Total	0	998	0	0
FTE	0.0	3.0	0.0	0.0
00831E PT14005 Off But Registering (OBR) Enhancement				
Labor	0	0	554	0
Non-Labor	0	0	0	0
NSE	0	0	0	0
Total	0	0	554	0
FTE	0.0	0.0	5.4	0.0
00833F PT14013 Centralized Calculation Engine				
Labor	0	675	1,053	0
Non-Labor	0	1,396	1,954	0
NSE	0	0	0	0
Total	0	2,071	3,007	0
FTE	0.0	6.6	10.3	0.0

Note: Totals may include rounding differences.

SDG&E/INFORMATION TECHNOLOGY/Exh No:SDG&E-19-CWP/Witness: S. Mikovits

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Category: B. CS - Operations, Information, and Technologies
Workpaper: VARIOUS

	In 2013\$ (000)			
	Adjusted-Recorded	Adjusted-Forecast		
	2013	2014	2015	2016
00833G PT14017 Smart Energy Advisor 2				
Labor	0	1,026	0	0
Non-Labor	0	1,698	0	0
NSE	0	0	0	0
Total	0	2,724	0	0
FTE	0.0	10.0	0.0	0.0
00833R PT13013 SMART METER OPERATION CENTER NETWORK				
Labor	0	102	0	0
Non-Labor	0	212	0	0
NSE	0	0	0	0
Total	0	314	0	0
FTE	0.0	1.0	0.0	0.0
00833U PT13009 Smart Energy Advisor				
Labor	0	256	0	0
Non-Labor	0	857	0	0
NSE	0	0	0	0
Total	0	1,113	0	0
FTE	0.0	2.5	0.0	0.0
03849B PT13012 Net Energy Metering				
Labor	0	45	0	0
Non-Labor	0	26	0	0
NSE	0	0	0	0
Total	0	71	0	0
FTE	0.0	0.4	0.0	0.0
03851H PT13031 SMOC EXCEPTION MANAGEMENT (SMOC-EM)				
Labor	0	386	51	0
Non-Labor	0	2,416	457	0
NSE	0	0	0	0
Total	0	2,802	508	0
FTE	0.0	3.8	0.5	0.0
00821A PT13010 CUSTOMER ANALYTICS SYSTEM 2013				
Labor	0	501	0	0
Non-Labor	0	2,061	0	0
NSE	0	0	0	0
Total	0	2,562	0	0
FTE	0.0	4.9	0.0	0.0
03853B PT14030 Customer Analytics System - Phase II				
Labor	0	0	86	114
Non-Labor	0	0	1,285	1,225
NSE	0	0	0	0
Total	0	0	1,371	1,339
FTE	0.0	0.0	0.8	1.2

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Category: B. CS - Operations, Information, and Technologies
Workpaper: VARIOUS

	In 2013\$ (000)			
	Adjusted-Recorded	Adjusted-Forecast		
	2013	2014	2015	2016
03853C PT16003 Customer Analytics System - III				
Labor	0	0	0	733
Non-Labor	0	0	0	175
NSE	0	0	0	0
Total	0	0	0	908
FTE	0.0	0.0	0.0	7.2

Note: Totals may include rounding differences.

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Beginning of Workpaper Group
00831B - PT15009 EBPP Tech Refresh

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 00831.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 1. Technical Obsolescence
Workpaper Group: 00831B - PT15009 EBPP Tech Refresh

Summary of Results (Constant 2013 \$ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
		2009	2010	2011	2012	2013	2014	2015	2016
Years									
Labor	Zero-Based	0	0	0	0	0	0	272	1,140
Non-Labor	Zero-Based	0	0	0	0	0	0	1,808	2,751
NSE	Zero-Based	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	2,080	3,891
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	2.7	11.2

Business Purpose:

The purpose of the Electronic Bill Presentment and Payment "EBPP" Tech Refresh project is to replace the existing back-end technology platform for the online electronic bill payment process ("EBPP") available to customers through SDG&E's My Account website. Upgrading the technology now will enable continued support of the site before the vendor for our current technology stops supporting the existing product in 2018. This is the same vendor supporting the customer-facing My Account portal site which is being replaced as part of the SDG&E My Account Accessibility project (project #12051). Updating the platform will improve stability, dependability and cost to support EBPP for customers. This is important because of the increased needs of the SDG&E customer base as demonstrated by EBPP's ability to handle the increased volume of transactions required by the C&I customers being addressed by the CPP-D project.

Physical Description:

The project will provide improved stability and dependability of EBPP as we continue to promote and drive increased adoption of our online services. Oracle Payments provides the many to many relationship functionality that will serve as the foundation for supporting the business needs of our C&I customers. Recurring Payment adoption rates and cash flow improvements will be realized due to an enhanced Recurring Payment process.

Project Justification:

Updating the user interface enhances the customer experience and allows for the implementation of accessibility requirements in accordance with the MOU ("Memorandum of Understanding") with Disabilities Rights Advocates

Note: Totals may include rounding differences.

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San Diego Gas & Electric Company
2016 GRC - APP
Capital Workpapers

Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 00831.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 1. Technical Obsolescence
Workpaper Group: 00831B - PT15009 EBPP Tech Refresh

Forecast Methodology:

Labor - Zero-Based

Estimate based on internal labor hours quotations

Non-Labor - Zero-Based

Estimate based on vendor quotations

NSE - Zero-Based

N/A

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**Beginning of Workpaper Sub Details for
Workpaper Group 00831B**

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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 00831.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 1. Technical Obsolescence
 Workpaper Group: 00831B - PT15009 EBPP Tech Refresh
 Workpaper Detail: 00831B.001 - My Account Portal is being replaced as part of the MAAUI project. This project propose
 In-Service Date: 12/31/2016
 Description:

		Forecast In 2013 \$(000)		
Years		2014	2015	2016
Labor		0	272	1,140
Non-Labor		0	1,808	2,751
NSE		0	0	0
	Total	0	2,080	3,891
FTE		0.0	2.7	11.2

Note: Totals may include rounding differences.

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Beginning of Workpaper Group
00832A - PT14006 Branch Office Technical and Security Improvements

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Capital Workpapers

Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 00832.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 1. Technical Obsolescence
Workpaper Group: 00832A - PT14006 Branch Office Technical and Security Improvements

Summary of Results (Constant 2013 \$ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
		2009	2010	2011	2012	2013	2014	2015	2016
Labor	Zero-Based	0	0	0	0	0	0	0	0
Non-Labor	Zero-Based	0	0	0	0	0	0	824	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		0	0	0	0	0	0	824	0
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Business Purpose:

The purpose of the Branch Office Technical and Security Improvements project is to provide for more secure financial transactions, easier cash and payment reconciliation, improved processing/handling and an overall better customer payment experience. The project will seek to improve upon the existing payment handling and processing in the Branch Offices. This project will also identify improvements to help with payment processing and better ways to track and secure cash that is received from the customers, such as Smart Safes. After identifying improved cash security and payment processing solutions, the project will implement the most cost effective and efficient products wherever possible.

Physical Description:

The scope will be centered on purchasing new equipment for the Branch Offices to replace existing outdated equipment and provide new payment options for customer. Also, the focus will be to strengthen the customer experience at the Branch Offices.

Project Justification:

For example, debit card payments are currently not available to customers who wish to pay over the counter in the Branch Offices, cash and change is given out by hand, and the existing Payment Entry Processing system ("PEP") is not efficient and is not entirely compatible with any of the new software programs or project initiatives for the CCC and Branch Offices. As such, this incompatibility has led to the creation of inefficient and more costly workarounds. There are also issues between the PEP system and some of the newer implementations for the SEAd and CAS projects. In addition, this project will address several known technology issues with SDG&E's ExpressPay kiosks. The existing kiosks are outdated from a technology standpoint and are in need of software upgrades and/or retrofitting and need to be replaced with a newer, more efficient technology.

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 00832.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 1. Technical Obsolescence
Workpaper Group: 00832A - PT14006 Branch Office Technical and Security Improvements

Forecast Methodology:

Labor - Zero-Based

Full implementation assumes all new equipment is purchased and up and running.

Non-Labor - Zero-Based

Full implementation assumes all new equipment is purchased and up and running.

NSE - Zero-Based

N/A

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Workpaper Group 00832A**

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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 00832.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 1. Technical Obsolescence
 Workpaper Group: 00832A - PT14006 Branch Office Technical and Security Improvements
 Workpaper Detail: 00832A.001 - The scope will be centered on purchasing new equipment for the Branch Offices to replac
 In-Service Date: 12/31/2015
 Description:

Forecast in 2013 \$(000)				
	Years	2014	2015	2016
		Labor	0	0
Non-Labor		0	824	0
NSE		0	0	0
	Total	0	824	0
FTE		0.0	0.0	0.0

Note: Totals may include rounding differences.

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Beginning of Workpaper Group
00833D - PT15012 I-Avenue Replacement

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 00833.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 1. Technical Obsolescence
Workpaper Group: 00833D - PT15012 I-Avenue Replacement

Summary of Results (Constant 2013 \$ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
		2009	2010	2011	2012	2013	2014	2015	2016
Years									
Labor	Zero-Based	0	0	0	0	0	0	1,093	90
Non-Labor	Zero-Based	0	0	0	0	0	0	1,855	155
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		0	0	0	0	0	0	2,948	245
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	10.7	0.9

Business Purpose:

I-Avenue, also known as Saratoga, is a CRM tool used by Commercial and Industrial services. In short, the system manages and tracks the interaction that takes place between SDG&E and its business customers. An upgrade is needed to bring the system up to current technology, and will require additional changes to master data to meet the customer's desire to have a more real-time, holistic view of each customer's usage profile.

Physical Description:

Configure SAP-CRM out the box functionality to support business requirements using standard CRM functionality: appointments, notes, contact lists, calendars, letters and reporting as well as, client specific views. The system will require additional changes to master data to meet the clients desire to have a 360 degree customer view.

Project Justification:

Move approximately 150 I-Avenue (Saratoga) CRM business users to enterprise CRM (SAP) application. The primary groups being effected are SDG&E C&I Services, Trade Allies, Fire Prevention and Delinquent Phone List business client groups. SCG gas business using I-Avenue will not be part of the project.

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 00833.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 1. Technical Obsolescence
Workpaper Group: 00833D - PT15012 I-Avenue Replacement

Forecast Methodology:

Labor - Zero-Based

Estimate based on internal labor hours quotations

Non-Labor - Zero-Based

Estimate based on vendor quotations

NSE - Zero-Based

N/A

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Workpaper Group 00833D**

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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 00833.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 1. Technical Obsolescence
 Workpaper Group: 00833D - PT15012 I-Avenue Replacement
 Workpaper Detail: 00833D.001 - Move approximately 150 I-Avenue (Saratoga) CRM business users to enterprise CRM (SAP) a
 In-Service Date: 06/30/2016
 Description:

Forecast In 2013 \$(000)				
	Years	2014	2015	2016
Labor		0	1,093	90
Non-Labor		0	1,855	155
NSE		0	0	0
	Total	0	2,948	245
FTE		0.0	10.7	0.9

Note: Totals may include rounding differences.

SDG&E/INFORMATION TECHNOLOGY/Exh No:SDG&E-19-CWP/Witness: S. Mikovits

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Beginning of Workpaper Group
00831A - PT15007 SDGE.com Redesign

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 00831.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 2. Improving Customer Experience
Workpaper Group: 00831A - PT15007 SDGE.com Redesign

Summary of Results (Constant 2013 \$ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2009	2010	2011	2012	2013	2014	2015	2016
Labor	Zero-Based	0	0	0	0	0	0	286	0
Non-Labor	Zero-Based	0	0	0	0	0	0	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		0	0	0	0	0	0	286	0
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	2.8	0.0

Business Purpose:

The purpose of the SDGE.com Redesign project is to redesign the SDG&E's website, SDGE.com. The website has become a prominent and essential communications channel to connect with customers. The redesign is needed because of new customer technologies (e.g. mobile, social media) and increase search engine friendliness. The website redesign will incorporate customer usage trend data and above-mentioned technologies to improve self-service. An enhanced navigation and information architecture will help customers find information easier and faster, a consistent experience with My Account, as well as removing out of date information, adding new features and technologies that were not available when the site was last built, and integration of the latest social media interfaces, image and video galleries, and blogging interfaces. Additionally, a redesign will help with compatibility with the latest browsers and accessibility requirements.

Physical Description:

A redesign will include research and testing, information architecture, and design and development. Advanced analytics will also be included as part of the redesign project. A large part of the first phase of development will be information gathering and planning, leading up to the research. Also needed will be testing and a maintenance strategy as part of a digital roadmap.

Project Justification:

Redesign company website, SDGE.com. Our website has become a prominent and essential communications channel to connect with customers. A redesign is needed to stay on top of best practices. The redesign will help us stay up-to-date with new technologies and increase search engine friendliness. The website redesign will utilize new trends and above-mentioned technologies to improve self-service, thus reducing calls and raising customer satisfaction.

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 00831.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 2. Improving Customer Experience
Workpaper Group: 00831A - PT15007 SDGE.com Redesign

Forecast Methodology:

Labor - Zero-Based

Estimate based on internal labor hours quotations

Non-Labor - Zero-Based

Estimate based on internal labor hours quotations

NSE - Zero-Based

N/A

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Workpaper Group 00831A**

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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 00831.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 2. Improving Customer Experience
 Workpaper Group: 00831A - PT15007 SDGE.com Redesign
 Workpaper Detail: 00831A.001 - Redesign company website, SDGE.com. Our website has become a prominent and essential c
 In-Service Date: 12/31/2015
 Description:

		Forecast In 2013 \$(000)		
	Years	2014	2015	2016
Labor		0	286	0
Non-Labor		0	0	0
NSE		0	0	0
	Total	0	286	0
FTE		0.0	2.8	0.0

Note: Totals may include rounding differences.

SDG&E/INFORMATION TECHNOLOGY/Exh No:SDG&E-19-CWP/Witness: S. Mikovits

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SDG&E/CS - INFORMATION & OFFICE OPERATIONS /Exh No:SDG&E-14-WP-R/Witness: B. Baugh

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Beginning of Workpaper Group
00831J - PT14015 C&I Business Portal

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 00831.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 2. Improving Customer Experience
Workpaper Group: 00831J - PT14015 C&I Business Portal

Summary of Results (Constant 2013 \$ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2009	2010	2011	2012	2013	2014	2015	2016
Labor	Zero-Based	0	0	0	0	0	0	0	1,476
Non-Labor	Zero-Based	0	0	0	0	0	0	0	5,871
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		0	0	0	0	0	0	0	7,347
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.5

Business Purpose:

The purpose of the C&I Business Portal is to address the specific needs of the large and medium commercial and industrial (C&I) customers. Currently, My Account provides online self-service for Residential and Small Commercial customers, however does not address the specific needs of the medium and large C&I customers. To satisfy the requests from this segment of customers and to enhance the customer experience for those that utilize our existing and future on-line customer tools, a C&I Business Portal will be developed for Medium and Large C&I customers. This portal will be a centralized location that provides the C&I customer roles the ability to utilize tools that support energy analysis from a cost and consumption level, event management, rate eligibility and enrollment, bill payment, benchmarking and energy efficiency. Across those functions additional capabilities will be developed to allow for role based access and complex analysis such as:

- Business level C&I Customer Registration into My Account allowing access to business-level related functions supporting C&I tools
- Aggregation and disaggregation of accounts, for multi-account customers.
- Management of complex (Many-to-Many) relationships between master users and delegated users for selected business functions
- Customer Managed Contact Management at the user level
- Subscription/Alerts

Physical Description:

Build out a WebPortal within the Oracle's WebCenter CMS to utilize new advance functions, which may include the ability to Design & Layout the entire look and feel of the front-end and backend separate from functionality. Organize and manage the structure of SDG&E website, content or data. Manage (create, modify, delete) user accounts and their information. Define user roles and setup permissions or use predefined ones. The ability to manage and setup user groups and set customer access permissions. Manage regional settings (language, character sets, date & time format, decimal points, etc.) Automatically manage mailing list and subscriptions and unsubscribes. Customizable administrative interfaces (functionality, access and actions restrictions in sections, and designs.)

Project Justification:

Note: Totals may include rounding differences.

SDG&E/INFORMATION TECHNOLOGY/Exh No:SDG&E-19-CWP/Witness: S. Mikovits

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 00831.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 2. Improving Customer Experience
Workpaper Group: 00831J - PT14015 C&I Business Portal

Currently, My Account provides online self-service for Residential and Small Commercial customers. However, it does not address the specific needs of the Large and Medium Commercial & Industrial (C&I) customers. This concept document addresses the requirement to enhance the customer experience for those that utilize on-line customer tools by developing a C&I WebPortal solution. The Web Portal will connect people, processes and information with a suite of functions: Web Experience management, content management, and collaboration technologies. Leverage existing investments by offering a complete, open and integrated user experience by providing standards-based support to improve the reuse of SDG&E existing resources and extend the value of existing systems. Features like content management will provide the ability for SDG&E to interact with the customer to manage text, pages, documents, images, data records, links, news, articles, topics, posts, products, catalogs, galleries, forms, polls, security, etc. Improve business productivity by providing social and collaborative services to help build the connections between people, information and applications, provides business activity streams so users can navigate, discover and access content in context, and offers dynamic, personalized role-based content in a collaborative environment.

Note: Totals may include rounding differences.

SDG&E/INFORMATION TECHNOLOGY/Exh No:SDG&E-19-CWP/Witness: S. Mikovits
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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 00831.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 2. Improving Customer Experience
Workpaper Group: 00831J - PT14015 C&I Business Portal

Forecast Methodology:

Labor - Zero-Based

Estimate based on internal labor hours quotations

Non-Labor - Zero-Based

Estimate based on vendor quotations

NSE - Zero-Based

N/A

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Workpaper Group 00831J**

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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 00831.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 2. Improving Customer Experience
 Workpaper Group: 00831J - PT14015 C&I Business Portal
 Workpaper Detail: 00831J.001 - Build out a WebPortal within the Oracle's WebCenter CMS to utilize new advance functio
 In-Service Date: 12/31/2016
 Description:

Forecast In 2013 \$(000)				
	Years	2014	2015	2016
Labor		0	0	240
Non-Labor		0	0	757
NSE		0	0	0
	Total	0	0	997
FTE		0.0	0.0	2.4

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 00831.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 2. Improving Customer Experience
 Workpaper Group: 00831J - PT14015 C&I Business Portal
 Workpaper Detail: 00831J.002 - C&I Business Portal
 In-Service Date: 12/31/2016
 Description:

Forecast In 2013 \$(000)			
Years	2014	2015	2016
	Labor	0	0
Non-Labor	0	0	1,135
NSE	0	0	0
Total	0	0	1,295
FTE	0.0	0.0	1.6

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 00831.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 2. Improving Customer Experience
 Workpaper Group: 00831J - PT14015 C&I Business Portal
 Workpaper Detail: 00831J.003 - C&I Business Portal
 In-Service Date: 12/31/2016
 Description:

Forecast in 2013 \$(000)				
	Years	2014	2015	2016
		Labor	0	0
Non-Labor		0	0	1,592
NSE		0	0	0
	Total	0	0	2,238
FTE		0.0	0.0	6.3

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 00831.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 2. Improving Customer Experience
 Workpaper Group: 00831J - PT14015 C&I Business Portal
 Workpaper Detail: 00831J.004 - C&I Business Portal
 In-Service Date: 12/31/2016
 Description:

Forecast In 2013 \$(000)				
	Years	2014	2015	2016
Labor		0	0	430
Non-Labor		0	0	2,387
NSE		0	0	0
	Total	0	0	2,817
FTE		0.0	0.0	4.2

Note: Totals may include rounding differences.

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Beginning of Workpaper Group
00831L - PT14023 IVR Phase 4 SDGE

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 00831.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 2. Improving Customer Experience
Workpaper Group: 00831L - PT14023 IVR Phase 4 SDGE

Summary of Results (Constant 2013 \$ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
		2009	2010	2011	2012	2013	2014	2015	2016
Years									
Labor	Zero-Based	0	0	0	0	0	395	0	0
Non-Labor	Zero-Based	0	0	0	0	0	156	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		0	0	0	0	0	551	0	0
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	3.9	0.0	0.0

Business Purpose:

The SDG&E IVR manages incoming customer calls to the CCC. The application guides the customer through menus, which either provide functions for the customer to self-serve (e.g. extend the due date on their bill; arrange for a gas appliance service order) or collects information about the caller to route the call to the properly skilled agent. The IVR 2014 project will shorten the call flow from the IVR entry to main menu and sub-menu; eliminate unnecessary caller authentication; minimize steps to complete a gas appliance service order; revise prompt verbiage for improved clarity and succinctness; and add self-service opportunities to start/stop service. The enhancements are intended to improve the experience for the caller and entice callers to use self-service. The benefits of this project are to increase IVR self-service and to reduce calls to the ESS and ESS workforce.

Physical Description:

Main and secondary menu changes; add a 'payment options' menu, identify callers at point of need; change gas appliance and shut-off call flows to increase self service
Move profile lookup call (IV02) into the IVR (from the Genesys strategy)
Implement Payment Arrangements web service (built for My Account)
Create an entry point in the Payment Arrangements leg of the application, to allow the CCC to transfer callers into the IVR to complete bill payment extension
Add IVR modules to improve call routing
Add NAICS code to the IV02 profile

Project Justification:

These changes will improve the overall IVR self service rate by 2.5 – 3%. In addition to increasing the self service rate, changes to the application will also result in better customer experience.

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 00831.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 2. Improving Customer Experience
Workpaper Group: 00831L - PT14023 IVR Phase 4 SDGE

Forecast Methodology:

Labor - Zero-Based

Project is currently in - progress. Based on actual timeline of the project to complete.

Non-Labor - Zero-Based

Project is currently in - progress. Based on actual timeline of the project to complete.

NSE - Zero-Based

N/A

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**Beginning of Workpaper Sub Details for
Workpaper Group 00831L**

SDG&E/INFORMATION TECHNOLOGY/Exh No:SDG&E-19-CWP/Witness: S. Mikovits
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Capital Workpapers

Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 00831.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 2. Improving Customer Experience
 Workpaper Group: 00831L - PT14023 IVR Phase 4 SDGE
 Workpaper Detail: 00831L.001 - SDG&E IVR system has been proven working however the results were modest. The IVR self-
 In-Service Date: 12/31/2014
 Description:

		Forecast In 2013 \$(000)		
Years		2014	2015	2016
Labor		395	0	0
Non-Labor		156	0	0
NSE		0	0	0
	Total	551	0	0
FTE		3.9	0.0	0.0

Note: Totals may include rounding differences.

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Beginning of Workpaper Group
008310 - PT11013 SCG My Account Accessibility Phase 3

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SDG&E/CS - INFORMATION & OFFICE OPERATIONS /Exh No:SDG&E-14-WP-R/Witness: B. Baugh
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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 00831.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 2. Improving Customer Experience
 Workpaper Group: 008310 - PT11013 SCG My Account Accessibility Phase 3

Summary of Results (Constant 2013 \$ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
		2009	2010	2011	2012	2013	2014	2015	2016
Labor	Zero-Based	0	0	0	0	0	7	0	0
Non-Labor	Zero-Based	0	0	0	0	0	106	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		0	0	0	0	0	113	0	0
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0

Business Purpose:

The purpose of the MAAUI Phase 3 (PDF Bill remediation) project is to complete the update to My Account and comply with TY 2011 GRC Memorandum of Understanding with the Center for Accessible Technology (C for AT). SoCalGas has long supported website usability and accessibility and has been making steady progress meeting its commitments to website accessibility as outlined in its Section 4.A.2.d of the MOU which states: "... the third party vendor software used for My Account will be rewritten to utilize accessible web pages that are compliant with Priorities A and AA and produce PDF documents that will be in an accessible format that would allow for a reader to review them using a screen reader". In July of 2013 the My Account system rewrite was completed and Priority AA compliance was confirmed by the C for AT. SoCalGas continues to modify the 25 months of billing history stored as PDF documents and available online to every My Account user in order to remain compliant with the MOU. More specifically, key requirements for the MAAUI Phase 3 project includes providing an alternative bill format that is readable with "screen readers" and font enlargement software and to provide accessible linkage to the new alternative bill format. SoCalGas' web and My Account teams have collaborated closely with the C for AT and other internal or external website accessibility resources in order to assure that all our customers with special needs can utilize every feature of socialgas.com and My Account. This project will provide Priority AA accessibility compliance to every feature and function in My Account

Physical Description:

Redesign of the web user interface for the My Account applications (no technical upgrades/changes)

Project Justification:

Note: Totals may include rounding differences.

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San Diego Gas & Electric Company
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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 00831.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 2. Improving Customer Experience
Workpaper Group: 008310 - PT11013 SCG My Account Accessibility Phase 3

The purpose of the MAAUI Phase 3 (PDF Bill remediation) project is to complete the update to My Account and comply with TY 2011 GRC Memorandum of Understanding with the Center for Accessible Technology (C for AT). SoCalGas has long supported website usability and accessibility and has been making steady progress meeting its commitments to website accessibility as outlined in its Section 4.A.2.d of the MOU which states: "... the third party vendor software used for My Account will be rewritten to utilize accessible web pages that are compliant with Priorities A and AA and produce PDF documents that will be in an accessible format that would allow for a reader to review them using a screen reader". In July of 2013 the My Account system rewrite was completed and Priority AA compliance was confirmed by the C for AT. SoCalGas continues to modify the 25 months of billing history stored as PDF documents and available online to every My Account user in order to be remain compliant with the MOU. More specifically, key requirements for the MAAUI Phase 3 project includes providing an alternative bill format that is readable with "screen readers" and font enlargement software and to provide accessible linkage to the new alternative bill format. SoCalGas' web and My Account teams have collaborated closely with the C for AT and other internal or external website accessibility resources in order to assure that all our customers with special needs can utilize every feature of socalgas.com and My Account. This project will provide Priority AA accessibility compliance to every feature and function in My Account

Note: Totals may include rounding differences.

SDG&E/INFORMATION TECHNOLOGY/Exh No:SDG&E-19-CWP/Witness: S. Mikovits
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Capital Workpapers

Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 00831.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 2. Improving Customer Experience
Workpaper Group: 008310 - PT11013 SCG My Account Accessibility Phase 3

Forecast Methodology:

Labor - Zero-Based

Project is currently in - progress. Based on actual timeline of the project to complete.

Non-Labor - Zero-Based

Project is currently in - progress. Based on actual timeline of the project to complete.

