

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-13-WP)

WORKPAPERS TO  
PREPARED DIRECT TESTIMONY  
OF SARA FRANKE  
ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY

BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA

NOVEMBER 2014





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

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**Overall Summary For Exhibit No. SDG&E-13-WP**

<b>Area:</b>	<b>CS - FIELD</b>
<b>Witness:</b>	<b>Sara Franke</b>

Description	In 2013 \$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2013	2014	2015	2016
<b>Non-Shared Services</b>	22,990	21,191	20,670	22,135
<b>Shared Services</b>	0	0	0	0
<b>Total</b>	<b>22,990</b>	<b>21,191</b>	<b>20,670</b>	<b>22,135</b>

*Note: Totals may include rounding differences.*

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

Area: CS - FIELD  
 Witness: Sara Franke

**Summary of Non-Shared Services Workpapers:**

Description	In 2013 \$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2013	2014	2015	2016
A. Customer Service Field	22,990	21,191	20,670	22,135
<b>Total</b>	<b>22,990</b>	<b>21,191</b>	<b>20,670</b>	<b>22,135</b>

*Note: Totals may include rounding differences.*

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

Area: CS - FIELD  
Witness: Sara Franke  
Category: A. Customer Service Field  
Workpaper: VARIOUS

**Summary for Category: A. Customer Service Field**

	In 2013\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2013	2014	2015	2016
Labor	21,451	19,935	19,433	20,725
Non-Labor	1,539	1,256	1,237	1,410
NSE	0	0	0	0
<b>Total</b>	<b>22,990</b>	<b>21,191</b>	<b>20,670</b>	<b>22,135</b>
FTE	282.6	257.0	247.5	262.4

**Workpapers belonging to this Category:**

**1FC001.000 Customer Services Field - Operations**

Labor	14,514	13,124	12,688	13,777
Non-Labor	1,164	850	830	898
NSE	0	0	0	0
<b>Total</b>	<b>15,678</b>	<b>13,974</b>	<b>13,518</b>	<b>14,675</b>
FTE	198.0	173.6	164.5	177.4

**1FC002.000 Customer Services Field - Supervision**

Labor	1,441	1,334	1,299	1,402
Non-Labor	50	74	75	82
NSE	0	0	0	0
<b>Total</b>	<b>1,491</b>	<b>1,408</b>	<b>1,374</b>	<b>1,484</b>
FTE	16.6	15.0	15.0	16.0

**1FC003.000 Customer Services Field - Dispatch**

Labor	2,940	2,962	2,962	2,962
Non-Labor	33	40	40	40
NSE	0	0	0	0
<b>Total</b>	<b>2,973</b>	<b>3,002</b>	<b>3,002</b>	<b>3,002</b>
FTE	34.9	35.9	35.9	35.9

**1FC004.000 Customer Services Field - Support**

Labor	2,556	2,515	2,484	2,584
Non-Labor	292	292	292	390
NSE	0	0	0	0
<b>Total</b>	<b>2,848</b>	<b>2,807</b>	<b>2,776</b>	<b>2,974</b>
FTE	33.1	32.5	32.1	33.1

*Note: Totals may include rounding differences.*

**Beginning of Workpaper**  
**1FC001.000 - Customer Services Field - Operations**

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

Area: CS - FIELD  
Witness: Sara Franke  
Category: A. Customer Service Field  
Category-Sub: 1. Customer Service Field - Operations  
Workpaper: 1FC001.000 - Customer Services Field - Operations

**Activity Description:**

Includes labor and non-labor costs associated with field technicians providing service at customer premises, including gas and electric meter work, establishing and terminating gas and electric service, lighting gas pilot lights, conducting customer appliance checks, investigating reports of gas leaks, investigating customer complaints of high bills, shutting off and restoring gas service for fumigation, responding to structure fires (e.g., to check for gas leakage/shut off gas service) and other emergency incidents, and other related field services for customers. Also includes field collectors who attempt to collect past due payments from customers before shutting off service.