NSE - Zero-Based

N/A

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**Beginning of Workpaper Sub Details for
Workpaper Group 008310**

San Diego Gas & Electric Company
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Capital Workpapers

Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 00831.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 2. Improving Customer Experience
 Workpaper Group: 008310 - PT11013 SCG My Account Accessibility Phase 3
 Workpaper Detail: 008310.001 - SCG My Account Accessibility
 In-Service Date: 03/31/2014
 Description:

		Forecast In 2013 \$(000)		
Years		2014	2015	2016
Labor		7	0	0
Non-Labor		106	0	0
NSE		0	0	0
	Total	113	0	0
FTE		0.1	0.0	0.0

Note: Totals may include rounding differences.

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Beginning of Workpaper Group
00831P - PT12051 SDG&E My Account Accessibility

SDG&E/INFORMATION TECHNOLOGY/Exh No:SDG&E-19-CWP/Witness: S. Mikovits
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SDG&E/CS - INFORMATION & OFFICE OPERATIONS /Exh No:SDG&E-14-WP-R/Witness: B. Baugh
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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 00831.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 2. Improving Customer Experience
Workpaper Group: 00831P - PT12051 SDG&E My Account Accessibility

Summary of Results (Constant 2013 \$ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
		2009	2010	2011	2012	2013	2014	2015	2016
Labor	Zero-Based	0	0	0	0	0	859	329	0
Non-Labor	Zero-Based	0	0	0	0	0	3,845	1,258	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	4,704	1,587	0
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	8.4	3.2	0.0

Business Purpose:

The purpose of the SDG&E My Account Accessibility is to update the customer-facing My Account portal site to comply with TY 2008 GRC Memorandum of Understanding ("MOU") with the Disability Rights Advocates while improving usability and upgrading the portal technology platform. The My Account portal site provides customers with convenient access to online service options. Updating the user interface will enhance customer experience through improved visual layout, additional personalization, and newer technology. The new technology will allow for the implementation Priority A and Priority AA Web Content Accessibility Guidelines 2.0 and requirements per section §4.3 of the 2008 MOU in order to ensure all our customers, including those with special needs, can utilize every My Account feature. Pages will be easier to read and customers who sign up can view their SDG&E bill, schedule online payments, manage service requests, view energy charts, and use analysis tools. New personalization will present at-a-glance balance and bill payment information, and an improved tailored account summary. The implementation of responsive design will create a seamless web experience with the same look-and-feel across mobile devices and other company sites, such as sdge.com. Supporting computer-alternative devices, such as mobile smartphones and tablets, will provide greater access to My Account for customers who may have barriers to technology. Upgrading the portal technology platform now will enable continued support of the site before the vendor for our current WebLogic technology stops supporting the existing product in 2018.

Physical Description:

Redesigned User Interface (My Account "look & feel") with Responsive Design
Usability improvements to promote self-service containment (where possible)
100% Accessibility Compliance including Accessible PDF Bill
Content Management & Tailored Treatments with utilization of portal features
Technology Refresh & Portal Migration to WebCenter Platform (HW & SW)
My Account site optimization including technical improvements & maintenance efficiencies
CSR Module – maintain consistency between module and My Account

Project Justification:

Compliance with §4.3 of the 2008 GRC Memorandum of Understanding (MOU) with the Disability Rights Advocates. The MOU was signed June of 2007 and agreed to be completed in 'a reasonable time.' The project needs to move forward in order to show progress on this agreement, show we intend to uphold our commitments and maintain credibility in negotiation with Interveners. Proof of progress will prevent legal action to force compliance and avoid potential lawsuits such as those experienced by Target & Amazon. (In 2008, Target settled a lawsuit agreeing to pay \$6 million to the National Federation of the Blind.)

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 00831.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 2. Improving Customer Experience
Workpaper Group: 00831P - PT12051 SDG&E My Account Accessibility

Forecast Methodology:

Labor - Zero-Based

Project is currently in - progress. Based on actual timeline of the project to complete.

Non-Labor - Zero-Based

Project is currently in - progress. Based on actual timeline of the project to complete.

NSE - Zero-Based

N/A

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**Beginning of Workpaper Sub Details for
Workpaper Group 00831P**

SDG&E/INFORMATION TECHNOLOGY/Exh No:SDG&E-19-CWP/Witness: S. Mikovits
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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 00831.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 2. Improving Customer Experience
 Workpaper Group: 00831P - PT12051 SDG&E My Account Accessibility
 Workpaper Detail: 00831P.001 - SDG&E My Account Accessibility
 In-Service Date: 12/31/2014
 Description:

		Forecast in 2013 \$(000)		
Years		2014	2015	2016
Labor		859	0	0
Non-Labor		3,845	0	0
NSE		0	0	0
	Total	4,704	0	0
FTE		8.4	0.0	0.0

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 00831.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 2. Improving Customer Experience
 Workpaper Group: 00831P - PT12051 SDG&E My Account Accessibility
 Workpaper Detail: 00831P.004 - SDG&E My Account Accessibility
 In-Service Date: 05/31/2015
 Description:

		Forecast In 2013 \$(000)		
Years		2014	2015	2016
Labor		0	329	0
Non-Labor		0	1,258	0
NSE		0	0	0
	Total	0	1,587	0
FTE		0.0	3.2	0.0

Note: Totals may include rounding differences.

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Beginning of Workpaper Group
03849C - PT15800 Bill Re-Design 2015

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 03849.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 2. Improving Customer Experience
Workpaper Group: 03849C - PT15800 Bill Re-Design 2015

Summary of Results (Constant 2013 \$ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
		2009	2010	2011	2012	2013	2014	2015	2016
Labor	Zero-Based	0	0	0	0	0	0	1,449	1,094
Non-Labor	Zero-Based	0	0	0	0	0	0	480	300
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		0	0	0	0	0	0	1,929	1,394
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	14.2	10.7

Business Purpose:

The purpose of the Bill Redesign project is to improve SDG&E's customer bill to address changes in the electric utility industry. The existing customer bill was designed in 2008 and implemented in 2010. As the electric industry is changing, our existing bill format lacks the flexibility to meet the expectations or the future needs of our customers. This project will leverage the existing formatting software to redesign our bill, and to enhance the bill presentation and graphics. Customer generation is expanding dramatically and new technologies are constantly providing new options for our customers. Smart Meter data allows us to provide more specific and targeted information that ever before.

Physical Description:

Rate reform, SPP and Demand Response programs will require us to provide timely, valuable and easy to read power usage information, alternative rate options and other important information to our customers to help them to make informed decisions in support of energy use, cost and conservation. While these tools are available now to customers online, over half our customers still receive a paper bill. The objective of this project is to target those customers and provide a paper bill that is easier to understand, incorporates more graphic information and provides a large font option.

Project Justification:

SDG&E also plans to offer customers currently receiving a paper bill the option of a one sheet/two page summary bill in lieu of the current full bill detail.

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 03849.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 2. Improving Customer Experience
Workpaper Group: 03849C - PT15800 Bill Re-Design 2015

Forecast Methodology:

Labor - Zero-Based

Based on historical and vendor estimates

Non-Labor - Zero-Based

Based on historical and vendor estimates

NSE - Zero-Based

N/A

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**Beginning of Workpaper Sub Details for
Workpaper Group 03849C**

SDG&E/INFORMATION TECHNOLOGY/Exh No:SDG&E-19-CWP/Witness: S. Mikovits
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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 03849.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 2. Improving Customer Experience
 Workpaper Group: 03849C - PT15800 Bill Re-Design 2015
 Workpaper Detail: 03849C.001 - Bill Re-Design 2015
 In-Service Date: 12/31/2016
 Description:

		Forecast In 2013 \$(000)		
	Years	2014	2015	2016
Labor		0	1,449	1,094
Non-Labor		0	480	300
NSE		0	0	0
	Total	0	1,929	1,394
FTE		0.0	14.2	10.7

Note: Totals may include rounding differences.

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Beginning of Workpaper Group
00831M - PT14040 Direct Access Service Request (DASR) Upgrade

SDG&E/INFORMATION TECHNOLOGY/Exh No:SDG&E-19-CWP/Witness: S. Mikovits
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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 00831.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 3. Mandated
Workpaper Group: 00831M - PT14040 Direct Access Service Request (DASR) Upgrade

Summary of Results (Constant 2013 \$ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
		2009	2010	2011	2012	2013	2014	2015	2016
Labor	Zero-Based	0	0	0	0	0	0	239	0
Non-Labor	Zero-Based	0	0	0	0	0	0	134	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		0	0	0	0	0	0	373	0
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0

Business Purpose:

The Direct Access Service Request ("DASR") System is a data management system used by SDG&E to exchange electronic and manual data input and output files with the Electronic Data Interchange (EDIX) System, CISCO, and other data management systems. The DASR system allows for the enrollment, termination, and customer account management associated with customers receiving electric or gas commodity services from an Electric Service Provider under the Direct Access ("DA") Program (electric), an Aggregator under the Core Aggregation Transportation Program (gas), or a Community Choice Aggregator ("CCA") under the Community Choice Aggregation Program (electric), collectively known as Energy Service Providers (ESPs). The DASR system upgrade will automate the DASR and related system processes (EDI, Service Order, and Load Migration), streamline processes across multiple applications to reduce existing time-lag, automate all DASR service orders, minimize the necessity for manual processing and verification of DASRs, ensure the accuracy of all DA billing, reduce the cancel and re-bill of customer billing due to data errors, and automate the Load Migration Reporting to the CAISO. These functional and technical enhancements are required to support the current DA business and are foundational to CCA. The current system has reached the end of its useful life and is to be reconfigured or replaced.

Physical Description:

The current system has reached the end of its useful life and is to be reconfigured or replaced. The new or reconfigured DASR System must have the functional capabilities required to support efficient, accurate, and timely processing of service requests and other electronic data exchanges between SDG&E and LSEs, including Community Choice Aggregators, and their agents.

Project Justification:

The new or reconfigured DASR System must have the functional capabilities required to support efficient, accurate, and timely processing of service requests and other electronic data exchanges between SDG&E and Load Serving Entities (LSE), including CCAs, and their agents. While the system changes required for CCA are being proposed under a separate project, implementing these DASR enhancements will mitigate the company's risk of not being fully prepared to develop and deploy the CCA-specific enhancements under regulatory timing constraints.

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 00831.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 3. Mandated
Workpaper Group: 00831M - PT14040 Direct Access Service Request (DASR) Upgrade

Forecast Methodology:

Labor - Zero-Based

Estimate based on vendor quotations

Non-Labor - Zero-Based

Estimate based on vendor quotations

NSE - Zero-Based

N/A

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Workpaper Group 00831M**

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Capital Workpapers

Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 00831.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 3. Mandated
 Workpaper Group: 00831M - PT14040 Direct Access Service Request (DASR) Upgrade
 Workpaper Detail: 00831M.001 - The current system has reached the end of its useful life and is to be reconfigured or
 In-Service Date: 12/31/2015
 Description:

		Forecast In 2013 \$(000)		
Years		2014	2015	2016
Labor		0	239	0
Non-Labor		0	134	0
NSE		0	0	0
	Total	0	373	0
FTE		0.0	2.3	0.0

Note: Totals may include rounding differences.

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Beginning of Workpaper Group
00831N - PT14065 CCA - Community Choice Aggregation

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 00831.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 3. Mandated
Workpaper Group: 00831N - PT14065 CCA - Community Choice Aggregation

Summary of Results (Constant 2013 \$ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
		2009	2010	2011	2012	2013	2014	2015	2016
Years									
Labor	Zero-Based	0	0	0	0	0	0	2,950	0
Non-Labor	Zero-Based	0	0	0	0	0	0	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		0	0	0	0	0	0	2,950	0
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	29.9	0.0

Business Purpose:

The purpose of the Community Choice Aggregation ("CCA") capital project is to make the necessary changes to SDG&E's systems to implement CCA. CCA permits cities and counties to provide electric commodity services to customers located within their jurisdiction. Under CCA, SDG&E would be required to provide basic CCA implementation services as well as ongoing support, including, SDG&E consolidated billing for all CCA customers within their boundaries and ongoing DASR communications between the CCA and SDG&E. The existing DASR system requires a technical upgrade and functional enhancements to meet the current Direct Access business needs. The CCA project is dependent on these DASR system modifications as these changes are foundational to the DASR CCA enhancements. The DASR upgrade has been proposed under a separate project due to the risk of timing constraints to complete those changes ahead of the development work required for implementing CCA.

Physical Description:

Systems impacted: Service Orders, Billing, Finance, Revenue, IVR, MyAcct, SDGE.com, Direct Access Service Request, Customer Relationship Management, Aclara & DataWarehouse. The DASR portion of this project has also been proposed as a separate project due to the risk of timing constraints to complete before a CCA is prepared to implement.

Project Justification:

In accordance with SDG&E's CPUC-approved Electric Rule 27, no later than six months after a CCA files an implementation plan with the CPUC, SDG&E must be prepared to provide initial CCA implementation services. These services include a platform to facilitate electronic communication between a CCA and SDG&E, in addition to ongoing support including SDG&E consolidated billing, meter reading, and other customer services. SDG&E recently received a request for data from a city and is aware of another CCA-eligible entity that has set aside funding for a CCA feasibility study. While it is difficult to predict if and when a city or county will ultimately implement CCA, SDG&E must be prepared nonetheless. Based on recent examples of CCAs becoming active in California, it seems entirely possible that a CCA could be implemented within two years after commencing its feasibility study. Thus, SDG&E believes that it is necessary to start the work on the upgrades to its systems now to be ready to serve a CCA within the six-month period discussed above.

Note: Totals may include rounding differences.

SDG&E/INFORMATION TECHNOLOGY/Exh No:SDG&E-19-CWP/Witness: S. Mikovits

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 00831.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 3. Mandated
Workpaper Group: 00831N - PT14065 CCA - Community Choice Aggregation

Forecast Methodology:

Labor - Zero-Based

Estimate based on internal labor hours quotations

Non-Labor - Zero-Based

Estimate based on vendor quotations

NSE - Zero-Based

N/A

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**Beginning of Workpaper Sub Details for
Workpaper Group 00831N**

SDG&E/INFORMATION TECHNOLOGY/Exh No:SDG&E-19-CWP/Witness: S. Mikovits
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San Diego Gas & Electric Company
 2016 GRC - APP
 Capital Workpapers

Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 00831.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 3. Mandated
 Workpaper Group: 00831N - PT14065 CCA - Community Choice Aggregation
 Workpaper Detail: 00831N.001 - Community Choice Aggregation
 In-Service Date: 12/31/2015
 Description:

		Forecast In 2013 \$(000)		
Years		2014	2015	2016
Labor		0	1,370	0
Non-Labor		0	0	0
NSE		0	0	0
	Total	0	1,370	0
FTE		0.0	13.4	0.0

Note: Totals may include rounding differences.

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San Diego Gas & Electric Company
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Capital Workpapers

Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 00831.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 3. Mandated
 Workpaper Group: 00831N - PT14065 CCA - Community Choice Aggregation
 Workpaper Detail: 00831N.002 - CCA - Customer Choice Aggregation
 In-Service Date: 12/31/2015
 Description:

		Forecast In 2013 \$(000)		
Years		2014	2015	2016
Labor		0	587	0
Non-Labor		0	0	0
NSE		0	0	0
	Total	0	587	0
FTE		0.0	5.8	0.0

Note: Totals may include rounding differences.

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San Diego Gas & Electric Company
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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 00831.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 3. Mandated
 Workpaper Group: 00831N - PT14065 CCA - Community Choice Aggregation
 Workpaper Detail: 00831N.003 - CCA - Customer Choice Aggregation
 In-Service Date: 12/31/2015
 Description:

Forecast In 2013 \$(000)				
	Years	2014	2015	2016
		Labor	0	666
Non-Labor		0	0	0
NSE		0	0	0
	Total	0	666	0
FTE		0.0	7.5	0.0

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 00831.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 3. Mandated
 Workpaper Group: 00831N - PT14065 CCA - Community Choice Aggregation
 Workpaper Detail: 00831N.004 - CCA - Customer Choice Aggregation
 In-Service Date: 12/31/2015
 Description:

		Forecast In 2013 \$(000)		
Years		2014	2015	2016
Labor		0	327	0
Non-Labor		0	0	0
NSE		0	0	0
	Total	0	327	0
FTE		0.0	3.2	0.0

Note: Totals may include rounding differences.

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Beginning of Workpaper Group
03849A - PT14039 CEN Phase 4 - System Enhancements

SDG&E/INFORMATION TECHNOLOGY/Exh No:SDG&E-19-CWP/Witness: S. Mikovits
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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 03849.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 3. Mandated
 Workpaper Group: 03849A - PT14039 CEN Phase 4 - System Enhancements

Summary of Results (Constant 2013 \$ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
		2009	2010	2011	2012	2013	2014	2015	2016
Labor	Zero-Based	0	0	0	0	0	0	291	291
Non-Labor	Zero-Based	0	0	0	0	0	0	164	164
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		0	0	0	0	0	0	455	455
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	2.9	2.9

Business Purpose:

The purpose of the Customer Energy Network ("CEN") Phase 4 project is to enhance the current CEN system which provides Smart Meter consumption information to external third parties who provide online presentment and other service offerings. Enhancements are necessary to meet requirements mandated in the decision Authorizing Provision of Customer Energy Data to Third Parties Upon Customer Request (CPUC D.13-09-025). Enhancements include conforming to the Energy Services Platform Interface (ESPI) data standard, third party registration portal, enrollment and other user interface changes in SDG&E's My Account web site. Additionally, CPUC D.13-09-025 mandated changes are also required to CEN's back-office platform to include application programming interfaces (API) and web services, reporting and administration services that manage third party and customer enrollments.

Physical Description:

The Customer Energy Network (CEN) Phase 4 project will enhance the CEN system to include cost data (leveraging the Centralized Calculation Engine), add gas consumption data, allow enrollments directly from the third party and support the new open standards for exchanging consumption information.

Project Justification:

The Customer Energy Network (CEN) system provides SmartMeter consumption information to external third parties who provide online presentment and other services. CEN Phase 4 project will enhance the current CEN system to meet the requirements mandated in the Customer Data Access ruling, provide automation of third party setup and maintenance to reduce future O&M support pressures and support Customer Services business needs.

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 03849.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 3. Mandated
Workpaper Group: 03849A - PT14039 CEN Phase 4 - System Enhancements

Forecast Methodology:

Labor - Zero-Based

Estimate based on internal labor hours quotations

Non-Labor - Zero-Based

Estimate based on vendor quotations

NSE - Zero-Based

N/A

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**Beginning of Workpaper Sub Details for
Workpaper Group 03849A**

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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 03849.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 3. Mandated
 Workpaper Group: 03849A - PT14039 CEN Phase 4 - System Enhancements
 Workpaper Detail: 03849A.001 - The Customer Energy Network (CEN) system provides SmartMeter consumption information to
 In-Service Date: 12/31/2015
 Description:

Forecast in 2013 \$(000)					
Years		2014	2015	2016	
Labor		0	291	0	
Non-Labor		0	164	0	
NSE		0	0	0	
	Total	0	455	0	
FTE		0.0	2.9	0.0	

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 03849.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 3. Mandated
 Workpaper Group: 03849A - PT14039 CEN Phase 4 - System Enhancements
 Workpaper Detail: 03849A.002 - CEN Phase 4 - System Enhancements
 In-Service Date: 12/31/2016
 Description:

		Forecast In 2013 \$(000)		
Years		2014	2015	2016
Labor		0	0	291
Non-Labor		0	0	164
NSE		0	0	0
	Total	0	0	455
FTE		0.0	0.0	2.9

Note: Totals may include rounding differences.

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**Beginning of Workpaper Group
03851D - PT13003 GRC Phase 2**

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 03851.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 3. Mandated
Workpaper Group: 03851D - PT13003 GRC Phase 2

Summary of Results (Constant 2013 \$ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
		2009	2010	2011	2012	2013	2014	2015	2016
Labor	Zero-Based	0	0	0	0	0	456	0	0
Non-Labor	Zero-Based	0	0	0	0	0	182	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		0	0	0	0	0	638	0	0
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	4.5	0.0	0.0

Business Purpose:

The GRC Phase II project is being implemented in compliance with CPUC D.14-01-002 in Phase II of SDG&E's 2012 General Rate Case application (A.10-12-005). More specifically, the project includes making changes to SDG&E's Customer Information System to enable the billing of the electric rates adopted by D.14-01-002. In addition, the electric rate changes also need to be made to SDG&E's online Energy Management Tool which provides customers with bill-to-date, bill history and other electric energy pricing information. The rate changes became effective for customers on May 1, 2014.

Physical Description:

- #1 Eliminate Minimum Charge and Create a New Customer Charge for Residential (SIR 88896)
- #2 Consolidating Tiers 3 and 4 (SIR 88896)
- #3 New Medical Consumption Codes and use of DMSM for billing Multi-unit Rates (SIR 88897)
- #4 Redesign Critical Peak Prices (CPP) for Events (SIR 88898)

Project Justification:

CISCO and Aclara system changes required to support GRC Phase 2.
For CISCO, 3 additional O&M (SIR) items that are not specific to GRC, which the client has requested be worked along with GRC due to the synergies involved.
CISCO and Aclara system changes required to support the Triennial Cost Allocation Proceeding (TCAP).

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 03851.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 3. Mandated
Workpaper Group: 03851D - PT13003 GRC Phase 2

Forecast Methodology:

Labor - Zero-Based

Project is currently in - progress. Based on actual timeline of the project to complete.

Non-Labor - Zero-Based

Project is currently in - progress. Based on actual timeline of the project to complete.

NSE - Zero-Based

N/A

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**Beginning of Workpaper Sub Details for
Workpaper Group 03851D**

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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 03851.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 3. Mandated
 Workpaper Group: 03851D - PT13003 GRC Phase 2
 Workpaper Detail: 03851D.001 - GRC Phase 2
 In-Service Date: 07/31/2014
 Description:

		Forecast In 2013 \$(000)		
Years		2014	2015	2016
Labor		456	0	0
Non-Labor		182	0	0
NSE		0	0	0
	Total	638	0	0
FTE		4.5	0.0	0.0

Note: Totals may include rounding differences.

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Beginning of Workpaper Group
03851F - PT13021 Critical Peak Pricing Default (CPP_D)

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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 03851.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 3. Mandated
 Workpaper Group: 03851F - PT13021 Critical Peak Pricing Default (CPP_D)

Summary of Results (Constant 2013 \$ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
		2009	2010	2011	2012	2013	2014	2015	2016
Years									
Labor	Zero-Based	0	0	0	0	0	1,204	1,021	0
Non-Labor	Zero-Based	0	0	0	0	0	4,027	6,424	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		0	0	0	0	0	5,231	7,445	0
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	11.8	10.0	0.0

Business Purpose:

The purpose of the CPP-D (Critical Peak Pricing – Default) Medium project is to support the rollout and ongoing management of the CPP rate for the mid-sized business customers in SDG&E's service territory. Unlike the small business customers, mid-sized customers have more complex electric service and multiple accounts serving their business which drives the need for a more robust tool for SDG&E to use to manage the enrollment, billing, anniversary management, and outreach. Likewise, the customers require more complex functionality to manage being on a critical peak pricing rate compared to their more simplistic time-of-use rate structure.

The CPP-D Medium project includes an online tool for the mid-sized customers to manage and monitor their energy usage and costs with the ability to group their accounts and review them at an aggregate level as well as to monitor the details down to each account and interval. Furthermore, C&I customers who are group billed will have the ability to view and pay their bills online, access historical group bills (including a download/print feature) and will have the option to select paperless billing.

Demand response events, a key component of the CPP rate, will be managed including customer notifications, event day management and post event analytics and metrics for the customers to manage their performance. The tool will also provide this customer group with high level benchmarking for their business type as well as recommendations for energy efficiency programs to consider.

Physical Description:

The scope of the CPP-D Medium project includes the implementation of two online tools for the customers to access and a number of integrations into SDG&E's existing application portfolio. Key integrations included in the project are My Account, Customer Relationship Management (CRM) and Customer Information System. Without this automation project, the implementation of the CPP-D rate for the mid-sized customers would be done with manual processes and providing no tool for the customers to effectively manage their participation on the new time-of-use rate.

Project Justification:

Critical Peak Pricing Rates are required to be rolled out to our customers by the CPUC. Our large commercial and industrial (C&I) customers, ~1,700 customers, were defaulted onto this new rate manually in 2008. The on-going processing remains manually intensive today. Small business customers, ~120,000, will be defaulted thru the Smart Pricing Program (SPP) automation. This leaves ~9,000 medium C&I customers who will not have not been defaulted. These medium customers are more complex than the small businesses as they likely have more meters and more complex operations, but still don't have the internal resources to effectively manage their energy.

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 03851.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 3. Mandated
Workpaper Group: 03851F - PT13021 Critical Peak Pricing Default (CPP_D)

Forecast Methodology:

Labor - Zero-Based

Project is currently in - progress. Based on actual timeline of the project to complete.

Non-Labor - Zero-Based

Project is currently in - progress. Based on actual timeline of the project to complete.

NSE - Zero-Based

N/A

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Workpaper Group 03851F**

SDG&E/INFORMATION TECHNOLOGY/Exh No:SDG&E-19-CWP/Witness: S. Mikovits
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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 03851.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 3. Mandated
 Workpaper Group: 03851F - PT13021 Critical Peak Pricing Default (CPP_D)
 Workpaper Detail: 03851F.001 - Critical Peak Pricing Default (CPP_D)
 In-Service Date: 12/31/2014
 Description:

		Forecast In 2013 \$(000)		
Years		2014	2015	2016
Labor		1,204	0	0
Non-Labor		3,365	0	0
NSE		0	0	0
	Total	4,569	0	0
FTE		11.8	0.0	0.0

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 03851.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 3. Mandated
 Workpaper Group: 03851F - PT13021 Critical Peak Pricing Default (CPP_D)
 Workpaper Detail: 03851F.002 - Critical Peak Pricing Default (CPP_D)
 In-Service Date: 10/31/2015

Description:

Software Licenses Purchased

		Forecast In 2013 \$(000)		
Years		2014	2015	2016
Labor		0	0	0
Non-Labor		662	2,000	0
NSE		0	0	0
	Total	662	2,000	0
FTE		0.0	0.0	0.0

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 03851.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 3. Mandated
 Workpaper Group: 03851F - PT13021 Critical Peak Pricing Default (CPP_D)
 Workpaper Detail: 03851F.003 - Critical Peak Pricing Default (CPP_D)

In-Service Date: 10/31/2015

Description:

Hardware Purchases

		Forecast In 2013 \$(000)		
Years		2014	2015	2016
Labor		0	0	0
Non-Labor		0	365	0
NSE		0	0	0
	Total	0	365	0
FTE		0.0	0.0	0.0

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 03851.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 3. Mandated
 Workpaper Group: 03851F - PT13021 Critical Peak Pricing Default (CPP_D)
 Workpaper Detail: 03851F.004 - Critical Peak Pricing Default (CPP_D)
 In-Service Date: 03/31/2015
 Description:

		Forecast in 2013 \$(000)		
Years		2014	2015	2016
Labor		0	1,021	0
Non-Labor		0	4,059	0
NSE		0	0	0
	Total	0	5,080	0
FTE		0.0	10.0	0.0

Note: Totals may include rounding differences.

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Beginning of Workpaper Group
04843A - PT14843 Smart Meter IT Phase 3 Billing

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 04843.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 3. Mandated
Workpaper Group: 04843A - PT14843 Smart Meter IT Phase 3 Billing

Summary of Results (Constant 2013 \$ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
		2009	2010	2011	2012	2013	2014	2015	2016
Years									
Labor	Zero-Based	0	0	0	0	0	392	0	0
Non-Labor	Zero-Based	0	0	0	0	0	525	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	917	0	0
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0

Business Purpose:

SDG&E installed a Smart Meter system throughout the San Diego and Orange County service areas to improve operational efficiencies, enhance customer service, and enable demand response. Approved by the CPUC on April 12, 2007, the Smart Meter Program has replaced and/or retrofitted approximately 1.4 million electric meters and 865,000 gas meters. The project established a two-way communications infrastructure, provided automated meter reading in place of manual meter reading, integrated customer information and billing systems, measured energy use in fifteen (15) minute or one hour intervals, provided integrated remote disconnect/reconnect capabilities and is in the process of providing a Home Area Network (HAN). SDG&E will implement the final phase of the Smart Meter billing system to support complex commercial/industrial accounts. Standby service, conjunctive billed, clean generation service and complex net meter accounts will be supported with this final phase. The project will allow approximately 600 Smart Meters to be installed for the complex commercial/industrial accounts.

Physical Description:

The system enhancements / processes will allow installation of approximately 600 meters.

Project Justification:

While these capital expenses are recovered through the Advanced Metering Infrastructure Balancing Account, pursuant to CPUC D.07-04-043 and as modified by D.11-03-042, these expenses are included herein for the purpose of determining SDG&E's rate base for its TY 2016 GRC

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 04843.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 3. Mandated
Workpaper Group: 04843A - PT14843 Smart Meter IT Phase 3 Billing

Forecast Methodology:

Labor - Zero-Based

The GRC forecast includes estimated current incremental internal resources assigned 100% to this integration effort and additional contract labor support thru the end of 2014.

Non-Labor - Zero-Based

The GRC forecast includes estimated current incremental internal resources assigned 100% to this integration effort and additional contract labor support thru the end of 2014.

NSE - Zero-Based

N/A

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Workpaper Group 04843A**

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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 04843.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 3. Mandated
 Workpaper Group: 04843A - PT14843 Smart Meter IT Phase 3 Billing
 Workpaper Detail: 04843A.001 - Smart Meter IT Phase 3 Billing
 In-Service Date: 12/31/2014
 Description:

		Forecast In 2013 \$(000)		
Years		2014	2015	2016
Labor		392	0	0
Non-Labor		525	0	0
NSE		0	0	0
	Total	917	0	0
FTE		3.8	0.0	0.0

Note: Totals may include rounding differences.

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**Beginning of Workpaper Group
10872A - PTSP Smart Peak Pricing**

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 10872.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 3. Mandated
Workpaper Group: 10872A - PTSPP Smart Peak Pricing

Summary of Results (Constant 2013 \$ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
		2009	2010	2011	2012	2013	2014	2015	2016
Labor	Zero-Based	0	0	0	0	0	698	0	0
Non-Labor	Zero-Based	0	0	0	0	0	1,236	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		0	0	0	0	0	1,934	0	0
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	6.8	0.0	0.0

Business Purpose:

The purpose of this phase of the overall SPP is to implement additional customer engagement functionality for NEM customers, enhancements allowing for new customers to enroll in the SPP rates over the phone, a new system for understanding the effectiveness of our outreach and education efforts, enhanced reporting and updates to our customer subscription, and alert architecture. The expected completion date for this phase is Q4 2014, with estimated capital expenses of \$1,934,000 for 2014. While these capital expenses are recovered through the Dynamic Pricing Balancing Account, pursuant to CPUC D.12-12-004, these expenses are included herein for the purpose of determining SDG&E's rate base for its TY 2016 GRC

Physical Description:

The systems impacted include: Service Orders, Billing, My Account, Customer Relationship Management, Aclara & Data Warehouse

Project Justification:

The project was approved in CPUC filing A.10-07-009

Note: Totals may include rounding differences.

SDG&E/INFORMATION TECHNOLOGY/Exh No:SDG&E-19-CWP/Witness: S. Mikovits

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 10872.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 3. Mandated
Workpaper Group: 10872A - PTSPP Smart Peak Pricing

Forecast Methodology:

Labor - Zero-Based

The GRC forecast includes estimated current incremental internal resources assigned to this integration effort and additional contract labor support thru the end of 2014.

Non-Labor - Zero-Based

The GRC forecast includes estimated current incremental internal resources assigned to this integration effort and additional contract labor support thru the end of 2014.

NSE - Zero-Based

N/A

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**Beginning of Workpaper Sub Details for
Workpaper Group 10872A**

SDG&E/INFORMATION TECHNOLOGY/Exh No:SDG&E-19-CWP/Witness: S. Mikovits
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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 10872.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 3. Mandated
 Workpaper Group: 10872A - PTSP Smart Peak Pricing
 Workpaper Detail: 10872A.001 - SPP CPUC
 In-Service Date: 12/31/2014
 Description:

		Forecast in 2013 \$(000)		
Years		2014	2015	2016
Labor		698	0	0
Non-Labor		1,236	0	0
NSE		0	0	0
	Total	1,934	0	0
FTE		6.8	0.0	0.0

Note: Totals may include rounding differences.

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Beginning of Workpaper Group
13849A - PT13026 Reduce your Use Opt In

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 13849.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 3. Mandated
Workpaper Group: 13849A - PT13026 Reduce your Use Opt In

Summary of Results (Constant 2013 \$ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
		2009	2010	2011	2012	2013	2014	2015	2016
Labor	Zero-Based	0	0	0	0	0	306	0	0
Non-Labor	Zero-Based	0	0	0	0	0	692	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		0	0	0	0	0	998	0	0
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0

Business Purpose:

The RYU Opt-In project complied with CPUC D.13-07-003 by converting the Peak Time Rebate ("PTR") program to an opt-in program, including taking customer calls to participate in the program, coding such customers as program participants, and enabling SDG&E to call a PTR program event involving only those customers who have taken the action necessary to opt into the program. This allows only those customers who have opted into the program to receive PTR program event alert notifications and be eligible to receive bill credits for load reductions achieved during PTR program events. Additional activities included modifying the online bill presentment of PTR program results, energy savings and bill credits through the EMT contained within SDG&E's My Account system. The PTR Opt-In project became available to customers on May 1, 2014.

Physical Description:

The RYU Opt-In project will allow SDG&E to:

- Leverage the investment in the Contact & Campaign Management (CCM) framework to manage RYU: subscriptions, customer segmentation, campaign execution, and campaign feedback. This will eliminate the need for Silverpop to manage these functions.
- Provide RYU credits only to customers who are RYU-eligible AND have subscribed to RYU alerts.

Project Justification:

RYU alert subscriptions will all be managed in the same way as SPP alerts, outage alerts, and newsletters, both internally and externally, providing a more uniform customer experience. Eliminating the majority of the program's "free-riders" will ensure that credit payments are focused on those customers who are providing statistically significant load reduction

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 13849.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 3. Mandated
Workpaper Group: 13849A - PT13026 Reduce your Use Opt In

Forecast Methodology:

Labor - Zero-Based

Project is currently in - progress. Based on actual timeline of the project to complete.

Non-Labor - Zero-Based

Project is currently in - progress. Based on actual timeline of the project to complete.

NSE - Zero-Based

N/A

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**Beginning of Workpaper Sub Details for
Workpaper Group 13849A**

SDG&E/INFORMATION TECHNOLOGY/Exh No:SDG&E-19-CWP/Witness: S. Mikovits
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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 13849.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 3. Mandated
 Workpaper Group: 13849A - PT13026 Reduce your Use Opt In
 Workpaper Detail: 13849A.001 - Reduce your Use Opt In
 In-Service Date: 07/31/2014
 Description:

		Forecast In 2013 \$(000)		
Years		2014	2015	2016
Labor		306	0	0
Non-Labor		692	0	0
NSE		0	0	0
	Total	998	0	0
FTE		3.0	0.0	0.0

Note: Totals may include rounding differences.

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Beginning of Workpaper Group
00831E - PT14005 Off But Registering (OBR) Enhancement

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 00831.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 4. Business Optimization
Workpaper Group: 00831E - PT14005 Off But Registering (OBR) Enhancement

Summary of Results (Constant 2013 \$ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
Years		2009	2010	2011	2012	2013	2014	2015	2016
Labor	Zero-Based	0	0	0	0	0	0	554	0
Non-Labor	Zero-Based	0	0	0	0	0	0	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	554	0
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	5.4	0.0

Business Purpose:

The purpose of the OBR Enhancement project is to automate the process of identifying and investigating situations where energy consumption is recorded on a company meter but system records indicate that the premise is inactive or OBR. The existing OBR process involves many manual tasks such as reviewing reports, making phone calls, and initiating field visits to determine the cause for consumption and who is responsible. The project will allow for automated monitoring and identification of these scenarios, will enable automated notifications to be mailed and/or delivered to premises and decision logic to leverage remote disconnect when possible.

Physical Description:

The scope will be centered on automating the existing Off But Registering (OBR) processes including the identification of unbilled energy, the "Give Notice" letter generation and Remote Disconnection, when appropriate.

Project Justification:

Customer Operations (Billing and Meter Revenue Protection) identify and investigate situations where energy consumption is recorded on a company meter but system records indicate that the premise is inactive (Off But Registering)

- Today's processes are manual. Working from reports, manually making phone calls or initiating field visits to try to determine the cause for consumption and who is responsible.
- Customer Billing and Meter Revenue Protection are both receiving information at the meter level, some of which leads to duplication
- The project will allow for automated monitoring and identification of these scenarios, will enable automated notifications to be mailed and/or delivered to premises and decision logic to leverage remote disconnect when possible.

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 00831.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 4. Business Optimization
Workpaper Group: 00831E - PT14005 Off But Registering (OBR) Enhancement

Forecast Methodology:

Labor - Zero-Based

Estimate based on internal labor hours quotations

Non-Labor - Zero-Based

N/A

NSE - Zero-Based

N/A

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Workpaper Group 00831E**

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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 00831.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 4. Business Optimization
 Workpaper Group: 00831E - PT14005 Off But Registering (OBR) Enhancement
 Workpaper Detail: 00831E.001 - The scope will be centered on automating the existing Off But Registering (OBR) proces
 In-Service Date: 07/31/2015
 Description:

Forecast In 2013 \$(000)				
	Years	2013		
		2014	2015	2016
Labor		0	554	0
Non-Labor		0	0	0
NSE		0	0	0
	Total	0	554	0
FTE		0.0	5.4	0.0

Note: Totals may include rounding differences.

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Beginning of Workpaper Group
00833F - PT14013 Centralized Calculation Engine

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 00833.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 4. Business Optimization
Workpaper Group: 00833F - PT14013 Centralized Calculation Engine

Summary of Results (Constant 2013 \$ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
		2009	2010	2011	2012	2013	2014	2015	2016
Labor	Zero-Based	0	0	0	0	0	675	1,053	0
Non-Labor	Zero-Based	0	0	0	0	0	1,396	1,954	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		0	0	0	0	0	2,071	3,007	0
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	6.6	10.3	0.0

Business Purpose:

The purpose of the Centralized Calculation Engine project is to implement a single engine to automate rate and complex billing calculations, utilizing consistent data sets from standard data sources, which can then be presented to internal users at will, in near real time, and at various portals. The development of this tool is anticipated to be foundational for use by other projects including the DRMS Project and Electric Vehicle to Grid Project. The first phase of this project will provide a single calculation engine to drive rate calculation, rate comparisons, modeling, pricing, and testing of rates. Currently there are multiple tools across different business units, both manual and automated, which utilize inconsistent data and methodologies to predict, model, and demonstrate rate scenarios and use cases. The need for this functionality will only increase as rates continually change and become more complex at a rapid pace. This tool will not replace the presentation of these calculations, but may become a data source for these calculations.

Physical Description:

The proposed scope of the project would be the development of a single calculation engine (software solution) which will automate and standardize rate calculation, complex and exception billing calculations. The goal of the end system is to access calculations that can be presented to users at will, in real time, and at various portals because the underlying data is trusted; while realizing both hard and soft benefits from not having to rely on multiple vendors for various portions of this output.

Project Justification:

A need has been identified to provide a single calculation engine to drive rate calculation, rate comparisons, modeling, pricing and rate analysis. There are multiple tools in many organizations and business units, both manual and automated, which utilize inconsistent data, input and methodologies to predict, model and demonstrate rate scenarios and use cases.

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 00833.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 4. Business Optimization
Workpaper Group: 00833F - PT14013 Centralized Calculation Engine

Forecast Methodology:

Labor - Zero-Based

Estimate based on internal labor hours quotations

Non-Labor - Zero-Based

Estimate based on vendor quotations

NSE - Zero-Based

N/A

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**Beginning of Workpaper Sub Details for
Workpaper Group 00833F**

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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 00833.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 4. Business Optimization
 Workpaper Group: 00833F - PT14013 Centralized Calculation Engine
 Workpaper Detail: 00833F.001 - The proposed scope of the project would be the development of a single calculation engi
 In-Service Date: 12/31/2014
 Description:

Forecast In 2013 \$(000)				
	Years	2014	2015	2016
		Labor	675	0
Non-Labor		979	0	0
NSE		0	0	0
	Total	1,654	0	0
FTE		6.6	0.0	0.0

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 00833.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 4. Business Optimization
 Workpaper Group: 00833F - PT14013 Centralized Calculation Engine
 Workpaper Detail: 00833F.002 - Centralized Calculation Engine
 In-Service Date: 12/31/2014
 Description:

Forecast in 2013 \$(000)				
	Years	2014	2015	2016
Labor		0	0	0
Non-Labor		417	0	0
NSE		0	0	0
	Total	<u>417</u>	<u>0</u>	<u>0</u>
FTE		0.0	0.0	0.0

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 00833.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 4. Business Optimization
 Workpaper Group: 00833F - PT14013 Centralized Calculation Engine
 Workpaper Detail: 00833F.003 - Centralized Calculation Engine
 In-Service Date: 12/31/2015
 Description:

Forecast in 2013 \$(000)				
	Years	2014	2015	2016
Labor		0	1,053	0
Non-Labor		0	1,371	0
NSE		0	0	0
	Total	0	2,424	0
FTE		0.0	10.3	0.0

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 00833.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 4. Business Optimization
 Workpaper Group: 00833F - PT14013 Centralized Calculation Engine
 Workpaper Detail: 00833F.004 - Centralized Calculation Engine
 In-Service Date: 12/31/2015
 Description:

Forecast In 2013 \$(000)				
	Years	2014	2015	2016
Labor		0	0	0
Non-Labor		0	583	0
NSE		0	0	0
	Total	0	583	0
FTE		0.0	0.0	0.0

Note: Totals may include rounding differences.

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Beginning of Workpaper Group
00833G - PT14017 Smart Energy Advisor 2

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 00833.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 4. Business Optimization
Workpaper Group: 00833G - PT14017 Smart Energy Advisor 2

Summary of Results (Constant 2013 \$ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
		2009	2010	2011	2012	2013	2014	2015	2016
Labor	Zero-Based	0	0	0	0	0	1,026	0	0
Non-Labor	Zero-Based	0	0	0	0	0	1,698	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		0	0	0	0	0	2,724	0	0
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0

Business Purpose:

The purpose of the Smart Energy Advisor desktop ("SEAd 2") project is to implement credit workflow into the Smart Energy Advisor desktop. The enhancement will streamline credit conversations and allow ESS to process credit orders more efficiently and in less time. The project will also make other functional and user interface improvements to improve the effectiveness of the ESS. The new functionality will allow ESS to process credit orders more efficiently and in less time.

Physical Description:

Further develop the SEAD (smart energy advisor desktop) platform to incorporate and streamline CISCO credit functions. The platform will introduce more customer profile information from the CAS (customer analytics system) project and access other data sources for greater insight into customers, premises, accounts, and energy use.

Project Justification:

ESS are using a green screen view of the customer, with multiple applications to get information necessary to perform their jobs, such as On-Line Help, CISCO, CSR Portal into My Account. These multiple applications and screens mean the ESS (Energy Services Specialist) has a fragmented view of the customer and extends handle time while customer is on the call.

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 00833.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 4. Business Optimization
Workpaper Group: 00833G - PT14017 Smart Energy Advisor 2

Forecast Methodology:

Labor - Zero-Based

Based on efforts performed by SEAD1 and the number current credit screens in CISCO.

Non-Labor - Zero-Based

Based on efforts performed by SEAD1 and the number current credit screens in CISCO.

NSE - Zero-Based

N/A

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Workpaper Group 00833G**

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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 00833.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 4. Business Optimization
 Workpaper Group: 00833G - PT14017 Smart Energy Advisor 2
 Workpaper Detail: 00833G.001 - ESS are using a green screen view of the customer with multiple applications to get i
 In-Service Date: 12/31/2014
 Description:

Forecast In 2013 \$(000)				
	Years	2014	2015	2016
		Labor	617	0
Non-Labor		290	0	0
NSE		0	0	0
	Total	907	0	0
FTE		6.0	0.0	0.0

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 00833.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 4. Business Optimization
 Workpaper Group: 00833G - PT14017 Smart Energy Advisor 2
 Workpaper Detail: 00833G.002 - Smart Energy Advisor 2
 In-Service Date: 12/31/2014
 Description:

Forecast in 2013 \$(000)				
	Years	2014	2015	2016
		Labor	153	0
Non-Labor		1,162	0	0
NSE		0	0	0
	Total	1,315	0	0
FTE		1.5	0.0	0.0

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 00833.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 4. Business Optimization
 Workpaper Group: 00833G - PT14017 Smart Energy Advisor 2
 Workpaper Detail: 00833G.003 - Smart Energy Advisor 2
 In-Service Date: 04/30/2014
 Description:

		Forecast In 2013 \$(000)		
Years		2014	2015	2016
Labor		206	0	0
Non-Labor		49	0	0
NSE		0	0	0
	Total	255	0	0
FTE		2.0	0.0	0.0

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 00833.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 4. Business Optimization
 Workpaper Group: 00833G - PT14017 Smart Energy Advisor 2
 Workpaper Detail: 00833G.004 - Smart Energy Advisor 2
 In-Service Date: 12/31/2014
 Description:

		Forecast in 2013 \$(000)		
Years		2014	2015	2016
Labor		50	0	0
Non-Labor		197	0	0
NSE		0	0	0
	Total	247	0	0
FTE		0.5	0.0	0.0

Note: Totals may include rounding differences.

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Beginning of Workpaper Group
00833R - PT13013 SMART METER OPERATION CENTER NETWORK

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 00833.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 4. Business Optimization
Workpaper Group: 00833R - PT13013 SMART METER OPERATION CENTER NETWORK

Summary of Results (Constant 2013 \$ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
		2009	2010	2011	2012	2013	2014	2015	2016
Labor	Zero-Based	0	0	0	0	0	102	0	0
Non-Labor	Zero-Based	0	0	0	0	0	212	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		0	0	0	0	0	314	0	0
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0

Business Purpose:

The Smart Meter Operations Center ("SMOC") project is a multi-year, multi-phase project to establish a SMOC. The project will centralize operations and improve operational efficiency by applying visualization packages, advanced data analytics and reporting tools to aid in network monitoring, exception management, work management, asset management to optimize network and data performance. Phase I will deliver network monitoring and visualization by providing Smart Meter Operations Analysts with network monitoring capabilities including search and notification features displayed in a geographic format to improve operational efficiencies.

Physical Description:

- The Smart Meter Management solution shall support protocols such as syslog & SNMPv3 to receive changes to the health statuses of the cell relays & smart meters.
- The Smart Meter Management solution shall provide security capabilities to enable role-based access control & NERC CIP compliance (to be validated with Information Security)
- The Smart Meter Management solution shall be capable of applying advanced analytics to raw Smart Meter Data to provide users with meaningful results.
- The solution must leverage existing software and enterprise platforms where functionally practical
- The Smart Meter Management solution shall be able to optimally manage data and scale based on the following metrics:
 - Number of users: 50 concurrent users
 - Number of cell relays: ~2,500 cell relays
 - Number of data points per cell relay: ~21
 - Number of smart meter endpoints: 2.2 M
 - Visualization of smart meter endpoints by different levels of exceptions
 - Number of data points per smart meter endpoint: ~10 (estimated);
 - Data Storage: ~24Tb (primary production) per year (3 year data retention)
 - Number of data sources (advanced analytics): ~8
 - Number of data element categories (advanced analytics): ~100
 - Number of Use Cases for development: ~90
- Ability to send, receive and record "ping" device check signals at 1 minute intervals
- Ability to receive and record prescribed data elements at 5 minute, 15 minute or 3 times per day intervals.

Project Justification:

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 00833.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 4. Business Optimization
Workpaper Group: 00833R - PT13013 SMART METER OPERATION CENTER NETWORK

A vast network of approximately 1.4 million Smart Meters and 800 thousand gas modules has been created to improve the revenue stream through data accuracy and fewer estimated bills. The Smart Meter network has also created new opportunity customer energy management programs such as Reduce Your Use and eventually, interval billing for lower consumption customers. The Smart Meter Network is the foundation for Smart Grid technologies; smart meters provide hourly data that makes "Green Button", Smart Pricing and other energy programs possible. All of these programs and innovations would not be possible without smart meter real-time energy information. Smart Meter Operations Center, Initiative #2 will centralize operations, improve operational efficiency and Smart Meter network reliability by applying a network management system; visualization, reporting tools and data analytics to aid in network monitoring, exception management and troubleshooting. Smart Meter Operations Center provide centralized information supporting customer service and establishing the foundation to support other company initiatives such as Smart Grid.

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 00833.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 4. Business Optimization
Workpaper Group: 00833R - PT13013 SMART METER OPERATION CENTER NETWORK

Forecast Methodology:

Labor - Zero-Based

Project is currently in - progress. Based on actual timeline of the project to complete.

Non-Labor - Zero-Based

Project is currently in - progress. Based on actual timeline of the project to complete.

NSE - Zero-Based

N/A

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**Beginning of Workpaper Sub Details for
Workpaper Group 00833R**

SDG&E/INFORMATION TECHNOLOGY/Exh No:SDG&E-19-CWP/Witness: S. Mikovits
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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 00833.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 4. Business Optimization
 Workpaper Group: 00833R - PT13013 SMART METER OPERATION CENTER NETWORK
 Workpaper Detail: 00833R.001 - SMART METER OPERATION CENTER NETWORK
 In-Service Date: 05/31/2014
 Description:

Forecast in 2013 \$(000)				
	Years	2014	2015	2016
		Labor	102	0
Non-Labor		212	0	0
NSE		0	0	0
	Total	314	0	0
FTE		1.0	0.0	0.0

Note: Totals may include rounding differences.

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Beginning of Workpaper Group
00833U - PT13009 Smart Energy Advisor

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 00833.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 4. Business Optimization
Workpaper Group: 00833U - PT13009 Smart Energy Advisor

Summary of Results (Constant 2013 \$ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
		2009	2010	2011	2012	2013	2014	2015	2016
Labor	Zero-Based	0	0	0	0	0	256	0	0
Non-Labor	Zero-Based	0	0	0	0	0	857	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		0	0	0	0	0	1,113	0	0
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0

Business Purpose:

The purpose of the Smart Energy Advisor desktop ("SEAd") project is to deliver a unified, process centric user interface for the CCC. The desktop establishes functional and technical capabilities including telephony integration, customer search, verification, customer relationship overview, and customer wrap up functions. The unified user interface improves the efficiency and effectiveness of the Energy Services Specialists ("ESS"). Since 1997, the company's front-line ESS staff has been using a mainframe "green screen" to access customer information. This user interface requires multiple key strokes and screen views to address common customer questions and requests. The SEAd interface is a modern browser-based interface that consolidates multiple screens into one display and provides ESS with a single sign-on to various mainframe and web applications. Furthermore, the project also provides for an upgrade to the on-line help system that the ESS use to research information and procedures to assist customers.

Physical Description:

- Login authentication
- Computer Telephony Integration (CTI) with Avaya
- Internet Explorer (version 8 or above) or Google Chrome
- System must be SDG&E 'branded' on screens
- Ability to support peak user load (160 connections)
- System response time has not been determined but will be quantified in requirements phase
- Systems integration development, leveraging existing web services (with expected modifications) or other appropriate data exchange techniques.
- Oracle database instance

Project Justification:

This project is intended to improve ESS performance and efficiency with advanced technology and effective tool. The benefits of this project are to control and reduce Average Handle Time. This project will enable individual ESS to handle more calls, and lower ESS cost of service.

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 00833.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 4. Business Optimization
Workpaper Group: 00833U - PT13009 Smart Energy Advisor

Forecast Methodology:

Labor - Zero-Based

Project is currently in - progress. Based on actual timeline of the project to complete.

Non-Labor - Zero-Based

Project is currently in - progress. Based on actual timeline of the project to complete.

NSE - Zero-Based

N/A

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**Beginning of Workpaper Sub Details for
Workpaper Group 00833U**

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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 00833.0
 Category: B. CS - Operations, information, and Technologies
 Category-Sub: 4. Business Optimization
 Workpaper Group: 00833U - PT13009 Smart Energy Advisor
 Workpaper Detail: 00833U.001 - Smart Energy Advisor
 In-Service Date: 04/30/2014
 Description:

		Forecast In 2013 \$(000)		
Years		2014	2015	2016
Labor		256	0	0
Non-Labor		857	0	0
NSE		0	0	0
	Total	1,113	0	0
FTE		2.5	0.0	0.0

Note: Totals may include rounding differences.

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Beginning of Workpaper Group
03849B - PT13012 Net Energy Metering

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 03849.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 4. Business Optimization
Workpaper Group: 03849B - PT13012 Net Energy Metering

Summary of Results (Constant 2013 \$ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
		2009	2010	2011	2012	2013	2014	2015	2016
Labor	Zero-Based	0	0	0	0	0	45	0	0
Non-Labor	Zero-Based	0	0	0	0	0	26	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		0	0	0	0	0	71	0	0
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0

Business Purpose:

The standards and billing processes for Net Energy Metering ("NEM") are defined under CPUC Code 2827 and SDG&E's NEM tariff, Schedule NEM. NEM is currently the fastest growing program at SDG&E, averaging a 40% increase each year. The purpose of the NEM capital project is to address 30 known NEM billing system deficiencies and enhancements including bill calculation and display improvements, online processing improvements, and customer communication enhancements.