**Forecast Explanations:**

**Labor - Zero-Based**

Labor costs are primarily driven by field work order volumes. Individual order volume forecasts were developed for each order type, taking into consideration Smart Meter impacts and other factors that impact order volumes. Estimates of average drive time and on premise time per order (based on 2013 actuals and forecasted changes) were applied to the order volumes to determine full-time equivalent (FTE) workforce requirements. Non-order time (e.g., pre-order preparation work, breaks, one-on-one discussions with supervisors, etc.), meetings/training and vacation/sick loaders were also applied to determine total FTE requirements. Incremental funding requests, which are forecasted using the zero based methodology, are then added to determine total funding requirements.

**Non-Labor - Zero-Based**

Non-labor expenses such uniforms, laundry expenses, materials used on the job and other miscellaneous expenses are driven by forecasted operations workforce levels. The zero-based non-labor forecast is based on the five-year average historical non-labor expense per field operations FTE, which appropriately aligns the average non-labor expense incurred by field operations employees with the forecasted FTEs. Incremental funding requests, which are forecasted using the zero based methodology, are then added to determine total funding requirements. Because these non-labor expense are driven by workforce and work order volumes, historical averaging or trending of expenses only would not be aligned with the forecasted workforce and activity levels.

**NSE - Zero-Based**

NSE is not applicable to this workgroup.

**Summary of Results:**

		In 2013\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2009	2010	2011	2012	2013	2014	2015	2016	
Labor		18,444	17,867	16,389	15,432	14,514	13,124	12,688	13,777	
Non-Labor		1,086	927	1,059	918	1,164	850	830	898	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>19,530</b>	<b>18,793</b>	<b>17,448</b>	<b>16,350</b>	<b>15,678</b>	<b>13,974</b>	<b>13,518</b>	<b>14,675</b>	
FTE		265.9	256.5	226.6	215.1	198.0	173.6	164.5	177.4	

*Note: Totals may include rounding differences.*



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

Area: CS - FIELD  
Witness: Sara Franke  
Category: A. Customer Service Field  
Category-Sub: 1. Customer Service Field - Operations  
Workpaper: 1FC001.000 - Customer Services Field - 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	13,124	12,688	13,777	13,124	12,688	13,777
Non-Labor	Zero-Based	0	0	0	850	830	898	850	830	898
NSE	Zero-Based	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>13,974</b>	<b>13,518</b>	<b>14,675</b>	<b>13,974</b>	<b>13,518</b>	<b>14,675</b>
FTE	Zero-Based	0.0	0.0	0.0	173.6	164.5	177.4	173.6	164.5	177.4

**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	-500	0	0	-500	-6.4	1-Sided Adj

Benefits as a result of CSF efficiency improvements from (a) improving work order routing to build tighter routes and reduce time spent traveling to customer premises (independent of drive time associated with traffic congestion), (b) reducing on premise times by completing service orders more efficiently, and (c) reducing incomplete orders

2014	1,168	70	0	1,238	21.0	1-Sided Adj
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Collections workload forecast including: 1) base workload forecast, 2) order forecast with reduction in order volume, 3) increase in drive time due to increasing traffic congestion. See supplemental workpaper "SDG&E-13-SFranke Supplemental Workpaper - Collections Work Order Volume" for detailed analysis.

2014	11,687	745	0	12,432	148.0	1-Sided Adj
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CSF Operations workload forecast including: 1) base workload forecast, 2) order forecast due to customer growth, 3) increase in drive time due to increasing traffic congestion, 4) proposed service enhancements, See supplemental workpaper "SDG&E-13-SFranke Supplemental Workpaper - Work Order Volume" for detailed analysis.

2014	769	0	0	769	11.0	1-Sided Adj
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CSF Operations and Collections training expense. See supplemental workpaper "SDG&E-13-SFranke Supplemental Workpaper - Work Order Volume" for detailed analysis.

2014	0	35	0	35	0.0	1-Sided Adj
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MDT Wireless Network Access Fees

<b>2014 Total</b>	<b>13,124</b>	<b>850</b>	<b>0</b>	<b>13,974</b>	<b>173.6</b>	
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Note: Totals may include rounding differences.