Physical Description:

Net Energy Metering Bill Calculation Improvements currently defined in the System Information Requests (SIRs)
Net Energy Metering Bill Display Improvements currently defined in the System Information Requests (SIRs)
Net Energy Metering On-Line Processing Improvements currently defined in the System Information Requests (SIRs)
Customer Communication Enhancements currently defined in the System Information Requests (SIRs)

Project Justification:

Benefits of this project include reducing the need for hiring additional labor to support continued NEM growth. These enhancements will allow for only needing one incremental FTE in 2014, two incremental FTEs in 2015, and one incremental FTE in 2016. Without these enhancements, the incremental resource requirement would have been another 4.0 FTEs by 2016. Additional NEM project benefits include reduced internal maintenance costs associated with troubleshooting and manually resolving issues, reduced number of customer phone calls and inquiries for the Customer Contact Center, and improved overall customer experience and satisfaction due to effective communication and transparency.

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 03849.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 4. Business Optimization
Workpaper Group: 03849B - PT13012 Net Energy Metering

Forecast Methodology:

Labor - Zero-Based

Project is currently in - progress. Based on actual timeline of the project to complete.

Non-Labor - Zero-Based

Project is currently in - progress. Based on actual timeline of the project to complete.

NSE - Zero-Based

N/A

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Workpaper Group 03849B**

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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 03849.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 4. Business Optimization
 Workpaper Group: 03849B - PT13012 Net Energy Metering
 Workpaper Detail: 03849B.001 - NEM
 In-Service Date: 07/31/2014
 Description:

		Forecast In 2013 \$(000)		
Years		2014	2015	2016
Labor		45	0	0
Non-Labor		26	0	0
NSE		0	0	0
	Total	71	0	0
FTE		0.4	0.0	0.0

Note: Totals may include rounding differences.

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Beginning of Workpaper Group
03851H - PT13031 SMOC EXCEPTION MANAGEMENT (SMOC-EM)

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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 03851.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 4. Business Optimization
 Workpaper Group: 03851H - PT13031 SMOC EXCEPTION MANAGEMENT (SMOC-EM)

Summary of Results (Constant 2013 \$ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
		2009	2010	2011	2012	2013	2014	2015	2016
Labor	Zero-Based	0	0	0	0	0	386	51	0
Non-Labor	Zero-Based	0	0	0	0	0	2,416	457	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		0	0	0	0	0	2,802	508	0
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	3.8	0.5	0.0

Business Purpose:

The SMOC - Exception Management ("SMOC-EM") is Phase II of the multi-year project to establish a SMOC. As part of Phase II of the project, SDG&E will deliver Smart Meter Operations' Analysts with results necessary to effectively resolve meter exceptions and network issues by use of event correlation and data analytics. SMOC-EM will deliver an information system integrated with multiple existing data sources to identify specific events or conditions resulting in exceptions or non-reporting meters while eliminating false-positive exceptions and pinpointing true exception meters and non-communicating network devices.

Physical Description:

SMOC-EM will deliver an information system integrated with multiple existing data sources to identify specific events or conditions resulting in exceptions or non-reporting meters while eliminating false-positive exceptions and pinpointing true exception meters and non-communicating network devices

Project Justification:

The SMOC system will combine essential data from multiple applications allowing expedient data analysis and troubleshooting, work order management for accelerated results.

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 03851.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 4. Business Optimization
Workpaper Group: 03851H - PT13031 SMOC EXCEPTION MANAGEMENT (SMOC-EM)

Forecast Methodology:

Labor - Zero-Based

Project is currently in progress

Non-Labor - Zero-Based

Project is currently in progress

NSE - Zero-Based

N/A

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Workpaper Group 03851H**

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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 03851.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 4. Business Optimization
 Workpaper Group: 03851H - PT13031 SMOC EXCEPTION MANAGEMENT (SMOC-EM)
 Workpaper Detail: 03851H.001 - SMOC EXCEPTION MANAGEMENT (SMOC-EM)
 In-Service Date: 03/31/2015
 Description:

		Forecast In 2013 \$(000)		
Years		2014	2015	2016
Labor		386	51	0
Non-Labor		2,416	457	0
NSE		0	0	0
	Total	<u>2,802</u>	<u>508</u>	<u>0</u>
FTE		3.8	0.5	0.0

Note: Totals may include rounding differences.

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Beginning of Workpaper Group
00821A - PT13010 CUSTOMER ANALYTICS SYSTEM 2013

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Capital Workpapers

Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 00821.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 6. Understanding Customers
Workpaper Group: 00821A - PT13010 CUSTOMER ANALYTICS SYSTEM 2013

Summary of Results (Constant 2013 \$ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
		2009	2010	2011	2012	2013	2014	2015	2016
Labor	Zero-Based	0	0	0	0	0	501	0	0
Non-Labor	Zero-Based	0	0	0	0	0	2,061	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		0	0	0	0	0	2,562	0	0
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	4.9	0.0	0.0

Business Purpose:

The purpose of the Customer Analytics System ("CAS") Phase 1 establishes an analytical system within Customer Services to store and analyze customer data. The CAS system centralizes data from multiple systems to allow efficient analysis using current technologies. Phase 1 allows the company to target customers with relevant services and programs through the Energy Services Specialists in the CCC. Phase 1 also provides an Enterprise Analytics Roadmap to align analytics projects across SDG&E to achieve efficiencies. Currently, customer data is stored in multiple systems that have been developed historically to satisfy separate project requirements. Consolidating relevant information about customers is difficult and complex, and the company uses multiple methods to access and analyze the information. Additionally, when a customer contacts the company, the ESS do not have the information necessary to present additional services or programs that the customer may be eligible for in an efficient manner. The CAS 2013 project is addressing these issues in two ways

Physical Description:

First, the Enterprise Analytics Roadmap evaluates the analytical systems across the company in support of SDG&E's "Smart Grid Deployment Plan - Integrated and Cost Cutting Systems for Data Management and Analytics". The Roadmap aligns similar types of data, analytical methods, and tools to identify synergies suitable for this project. Second, the project will develop a Next Best Option analytical system using customer data obtained from multiple data sources within the company. Integrating this data and developing the analytics for the purpose of the Next Best Option will be completed for several programs and services. The Next Best Option will evaluate relevant information about customers and compare that to the programs and services that SDG&E offers. Analytics will be used to inform ESS of the most relevant programs and services for a customer who calls the CCC. Company standards on information security and protecting customer privacy will be followed.

Project Justification:

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 00821.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 6. Understanding Customers
Workpaper Group: 00821A - PT13010 CUSTOMER ANALYTICS SYSTEM 2013

Business Problems:

The Energy Service Specialists (ESS) do not have timely or sufficient information about a customer to efficiently answer questions, provide expert advice, and offer personalized recommendations
Customer expectations on customer service are increasing, and affect conversations related to billing and rates
The company has many analytics solutions, but there are data silos and inefficiencies in data that affect customers

Solutions:

Create a Customer Services analytics roadmap and an Enterprise analytics roadmap that are aligned
Leverage the Enterprise Analytics System (EAS) so that Customer Services can share common customer and business data elements
Provide the ESS with summarized information based on the specific customer call and workflow, and offer recommendations to help customers achieve their desired energy lifestyle.

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 00821.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 6. Understanding Customers
Workpaper Group: 00821A - PT13010 CUSTOMER ANALYTICS SYSTEM 2013

Forecast Methodology:

Labor - Zero-Based

Project is currently in - progress. Based on actual timeline of the project to complete.

Non-Labor - Zero-Based

Project is currently in - progress. Based on actual timeline of the project to complete.

NSE - Zero-Based

N/A

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Workpaper Group 00821A**

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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 00821.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 6. Understanding Customers
 Workpaper Group: 00821A - PT13010 CUSTOMER ANALYTICS SYSTEM 2013
 Workpaper Detail: 00821A.001 - CUSTOMER ANALYTICS SYSTEM 2013
 In-Service Date: 09/30/2014
 Description:

		Forecast In 2013 \$(000)		
Years		2014	2015	2016
Labor		501	0	0
Non-Labor		1,921	0	0
NSE		0	0	0
	Total	2,422	0	0
FTE		4.9	0.0	0.0

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 00821.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 6. Understanding Customers
 Workpaper Group: 00821A - PT13010 CUSTOMER ANALYTICS SYSTEM 2013
 Workpaper Detail: 00821A.002 - CUSTOMER ANALYTICS SYSTEM 2013
 In-Service Date: 04/30/2014

Description:

Software Purchase

		Forecast In 2013 \$(000)		
Years		2014	2015	2016
Labor		0	0	0
Non-Labor		80	0	0
NSE		0	0	0
	Total	80	0	0
FTE		0.0	0.0	0.0

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 00821.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 6. Understanding Customers
 Workpaper Group: 00821A - PT13010 CUSTOMER ANALYTICS SYSTEM 2013
 Workpaper Detail: 00821A.003 - CUSTOMER ANALYTICS SYSTEM 2013
 In-Service Date: 04/30/2014

Description:

Hardware Purchase

		Forecast In 2013 \$(000)		
Years		2014	2015	2016
Labor		0	0	0
Non-Labor		60	0	0
NSE		0	0	0
	Total	60	0	0
FTE		0.0	0.0	0.0

Note: Totals may include rounding differences.

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Beginning of Workpaper Group
03853B - PT14030 Customer Analytics System - Phase II

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 03853.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 6. Understanding Customers
Workpaper Group: 03853B - PT14030 Customer Analytics System - Phase II

Summary of Results (Constant 2013 \$ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
		2009	2010	2011	2012	2013	2014	2015	2016
Labor	Zero-Based	0	0	0	0	0	0	86	114
Non-Labor	Zero-Based	0	0	0	0	0	0	1,285	1,225
NSE	Zero-Based	0	0	0	0	0	0	0	0
Total		0	0	0	0	0	0	1,371	1,339
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.2

Business Purpose:

The purpose of the CAS Phase II project is to gain further understanding of customers using data analytics to achieve efficiencies in customer outreach. CAS Phase II will introduce data governance and data quality processes to improve the accuracy of customer data, maximizing re-use across the company in customer outreach campaigns, new product & service development, and internal reporting. The project will integrate more data sources into the common data model and define definitions for common understanding of customer segments across multiple business groups. The CAS Phase II project will build upon the data integration and data model established in the CAS 2013 project. CAS Phase II will integrate more data sources into the common data model and define definitions for common understanding of customer segments across multiple business groups. The result will be better understanding of customer segments, improved communications that align with customer needs, and a better customer experience.

Physical Description:

Five to seven new data sources will be integrated into EAS to support Customer Analytics. In addition, data quality and governance processes will be developed and deployed to support the data model for Customer Analytics. Self Service capabilities will be delivered to various business functions at SDG&E. Real time data integration (CDC).

Project Justification:

Will allow more targeted marketing campaigns with more efficient budgets. This project will minimize data gathering and data clean-up that most business users are doing today in separate and inconsistent ways. Maximizes the use of customer data to make strategic, tactical, and operational decisions.

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 03853.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 6. Understanding Customers
Workpaper Group: 03853B - PT14030 Customer Analytics System - Phase II

Forecast Methodology:

Labor - Zero-Based

Estimate based on internal labor hours quotations

Non-Labor - Zero-Based

Estimate based on vendor quotations

NSE - Zero-Based

N/A

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**Beginning of Workpaper Sub Details for
Workpaper Group 03853B**

SDG&E/INFORMATION TECHNOLOGY/Exh No:SDG&E-19-CWP/Witness: S. Mikovits
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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 03853.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 6. Understanding Customers
 Workpaper Group: 03853B - PT14030 Customer Analytics System - Phase II
 Workpaper Detail: 03853B.001 - Five to seven new data sources will be integrated into EAS to support Customer Analytic
 In-Service Date: 12/31/2015
 Description:

		Forecast In 2013 \$(000)		
Years		2014	2015	2016
Labor		0	73	0
Non-Labor		0	321	0
NSE		0	0	0
	Total	0	394	0
FTE		0.0	0.7	0.0

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 03853.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 6. Understanding Customers
 Workpaper Group: 03853B - PT14030 Customer Analytics System - Phase II
 Workpaper Detail: 03853B.002 - Customer Analytics System - Phase II
 In-Service Date: 12/31/2015
 Description:

		Forecast In 2013 \$(000)		
Years		2014	2015	2016
Labor		0	13	0
Non-Labor		0	964	0
NSE		0	0	0
	Total	0	977	0
FTE		0.0	0.1	0.0

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 03853.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 6. Understanding Customers
 Workpaper Group: 03853B - PT14030 Customer Analytics System - Phase II
 Workpaper Detail: 03853B.003 - Customer Analytics System - Phase II
 In-Service Date: 12/31/2016
 Description:

		Forecast In 2013 \$(000)		
Years		2014	2015	2016
Labor		0	0	97
Non-Labor		0	0	306
NSE		0	0	0
	Total	0	0	403
FTE		0.0	0.0	1.0

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 03853.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 6. Understanding Customers
 Workpaper Group: 03853B - PT14030 Customer Analytics System - Phase II
 Workpaper Detail: 03853B.004 - Customer Analytics System - Phase II
 In-Service Date: 12/31/2016
 Description:

Forecast In 2013 \$(000)					
Years		2014	2015	2016	
Labor		0	0	17	
Non-Labor		0	0	919	
NSE		0	0	0	
	Total	0	0	936	
FTE		0.0	0.0	0.2	

Note: Totals may include rounding differences.

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Beginning of Workpaper Group
03853C - PT16003 Customer Analytics System - III

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SDG&E/CS - INFORMATION & OFFICE OPERATIONS /Exh No:SDG&E-14-WP-R/Witness: B. Baugh
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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 03853.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 6. Understanding Customers
 Workpaper Group: 03853C - PT16003 Customer Analytics System - III

Summary of Results (Constant 2013 \$ in 000s):

Forecast Method		Adjusted Recorded					Adjusted Forecast		
		2009	2010	2011	2012	2013	2014	2015	2016
Labor	Zero-Based	0	0	0	0	0	0	0	733
Non-Labor	Zero-Based	0	0	0	0	0	0	0	175
NSE	Zero-Based	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	908
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.2

Business Purpose:

The purpose of the CAS Phase III project is to provide business users with information and analytic tools to optimize channel usage by customers and Customer Programs effectiveness. This will involve integrating further data sources from web, Branch Office, and IVR channels into the Enterprise Analytics System for channel optimization. It will also include integrating further data sources from other databases and some 3rd parties for monitoring energy efficiency and demand response program effectiveness.

Physical Description:

Five to seven new data sources will be integrated into Enterprise Analytics System to support Customer Analytics. Data quality and governance processes will be expanded. Channel optimization analytics tools will be evaluated and deployed. Program effectiveness analytics tools will be evaluated and deployed.

Project Justification:

Will allow Customer Services groups to optimize channel effectiveness by customer, minimizing the cost to serve customers through these channels. More effective Program analysis will minimize customer acquisition costs and provide greater clarity on program participation by customers, which will also allow SDG&E to affect better Program design with the CPUC through better data.

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
Witness: Stephen J. Mikovits
Budget Code: 03853.0
Category: B. CS - Operations, Information, and Technologies
Category-Sub: 6. Understanding Customers
Workpaper Group: 03853C - PT16003 Customer Analytics System - III

Forecast Methodology:

Labor - Zero-Based

Estimate based on internal labor hours quotations

Non-Labor - Zero-Based

Estimate based on vendor quotations

NSE - Zero-Based

N/A

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**Beginning of Workpaper Sub Details for
Workpaper Group 03853C**

SDG&E/INFORMATION TECHNOLOGY/Exh No:SDG&E-19-CWP/Witness: S. Mikovits
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SDG&E/CS - INFORMATION & OFFICE OPERATIONS /Exh No:SDG&E-14-WP-R/Witness: B. Baugh
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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 03853.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 6. Understanding Customers
 Workpaper Group: 03853C - PT16003 Customer Analytics System - III
 Workpaper Detail: 03853C.001 - Customer Analytics System - III
 In-Service Date: 12/31/2016
 Description:

		Forecast In 2013 \$(000)		
Years		2014	2015	2016
Labor		0	0	623
Non-Labor		0	0	44
NSE		0	0	0
	Total	0	0	667
FTE		0.0	0.0	6.1

Note: Totals may include rounding differences.

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Area: INFORMATION TECHNOLOGY
 Witness: Stephen J. Mikovits
 Budget Code: 03853.0
 Category: B. CS - Operations, Information, and Technologies
 Category-Sub: 6. Understanding Customers
 Workpaper Group: 03853C - PT16003 Customer Analytics System - III
 Workpaper Detail: 03853C.002 - Customer Analytics System - III
 In-Service Date: 12/31/2016
 Description:

Forecast In 2013 \$(000)				
	Years	2014	2015	2016
		Labor	0	0
Non-Labor		0	0	131
NSE		0	0	0
	Total	0	0	241
FTE		0.0	0.0	1.1

Note: Totals may include rounding differences.

SDG&E-ORA-DEF-009-TLG

Questions A.1 and B.1 Attachments

Supporting the Request of Bradley M. Baugh

Customer Service Operations, Information and Technologies

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SDG&E-ORA-DEF-009-TLG-Question A1

Exh No:SDG&E-14-IT Capital Projects	Witness Name	Project #	Adjusted Recorded					Forecast						
			2009	2010	2011	2012	2013	2014	2015	2016				
Constant 2013\$ in Thousands	Bradley M. Baugh													
Capital Project Name		WP#												
Branch Office Technical and Security Improvements		14006												
EBPP Tech Refresh		15009												\$824
I-Avenue Replacement		15012												\$2,080
Sub-Total Technical Obsolescence			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,948
SCG MyAccount Accessibility		11013		\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,852
SDG&E MyAccount Accessibility		12051		\$50	\$2,027	\$745	\$7	\$3,072	\$113	\$4,704	\$1,587			\$7,347
C&I Business Portal		14015												
IVR Phase 4 SDG&E		14023												
SDG&E.com Redesign		15007												
Bill Re-Design		15800	\$1,233	\$1,044	\$1,742	\$22								\$286
Sub-Total Improving Customer Experience			\$1,233	\$1,044	\$1,798	\$2,056	\$3,817	\$1,934	\$5,368	\$3,802	\$1,394			\$8,741
Smart Peak Pricing (separate recovery mechanism outside of GRC ¹)		10872	\$25,753	\$16,009	\$14,836	\$9,820	\$16,219	\$917	\$9,718	\$11,223	\$455			
GRC Phase 2		13003	\$25,753	\$17,200	\$26,339	\$23,619	\$29,714	\$9,718	\$1,113	\$1,113	\$71			
Critical Peak Pricing Default (CPP-D)		13021												
Reduce Your Use Opt-in		13026												\$7,445
CEN Phase 4 - System Enhancement		14039												\$998
Direct Access Service Request (DASR)		14040												\$455
CCA - Community Choice Aggregation		14065												\$373
Smart Meter IT Phase 3 Billing (separate recovery mechanism outside of GRC ²)		14843	\$25,753	\$16,009	\$14,836	\$9,820	\$16,219	\$917	\$9,718	\$11,223	\$455			
Sub-Total Mandated			\$25,753	\$17,200	\$26,339	\$23,619	\$29,714	\$9,718	\$1,113	\$1,113	\$71			
Smart Energy Advisor		13009												
Net Energy Metering Enhancement		13012												
Smart Meter Operations Center Network		13013												
Smart Meter Operations Center Exceptions Management (SMOC-EM)		13031												
Off But Registering (OBR) Enhancement		14005												\$508
Centralized Calculation Engine		14013												\$554
Smart Energy Advisor 2		14017												\$3,007
Sub-Total Business Optimization			\$0	\$0	\$0	\$0	\$0	\$4,177	\$9,095	\$4,069	\$0			\$0
Customer Analytics System 2013		13010												
Customer Analytics System - Phase II		14030												
Customer Analytics System - III		16003												
Sub-Total Business Understanding Customers			\$0	\$0	\$0	\$606	(\$42)	\$2,562	\$1,371	\$1,371	\$1,339			\$908
Other Customer Service projects in IT Capital History														
GRAND TOTAL ALL			(\$2,687)	\$2,639	\$8,089	\$13,791	\$9,701	\$2,562	\$1,371	\$1,371	\$2,247			\$0
GRAND TOTAL (without Smart Meter and Smart Pricing - separate recovery outside of GRC)			\$24,298	\$20,883	\$36,226	\$40,072	\$47,367	\$26,743	\$26,317	\$26,317	\$15,579			\$15,579
			(\$1,455)	\$3,683	\$9,887	\$16,684	\$19,252	\$23,892	\$26,317	\$26,317	\$15,579			\$15,579

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ORA Deficiency Data Request SDG&E-ORA-DEF-009-TLG Question B.1

Exh No:SDG&E-14-WP	Witness Name	Bradley M. Baugh	Adjusted Recorded							Variances by Year			Workpaper Page
			2009	2010	2011	2012	2013	2009-10	2010-11	2011-12	2012-13		
Constant 2013\$ in Thousands													
100000.000 - Advanced Metering Ops													
Labor		4,681	5,070	4,870	7,311	7,556		389	(200)	2,441	245		
NLbr		608	514	552	842	579		(94)	38	290	(263)		
NSE		0	0	0	0	0		0	0	0	0		
100000.000 Total		5,289	5,584	5,422	8,153	8,135		295	(162)	2,731	(18)	Page 6 of 472	
Variance Explanation													
2009-10													
Labor													
Labor increased with the addition of four positions (project manager, dispatcher, sr. system analyst and business advisor)													198
Labor increased due to three management positions and associated activities transferred from Meter Reading to Advanced Metering Operations due to the closure of the Meter Reading Department													146
Increased field overtime													45
NLbr													389
Decrease in computer hardware expenses													(70)
Decrease in misc. field tool expenses													(24)
													(94)
													295
Variance Amount													

Note: Totals may include rounding differences.

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ORA Deficiency Data Request SDG&E-ORA-DEF-009-TLG Question B.1

Exh No:SDG&E-14-WP	Witness Name	Bradley M. Baugh	Adjusted Recorded							Variances by Year				Workpaper Page
			2009	2010	2011	2012	2013	2009-10	2010-11	2011-12	2012-13			
Constant 2013\$ in Thousands														
100000.000 - Advanced Metering Ops														
Labor		4,681	5,070	4,870	7,311	7,556	389	(200)	2,441	245				
NLbr		608	514	552	842	579	(94)	38	290	(263)				
NSE		0	0	0	0	0	0	0	0	0				
100000.000 Total		5,289	5,584	5,422	8,153	8,135	295	(162)	2,731	(18)	Page 6 of 472			
Variance Explanation													Variance Amount	
2010-11														
Labor	Decrease in field labor positions due to Smart Meter deployment efforts												(166)	
	Decrease due to two employees on leave												(34)	
													(200)	
NLbr	Increase in misc. field equipment												17	
	Increase in computer hardware expenses												21	
													38	
													(162)	

Note: Totals may include rounding differences.

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ORA Deficiency Data Request SDG&E-ORA-DEF-009-TLG Question B.1

Exh No:SDG&E-14-WP	Witness Name	Constant 2013\$ in Thousands	Bradley M. Baugh	Adjusted Recorded							Variances by Year			Workpaper Page
				2009	2010	2011	2012	2013	2009-10	2010-11	2011-12	2012-13		
100000.000 - Advanced Metering Ops														
Labor			4,681	5,070	4,870	7,311	7,556		389	(200)	2,441	245		
NLbr			608	514	552	842	579		(94)	38	290	(263)		
NSE			0	0	0	0	0		0	0	0	0		
100000.000 Total			5,289	5,584	5,422	8,153	8,135		295	(162)	2,731	(18)	Page 6 of 472	
Variance Explanation														
2011-12													Variance Amount	
Labor														
Increase in labor is primarily due to the transition of activities from the Smart Meter program to Advanced Metering Operations in the following areas: Smart Meter Data Operations, System Network, Single Phase Technicians/Meter Installers													2,310	
Increase in field overtime													131	
NLbr													2,441	
Temporary increase in agency labor to fill position in Smart Meter Data Operations														
Increase in misc. field equipment													144	
Increase in misc. office expenses													73	
Increase in employee-related expenses													26	
													47	
													290	
													2,731	

Note: Totals may include rounding differences.

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ORA Deficiency Data Request SDG&E-ORA-DEF-009-TLG Question B.1

Exh No:SDG&E-14-WP	Witness Name	Constant 2013\$ in Thousands	Adjusted Recorded							Variances by Year				Worksheet Page	
			2009	2010	2011	2012	2013	2009-10	2010-11	2011-12	2012-13				
	Bradley M. Baugh														
100000.000 - Advanced Metering Ops															
Labor			4,681	5,070	4,870	7,311	7,556		389	(200)	2,441		245		
NLbr			608	514	552	842	579		(94)	38	290		(263)		
NSE			0	0	0	0	0		0	0	0		0		
100000.000 Total			5,289	5,584	5,422	8,153	8,135		295	(162)	2,731		(18)		Page 6 of 472
Variance Explanation			Variance Amount												
2012-13															
Labor	Labor costs increased due to the resumption of field work (deferred during Smart Meter deployment) and Advanced Metering Operations absorbing manual meter reading (due to the closure of the Meter Reading Department). Increased costs were offset by employees retiring or moving to other areas of the company.														
	378														
	(133)														
	245														
NLbr															
Decrease in temporary agency labor in Smart Meter Data Operations			(144)												
Decrease in misc. field equipment			(40)												
Decrease in employee-related expenses			(26)												
			(210)												
			35												

Note: Totals may include rounding differences.

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ORA Deficiency Data Request SDG&E-ORA-DEF-009-TLG Question B.1

Exh No:SDG&E-14-WP Witness Name Constant 2013\$ in Thousands	Bradley M. Baugh		Adjusted Recorded					Variances by Year				Workpaper Page	
	2009	2010	2011	2012	2013	2009-10	2010-11	2011-12	2012-13				
100002.000 - Billing													
Labor	4,321	4,237	4,037	4,687	4,768	(84)	(200)	650	81				
NLbr	231	374	328	316	305	143	(46)	(12)	(11)				
NSE	0	0	0	0	0	0	0	0	0				
100002.000 Total	4,552	4,611	4,365	5,003	5,073	59	(246)	638	70				Page 27 of 472
Variance Explanation													
2009-10													
2010-11													
Labor													
Temporary labor decrease primarily due to employees moving to support Smart Meter deployment.									(200)				
NLbr									(200)				
Decrease in hardware purchases									(26)				
Decrease in consulting fees for Smart Meter departmental organization optimization									(15)				
Decrease in misc. office expenses									(8)				
Increase in employee-related expenses									3				
									(46)				
									(246)				

Note: Totals may include rounding differences.

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ORA Deficiency Data Request SDG&E-ORA-DEF-009-TLG Question B.1

Exh No:SDG&E-14-WP	Witness Name	Bradley M. Baugh	Adjusted Recorded							Variances by Year			Workpaper Page
			2009	2010	2011	2012	2013	2009-10	2010-11	2011-12	2012-13		
Constant 2013\$ in Thousands													
100002.000 - Billing													
Labor	4,321	4,237	4,037	4,687	4,768	(84)	(200)	650	81				
NLbr	231	374	328	316	305	143	(46)	(12)	(11)				
NSE	0	0	0	0	0	0	0	0	0				
100002.000 Total	4,552	4,611	4,365	5,003	5,073	59	(246)	638	70				Page 27 of 472
Variance Explanation													
2009-10													
2012-13													
Labor	Additional labor increase due to leveling billing positions to account for more complex billing activities due to the deployment of Smart Meters												81
NLbr													81
Agency labor for temporary backfill for a retired employee													37
Decrease in misc. office expenses													(28)
Decrease in employee-related expenses													(20)
													(11)
													70

Note: Totals may include rounding differences.

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ORA Deficiency Data Request SDG&E-ORA-DEF-009-TLG Question B.1

Exh No:SDG&E-14-WP Witness Name Constant 2013\$ in Thousands	Bradley M. Baugh	Adjusted Recorded					Variances by Year				Workpaper Page	
		2009	2010	2011	2012	2013	2009-10	2010-11	2011-12	2012-13		
100003.000 - Credit & Collections												
Labor	2,025	2,066	2,086	2,123	2,227	41	20	37	104			
NLbr	553	516	537	447	480	(37)	21	(90)	33			
NSE	0	0	0	0	0	0	0	0	0			
100003.000 Total	2,578	2,582	2,623	2,570	2,707	4	41	(53)	137			Page 39 of 472
Variance Explanation												
Variance Amount												
2009-10												
Labor												
Labor increase due to a full year adjustment for an employee hired mid-2009							41					
NLbr							41					
Decrease in agency fees due to decreased collection volumes							(56)					
Increase in equipment (gas locks) for Meter Revenue Protection Specialists							13					
Increase in employee-related expenses							11					
Decrease in misc. office expenses							(5)					
							(37)					
							4					

Note: Totals may include rounding differences.

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ORA Deficiency Data Request SDG&E-ORA-DEF-009-TLG Question B.1

Exh No:SDG&E-14-WP	Witness Name	Constant 2013\$ in Thousands	Adjusted Recorded					Variances by Year				Workpaper Page		
			2009	2010	2011	2012	2013	2009-10	2010-11	2011-12	2012-13			
	Bradley M. Baugh													
100003.000 - Credit & Collections														
Labor			2,025	2,066	2,086	2,123	2,227		41	20	37	104		
NLbr			553	516	537	447	480	(37)	(37)	21	(90)	33		
NSE			0	0	0	0	0	0	0	0	0	0		
100003.000 Total			2,578	2,582	2,623	2,570	2,707	4	41	(53)	137	137	Page 39 of 472	
Variance Explanation			Variance Amount											
2010-11														
Labor														
Labor increase primarily due to filling an open position offset by employee leave										20				
NLbr										20				
Decrease in equipment for one-time purchase of gas locks for Meter Revenue Protection Specialists										(13)				
Increase in agency fees due to increased collection volumes										27				
Decrease due to annual timing of vendor invoices which fluctuate throughout the year										(29)				
Increase in safety equipment for Meter Revenue Protection Specialists										5				
Paper stock for notices required to be mailed to give residential customers information about the upcoming transition to Smart Meter disconnection that would be effective July 1, 2012										46				
Decrease in employee-related expenses										(15)				
										21				
										41				

Note: Totals may include rounding differences. Page 13 of 64 SDGE-ORA-DEF-009-TLG-B1-OM-SDGE-14 App Update (Errata).xlsx - Cr&Coll

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ORA Deficiency Data Request SDG&E-ORA-DEF-009-TLG Question B.1

Exh No.:SDG&E-14-WP	Witness Name	Constant 2013\$ in Thousands	Adjusted Recorded					Variances by Year				Worksheet Page		
			2009	2010	2011	2012	2013	2009-10	2010-11	2011-12	2012-13			
	Bradley M. Baugh													
100003.000 - Credit & Collections														
Labor			2,025	2,066	2,086	2,123	2,227							
NLbr			553	516	537	447	480	41	20	37	104			
NSE			0	0	0	0	0	(37)	21	(90)	33			
100003.000 Total			2,578	2,582	2,623	2,570	2,707	0	0	0	0			
								4	41	(53)	137			Page 39 of 472
Variance Explanation			Variance Amount											
2011-12														
Labor	Labor increase primarily due to Meter Revenue Protection employee and associated activities transitioning from the Smart Meter program offset by a decrease due to unfilled position													
NLbr	37													
Reduction for the prior purchase of safety equipment for Meter Revenue Protection Specialists			(5)											
Increase in agency fees due to increased collection volumes			26											
Reduction for prior purchase of paper stock for notices required to be mailed to give residential customers information about the upcoming transition to Smart Meter disconnection			(33)											
Decrease due to annual timing of vendor invoices which fluctuates throughout the year			(45)											
Decrease in employee-related expenses			(3)											
Decrease due to half of licensing fees paid due to implementation of new collection systems			(31)											
			(90)											
			(53)											

Note: Totals may include rounding differences.

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ORA Deficiency Data Request SDG&E-ORA-DEF-009-TLG Question B.1

Exh No:SDG&E-14-WP	Witness Name	Bradley M. Baugh	Adjusted Recorded				Variances by Year				Worksheet Page
			2009	2010	2011	2012	2013	2009-10	2010-11	2011-12	
Constant 2013\$ in Thousands											
100003.000 - Credit & Collections											
Labor		2,025	2,066	2,086	2,123	2,227	41	20	37	104	
NLbr		553	516	537	447	480	(37)	21	(90)	33	
NSE		0	0	0	0	0	0	0	0	0	
100003.000 Total		2,578	2,582	2,623	2,570	2,707	4	41	(53)	137	Page 39 of 472
Variance Explanation											
Variance Amount											
Labor											
Labor increase primarily due to open positions being filled offset by a reduction due to employee leave										104	
NLbr										104	
Increase due to annual timing of vendor invoices which fluctuates throughout the year										30	
Vendor implementation fees for new collection systems										68	
Paper stock expenses for Smart Meter disconnection letters incurred in prior year										(19)	
Decrease in employee-related expenses										(8)	
Decrease in collection fees due to new collection systems										(89)	
Increase in licensing fees due to new collection systems										66	
Increase due to temporary agency labor incurred in 2013 but not in 2012										8	
Decrease in other misc. office expenses										(12)	
Decrease due to invoice timing for past due notices										(11)	
										33	
										137	

Note: Totals may include rounding differences.

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ORA Deficiency Data Request SDG&E-ORA-DEF-009-TLG Question B.1

Exh No:SDG&E-14-WP	Witness Name	Bradley M. Baugh	Adjusted Recorded				Variances by Year				Worksheet Page		
			2009	2010	2011	2012	2013	2009-10	2010-11	2011-12		2012-13	
Constant 2013\$ in Thousands													
100004.000 - Remittance Processing													
Labor		0	0	0	0	0	0	0	0	0	0	0	
NLbr		1,025	877	886	815	887	(148)	9	(71)	72			
NSE		0	0	0	0	0	0	0	0	0	0	0	
100004.000 Total		1,025	877	886	815	887	(148)	9	(71)	72			Page 52 of 472
Variance Explanation													
2009-10													
Labor													
NLbr													
Decrease due to forms and envelopes changed to larger sizes due to bill redesign - partly purchased in 2009 for 2010 usage							(189)						
Increase due to fees paid to vendor for e-bills delivery services							58						
Decrease in software expenses for electronic bills and electronic payments							(17)						
							(148)						
							(148)						

Note: Totals may include rounding differences.

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ORA Deficiency Data Request SDG&E-ORA-DEF-009-TLG Question B.1

Exh No:SDG&E-14-WP Witness Name Constant 2013\$ in Thousands	Bradley M. Baugh	Adjusted Recorded					Variances by Year				Workpaper Page	
		2009	2010	2011	2012	2013	2009-10	2010-11	2011-12	2012-13		
100004.000 - Remittance Processing												
Labor	0	0	0	0	0	0	0	0	0	0		
NLbr	1,025	877	886	815	887	(148)	9	(71)	72			
NSE	0	0	0	0	0	0	0	0	0			
100004.000 Total	1,025	877	886	815	887	(148)	9	(71)	72			Page 52 of 472
Variance Explanation												
2010-11												
Labor												
NLbr												
Increase due to forms and envelopes used in 2010 were partly paid in 2011									3			
Decrease due to vendor fees for electronic bill delivery services									(3)			
Increase in software expenses for electronic bills and electronic payments									9			
									9			
									9			

Note: Totals may include rounding differences. Page 17 of 64 SDGE-ORA-DEF-009-TLG-B1-OM-SDGE-14 App Update (Errata).xlsx - Remit

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ORA Deficiency Data Request SDG&E-ORA-DEF-009-TLG Question B.1

Exh No:SDG&E-14-WP	Witness Name	Bradley M. Baugh	Adjusted Recorded				Variances by Year				Workpaper Page		
			2009	2010	2011	2012	2013	2009-10	2010-11	2011-12		2012-13	
Constant 2013\$ in Thousands													
100004.000 - Remittance Processing													
Labor		0	0	0	0	0	0	0	0	0	0	0	
NLbr		1,025	877	886	815	887	(148)	9	(71)	72			
NSE		0	0	0	0	0	0	0	0	0	0	0	
100004.000 Total		1,025	877	886	815	887	(148)	9	(71)	72			Page 52 of 472
Variance Explanation			Variance Amount										
2011-12													
Labor													
NLbr													
Decrease due to forms and envelopes used in 2012 were partly paid in 2011												(80)	
Decrease due to vendor fees for electronic bill delivery services												8	
Increase in software expenses for electronic bills and electronic payments												1	
												(71)	
												(71)	

Note: Totals may include rounding differences.

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ORA Deficiency Data Request SDG&E-ORA-DEF-009-TLG Question B.1

Exh No:SDG&E-14-WP	Witness Name	Bradley M. Baugh	Adjusted Recorded					Variances by Year				Workpaper Page
			2009	2010	2011	2012	2013	2009-10	2010-11	2011-12	2012-13	
Constant 2013\$ in Thousands												
100004.000 - Remittance Processing												
Labor	0	0	0	0	0	0	0	0	0	0	0	
NLbr	1,025	877	886	815	887	887	(148)	9	(71)	72		
NSE	0	0	0	0	0	0	0	0	0	0		
100004.000 Total	1,025	877	886	815	887	887	(148)	9	(71)	72		Page 52 of 472
Variance Explanation												
2012-13												
Labor												
NLbr												
Increase due to forms and envelopes including supplies used in Nov and Dec 2012 but paid for in 2013												
											27	
Decrease due to vendor fees for electronic bill delivery services												
											20	
Increase in software expenses for electronic bills and electronic payments												
											25	
											72	
											72	

Note: Totals may include rounding differences.

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ORA Deficiency Data Request SDG&E-ORA-DEF-009-TLG Question B.1

Exh No:SDG&E-14-WP	Witness Name	Bradley M. Baugh	Adjusted Recorded				Variances by Year				Workpaper Page	
			2009	2010	2011	2012	2013	2009-10	2010-11	2011-12		2012-13
Constant 2013\$ in Thousands												
100004.001 - Postage												
	Labor	0	0	0	0	0	0	0	0	0	0	
	NLbr	(1)	(1)	0	0	0	0	1	0	0	0	
	NSE	5,059	5,008	4,979	4,597	4,431	(51)	(29)	(382)	(382)	(166)	
	100004.001 Total	5,058	5,007	4,979	4,597	4,431	(51)	(28)	(382)	(382)	(166)	Page 64 of 472
Variance Explanation												
	2011-12											
	NSE											
	Volume of paper bills and notices were lower by 479,262 x effective rate \$0.3967869										(190)	
	Difference due to lower effective rate (2012 volume 12,069,034 x rate differential -\$0.0158652)										(192)	
											(382)	
	2012-13											
	NSE											
	Volume of paper bills and notices were lower by 599,365 x effective rate \$0.3809007										(228)	
	Difference due to higher effective rate (2013 volume 11,469,669 x rate differential \$0.0054470)										62	
											(166)	
											(166)	

Note: Totals may include rounding differences.

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ORA Deficiency Data Request
~~SDG&E-ORA-DEF-009-TLG~~

Exh No:SDG&E-14-WP Witness Name Constant 2013\$ in Thousands	Bradley M. Baugh Question B.1	Adjusted Recorded				Variances by Year				Workpaper Page	
		2009	2010	2011	2012	2013	2009-10	2010-11	2011-12		2012-13
100005.000 - Branch Offices											
Labor		1,430	1,402	1,458	1,409	1,503	(28)	56	(49)	94	
NLbr		526	470	520	485	516	(56)	50	(35)	31	
NSE							0	0	0	0	
100005.000 Total		1,956	1,872	1,978	1,894	2,019	(84)	106	(84)	125	Page 79 of 472
		Variance Explanation					Variance Amount				
2009-10											
Labor							(28)				
Labor decrease primarily due to employee on special assignment											
NLbr							(28)				
Increase in software maintenance /leases expenses due to purchase of additional Express Pay kiosks							54				
Reduction in costs due to prior purchase of two Express Pay kiosks in 2009							(73)				
Decrease due to prior customer communication regarding relocation of Oceanside Branch Office							(23)				
Decrease due to annual timing of vendor invoices which fluctuate throughout the year							(38)				
Increase due to other misc. office expenses							23				
							(57)				
							(85)				

Note: Totals may include rounding differences.

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ORA Deficiency Data Request
SDG&E-ORA-DEF-009-TLG

Exh No:SDG&E-14-WP Witness Name Constant 2013\$ in Thousands	Bradley M. Baugh Question B.1	Adjusted Recorded				Variances by Year				Workpaper Page	
		2009	2010	2011	2012	2013	2009-10	2010-11	2011-12		2012-13
100005.000 - Branch Offices											
Labor		1,430	1,402	1,458	1,409	1,503	(28)	56	(49)	94	
NLbr		526	470	520	485	516	(56)	50	(35)	31	
NSE							0	0	0	0	
100005.000 Total		1,956	1,872	1,978	1,894	2,019	(84)	106	(84)	125	Page 79 of 472
Variance Explanation											
2011-12											
Labor											
Labor increase primarily due to employee on leave and change in labor mix (shifting from part-time to full-time)										(49)	
NLbr										(49)	
Decrease due to temporary agency labor no longer needed										(6)	
Decrease due to prior postage expenses										(18)	
Decrease due to employee-related expenses										(4)	
Decrease due to misc. office expenses										(7)	
										(35)	
										(84)	

Note: Totals may include rounding differences.

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ORA Deficiency Data Request

Exh No:SDG&E-14-WP Witness Name Constant 2013\$ in Thousands	Bradley M. Baugh Question B-1	Adjusted Recorded					Variances by Year				Workpaper Page		
		2009	2010	2011	2012	2013	2009-10	2010-11	2011-12	2012-13			
100005.000 - Branch Offices													
Labor		1,430	1,402	1,458	1,409	1,503	(28)	56	(49)	94			
NLbr		526	470	520	485	516	(56)	50	(35)	31			
NSE							0	0	0	0			
100005.000 Total		1,956	1,872	1,978	1,894	2,019	(84)	106	(84)	125			Page 79 of 472
Variance Explanation													
2012-13													
Labor													
Labor increase primarily due to employees returning from leave												94	
NLbr												94	
Increase due to timing of vendor invoices which fluctuate through the year												7	
Increase due to employee-related expenses												11	
Increase due to misc. office expenses												14	
												31	
												125	

Note: Totals may include rounding differences.

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ORA Deficiency Data Request SDG&E-ORA-DEF-009-TLG Question B.1

Exh No:SDG&E-14-WP Witness Name Constant 2013\$ in Thousands	Bradley M. Baugh	Adjusted Recorded				Variances by Year				Workpaper Page	
		2009	2010	2011	2012	2013	2009-10	2010-11	2011-12		2012-13
100006.000 - CCC Operations											
Labor	9,271	8,941	8,590	8,551	8,804	(330)	(351)	(39)	253		
NLbr	94	322	236	357	384	228	(86)	121	27		
NSE	0	0	0	0	0	0	0	0	0		
100006.000 Total	9,365	9,263	8,826	8,908	9,188	(102)	(437)	82	280	Page 89 of 472	
Labor Cost Drivers											
	2009	2010	2011	2012	2013						
ESS-answered calls with Virtual	2,436,338	2,353,875	2,242,137	2,127,497	2,066,645						
Total transactions	2,983,732	3,095,541	2,965,014	2,869,113	2,840,446						
AHT	273	258	259	273	274						
ESS LOS	72.32%	70.97%	71.86%	64.96%	68.86%						
ESS & IVR LOS	76.12%	76.38%	77.01%	71.63%	75.04%						
ESS/FTE	171	163	152	147	155						
Non-ESS/FTE	17	17	17	19	19						
Variance Explanation											
2009-10											
Labor											
Due to numerous factors that affect the labor cost, we cannot itemize the labor variance by individual labor cost drivers.						(330)					
NLbr						(330)					
Increase due to hardware costs									104		
Increase due to miscellaneous material expenses									20		
Increase due to office furniture replacement									71		
Increase due to temporary agency labor (staff assistant)									16		
Increase due to misc. office expenses									26		
All other cost elements									(9)		
									228		
									(102)		

Note: Totals may include rounding differences.

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ORA Deficiency Data Request SDG&E-ORA-DEF-009-TLG Question B.1

Exh No:SDG&E-14-WP Witness Name Constant 2013\$ in Thousands	Bradley M. Baugh	Adjusted Recorded					Variances by Year			Workpaper Page		
		2009	2010	2011	2012	2013	2009-10	2010-11	2011-12		2012-13	
100006.000 - CCC Operations												
Labor	9,271	8,941	8,590	8,551	8,804	(330)	(351)	(39)	253			
NLbr	94	322	236	357	384	228	(86)	121	27			
NSE	0	0	0	0	0	0	0	0	0			
100006.000 Total	9,365	9,263	8,826	8,908	9,188	(102)	(437)	82	280			Page 89 of 472
Labor Cost Drivers												
	2009	2010	2011	2012	2013							
ESS-answered calls with Virtual	2,436,338	2,353,875	2,242,137	2,127,497	2,066,645							
Total transactions	2,983,732	3,095,541	2,965,014	2,869,113	2,840,446							
AHT	273	258	259	273	274							
ESS LOS	72.32%	70.97%	71.86%	64.96%	68.86%							
ESS & IVR LOS	76.12%	76.38%	77.01%	71.63%	75.04%							
ESS/FTE	171	163	152	147	155							
Non-ESS/FTE	17	17	17	19	19							
Variance Explanation												
2010-11												
Labor												
Due to numerous factors that affect the labor cost, we cannot itemize the labor variance by individual labor cost drivers.										(351)		
NLbr										(351)		
Decrease due to hardware expenses										(184)		
Decrease due to miscellaneous material expenses										(17)		
Decrease due to office furniture replacement										(45)		
Increase in consulting services										19		
Increase due to temporary agency labor (staff assistant)										21		
Increase in telecom equipment expenses										114		
All other cost elements										6		
										(86)		
										(437)		

Note. Totals may include rounding differences.

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ORA Deficiency Data Request SDG&E-ORA-DEF-009-TLG Question B.1

Exh No:SDG&E-14-WP Witness Name Constant 2013\$ in Thousands	Bradley M. Baugh	Adjusted Recorded				Variances by Year				Workpaper Page	
		2009	2010	2011	2012	2013	2009-10	2010-11	2011-12		2012-13
100006.000 - CCC Operations											
Labor	9,271	8,941	8,590	8,551	8,804	(330)	(351)	(39)	253		
NLbr	94	322	236	357	384	228	(86)	121	27		
NSE	0	0	0	0	0	0	0	0	0		
100006.000 Total	9,365	9,263	8,826	8,908	9,188	(102)	(437)	82	280	Page 89 of 472	
Labor Cost Drivers											
	2009	2010	2011	2012	2013						
ESS-answered calls with Virtual	2,436,338	2,353,875	2,242,137	2,127,497	2,066,645						
Total transactions	2,983,732	3,095,541	2,965,014	2,869,113	2,840,446						
AHT	273	258	259	273	274						
ESS LOS	72.32%	70.97%	71.86%	64.96%	68.86%						
ESS & IVR LOS	76.12%	76.38%	77.01%	71.63%	75.04%						
ESS/FTE	171	163	152	147	155						
Non-ESS/FTE	17	17	19	19	19						
Variance Explanation											
2012-13											
Labor											
Due to numerous factors that affect the labor cost, we cannot itemize the labor variance by individual labor cost drivers.									253		
NLbr									253		
Decrease due to employee-related expenses									(11)		
Decrease in computer hardware expenses									(24)		
Decrease in miscellaneous material expenses									(21)		
Increase in office furniture replacement expenses									26		
Increase in consulting services									21		
Increase in temporary agency labor (staff assistant)									39		
All other cost elements									(2)		
									27		
									280		

Note: Totals may include rounding differences. Page 29 of 64 SDGE-ORA-DEF-009-TLG-B1-OM-SDGE-14 App Update (Errata).xlsx - CCC-Ops

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ORA Deficiency Data Request SDG&E-ORA-DEF-009-TLG Question B.1

Exh No:SDG&E-14-WP Witness Name Constant 2013\$ in Thousands	Bradley M. Baugh	Adjusted Recorded					Variances by Year					Workpaper Page	
		2009	2010	2011	2012	2013	2009-10	2010-11	2011-12	2012-13			
100007.000 - CCC Support													
Labor	1,299	1,153	1,301	1,404	1,312	(146)	148	103	(92)				
NLbr	993	1,251	1,088	903	1,010	258	(163)	(185)	107				
NSE	0	0	0	0	0	0	0	0	0				
100007.000 Total	2,292	2,404	2,389	2,307	2,322	112	(15)	(82)	15			Page 105 of 472	
Variance Explanation													
2009-10													
Labor													
Labor decrease due to employees on leave						(146)							
NLbr						(146)							
Increase in maintenance & telco costs after contract negotiations for software and hardware license and maintenance fees						227							
Increase in contracted service costs for usage of language line services						10							
Increase in miscellaneous office supplies, employee-related expenses, and temporary agency services						21							
						258							
						112							

Note: Totals may include rounding differences.

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ORA Deficiency Data Request SDG&E-ORA-DEF-009-TLG Question B.1

Exh No.:SDG&E-14-WP Witness Name Constant 2013\$ in Thousands	Bradley M. Baugh	Adjusted Recorded					Variances by Year					Workpaper Page	
		2009	2010	2011	2012	2013	2009-10	2010-11	2011-12	2012-13			
100007.000 - CCC Support													
Labor	1,299	1,153	1,301	1,404	1,312	(146)	148	103	(92)				
NLbr	993	1,251	1,088	903	1,010	258	(163)	(185)	107				
NSE	0	0	0	0	0	0	0	0	0				
100007.000 Total	2,292	2,404	2,389	2,307	2,322	112	(15)	(82)	15				Page 105 of 472
Variance Explanation													
2010-11													
Labor													
Increase due to employees return from leave									148				
NLbr									148				
Decrease in telco costs due to contract negotiations and separating contract with SoCal Gas									(128)				
Decrease in contracted service costs for usage of language line services									(5)				
Decrease in miscellaneous office supplies, employee-related costs, and temporary agency services									(30)				
									(163)				
									(15)				

Note: Totals may include rounding differences.

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ORA Deficiency Data Request SDG&E-ORA-DEF-009-TLG Question B.1

Exh No:SDG&E-14-WP Witness Name Constant 2013\$ in Thousands	Bradley M. Baugh	Adjusted Recorded				Variances by Year				Workpaper Page	
		2009	2010	2011	2012	2013	2009-10	2010-11	2011-12		2012-13
100007.000 - CCC Support											
Labor	1,299	1,153	1,301	1,404	1,312	(146)	148	103	(92)		
NLbr	993	1,251	1,088	903	1,010	258	(163)	(185)	107		
NSE	0	0	0	0	0	0	0	0	0		
100007.000 Total	2,292	2,404	2,389	2,307	2,322	112	(15)	(82)	15	Page 105 of 472	
Variance Explanation											
2011-12											
Labor											
Increase due to additional staffing (Level of Service Associate Supervisor & Business Advisor) to support the Customer Contact Center data analysis transactions and average handle time									103		
NLbr									103		
Decrease in maintenance & telco costs for software, hardware, maintenance fees due to contract negotiations									(182)		
Decrease in contracted service costs for usage of language line services									(8)		
Increase in miscellaneous office supplies and employee-related costs									5		
									(185)		
									(82)		

Note: Totals may include rounding differences.

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ORA Deficiency Data Request SDG&E-ORA-DEF-009-TLG Question B.1

Exh No:SDG&E-14-WP Witness Name Constant 2013\$ in Thousands	Bradley M. Baugh	Adjusted Recorded					Variances by Year					Workpaper Page	
		2009	2010	2011	2012	2013	2009-10	2010-11	2011-12	2012-13			
100007.000 - CCC Support													
Labor		1,299	1,153	1,301	1,404	1,312	(146)	148	103	(92)			
NLbr		993	1,251	1,088	903	1,010	258	(163)	(185)	107			
NSE		0	0	0	0	0	0	0	0	0			
100007.000 Total		2,292	2,404	2,389	2,307	2,322	112	(15)	(82)	15			Page 105 of 472
Variance Explanation													
2012-13													
Labor													
Increase due to employees return from leave												(92)	
												(92)	
NLbr													
Increase due to software and hardware upgrades to telco equipment													88
Increase in contracted service costs for usage of language line services													21
Decrease in miscellaneous office supplies and employee-related costs													(2)
													107
													15

Note: Totals may include rounding differences.