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

Area: CS - FIELD  
Witness: Sara Franke  
Category: A. Customer Service Field  
Category-Sub: 1. Customer Service Field - Operations  
Workpaper: 1FC001.000 - Customer Services Field - 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	601	33	0	634	10.0	1-Sided Adj
Collections workload forecast including: 1) base workload forecast, 2) order forecast with reduction in order volume, 3) increase in drive time due to increasing traffic congestion. See supplemental workpaper "SDG&E-13-SFranke Supplemental Workpaper - Collections Work Order Volume" for detailed analysis.						
2015	-698	0	0	-698	-8.9	1-Sided Adj
Benefits as a result of CSF efficiency improvements from (a) improving work order routing to build tighter routes and reduce time spent traveling to customer premises (independent of drive time associated with traffic congestion), (b) reducing on premise times by completing service orders more efficiently, and (c) reducing incomplete orders						
2015	40	0	0	40	0.4	1-Sided Adj
Incremental Field Technician training expenses for changes to Operator Qualification training. See supplemental workpaper "SDG&E-13-SFranke Supplemental Workpaper - Operator Qualification Training" for detailed analysis.						
2015	11,958	763	0	12,721	152.0	1-Sided Adj
CSF Operations workload forecast including: 1) base workload forecast, 2) order forecast due to customer growth, 3) increase in drive time due to increasing traffic congestion, 4) proposed service enhancements, See supplemental workpaper "SDG&E-13-SFranke Supplemental Workpaper - Work Order Volume" for detailed analysis.						
2015	787	0	0	787	11.0	1-Sided Adj
CSF Operations and Collections training expense. See supplemental workpaper "SDG&E-13-SFranke Supplemental Workpaper - Work Order Volume" for detailed analysis.						
2015	0	34	0	34	0.0	1-Sided Adj
MDT Wireless Network Access Fees						
<b>2015 Total</b>	<b>12,688</b>	<b>830</b>	<b>0</b>	<b>13,518</b>	<b>164.5</b>	

2016	601	33	0	634	10.0	1-Sided Adj
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Collections workload forecast including: 1) base workload forecast, 2) order forecast with reduction in order volume, 3) increase in drive time due to increasing traffic congestion. See supplemental workpaper "SDG&E-13-SFranke Supplemental Workpaper - Collections Work Order Volume" for detailed analysis.

Note: Totals may include rounding differences.

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

Area: CS - FIELD  
 Witness: Sara Franke  
 Category: A. Customer Service Field  
 Category-Sub: 1. Customer Service Field - Operations  
 Workpaper: 1FC001.000 - Customer Services Field - Operations

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adi Type</u>
2016	-698	0	0	-698	-8.9	1-Sided Adj
Benefits as a result of CSF efficiency improvements from (a) improving work order routing to build tighter routes and reduce time spent traveling to customer premises (independent of drive time associated with traffic congestion), (b) reducing on premise times by completing service orders more efficiently, and (c) reducing incomplete orders						
2016	38	0	0	38	0.3	1-Sided Adj
Incremental Field Technician training expenses for changes to Operator Qualification training. See supplemental workpaper "SDG&E-13-SFranke Supplemental Workpaper - Operator Qualification Training" for detailed analysis.						
2016	12,981	828	0	13,809	164.0	1-Sided Adj
CSF Operations workload forecast including: 1) base workload forecast, 2) order forecast due to customer growth, 3) increase in drive time due to increasing traffic congestion, 4) proposed service enhancements, See supplemental workpaper "SDG&E-13-SFranke Supplemental Workpaper - Work Order Volume" for detailed analysis.						
2016	855	0	0	855	12.0	1-Sided Adj
CSF Operations and Collections training expense. See supplemental workpaper "SDG&E-13-SFranke Supplemental Workpaper - Work Order Volume" for detailed analysis.						
2016	0	37	0	37	0.0	1-Sided Adj
MDT Wireless Network Access Fees						
<b>2016 Total</b>	<b>13,777</b>	<b>898</b>	<b>0</b>	<b>14,675</b>	<b>177.4</b>	

Note: Totals may include rounding differences.