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Exh No:SDG&E-14-WP Witness Name Constant 2013\$ in Thousands	Bradley M. Baugh	Adjusted Recorded				Variances by Year				Workpaper Page
		2009	2010	2011	2012	2013	2009-10	2010-11	2011-12	
100008.000 - Residential Customer Services										
Labor	1,688	1,421	1,832	2,471	2,579	(267)	411	639	108	
NLbr	1,769	1,421	1,616	1,634	2,998	(348)	195	18	1,364	
NSE	0	0	0	0	0	0	0	0	0	
100008.000 Total	3,457	2,842	3,448	4,105	5,577	(615)	606	657	1,472	Page 124 of 472
Variance Explanation										
2009-10										
Labor										
Labor decrease due to the initial development and set-up of the Emergency Preparedness Program and Public Safety Outreach process in 2009						(205)				
Labor decrease due to employee leave						(43)				
Labor decrease due to salary fluctuations based on the level of experience of a workforce, the type of work required, and market reference range						(19)				
NLbr						(267)				
Increase due to more NGAT (Natural Gas Appliance Test)/Co-Testing performed by contractors due to more homes receiving weatherization services under the Energy Savings Assistance Program						71				
Increase due to printing of application forms for customer assistance programs						3				
Decrease due to printing fewer customer brochures (welcome kits, safety, level-pay, etc)						(38)				
Decrease due to the initial development and set-up of the Emergency Preparedness Program and Public Safety Outreach process in 2009 related to printing of brochures, database enhancements during program development and implementation						(384)				
						(348)				
						(615)				

Note: Totals may include rounding differences.

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ORA Deficiency Data Request SDG&E-ORA-DEF-009-TLG Question B.1

Exh No:SDG&E-14-WP Witness Name Constant 2013\$ in Thousands	Bradley M. Baugh	Adjusted Recorded					Variances by Year				Workpaper Page
		2009	2010	2011	2012	2013	2009-10	2010-11	2011-12	2012-13	
100008.000 - Residential Customer Services											
Labor	1,688	1,421	1,832	2,471	2,579	(267)	411	639	108		
NLbr	1,769	1,421	1,616	1,634	2,998	(348)	195	18	1,364		
NSE	0	0	0	0	0	0	0	0	0		
100008.000 Total	3,457	2,842	3,448	4,105	5,577	(615)	606	657	1,472	Page 124 of 472	
Variance Explanation											
2011-12											
Labor											
Labor increase due to the establishment of the Customer Experience / Residential Services Marketing / Outreach Group. Added 2.5 Energy Solution Advisors and a Customer Outreach Manager											
									359		
Labor increase due to addition of 2 Program Managers to support expanded work in Electric Vehicle Program											
									203		
Labor increase due to additional Program Manager to support increased program participation, and customer retention in Medical Baseline Program											
									77		
									639		
NLbr											
Increase due to more NGAT (Natural Gas Appliance Test)/Co-Testing performed by contractors due to more homes receiving weatherization services under the Energy Savings Assistance Program											
									80		
Increase due to printing of application forms for customer assistance programs											
									3		
Increase for residential outreach events, collateral printing and graphics, and employee related expenses in support of enhancing the overall customer experience for customers by providing integrated messaging and solutions											
									47		
Increase for printing and mailing of program collateral material for Emergency Preparedness Program											
									16		
Decrease due to timing of invoicing for consulting services, software license agreements for segmentation and sensus track data											
									(128)		
									18		
									657		

Note: Totals may include rounding differences. Page 36 of 64 SDGE-ORA-DEF-009-TLG-B1-OM-SDGE-14 App Update (Errata).xlsx - ResSvc

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ORA Deficiency Data Request SDG&E-ORA-DEF-009-TLG Question B.1

Exh No:SDG&E-14-WP Witness Name Constant 2013\$ in Thousands	Bradley M. Baugh	Adjusted Recorded				Variances by Year				Workpaper Page
		2009	2010	2011	2012	2013	2009-10	2010-11	2011-12	
100008.000 - Residential Customer Services										
Labor	1,688	1,421	1,832	2,471	2,579	(267)	411	639	108	
NLbr	1,769	1,421	1,616	1,634	2,998	(348)	195	18	1,364	
NSE	0	0	0	0	0	0	0	0	0	
100008.000 Total	3,457	2,842	3,448	4,105	5,577	(615)	606	657	1,472	Page 124 of 472
Variance Explanation										
Variance Amount										
2012-13										
Labor									108	
Labor cost increase due to addition of a Customer Experience Manager									108	
NLbr										
Decrease due to fewer NGAT (Natural Gas Appliance Test)/Co-Testing performed by contractors due to less homes receiving weatherization services under the Energy Savings Assistance Program									(45)	
Increase due to printing of application forms for customer assistance programs and consulting services for database enhancements for MBL application processing									76	
Increase primarily due to consulting services for customer segmentation study and customer analytical support									122	
Increase due to printing customer brochures (welcome kits, safety, level-pay, etc)									61	
Decrease for printing and mailing of program collateral material for Emergency Preparedness Program									(8)	
Increase due to software license agreements for segmentation and census track data									89	
Increase due to third party development of Manage Act Save Program, consulting services, and software licensing and maintenance fees									938	
Increase due to outreach and community events and partnerships with community based organizations to educate and inform customers about rates									285	
Decrease in Electric Vehicle Program costs related primarily to renegotiating contracts and adjusting level of sponsorships and research projects									(154)	
									1,364	
									1,472	

Note: Totals may include rounding differences. Page 37 of 64 SDGE-ORA-DEF-009-TLG-B1-OM-SDGE-14 App Update (Errata).xlsx - ResSvc

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ORA Deficiency Data Request SDG&E-ORA-DEF-009-TLG Question B.1

Exh No:SDG&E-14-WP Witness Name Constant 2013\$ in Thousands	Bradley M. Baugh	Adjusted Recorded				Variances by Year				Workpaper Page	
		2009	2010	2011	2012	2013	2009-10	2010-11	2011-12		2012-13
100009.000 - C&J Services											
Labor	4,599	4,563	4,311	4,447	4,418	(36)	(252)	136	(29)		
NLbr	665	579	894	958	887	(86)	315	64	(71)		
NSE						0	0	0	0		
100009.000 Total	5,264	5,142	5,205	5,405	5,305	(122)	63	200	(100)	Page 136 of 472	
	Variance Explanation					Variance Amount					
2009-10											
Labor											
Labor decrease is due to employee leave offset by severance pay						(36)					
NLbr						(36)					
Decrease in consulting services related to Gas Open Season and benchmarking study						(18)					
Decrease in employee-related expenses						(23)					
Decrease in misc. office expenses						(25)					
Decrease in employee training						(20)					
						(86)					
						(122)					

Note: Totals may include rounding differences.

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ORA Deficiency Data Request SDG&E-ORA-DEF-009-TLG Question B.1

Exh No:SDG&E-14-WP Witness Name Constant 2013\$ in Thousands	Bradley M. Baugh	Adjusted Recorded					Variances by Year				Workpaper Page	
		2009	2010	2011	2012	2013	2009-10	2010-11	2011-12	2012-13		
100009.000 - C&I Services												
Labor	4,599	4,563	4,311	4,447	4,418	(36)	(252)	136	(29)			
NLbr	665	579	894	958	887	(86)	315	64	(71)			
NSE						0	0	0	0			
100009.000 Total	5,264	5,142	5,205	5,405	5,305	(122)	63	200	(100)			Page 136 of 472
Variance Explanation												
2011-12												
Labor	Increase in labor is due to leveling pay market advisor positions and filling open positions (fire preparedness manager, project coordinator and customer service specialist)											
										136		
										136		
NLbr	Increase in consulting services for Small and Medium Business strategy and increase in employee-related expenses											
										64		
										64		
										200		

Note: Totals may include rounding differences. Page 40 of 64 SDGE-ORA-DEF-009-TLG-B1-OM-SDGE-14 App Update (Errata).xlsx - C&I

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ORA Deficiency Data Request SDG&E-ORA-DEF-009-TLG Question B.1

Exh No:SDG&E-14-WP Witness Name Constant 2013\$ in Thousands	Bradley M. Baugh	Adjusted Recorded					Variances by Year				Workpaper Page	
		2009	2010	2011	2012	2013	2009-10	2010-11	2011-12	2012-13		
100010.000 - Communications Research & Web												
Labor	1,839	1,440	1,846	2,219	2,204	(399)	406	373	(15)			
NLbr	4,737	3,195	3,688	5,764	5,736	(1,542)	493	2,076	(28)			
NSE	0	0	0		0	0	0	0	0			
100010.000 Total	6,576	4,637	5,535	7,984	7,940	(1,941)	899	2,449	(43)	Page 142 of 472		
		Variance Explanation					Variance Amount					
2009-10												
Labor												
Labor decrease is due to reduction of administrative assistant, a web manager and a research analyst.						(399)						
NLbr						(399)						
Decrease in customer communications -- overall decrease in fire communications, winter and summer seasonal efforts, bill newsletters printing quantities and reductions in number of smaller projects						(1,604)						
Increase in e-services for development of Digital roadmap, initial work on sdge.com revision, mobile app development and social media strategy, and additional projects using digital agency for development and consulting						372						
Decrease due to one-time expenditures in 2009 not repeated in 2010 for various research subscriptions services and one-time studies conducted in 2009 only						-310						
						(1,542)						
						(1,941)						

Note: Totals may include rounding differences.

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ORA Deficiency Data Request SDG&E-ORA-DEF-009-TLG Question B.1

Exh No:SDG&E-14-WP	Witness Name	Bradley M. Baugh	Adjusted Recorded				Variances by Year				Workpaper Page		
			2009	2010	2011	2012	2013	2009-10	2010-11	2011-12		2012-13	
Constant 2013\$ in Thousands													
100010.000 - Communications Research & Web													
Labor		1,839	1,440	1,846	2,219	2,204	(399)	406	373	(15)			
NLbr		4,737	3,195	3,688	5,764	5,736	(1,542)	493	2,076	(28)			
NSE		0	0	0		0	0	0	0	0			
100010.000 Total		6,576	4,637	5,535	7,984	7,940	(1,941)	899	2,449	(43)	Page 142 of 472		
Variance Explanation													
2011-12													
Labor													
Labor increase due to adding a developer, two project managers and FTE in Technology area										373			
NLbr										373			
Increase in mass communications due to increase in summer communications, winter communications, ethnic targeted mass and production of some communications, videos and other materials late in 2012 to be used in 2013										2,103			
Decrease due to transition to new vendor offset by increases due to expanded customer connections study, increased JD Power costs and additional year-end reports for third party research, and other survey costs increases due to vendor cost increases.										(110)			
Increase in Technology area development of new features for mobile app										83			
										2,076			
										2,449			

Note: Totals may include rounding differences.

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ORA Deficiency Data Request SDG&E-ORA-DEF-009-TLG Question B.1

Exh No:SDG&E-14-WP	Witness Name	Bradley M. Baugh	Adjusted Recorded				Variances by Year				Worksheet Page
			2009	2010	2011	2012	2013	2009-10	2010-11	2011-12	
Constant 2013\$ in Thousands											
100010.000 - Communications Research & Web											
Labor	1,839	1,440	1,846	2,219	2,204	(399)	406	373	(15)		
NLbr	4,737	3,195	3,688	5,764	5,736	(1,542)	493	2,076	(28)		
NSE	0	0	0	0	0	0	0	0	0		
100010.000 Total	6,576	4,637	5,535	7,984	7,940	(1,941)	899	2,449	(43)	Page 142 of 472	
Variance Explanation											
2012-13											
Labor											
Decrease in labor due to salary differential.											
											(15)
NLbr											(15)
Decrease in mass communications due to production done in 2012 and decrease in summer and winter preparedness efforts, eliminate special targeted ethnic communications, and eliminate one bill newsletter											
											(706)
Increase in e-services due to translation of site, updating digital roadmap and personas, a one-time social media effort, web site accessibility review and improvements, reporting and evaluation, and increase in web consulting											
											375
Increase in research studies with addition of the High Risk Fire Area and business modules added to Customer Opinion Survey, Re-establish on-line panel, further expansion of customer connections survey, and other cost changes within surveys.											
											303
											(28)
											(43)

Note: Totals may include rounding differences.

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ORA Deficiency Data Request SDG&E-ORA-DEF-009-TLG Question B.1

Exh No:SDG&E-14-WP Witness Name Constant 2013\$ in Thousands	Bradley M. Baugh	Adjusted Recorded				Variances by Year				Workpaper Page
		2009	2010	2011	2012	2013	2009-10	2010-11	2011-12	
100011.000 - Customer Programs & Projects										
Labor	905	943	976	1,453	1,419	38	33	477	(34)	
NLbr	1,391	852	808	973	1,304	(539)	(44)	165	331	
NSE	0	0	0	0	0	0	0	0	0	
100011.000 Total	2,296	1,795	1,784	2,426	2,723	(501)	(11)	642	297	Page 156 of 472
Variance Explanation										
2009-10										
Labor										
Increase in O&M due to increased support required for O&M programs (e.g.Critical Peak Pricing Roll-out (CPP-D))						38				
NLbr						38				
Reduced non-labor due to payment of maintenance in 2009 for both 2009 & 2010. Paid only one year in 2010.						(294)				
Reduced for software licensing costs for research firm, publications, consulting, sponsorships, market research and other						(245)				
						(539)				
						(501)				
Variance Amount										

Note: Totals may include rounding differences.

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ORA Deficiency Data Request SDG&E-ORA-DEF-009-TLG Question B.1

Exh No:SDG&E-14-WP Witness Name Constant 2013\$ in Thousands	Bradley M. Baugh	Adjusted Recorded				Variances by Year				Workpaper Page
		2009	2010	2011	2012	2013	2009-10	2010-11	2011-12	
100011.000 - Customer Programs & Projects										
Labor	905	943	976	1,453	1,419	38	33	477	(34)	
NLbr	1,391	852	808	973	1,304	(539)	(44)	165	331	
NSE	0	0	0	0	0	0	0	0	0	
100011.000 Total	2,296	1,795	1,784	2,426	2,723	(501)	(1.1)	642	297	Page 156 of 472
Variance Explanation										
2011-12										
Labor										
Increase labor due additional support for O&M programs (CPP-D, Rolling Black outs)									78	
Temporary backfill while manager on special assignment									53	
Increase in labor due to transition of Home Area Network Team from Smart Meter project									259	
Increase in support for the Technology Strategy team									46	
Increase in support for new Customer Privacy team									41	
									477	
NLbr										
Increase in consulting costs, sponsorships, market research and testing equipment for the HAN team and employee expenses									165	
									165	
									642	

Note: Totals may include rounding differences.

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Exh No:SDG&E-14-WP	Witness Name	Bradley M. Baugh	Adjusted Recorded				Variances by Year				Workpaper Page		
			2009	2010	2011	2012	2013	2009-10	2010-11	2011-12		2012-13	
Constant 2013\$ in Thousands													
100012.000 - Other Office													
Labor		517	400	423	437	588	(117)	23	14	151			
NLbr		312	48	463	1,006	283	(264)	415	543	(723)			
NSE		0	0	0	0	0	0	0	0	0			
100012.000 Total		829	448	886	1,443	871	(381)	438	557	(572)			Page 116 of 472
Variance Explanation			Variance Amount										
2009-10													
Labor													
Decrease primarily due to salary differentials for employee backfill							(117)						
NLbr							(117)						
Decrease primarily due to vendor invoice payment timing and reduction in executive expenses							(264)						
							(264)						
							(381)						

Note: Totals may include rounding differences. Page 50 of 64 SDGE-ORA-DEF-009-TLG-B1-OM-SDGE-14 App Update (Errata).xlsx - Other

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ORA Deficiency Data Request SDG&E-ORA-DEF-009-TLG Question B.1

Exh No:SDG&E-14-WP Witness Name Constant 2013\$ in Thousands	Bradley M. Baugh	Adjusted Recorded				Variances by Year				Workpaper Page	
		2009	2010	2011	2012	2013	2009-10	2010-11	2011-12		2012-13
100012.000 - Other Office											
Labor	517	400	423	437	588	(117)	23	14	151		
NLbr	312	48	463	1,006	283	(264)	415	543	(723)		
NSE	0	0	0	0	0	0	0	0	0		
100012.000 Total	829	448	886	1,443	871	(381)	438	557	(572)	Page 116 of 472	
Variance Explanation											
2011-12											
Labor											
Variance is immaterial and primarily represents base salary increases.											
									14		
NLbr									14		
Variance is primarily due to increased consulting in customer experience and marketing studies											
									543		
									543		
									557		

Note: Totals may include rounding differences.

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Exh No:SDG&E-14-WP Witness Name Constant 2013\$ in Thousands	Bradley M. Baugh	Adjusted Recorded					Variances by Year				Workpaper Page
		2009	2010	2011	2012	2013	2009-10	2010-11	2011-12	2012-13	
2100-0006.000 - Customer Service Strategies											
Labor	108	105	111	109	113	(3)	6	(2)	4		
NLbr	3	1	8	8	8	(2)	7	0	0		
NSE	0	0	0			0	0	0	0		
2100-0006.000 Total	111	106	119	117	121	(5)	13	(2)	4		Page 169 of 472
Variance Explanation											
2009-10											
Labor											
Decrease due to variation in O&M project support						(3)					
NLbr						(3)					
Decrease due to employee-related expenses						(2)					
						(2)					
						(5)					
2010-11											
Labor											
Increase due to variation in O&M project support									6		
NLbr									6		
Increase due to employee-related expenses									7		
									7		
									13		

Note: Totals may include rounding differences. Page 54 of 64 SDGE-ORA-DEF-009-TLG-B1-OM-SDGE-14 App Update (Errata).xlsx - 0006

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ORA Deficiency Data Request SDG&E-ORA-DEF-009-TLG Question B.1

Exh No:SDG&E-14-WP	Witness Name	Bradley M. Baugh	Adjusted Recorded					Variances by Year			Workpaper Page
			2009	2010	2011	2012	2013	2009-10	2010-11	2011-12	
Constant 2013\$ in Thousands											
2100-3434.000 - Planning & Development											
Labor		580	388	353	276	259	(192)	(35)	(77)	(17)	
NLbr		398	279	248	366	246	(119)	(31)	118	(120)	
NSE		0	0	0	0	0	0	0	0	0	
2100-3434.000 Total		978	667	601	642	505	(311)	(66)	41	(137)	Page 191 of 472
Variance Explanation											
2010-11											
Labor											
Decrease due to staff rotation									(35)		
NLbr									(35)		
Timing of billing and payment of outside services around year end and year-to-year variation in spend on outside expert support based on project phasing and schedule.									(31)		
									(31)		
									(66)		
Variance Amount											

Note: Totals may include rounding differences. Page 57 of 64 SDGE-ORA-DEF-009-TLG-B1-OM-SDGE-14 App Update (Errata).xlsx - -3434

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ORA Deficiency Data Request SDG&E-ORA-DEF-009-TLG Question B.1

Exh No:SDG&E-14-WP	Witness Name	2009	Adjusted Recorded			Variances by Year				Workpaper Page	
			2010	2011	2012	2013	2009-10	2010-11	2011-12		2012-13
Constant 2013\$ in Thousands	Bradley M. Baugh										
2100-3461.000 - Business Planning & Budgets Customer Service											
Labor		220	212	115	112	122	(8)	(97)	(3)	10	
NLbr		1	1	2	2	3	0	1	0	1	
NSE							0	0	0	0	
2100-3461.000 Total		221	213	117	114	125	(8)	(96)	(3)	11	Page 176 of 472
Variance Explanation											
2011-12											
Labor											
Decrease due to recorded vacation and sick time									(3)		
NLbr									(3)		
2012-13											
Labor											
Increase in labor is due to an employee promotion from a Project Manager to a Business Planning Manager										10	
NLbr										10	
Increase due to employee-related expenses										1	
										1	
										11	

Note: Totals may include rounding differences.

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San Diego Gas & Electric Company
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ORA Deficiency Data Request SDG&E-ORA-DEF-009-TLG Question B.1

Exh No:SDG&E-14-WP Witness Name Constant 2013\$ in Thousands	Bradley M. Baugh	Adjusted Recorded				Variances by Year			Workpaper Page
		2009	2010	2011	2012	2013	2009-10	2010-11	
2100-3709.000 - Low Emissions Vehicle Program									
Labor	114	8	76	80	84	(106)	68	4	4
NLbr	23	1	9	10	11	(22)	8	1	1
NSE	0	0				0	0	0	0
2100-3709.000 Total	137	9	85	90	95	(128)	76	5	5
Variance Explanation									
2009-10									
Labor									
Reduction of Clean Transportation Manager replaced by SoCalGas employee						(106)			
NLbr						(106)			
Decrease due to employee-related expenses						(22)			
						(22)			
2010-11						(128)			
Labor									
Increase due to adding account executive to assist customer adoption of natural gas as a transportation fuel and providing information and assistance to customers							68		
NLbr							68		
Increase due to employee-related expenses							8		
							8		
							76		

Note: Totals may include rounding differences. Page 61 of 64 SDGE-ORA-DEF-009-TLG-B1-OM-SDGE-14 App Update (Errata).xlsx - -3709

San Diego Gas & Electric Company
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Shared Services Workpapers

ORA Deficiency Data Request SDG&E-ORA-DEF-009-TLG Question B.1

Exh No:SDG&E-14-WP Witness Name Constant 2013\$ in Thousands	Bradley M. Baugh	Adjusted Recorded				Variances by Year				Worksheet Page
		2009	2010	2011	2012	2013	2009-10	2010-11	2011-12	
2100-3511.000 - CCC Strategy and Analysis Manager										
Labor	122	123	124	123	125	1	1	(1)	2	
NLbr	3	2	4	11	5	(1)	2	7	(6)	
NSE						0	0	0	0	
2100-3511.000 Total	125	125	128	134	130	0	3	6	(4)	Page 183 of 472
Variance Explanation										
2011-12										
Labor										
The fluctuation is relatively flat with no significant change										
									(1)	
NLbr									(1)	
Employee-related expenses and services										
									7	
									7	
									6	
2012-13										
Labor										
The fluctuation is relatively flat with no significant change										
									2	
NLbr									2	
Employee-related expenses and services										
									(6)	
									(6)	
									(4)	

Note: Totals may include rounding differences.

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SDG&E-ORA-DEF-040-TLG

**SDG&E-14 Attachments:
Summary Tab
Details by Workgroup
High Level Roadmap**

Supporting the Request of Bradley M. Baugh

Customer Service Operations, Information and Technologies

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ORA Deficiency SDG&E-ORA-DEF-040-TLG-SDG&E-14 Summary Tab

Witness Name	Bradley Baugh				
Constant 2013\$ in Thousands					
	2013	2016	TY2016		
	Adjusted Recorded	Request	Request		
	Base Year	Test Year	Incremental	Testimony Pages	Workpaper Page
SDG&E					
Exh No.SDG&E-14					
O&M Total (NSS + USS)	58,151	67,584	9,433		
NSS	57,175	66,605	9,430		
100000.000 - Advanced Metering Ops					
Labor	7,556	8,090	534		
NLbr	579	681	102		
NSE	0	0	0		
100000.000 Total	8,135	8,771	636	BMB-10-18	Page 6 of 472
100001.000 - Meter Reading					
Labor	0	0	0		
NLbr	0	0	0		
NSE	0	0	0		
100001.000 Total	0	0	0	BMB-18	Page 21 of 472
100002.000 - Billing					
Labor	4,768	5,508	740		
NLbr	305	331	26		
NSE	0	0	0		
100002.000 Total	5,073	5,839	766	BMB-19-26	Page 27 of 472
100003.000 - Credit & Collections					
Labor	2,227	2,256	29		
NLbr	480	591	111		
NSE	0	0	0		
100003.000 Total	2,707	2,847	140	BMB-26-32	Page 39 of 472
100004.000 - Remittance Processing					
Labor	0	0	0		
NLbr	887	865	(22)		
NSE	0	10	10		
100004.000 Total	887	875	(12)	BMB-32-33	Page 52 of 472
100004.001 - Postage					
Labor	0	0	0		
NLbr	0	0	0		
NSE	4,431	4,333	(98)		
100004.001 Total	4,431	4,333	(98)	BMB-34-36	Page 64 of 472
100005.000 - Branch Offices					
Labor	1,503	1,218	(285)		
NLbr	516	516	0		
NSE	0	0	0		
100005.000 Total	2,019	1,734	(285)	BMB-36-49	Page 79 of 472
100006.000 - CCC Operations					
Labor	8,804	8,429	(375)		
NLbr	384	384	0		
NSE	0	0	0		
100006.000 Total	9,188	8,813	(375)	BMB-49-57	Page 89 of 472
100007.000 - CCC Support					
Labor	1,312	1,313	1		
NLbr	1,010	1,082	72		
NSE	0	0	0		
100007.000 Total	2,322	2,395	73	BMB-57-58	Page 105 of 472

Note Totals may include rounding differences
Summary

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ORA Deficiency SDG&E-ORA-DEF-040-TLG-SDG&E-14 Summary Tab

Witness Name	Bradley Baugh					
Constant 2013\$ in Thousands	2013	2016	TY2016			
	Adjusted Recorded	Request	Request			
	Base Year	Test Year	Incremental	Testimony Pages	Workpaper Page	
100008 000 - Residential Customer Services						
Labor	2,579	2,903	324			
NLbr	2,998	3,703	706			
NSE	0	0	0			
100008 000 Total	5,577	6,607	1,031	BMB-60-72	Page 124 of 472	
100009 000 - C&I Services						
Labor	4,418	4,827	409			
NLbr	887	962	75			
NSE	0	0	0			
100009 000 Total	5,305	5,789	484	BMB-72-81	Page 136 of 472	
100010 000 - Communications Research & Web						
Labor	2,204	3,023	819			
NLbr	5,736	11,265	5,529			
NSE	0	0	0			
100010.000 Total	7,940	14,288	6,348	BMB-82-102	Page 142 of 472	
100011 000 - Customer Programs & Projects						
Labor	1,419	1,920	501			
NLbr	1,304	1,518	214			
NSE	0	5	5			
100011 000 Total	2,723	3,443	720	BMB-102-111	Page 156 of 472	
100012.000 - Other Office						
Labor	588	587	(1)			
NLbr	283	283	0			
NSE	0	0	0			
100012 000 Total	871	870	(1)	BMB-59	Page 116 of 472	
USS	976	979	3			
2100-0006 000 - Customer Service Strategies						
Labor	113	113	0			
NLbr	8	8	0			
NSE	0	0	0			
2100-0006 000 Total	121	121	0	BMB-112-113	Page 169 of 472	
2100-3434 000 - Planning & Development						
Labor	259	259	0			
NLbr	246	246	0			
NSE	0	0	0			
2100-3434.000 Total	505	505	0	BMB-115-116	Page 191 of 472	
2100-3461 000 - Business Planning & Budgets Customer Service						
Labor	122	122	0			
NLbr	3	3	0			
NSE	0	0	0			
2100-3461 000 Total	125	125	0	BMB-113-114	Page 176 of 472	
2100-3511 000 - CCC Strategy and Analysis Manager						
Labor	125	125	0			
NLbr	5	5	0			
NSE	0	0	0			
2100-3511 000 Total	130	130	0	BMB-114-115	Page 183 of 472	
2100-3709.000 - Low Emissions Vehicle Program						
Labor	84	84	0			
NLbr	11	14	3			
NSE	0	0	0			
2100-3709 000 Total	95	98	3	BMB-116-118	Page 200 of 472	

Note Totals may include rounding differences
Summary

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ORA Deficiency SDG&E-ORA-DEF-40-TLG-SDG&E-14 Details by Workgroup

Testimony	Testimony Page #	Workpaper Group	Workpaper Page #	Forecast Methodology Workpapers	Work Group Name	Cost Driver	Total (\$000)	Labor (\$000)	Non-Labor (\$000)	NSE (\$000)	FTE	NOTES
III A 1 c i	13-14	1000000.000	11, 17-19		I. Advanced Metering	Smart Meter Extended Warranty	22	-	22	-	-	Non-labor is based on contractual agreement with vendor for warranty.
III A 1 c ii	14	1000000.000	10, 17		I. Advanced Metering	Testing Hardware/Firmware	100	100	-	-	1.0	
III A 1 c iii	15	1000000.000	10, 17		I. Advanced Metering	Process Improvements - duplicate field visits	(64)	(64)	-	-	(0.5)	Labor represents .5 FTE at an annual salary of \$92.5K.
III A 1 c iii	15	1000000.000	10-11, 17		I. Advanced Metering	Process Improvements - coaching/training to improve performance	(185)	(185)	-	-	(2.0)	Labor represents 2 FTEs at an annual salary of \$92.5K.
III A 1 c iii	15	1000000.000	10, 17		I. Advanced Metering	Process Improvements - redistributing workload	(195)	(195)	-	-	(2.0)	Labor represents 1 FTE at \$109K annual salary and 1 FTE at \$86K annual salary.
III A 1 c iv	16	1000000.000	9, 17		I. Advanced Metering	Meter Reading	117	117	-	-	1.8	Labor represents 1.8 FTE at annual salary of \$64K (see supplemental workpaper 1 on page 19 cell D26.
III A 1 c v	16-17	1000000.000	9-10, 17		I. Advanced Metering	Resumption of Field Compliance and Other Maintenance Work	862	862	-	-	8.5	Labor represents 1) Increase in O&M field compliance work (5 FTEs x \$39 30/hour x 2,080 hours = \$411,575); Helpers/Meter Installers to Single Phase Technicians (7 FTEs x \$10 28 x 2,080 = \$150,093); Apprentices Step-up Rates Increase (6.6 FTEs x \$5 63 x 2,080 = \$77,289). Total equals \$639,956 (See cell D27 in supplemental workpaper 1 on page 19). 2) Apprentice step-up increase (classroom portion) (4 FTE x \$5 63/hour increase x 2,080 = \$4,684) (See cell D28 in supplemental workpaper 1 on page 19) 3) Meter Shop (Single Phase Technicians returning from Smart Meter deployment to O&M work) (3 4 FTEs at \$69,400 annual salary = \$236,654; 8 FTEs at \$19,000 annual salary reduction = (\$15,680) Total equals \$220,974 (see cell D29 in supplemental workpaper 1 on page 19) NOTE Any minor discrepancies or differences are due to rounding.
III A 1 c vi	17	1000000.000	11, 17		I. Advanced Metering	Non-Labor Adjustment	(79)	-	(79)	-	-	Non-labor reduction reflects the removal of temporary contract labor (1,950.6 hours at average hourly rate of \$40.52).
III A 1 c vii	17-18	1000000.000	11, 17		I. Advanced Metering	Capital Projects -SMOC EM Capital Project #13031 labor savings	(100)	(100)	-	-	(1.0)	

Details By Workgroup

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ORA Deficiency SDG&E-ORA-DEF-40-TLG-SDG&E-14 Details by Workgroup

Testimony	Testimony Page #	Workpaper Group	Workpaper Page #	Forecast Methodology Workpapers	Work Group Name	Cost Driver	Total (\$000)	Labor (\$000)	Non-Labor (\$000)	NSE (\$000)	FTE	NOTES
II A 1 c vii	17-18	100000.000	11, 17		1. Advanced Metering	Capital Projects - SMOCC-EM Capital Project #13031 annual software maintenance & service fees	159	-	159	-	-	Non-labor is based on contractual agreement with vendor for software maintenance & service fees.
				Workpaper Pages 6-7 Testimony Pages 12-13	Sub-Total		637	535	102	-	5.8	
II A 3 c i	21-22	100002.000	28-29, 35		3. Billing	Net Energy Metering	251	241	10	-	4.0	Non-labor is a professional estimate and represents employee-related expenses such as mileage, travel, training, office supplies, office equipment, cell phones, etc.
II A 3 c ii	22-24	100002.000	29, 36		3. Billing	New Rate Options and Programs	410	397	13	-	5.0	Labor represents 3 FTEs at \$83.7K annual salary totaling \$259K and 2 FTEs at 73K annual salary totaling \$151K. Non-labor is a professional estimate and represents employee-related expenses such as mileage, travel, training, office supplies, office equipment, cell phones, etc.
II A 3 c iii	24	100002.000	29, 37		3. Billing	Increased Complexity of Activities	86	83	3	-	1.0	Non-labor is a professional estimate and represents employee-related expenses such as mileage, travel, training, office supplies, office equipment, cell phones, etc.
II A 3 c iv	25-26	100002.000	29		3. Billing	Capital Projects - Off But Registering Capital Project #14005 labor savings	(57)	(54)	(3)	-	(1.0)	Non-labor is a professional estimate and represents employee-related expenses such as mileage, travel, training, office supplies, office equipment, cell phones, etc.
II A 3 c iv	25-26	100002.000	29		3. Billing	Capital Projects - Centralized Calculation Engine Capital Project #14013 labor costs	76	73	3	-	1.0	Non-labor is a professional estimate and represents employee-related expenses such as mileage, travel, training, office supplies, office equipment, cell phones, etc.
				Workpaper Pages 27-28 Testimony Pages 21	Sub-Total		766	740	26	-	10.0	

Details By Workgroup

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ORA Deficiency SDG&E-ORA-DEF-40-TLG-SDG&E-14 Details by Workgroup

Testimony	Testimony Page #	Workpaper Group	Workpaper Page #	Forecast Methodology Workpapers	Work Group Name	Cost Driver	Total (\$000)	Labor (\$000)	Non-Labor (\$000)	NSE (\$000)	FTE	NOTES
II A. 4 c i	28-29	100003.000	42		4. Credit & Collections	Meter Revenue Protection	138	133	5	-	2.0	Non-labor is a professional estimate and represents employee-related expenses such as mileage, travel, training, office supplies, office equipment, cell phones, etc.
II A. 4 c ii	29-30	100003.000	43		4. Credit & Collections	Process Improvements - account reconciliation processes	(53)	(53)	-	-	(1.0)	Labor reduction reflects 1 FTE at \$53K average annual salary.
II A. 4 c ii	29-30	100003.000	43		4. Credit & Collections	Process Improvements - collection of delinquent commercial accounts	(113)	(113)	-	-	(2.0)	Labor represents 2 FTE reductions at an average annual salary of \$56.5.
II A. 4 c iii	30	100003.000	43, 49		4. Credit & Collections	Customer Growth	77	62	15	-	1.2	Labor and non-labor represents 2016 forecast multiplied by customer growth (see supplemental workpaper 1 on page 49).
II A. 4 c iv	30-31	100003.000	42-43		4. Credit & Collections	Collection Systems - new collection systems software licensing costs	33	-	33	-	-	Non-labor represents contractual agreement for licensing costs.
II A. 4 c iv	30-31	100003.000	42		4. Credit & Collections	Collection Systems - reduction for old collection system licensing costs	(32)	-	(32)	-	-	Non-labor represents savings based on contractual agreement for licensing costs.
II A. 4 c iv	30-31	100003.000	42		4. Credit & Collections	Collection Systems - new collection system on-time implementation set-up/configuration costs	(36)	-	(36)	-	-	Non-labor represents savings based on contractual agreements.
II A. 4 c iv	30-31	100003.000	43		4. Credit & Collections	Collection Systems - annual software training and vendor assisted system changes/upgrades	10	-	10	-	-	Non-labor is based on contractual rate card and an estimated amount of system changes.
II A. 4 c iv	30-31	100003.000	43, 50		4. Credit & Collections	Collection Systems - collection agency commission payments	90	-	90	-	-	Represents projected increase in collections by collection agencies (see supplemental workpaper 2 on page 50).
II A. 4 c v	31-32	100003.000	43		4. Credit & Collections	Other - final bill notices	14	-	14	-	-	Non-labor represents the forecasted cost for postage and paper to mail final bill notices.
II A. 4 c v	31-32	100003.000	43		4. Credit & Collections	Other - 48 hour disconnection notice for vulnerable customers	12	-	12	-	-	Non-labor is based on historical costs for postage and paper to mail the 48 hour notice.
					Sub-Total		140	29	111	-	0.2	
				Workpaper Pages 39-40 Testimony Page 27 28								

Details By Workgroup

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ORA Deficiency SDG&E-ORA-DEF-40-TLG-SDG&E-14 Details by Workgroup

Testimony	Testimony Page #	Workpaper Group	Workpaper Page #	Forecast Methodology Workpapers	Work Group Name	Cost Driver	Total (\$000)	Labor (\$000)	Non-Labor (\$000)	NSE (\$000)	FTE	NOTES
II A 5 c i	33	100004.000	54, 61		5. Remittance Processing	Software Licensing Costs	10	-	-	10	-	NSE represents 3% contractual increase (see supplemental workpaper 2 on page 62).
II A 5 c ii	33	100004.000	54, 61		5. Remittance Processing	Increase of E-Bills Delivered	19	-	19	-	-	Non-labor represents the volume multiplied by the unit cost (see supplemental workpaper 2 on page 62).
II A 5 c iii	33	100004.000	55, 62		5. Remittance Processing	Forms & Envelopes - 1st collection notices	11	-	11	-	-	Non-labor represents the volume multiplied by the rate (see supplemental workpaper 3 on page 60).
II A 5 c iii	33	100004.000	54-55, 61		5. Remittance Processing	Forms & Envelopes - Suppressed bills	(52)	-	(52)	-	-	Non-labor represents the volume multiplied by the unit cost (see supplemental workpaper 2 on page 62).
				Workpaper Pages 52-53 Testimony Page 32-33	Sub-Total		(12)	-	(22)	10	-	
II A 6 c i	35	100004.001	66, 73-77		6. Postage	Postage for Meter Growth	93	-	-	93	-	Non-labor represents impact due to electric meter growth on volumes multiplied by the rate (see supplemental workpaper 2 on page 77).
II A 6 c ii	35	100004.001	67, 73-77		6. Postage	Increased Postage Costs - Rate Increase	386	-	-	386	-	Non-labor represents postage increase (see supplemental workpaper 2 on page 77).
II A 6 c ii	35	100004.001	67, 73-77		6. Postage	Increased Postage Costs - 1st call notices	213	-	-	213	-	Non-labor represents the volume multiplied by the rate (see supplemental workpaper 3 on page 74).
II A 6 c iii	35	100004.001	67, 73-77		6. Postage	Postage Savings - Paperless	(636)	-	-	(636)	-	Non-labor represents impact due to electric meter growth on volumes multiplied by the rate for paperless (see supplemental workpaper 2 on page 77).
II A 6 c iii	35	100004.001	67, 73-77		6. Postage	Postage Savings - Rate Increase	(154)	-	-	(154)	-	Non-labor represents savings related to postage increase for paperless (see supplemental workpaper 2 on page 77).
				Workpaper Pages 64-65 Testimony Page 34-35	Sub-Total		(98)	-	-	(98)	-	

Details By Workgroup

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ORA Deficiency SDG&E-ORA-DEF-40-TLG-SDG&E-14 Details by Workgroup

Testimony	Testimony Page #	Workpaper Group	Workpaper Page #	Forecast Methodology Workpapers	Work Group Name	Cost Driver	Total (\$000)	Labor (\$000)	Non-Labor (\$000)	NSE (\$000)	FTE	NOTES																																																																
II A 7 c i	38	100005.000	80, 84		7. Branch Offices	Process Improvements	(285)	(285)	-	-	(5.5)	Labor represents reduction of 5.5 FTEs at an average annual salary of \$51.8K (see supplemental workpaper 1 on page 84).																																																																
II A 7 c ii	38-49	100005.000	85-87		7. Branch Offices	Closure of Branch Offices	-	-	-	-	-	See supplemental workpaper 2 on pages 85-87.																																																																
				Workpaper Pages 79-80 Testimony Page 37-38	Sub-Total		(285)	(285)	-	-	(5.5)																																																																	
II A 8 c i	53	100006.000	92, 100-103		8. Customer Contact Center Operations	Staffing Increase and Reduction in Overtime Pay	(46)	(46)	-	-	3.6	See comparison table below:																																																																
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">Comparison of Two Base Forecasts without middle to 2013 Adjusted Recorded</th> <th colspan="2">2013 Adjusted</th> <th colspan="2">172016 Forecast</th> <th colspan="2">Change</th> </tr> <tr> <th>Labor</th> <th>FTE</th> <th>Labor</th> <th>FTE</th> <th>Labor</th> <th>FTE</th> <th>Labor</th> <th>FTE</th> </tr> </thead> <tbody> <tr> <td>ESS Full-Time (FT)</td> <td></td> <td>5,476,187</td> <td>115.6</td> <td>6,183,626</td> <td>128.3</td> <td>716,439</td> <td>12.7</td> </tr> <tr> <td>ESS Peak-Time (PT)</td> <td></td> <td>1,195,422</td> <td>31.8</td> <td>1,188,830</td> <td>30.3</td> <td>(6,592)</td> <td>(1.6)</td> </tr> <tr> <td>ESS FT Overtime</td> <td></td> <td>688,149</td> <td>7.4</td> <td>-</td> <td>0.0</td> <td>(688,149)</td> <td>(7.4)</td> </tr> <tr> <td>ESS PT Overtime</td> <td></td> <td>20,131</td> <td>0.3</td> <td>-</td> <td>0.0</td> <td>(20,131)</td> <td>(0.3)</td> </tr> <tr> <td>All other staff (Mgmt. Supp.)</td> <td></td> <td>1,411,099</td> <td>18.8</td> <td>1,396,000</td> <td>19.0</td> <td>(15,099)</td> <td>(0.2)</td> </tr> <tr> <td>Total</td> <td></td> <td>8,803,988</td> <td>174.0</td> <td>8,776,156</td> <td>177.6</td> <td>(46,831)</td> <td>3.6</td> </tr> </tbody> </table>													Comparison of Two Base Forecasts without middle to 2013 Adjusted Recorded		2013 Adjusted		172016 Forecast		Change		Labor	FTE	Labor	FTE	Labor	FTE	Labor	FTE	ESS Full-Time (FT)		5,476,187	115.6	6,183,626	128.3	716,439	12.7	ESS Peak-Time (PT)		1,195,422	31.8	1,188,830	30.3	(6,592)	(1.6)	ESS FT Overtime		688,149	7.4	-	0.0	(688,149)	(7.4)	ESS PT Overtime		20,131	0.3	-	0.0	(20,131)	(0.3)	All other staff (Mgmt. Supp.)		1,411,099	18.8	1,396,000	19.0	(15,099)	(0.2)	Total		8,803,988	174.0	8,776,156	177.6	(46,831)	3.6
Comparison of Two Base Forecasts without middle to 2013 Adjusted Recorded		2013 Adjusted		172016 Forecast		Change																																																																						
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Total		8,803,988	174.0	8,776,156	177.6	(46,831)	3.6																																																																					
II A 8 c ii	53-54	100006.000	93-94, 103		8. Customer Contact Center Operations	Change In Operating Hours	(145)	(145)	-	-	(3.0)	Labor reductions are represented in supplemental workpaper 4, row 10 on page 103.																																																																
II A 8 c iii	54	100006.000	93, 103		8. Customer Contact Center Operations	Customer Outreach Safety Checks	48	48	-	-	1.0	Labor represents 1 FTE to respond to approximately 17K customer inquiries (see supplemental workpaper 4, row 14 on page 103).																																																																
II A 8 c iv	54-55	100006.000	93, 103		8. Customer Contact Center Operations	New Rate Options and Programs	241	241	-	-	5.0	Labor represents 5 FTEs to respond to approximately 80K customer inquiries or 17K calls per FTE (see supplemental workpaper 4, row 15 on page 103).																																																																
II A 8 c v	55	100006.000	93, 103		8. Customer Contact Center Operations	CARE Enrollment	72	72	-	-	1.5	Labor represents 1.5 FTEs to process approximately 20K CARE enrollments (see supplemental workpaper 4, row 16 on page 103).																																																																

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Testimony	Testimony Page #	Workpaper Group	Workpaper Page #	Forecast Methodology Workpapers	Work Group Name	Cost Driver	Total (\$000)	Labor (\$000)	Non-Labor (\$000)	NSE (\$000)	FTE	NOTES
II A 8 c vi	56-57	100006.000	92, 103		8. Customer Contact Center Operations	Capital Project Impacts - IVR 2014 Capital Project #14023	(193)	(193)	-	-	(4.0)	Labor represents a reduction of 4 FTEs as an estimated 57K calls will be avoided due to capital project (see supplemental workpaper 4 row 17 on page 103).
II A 8 c vi	56-57	100006.000	92-93, 103		8. Customer Contact Center Operations	Capital Project Impacts - SEAd Phase 1 Capital Project #13309	(217)	(217)	-	-	(4.5)	Labor represents a reduction of 4.5 FTEs as the AHT is reduced by 8 seconds due to capital project (see supplemental workpaper 4, row 18 on page 103).
II A 8 c vi	56-57	100006.000	92-93, 103		8. Customer Contact Center Operations	Capital Project Impacts - SEAd Phase 2 Capital Project #14017	(135)	(135)	-	-	(2.8)	Labor represents a reduction of 2.8 FTEs as the AHT is reduced by 5 seconds due to capital project (see supplemental workpaper 4, row 19 on page 103).
				Workpaper Pages 89-90 Testimony Pages 50-52	Sub-Total		(375)	(375)	-	-	(3.2)	
II A 9 c i	58	100007.000	106		9. Customer Contact Center Support	Capital Project Impacts	73	-	73	-	-	Non-labor represents contractual agreement for annual software maintenance fees due to capital project.
				Workpaper Pages 105-106 Testimony Page 58	Sub-Total		73	-	73	-	-	
II B 1 c i	65	100008.000	126		1. Residential Services	Adjustment for Manage Act Save	(438)	-	(438)	-	-	Non-labor is based on contractual agreement.
II B 1 c ii	65-67	100008.000	126		1. Residential Services	Energy Management Tool ("EMT") - Product Manager	98	95	3	-	1.0	Non-labor is a professional estimate and represents employee-related expenses such as mileage, travel, training, office supplies, office equipment, cell phones, etc.

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ORA Deficiency SDG&E-ORA-DEF-40-TLIG-SDG&E-14 Details by Workgroup

Testimony	Testimony Page #	Workpaper Group	Workpaper Page #	Forecast Methodology Workpapers	Work Group Name	Cost Driver	Total (\$000)	Labor (\$000)	Non-Labor (\$000)	NSE (\$000)	FTE	NOTES
II B 1 c ii	65-67	100008.000	126-127, 134		1. Residential Services	Energy Management Tool ("EMT") - licensing, hosting and maintenance fees	582	-	582	-	-	Non-labor is based on contractual agreement. (See supplemental workpaper 1 on page 134).
II B 1 c ii	65-67	100008.000	127		1. Residential Services	Energy Management Tool ("EMT") - batch rate comparison	75	-	75	-	-	Non-labor represents the forecasted amount of batch rate comparisons based on 75% increase of current contracted volume.
II B 1 c iii	67-70	100008.000	126		1. Residential Services	Customer Data Analytics and Technical Studies - labor	237	230	7	-	2.5	Non-labor is a professional estimate and represents employee-related expenses such as mileage, travel, training, office supplies, office equipment, cell phones, etc.
II B 1 c iii	67-70	100008.000	126		1. Residential Services	Customer Data Analytics and Technical Studies - tools and consulting services	327	-	327	-	-	Non-labor is based on existing contractual agreements with vendors.
II B 1 c iv	70-71	100008.000	126		1. Residential Services	Plug-In Electric Vehicle ("PEV") Outreach and Education	100	-	100	-	-	Non-labor is a professional estimate for the outreach and education activities to support customer growth in electric vehicles.
II B 1 c v	71-72	100008.000	127		1. Residential Services	Rate Reform	50	-	50	-	-	Non-labor represents the costs to write, design and print 45K pieces of collateral at \$1.12 each and is based on historical costs for similar types of communications.
				Workpaper Pages 124-125 Testimony Page 64 65	Sub-Total		1,031	325	706	-	3.5	
II B 2 c i	79-80	100009.000	138		2. Commercial & Industrial Services	New Rate Options and Programs	310	310	-	-	3.5	Labor represents 1 FTE at \$75K annual salary and .5 FTE at \$100K salary totaling \$125K and 1 FTE at \$88K annual salary and 1 FTE at \$97K annual salary totaling \$185K.
II B 2 c ii	80-81	100009.000	138		2. Commercial & Industrial Services	Improving Outage Activities - Project Manager	107	107	-	-	1.0	
II B 2 c iii	81	100009.000	138		2. Commercial & Industrial Services	Process Improvements	(8)	(8)	-	-	(0.2)	Non-labor represents a portion of one FTE at an annual salary of \$55K.
II B 2 c iv	81	100009.000	138		2. Commercial & Industrial Services	Software Licensing Costs	75	-	75	-	-	Non-labor is based on contractual agreement for software hosting fees.
				Workpaper Pages 136-137 Testimony Page 78 79	Sub-Total		484	409	75	-	4.3	

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Testimony	Testimony Page #	Workpaper Group	Workpaper Page #	Forecast Methodology Workpapers	Work Group Name	Cost Driver	Total (\$000)	Labor (\$000)	Non-Labor (\$000)	NSE (\$000)	FTE	NOTES
II B 3 c i	86-90	100010.000	145, 154		3. Communications, Research & Web	Customer Research Activities - Surveys	1,342	-	1,342	-	-	See supplemental workpaper 2 on page 154. Costs are based on adding additional transactions/experiences under Customer Programs and Customer Assistance for the enhanced Customer Connections Survey and the remaining surveys are based on historical vendor costs for similar surveys.
II B 3 c i	86-90	100010.000	145		3. Communications, Research & Web	Customer Research Activities - Labor	379	379	-	-	4.0	
II B 3 c ii	91-92	100010.000	146		3. Communications, Research & Web	Social Media Tools	90	-	90	-	-	Non-labor is based on contractual agreement and vendor estimated costs.
II B 3 c iii	92-94	100010.000	145		3. Communications, Research & Web	Social Media Advisor	85	85	-	-	1.0	
II B 3 c iv	94-95	100010.000	145		3. Communications, Research & Web	Mobile Application Capabilities	50	-	50	-	-	Non-labor is based on historical contractual agreements with vendors.
II B 3 c v	95-96	100010.000	145		3. Communications, Research & Web	My Account Content Management System	100	100	-	-	1.0	
II B 3 c vi	96-97	100010.000	146, 153		3. Communications, Research & Web	SPP/Event Notifications and Goals and Alerts	376	-	376	-	-	See supplemental workpaper 1 on page 153.
II B 3 c vii	98-99	100010.000	145		3. Communications, Research & Web	Ongoing SPP activities	255	255	-	-	3.0	Labor represents 1 FTE (Web Business Technologist) at \$89K annual salary; 1 FTE (Customer Communications Advisor) at \$82K annual salary; and 1 FTE (Research Analyst) at \$85K annual salary.

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Testimony	Testimony Page #	Workpaper Group	Workpaper Page #	Forecast Methodology Workpapers	Work Group Name	Cost Driver	Total (\$000)	Labor (\$000)	Non-Labor (\$000)	NSE (\$000)	FTE	NOTES
II B 3 c viii	99-101	100010.000	146		3. Communications, Research & Web	New Rate Options and Programs	2,870	-	2,870	-	-	Non-labor is based on historical costs for similar types of activities broken out as follows. \$2.11M for mass media is for the use of TV, radio and print (newspaper) and is for both the production of ads and the placing of ads in the media. The costs are based on having the TV, radio and newspaper ads run for 15 weeks, with the media running at exposure levels SDG&E has historically used \$230K online media is based on having the ads run for 10 weeks on a wide range of websites, limited to appear within SDG&E's service area. The ads would include banner ad and pre-roll video. \$175K for direct mail is based on mailing 550,000 pieces at a total price of \$0.50 each, which include postage, printing and all associated costs. The direct mail would be letters mailed in standard envelopes \$25K for Email is based on costs of approximately \$0.01 each for sending of 2.5 million emails. \$105K for bill inserts is based on costs of \$46,250 to design and print an insert with a total of four inserts during the year. \$175K for research is based on one study to be conducted to provide measurement of the project.
II B 3 c ix	101	100010.000	146		3. Communications, Research & Web	Enhanced Customer Education While On Customer Premises	19	-	19	-	-	Non-labor represents the cost to design and print 350K materials and is based on historical costs for similar communications (350K x \$0.05).
II B 3 c x	101-102	100010.000	146		3. Communications, Research & Web	Customer Outreach Safety Checks	281	-	281	-	-	Non-labor represents the development, printing, handling and postage for customer postcards and is based on historical costs for similar communications (approximately 450K postcards x \$0.62).
				Workpaper Pages 142-143 Testimony Pages 85-86	Sub-Total		6,347	819	5,528	-	9.0	

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Testimony	Testimony Page #	Workpaper Group	Workpaper Page #	Forecast Methodology Workpapers	Work Group Name	Cost Driver	Total (\$000)	Labor (\$000)	Non-Labor (\$000)	NSE (\$000)	FTE	NOTES
II B 4 c i	107-109	100011.000	157-158		4. Customer Programs & Projects	Ongoing SPP and CPP-D Activities	281	199	82	-	2.2	Non-labor is based historical contracts for similar consulting services.
II B 4 c ii	109-110	100011.000	158		4. Customer Programs & Projects	Customer Privacy Office	170	170	-	-	2.0	
II B 4 c iii	110	100011.000	158		4. Customer Programs & Projects	Privacy Audit	133	-	133	-	-	Non-labor is based on the 2014 privacy audit costs with anticipated changes
II B 4 c iv	110-111	100011.000	158		4. Customer Programs & Projects	Other - program office	133	133	-	-	1.0	
II B 4 c v	110-111	100011.000	158		4. Customer Programs & Projects	Other - software maintenance agreement	5	-	-	5	-	Non-labor is based on contractual vendor annual for software maintenance.
				Workpaper Pages 156-157 Testimony Page 106	Sub-Total		722	502	215	5	5.2	
Total Non-Shared Services							9,430	2,699	6,814	(83)	29.3	
II B 2 c i	117	2100-3709	203		2. Low Emissions Vehicle Program	Travel Expenses	3	-	3	-	-	Non-labor is a professional estimate and represents employee travel expenses.
				Workpaper Pages 200-203 Testimony Pages 116-117	Sub-Total		3	-	3	-	-	
Total Shared Services							3	-	3	-	-	
Total NSS + USS							9,433	2,699	6,817	(83)	29.3	

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Functional Area	Testimony Area	Work Paper Group	Testimony Pages	Workpaper Pages X of 472	MDR Chapter 8 Question #	WP Group FERC Accounts	FERC Allocation %	Cost Centers in Group	Cost Center Name
Customer Service Operations, Information, and Technologies - Exhibit No.: SDG&E - 14 Witness: Bradley M. Baugh									
	Non-Shared Costs - Section II		BMB-9-111	3-165					
	A - Customer Service Operations	100000 000 - Advanced Metering Operations "AMO"	BMB-10-18	5-19	Chapter 8 Q1-4, 15	586 1	20%	2100-0035	ELECTRIC METERING OPERATIONS
		Reconciliation Ty2016 Zero Based Labor Forecast to 2013 Adjusted Recorded Smart Meter Extended Warranty	BMB-13	17		586 2	24%	2100-0042	CENTRAL OPS - MEASUREMENT OPERATIONS
			BMB-14	18-19		586 6	29%	2100-0717	QUALITY ASSURANCE
						586 7	9%	2100-3467	ENGINEERING
						902 2	18%	2100-3547	AMO PROJECT SUPPORT
								2100-3571	ADVANCED METERING OPERATIONS MANAGER
								2100-3598	TRAINING
								2100-3639	PROJECT
								2100-3779	OPERATIONS
								2100-3780	CENTRAL OPS NETWORK & SYSTEMS SUPPORT
								2100-3891	SMART MTR OPS CENTER
	A - Customer Service Operations	100001 000 - Meter Reading was eliminated in 2012 as a result of the implementation of Smart Meters	BMB-18	20-25	Chapter 8 Q1-4	N/A	N/A	2100-0011	METER READING SUPPORT 1
								2100-0012	METER READING SUPPORT 2
								2100-0648	METER READING OPERATIONS STAFF
								2100-0649	MTR READING SUPPORT
								2100-0705	METER READING MANAGER POLICY & STRATEGY
								2100-3470	MANAGER
								2100-3471	TRAINING SUPERVISOR
								2100-3472	METER READING GRP 3 - BEACH CITIES
								2100-3474	METER READING GRP 5 - METRO
								2100-3549	METER READING ACCESS SUPPORT
								2100-3596	METER READING SUPPORT 7
								2100-3635	METER READING GROUP 7

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Functional Area	Testimony Area	Work Paper Group	Testimony Pages	Workpaper Pages X of 472	MDR Chapter 8 Question #	WP Group FERC Accounts	FERC Allocation %	Cost Centers in Group	Cost Center Name
A - Customer Service Operations	100002 000 - Billing	BMB-19-26	26-37	Chapter 8 Q1-4	903 3	8%	2100-0008	CUSTOMER BILLING RESOURCES MGR	
	Supplemental Workpaper 1 - Net Energy Metering Forecast	BMB-21	35		903 5	92%	2100-0009	CUSTOMER BILLING MGR	
	Supplemental Workpaper 2 - SPP Rate Change Exception Forecast	BMB-24	36				2100-3476	CUSTOMER OPERATIONS DIRECTOR	
	Supplemental Workpaper 3 - Interval Billing and Training Forecast	BMB-24	37				2100-3477	BILLING OPERATIONS SUPPORT MGR	
							2100-3480	CUST OPS SOUTH DIR	
							2100-3622	CONTRACTS & COMPLIANCE MANAGER	
							2100-3782	BILLING OPERATIONS SUPPORT - SMART METER	
A - Customer Service Operations	100003 000 - Credit & Collections	BMB-26-32	38-50	Chapter 8 Q1-4, 11, 12	903 3	61%	2100-0021	ACCOUNT MANAGEMENT	
	Supplemental Workpaper 1 - Customer Growth Calculation	BMB-30	49		903 4	31%	2100-0022	ACCOUNT RESEARCH	
	Supplemental Workpaper 2 - Collection Agency Commissions	BMB-30-31	50		903 8	9%	2100-0023	METER REVENUE PROTECTION SDGE	
							2100-0026	CUSTOMER REMITTANCE PROCESSING MANAGER	
							2100-0330	ALLOWANCE FOR UNCOLLECTIBLES	
							2100-3488	CUST OPS SOUTH LVC	
							2100-3489	MAJOR MARKETS CREDIT & COLLECTIONS	
							2100-3490	CREDIT & COLL MGR	
							2100-3811	CUSTOMER OPS SUPPORT	
A - Customer Service Operations	100004 000 - Remittance Processing	BMB-32-33	51-62	Chapter 8 Q1-4, 13	903 4	100%	2100-0395	POSTAGE - CUSTOMER BILLS MANAGER OF REMITTANCE PROCESSING	
	Supplemental Workpaper 1 - Historical and Forecast Data	BMB-33	60				2100-3637		
	Supplemental Workpaper 2 - Forecast Adjustment Calculations	BMB-33	61						
	Supplemental Workpaper 3 - 1st Call Notices Forecast Adjustment Calculations	BMB-33	62						
A - Customer Service Operations	100004 001 - Postage	BMB-34-36	63-77	Chapter 8 Q1-4, 13	903 7	100%	2100-0395	POSTAGE - CUSTOMER BILLS	
	Supplemental Workpaper 1 - Historical and Forecast Data	BMB-35	73						
	Supplemental Workpaper 2 - Postage Forecast Calculations	BMB-35	77						

Functional Area	Testimony Area	Work Paper Group	Testimony Pages	Workpaper Pages X of 472	MDR Chapter 8 Question #	WP Group FERC Accounts	FERC Allocation %	Cost Centers in Group	Cost Center Name
		Supplemental Workpaper 3 - 1st Call Notices Forecast Adjustment Calculations	BMB-35	74					
		Supplemental Workpaper 4 -USPS Postal News - Postal Rate Increase	BMB-35	75-76					
	A - Customer Service Operations	100005 000 - Branch Offices	BMB-36-49	78-87	Chapter 8 Q1-4, 10	903 4	100%	2100-0016	BRANCH OFFICE MANAGER
		Supplemental Workpaper 1 - Branch Office Capacity Model	BMB-38	84				2100-3482	BRANCH OFFICE PAYSTATIONS
		Supplemental Workpaper 2 - Closure of Branch Offices	BMB-38-49	85-87				2100-3484	BRANCH OFFICE OPERATIONS
								2100-3485	BRANCH OFFICE SATELLITES
								2100-3486	AUTHORIZED PAYMENT LOCATIONS
	A - Customer Service Operations	100006 000 - Customer Contact Center Operations	BMB-49-57	88-103	Chapter 8 Q1-4, 5, 6, 7, 8, 9	903 1	100%	2100-0013	CCC SAN DIEGO MANAGER
		Supplemental Workpaper 1 - Historical Performances	BMB-51	100				2100-3514	CCC SPECIAL SERVICES SAN DIEGO
		Supplemental Workpaper 2 - Call Volume Forecast	BMB-52	101					
		Supplemental Workpaper 3 - e-Workforce Management FTE Requirements	BMB-53-57	102					
		Supplemental Workpaper 4 - TY2016 FTE Forecast Adjustment Calculations Summary	BMB-53-57	103					
	A - Customer Service Operations	100007 000 - Customer Contact Center Support	BMB-57-58	104-114	Chapter 8 Q1-4	903 1	100%	2100-0019	CCC TECHNOLOGY SDGE
								2100-3510	CUSTOMER CONTACT CENTERS DIRECTOR
								2100-3512	CCC LOS SAN DIEGO
								2100-3513	CCC PLANNING & ANALYSIS
								2100-3515	CS TRAINING & DEVELOPMENT (SDGE)
								2100-3516	OPS SUPPORT SDGE
								2100-3517	QUALITY ASSURANCE SDGE
								2100-3518	CCC PLANNING & ANALYSIS SDGE
								2100-3611	CCC TECHNOLOGY MANAGER

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								2100-3715	CCC IT PROJECT MANAGER - SDG&E
	A - Customer Service Operations	10012 000 - Other Office	BMB-59	115-121	Chapter 8 Q1-4	903 1	8%	2100-0004	VP CUSTOMER SERVICES SVCS & STAFF
						908 0	24%	2100-0712	BUSINESS PLANNING & BUDGETS - CO
						920 0	39%	2100-3538	VP ENGINEERING & OPERATION STAFF
						921 0	30%	2100-3562	CUSTOMER SERVICE SVP & STAFF
								2100-3701	VP CUSTOMER SOLUTIONS
								2100-3844	VP CUSTOMER OPERATIONS
								2100-4026	DYNAMIC PRICING MANAGER
	B - Customer Service Information	100008 000 - Residential Services	BMB-60-72	123-134	Chapter 8 Q23-33	908 0	78%	2100-0040	CUSTOMER SVCS MARKET STRATEGIES
		Supplemental Workpaper 1 - Calculation for Aclara/Batch Rate Comparison Annual Hosting, Maintenance Fees and 5 Year License Fees	BMB-66	134		910 0	22%	2100-0630	CUSTOMER ASST MGR - DAP
								2100-3446	MY ACCOUNT PROGAM MGMT & MARKETING
								2100-3452	CUSTOMER ASST MGR - CARE
								2100-3453	CUSTOMER ASST MGR - STRATEGY & OUTREACH
								2100-3454	CUSTOMER ASSISTANT OUTREACH MANAGER
								2100-3455	CUSTOMER ASST MGR - PROGRAM SUPPORT
								2100-3593	MARKETING RESIDENTIAL
								2100-3675	ELECTRIC TRANSPORTATION
								2100-3703	DIRECTOR RESIDENTIAL SERVICES
								2100-3705	PRODUCT INNOVATION
								2100-3839	RES SVCS CUSTOMER EXPERIENCE & ENGAGEMENT
								2100-4027	RES SVCS OUTREACH & EDUCATION

SDG&E/CS - INFORMATION & OFFICE OPERATIONS /Exh No:SDG&E-14-WP-R/Witness: B. Baugh
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								2100-3783	CUSTOMER INSIGHTS & E-SERVICES
								2100-3784	CUSTOMER COMMUNICATIONS - TECHNOLOGIES
								2100-3785	SCG CUSTOMER COMMUNICATIONS - BUSINESS
								2100-4012	ADVERTISING & RESEARCH
	B - Customer Service Information	100011 000 - Customer Programs & Projects	BMB-102-111	155-165	Chapter 8 Q23-33	580 2	6%	2100-0064	DIR CUST PROGRAMS & PROJECTS
						879 1	11%	2100-0065	RES REBATE PROGRAMS MANAGER
						903 1	19%	2100-0629	POLICY & SUPPORT
						908 0	64%	2100-0643	COMMERCIAL NEW CONSTRUCTION MANAGER
								2100-0650	RESIDENTIAL & DR PROGRAM MANAGEMENT
								2100-0651	ENERGY EFFICIENCY PROGRAM MANAGER
								2100-3440	DEMAND RESPONSE PROGRAM MANAGER
								2100-3441	LOW EMISSION VEHICLE MANAGER
								2100-3448	SMALL C&I SEGMENT EE/DR MANAGER
								2100-3449	RES NEW CONSTRUCTION MANAGER
								2100-3450	CODES & STANDARDS MANAGER
								2100-3451	ENERGY EFFICIENCY PARTNERSHIPS & OBF
								2100-3556	AMO PROJECTS
								2100-3570	MARKET PLANNING & ANALYSIS
								2100-3574	AMI PROGRAM OFFICE DIRECTOR
								2100-3575	AMI TECHNOLOGIES
								2100-3576	AMI CLIENT INTERFACE
								2100-3577	AMI STAKEHOLDER EDUCATION
								2100-3584	CST - SORT
								2100-3601	ENERGY EFFICIENCY NEW CONSTRUCTION
								2100-3619	TECHNICAL SUPPORT
								2100-3620	AMI INSTALLATIONS

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	Capital Projects-Section V		BMB-119-141	Capital Workpapers found in Ex SDG&E-19-CWP	Chapter 8 Q22, 33, 44	N/A	N/A		
GRID WP #	Capital Project #	Capital Project Name							
00832A	14006	Branch Office Technical and Security Improvements	BMB-122	Stephen J Mikovits Exh	SDG&E-19-CWP pp 18 - 22				
00831B	15009	EBPP Tech Refresh	BMB-123-124	Stephen J Mikovits Exh	SDG&E-19-CWP pp 13 - 17				
00833D	15012	I-Avenue Replacement	BMB-123-124	Stephen J Mikovits Exh	SDG&E-19-CWP pp 23 - 27				
00831O	11013	SCG My Account Accessibility	BMB-124-125	Stephen J Mikovits Exh	SDG&E-19-CWP pp 47 - 52				
00831P	12051	SDG&E My Account Accessibility	BMB-125-126	Stephen J Mikovits Exh	SDG&E-19-CWP pp 53 - 58				
00831J	14015	C&I Business Portal	BMB-126	Stephen J Mikovits Exh	SDG&E-19-CWP pp 33 - 41				
00831L	14023	IVR Phase 4 SDGE	BMB-127-128	Stephen J Mikovits Exh	SDG&E-19-CWP pp 42 - 46				
00831A	15007	SDGE com Redesign	BMB-128-129	Stephen J Mikovits Exh	SDG&E-19-CWP pp 28 - 32				
03849C	15800	Bill Re-Design	BMB-128-129	Stephen J Mikovits Exh	SDG&E-19-CWP pp 59 - 63				
10872A	10872	Smart Peak Pricing	BMB-129-130	Stephen J Mikovits Exh	SDG&E-19-CWP pp 101 - 105				
03851D	13003	GRC Phase 2	BMB-130	Stephen J Mikovits Exh	SDG&E-19-CWP pp 83 - 87				
03851F	13021	Critical Peak Pricing Default (CPP D)	BMB-130-131	Stephen J Mikovits Exh	SDG&E-19-CWP pp 88 - 95				
13849A	13026	Reduce your Use Opt In	BMB-131-132	Stephen J Mikovits Exh	SDG&E-19-CWP pp 106 - 110				
03849A	14039	CEN Phase 4 - System Enhancements	BMB-132	Stephen J Mikovits Exh	SDG&E-19-CWP pp 77 - 82				
00831M	14040	Direct Access Service Request (DASR) Upgrade	BMB-132-133	Stephen J Mikovits Exh	SDG&E-19-CWP pp 64 - 68				
00831N	14065	CCA - Community Choice Aggregation	BMB-133-134	Stephen J Mikovits Exh	SDG&E-19-CWP pp 69 - 76				
04843A	14843	Smart Meter IT Phase 3 Billing	BMB-134-135	Stephen J Mikovits Exh	SDG&E-19-CWP pp 96 - 100				
00833U	13009	Smart Energy Advisor	BMB-135-136	Stephen J Mikovits Exh	SDG&E-19-CWP pp 138 - 142				
03849B	13012	Net Energy Metering Enhancement	BMB-136	Stephen J Mikovits Exh	SDG&E-19-CWP pp 143 - 147				
00833R	13013	Smart Meter Operation Center Network	BMB-136-137	Stephen J Mikovits Exh	SDG&E-19-CWP pp 132 - 137				
03851H	13031	Smart Meter Operations Center Exception Management (SMOC-EM)	BMB-137	Stephen J Mikovits Exh	SDG&E-19-CWP pp 148 - 152				
00831E	14005	Off But Registering (OBR) Enhancement	BMB-137-138	Stephen J Mikovits Exh	SDG&E-19-CWP pp 111 - 115				
00833F	14013	Centralized Calculation Engine	BMB-138	Stephen J Mikovits Exh	SDG&E-19-CWP pp 116 - 123				
00833G	14017	Smart Energy Advisor 2	BMB-138-139	Stephen J Mikovits Exh	SDG&E-19-CWP pp 124 - 131				
00821A	13010	Customer Analytics System 2013	BMB-139-140	Stephen J Mikovits Exh	SDG&E-19-CWP pp 153 - 160				
03853B	14030	Customer Analytics System - Phase II	BMB-140	Stephen J Mikovits Exh	SDG&E-19-CWP pp 161 - 168				
03853C	16003	Customer Analytics System - III	BMB-140-141	Stephen J Mikovits Exh	SDG&E-19-CWP pp 169 - 174				
Appendix A - NSS Cost Center Listing				469-472		N/A			

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Witness: Bradley M. Baugh

Appendix A: List of Non-Shared Cost Centers

Cost Center	Sub	Description
2100-0004	000	VP CUSTOMER SERVICES SVCS & STAFF
2100-0008	000	CUSTOMER BILLING RESOURCES MGR
2100-0009	000	CUSTOMER BILLING MGR
2100-0011	000	METER READING SUPPORT 1
2100-0012	000	METER READING SUPPORT 2
2100-0013	000	CCC SAN DIEGO MANAGER
2100-0016	000	BRANCH OFFICE MANAGER
2100-0019	000	CCC TECHNOLOGY SDGE
2100-0021	000	ACCOUNT MANAGEMENT
2100-0022	000	ACCOUNT RESEARCH
2100-0023	000	METER REVENUE PROTECTION SDGE
2100-0026	000	CUSTOMER REMITTANCE PROCESSING MANAGER
2100-0035	000	ELECTRIC METERING OPERATIONS
2100-0040	000	CUSTOMER SVCS MARKET STRATEGIES
2100-0042	000	CENTRAL OPS - MEASUREMENT OPERATIONS
2100-0044	000	CUSTOMER CHOICE
2100-0058	000	SDGE CUSTOMER COMMUNICATIONS - RESIDENTL
2100-0064	000	DIR CUST PROGRAMS & PROJECTS
2100-0065	000	RES REBATE PROGRAMS MANAGER
2100-0330	000	ALLOWANCE FOR UNCOLLECTIBLES
2100-0395	000	POSTAGE - CUSTOMER BILLS
2100-0622	000	COMMERCIAL & INDUSTRIAL MARKETS DIR SDGE
2100-0626	000	FEDERAL ACCOUNTS DIRECTOR
2100-0627	000	FEDERAL PROJECTS
2100-0629	000	POLICY & SUPPORT
2100-0630	000	CUSTOMER ASST MGR - DAP
2100-0634	000	C&I MARKETS MANAGER
2100-0643	000	COMMERCIAL NEW CONSTRUCTION MANAGER
2100-0648	000	METER READING OPERATIONS STAFF
2100-0649	000	MTR READING SUPPORT
2100-0650	000	RESIDENTIAL & DR PROGRAM MANAGEMENT
2100-0651	000	ENERGY EFFICIENCY PROGRAM MANAGER
2100-0653	000	C&I TECHNOLOGY SUPPORT SUPERVISOR
2100-0655	000	FEDERAL ACCOUNTS FINANCE & ACCOUNTING
2100-0705	000	METER READING MANAGER
2100-0712	000	BUSINESS PLANNING & BUDGETS - CO
2100-0717	000	QUALITY ASSURANCE
2100-3166	000	CUSTOMER COMMUNICATIONS SCG
2100-3167	000	CUSTOMER COMMUNICATIONS - E-SERVICES
2100-3168	000	CUSTOMER INSIGHTS & ANALYTICS
2100-3307	000	CREATIVE SERVICES & BRANDING SDGE
2100-3435	000	FEDERAL BUSINESS DEVELOPMENT
2100-3440	000	DEMAND RESPONSE PROGRAM MANAGER
2100-3441	000	LOW EMISSION VEHICLE MANAGER
2100-3442	000	C&I MAJOR ACCOUNTS

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Appendix A: List of Non-Shared Cost Centers

Cost Center	Sub	Description
2100-3444	000	C&I PROJECT COORDINATION
2100-3446	000	MY ACCOUNT PROGRAM MGMT & MARKETING
2100-3448	000	SMALL C&I SEGMENT EE/DR MANAGER
2100-3449	000	RES NEW CONSTRUCTION MANAGER
2100-3450	000	CODES & STANDARDS MANAGER
2100-3451	000	ENERGY EFFICIENCY PARTNERSHIPS & OBF
2100-3452	000	CUSTOMER ASST MGR - CARE
2100-3453	000	CUSTOMER ASST MGR - STRATEGY & OUTREACH
2100-3454	000	CUSTOMER ASSISTANT OUTREACH MANAGER
2100-3455	000	CUSTOMER ASST MGR - PROGRAM SUPPORT
2100-3466	000	DIRECTOR OF CUSTOMER COMMUNICATIONS
2100-3467	000	ELECTRIC METERING ENGINEERING
2100-3470	000	POLICY & STRATEGY MANAGER
2100-3471	000	TRAINING SUPERVISOR
2100-3472	000	METER READING GRP 3 - BEACH CITIES
2100-3474	000	METER READING GRP 5 - METRO
2100-3476	000	CUSTOMER OPERATIONS DIRECTOR
2100-3477	000	BILLING OPERATIONS SUPPORT MGR
2100-3480	000	CUST OPS SOUTH DIR
2100-3482	000	BRANCH OFFICE PAYSTATIONS
2100-3484	000	BRANCH OFFICE OPERATIONS
2100-3485	000	BRANCH OFFICE SATELLITES
2100-3486	000	AUTHORIZED PAYMENT LOCATIONS
2100-3488	000	CUST OPS SOUTH LVC
2100-3489	000	MAJOR MARKETS CREDIT & COLLECTIONS
2100-3490	000	CREDIT & COLL MGR
2100-3510	000	CUSTOMER CONTACT CENTERS DIRECTOR
2100-3512	000	CCC LOS SAN DIEGO
2100-3513	000	CCC PLANNING & ANALYSIS
2100-3514	000	CCC SPECIAL SERVICES SAN DIEGO
2100-3515	000	CS TRAINING & DEVELOPMENT (SDGE)
2100-3516	000	OPS SUPPORT SDGE
2100-3517	000	QUALITY ASSURANCE SDGE
2100-3518	000	CCC PLANNING & ANALYSIS SDGE
2100-3530	000	UEG/WHSLE/COGEN/IPP MANAGER
2100-3538	000	VP ENGINEERING & OPERATION STAFF
2100-3545	000	C&I REPRESENTATIVES
2100-3547	000	AMO PROJECT SUPPORT
2100-3549	000	METER READING ACCESS SUPPORT
2100-3556	000	AMO PROJECTS
2100-3562	000	CUSTOMER SERVICE SVP & STAFF
2100-3570	000	MARKET PLANNING & ANALYSIS
2100-3571	000	ADVANCED METERING OPERATIONS MANAGER
2100-3574	000	AMI PROGRAM OFFICE DIRECTOR
2100-3575	000	AMI TECHNOLOGIES

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Appendix A: List of Non-Shared Cost Centers

Cost Center	Sub	Description
2100-3576	000	AMI CLIENT INTERFACE
2100-3577	000	AMI STAKEHOLDER EDUCATION
2100-3579	000	TECHNOLOGY SERVICES MANAGER
2100-3580	000	RATE SUPPORT SUPERVISOR
2100-3584	000	CST - SORT
2100-3593	000	MARKETING RESIDENTIAL
2100-3596	000	METER READING SUPPORT 7
2100-3598	000	ELECTRIC METERING TRAINING
2100-3601	000	ENERGY EFFICIENCY NEW CONSTRUCTION
2100-3611	000	CCC TECHNOLOGY MANAGER
2100-3619	000	TECHNICAL SUPPORT
2100-3620	000	AMI INSTALLATIONS
2100-3622	000	CONTRACTS & COMPLIANCE MANAGER
2100-3633	000	CS-MASS MKTS LVC for Budget Use Only
2100-3635	000	METER READING GROUP 7
2100-3637	000	MANAGER OF REMITTANCE PROCESSING
2100-3639	000	AMO C&I DEPLOYMENT PROJECT
2100-3642	000	SPECIAL PROJS PLANNING & DEVELOPMENT SD
2100-3675	000	ELECTRIC TRANSPORTATION
2100-3701	000	VP CUSTOMER SOLUTIONS
2100-3703	000	DIRECTOR RESIDENTIAL SERVICES
2100-3705	000	PRODUCT INNOVATION
2100-3707	000	DISTRIBUTED GENERATION PROGRAMS
2100-3715	000	CCC IT PROJECT MANAGER - SDG&E
2100-3765	000	PROGRAM OPERATIONS
2100-3766	000	CUSTOMER PROGRAMS SUPPORT
2100-3770	000	SDGE CUSTOMER COMMUNICATIONS - BUSINESS
2100-3776	000	ENERGY EFFICIENCY ADMINISTRATIVE COST
2100-3777	000	ENERGY EFFICIENCY MARKETING COST
2100-3778	000	ENERGY EFFICIENCY DIRECT IMPLEMENT COST
2100-3779	000	CENTRALIZED OPS - SYSTEM OPERATIONS
2100-3780	000	CENTRAL OPS NETWORK & SYSTMS SUPPORT
2100-3782	000	BILLING OPERATIONS SUPPORT - SMART METER
2100-3783	000	CUSTOMER INSIGHTS & E-SERVICES
2100-3784	000	CUSTOMER COMMUNICATIONS - TECHNOLOGIES
2100-3785	000	SCG CUSTOMER COMMUNICATIONS - BUSINESS
2100-3786	000	CUSTOMER EXPERIENCE & ENGAGEMENT C&I
2100-3811	000	CUSTOMER OPS SUPPORT
2100-3839	000	RES SVCS CUSTOMER EXPERIENCE & ENGAGEMENT
2100-3841	000	TECHNOLOGY STRATEGY
2100-3844	000	VP CUSTOMER OPERATIONS
2100-3847	000	HAN (HOME AREA NETWORK)
2100-3880	000	OFFICE OF CUSTOMER PRIVACY
2100-3891	000	SMART MTR OPS CENTER
2100-3899	000	SM & MED BUSINESS MGR

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Cost Center	Sub	Description
2100-3938	000	BUSINESS REQUIREMENTS & GOVERNANCE
2100-3947	000	MPH OUTREACH
2100-4012	000	ADVERTISING & RESEARCH
2100-4018	000	TECHNOLOGY DEVELOPMENT MANAGER
2100-4026	000	DYNAMIC PRICING MANAGER
2100-4027	000	RES SVCS OUTREACH & EDUCATION