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

Area: CS - FIELD  
Witness: Sara Franke  
Category: A. Customer Service Field  
Category-Sub: 1. Customer Service Field - Operations  
Workpaper: 1FC001.000 - Customer Services Field - Operations

**Determination of Adjusted-Recorded (Incurred Costs):**

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	14,423	14,319	14,148	13,391	12,949
Non-Labor	983	857	1,020	903	856
NSE	0	0	0	0	0
<b>Total</b>	<b>15,405</b>	<b>15,176</b>	<b>15,168</b>	<b>14,294</b>	<b>13,804</b>
FTE	222.8	215.7	201.0	188.2	174.7
<b>Adjustments (Nominal \$) **</b>					
Labor	290	175	-425	-196	-421
Non-Labor	0	0	0	0	308
NSE	0	0	0	0	0
<b>Total</b>	<b>290</b>	<b>175</b>	<b>-425</b>	<b>-196</b>	<b>-113</b>
FTE	5.0	2.9	-6.4	-3.0	-6.2
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	14,713	14,494	13,723	13,195	12,528
Non-Labor	983	857	1,020	903	1,164
NSE	0	0	0	0	0
<b>Total</b>	<b>15,696</b>	<b>15,351</b>	<b>14,743</b>	<b>14,098</b>	<b>13,691</b>
FTE	227.8	218.7	194.6	185.2	168.5
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	2,272	2,307	2,021	1,912	1,987
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>2,272</b>	<b>2,307</b>	<b>2,021</b>	<b>1,912</b>	<b>1,987</b>
FTE	38.1	37.9	31.9	29.9	29.5
<b>Escalation to 2013\$</b>					
Labor	1,459	1,065	644	326	0
Non-Labor	103	69	40	14	0
NSE	0	0	0	0	0
<b>Total</b>	<b>1,562</b>	<b>1,134</b>	<b>684</b>	<b>340</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2013\$)</b>					
Labor	18,444	17,867	16,389	15,432	14,514
Non-Labor	1,086	927	1,059	918	1,164
NSE	0	0	0	0	0
<b>Total</b>	<b>19,530</b>	<b>18,793</b>	<b>17,448</b>	<b>16,350</b>	<b>15,678</b>
FTE	265.9	256.6	226.5	215.1	198.0

\* After company-wide exclusions of Non-GRC costs

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

Note: Totals may include rounding differences.

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

Area: CS - FIELD  
 Witness: Sara Franke  
 Category: A. Customer Service Field  
 Category-Sub: 1. Customer Service Field - Operations  
 Workpaper: 1FC001.000 - Customer Services Field - Operations

**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs					
Years	2009	2010	2011	2012	2013
Labor	290	175	-425	-196	-421
Non-Labor	0	0	0	0	308
NSE	0	0	0	0	0
<b>Total</b>	<b>290</b>	<b>175</b>	<b>-425</b>	<b>-196</b>	<b>-113</b>
FTE	5.0	2.9	-6.4	-3.0	-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	-30	0	0	-0.4	1-Sided Adj	N/A	TPKAJ201311101 55236617
Transfer Collections Supervisors labor from 1FC001.000 to 1FC002.000 in order to align historical costs with the workgroup in which the activity will be forecasted.							
2009	-28	0	0	-0.6	1-Sided Adj	N/A	TPKAJ201311101 60256057
Transfer Staff Assistants labor from 1FC001.000 to 1FC004.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2009	287	0	0	5.1	1-Sided Adj	N/A	TPKAJ201311101 61756913
Transfer Operations training labor from 1FC004.000 to 1FC001.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2009	61	0	0	0.9	1-Sided Adj	N/A	TPKAJ201311101 62655733
Transfer Operations labor from 1FC002.000 to 1FC001.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
<b>2009 Total</b>	<b>290</b>	<b>0</b>	<b>0</b>	<b>5.0</b>			

2010	-8	0	0	-0.1	1-Sided Adj	N/A	TPKAJ201311101 55451403
Transfer Collections Supervisors labor from 1FC001.000 to 1FC002.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2010	175	0	0	2.9	1-Sided Adj	N/A	TPKAJ201311101 61821060
Transfer Operations training labor from 1FC004.000 to 1FC001.000 in order to align historical costs with the workgroup in which the activity will be forecasted							

*Note: Totals may include rounding differences.*

San Diego Gas & Electric Company  
2016 GRC - APP  
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Area: CS - FIELD  
 Witness: Sara Franke  
 Category: A. Customer Service Field  
 Category-Sub: 1. Customer Service Field - Operations  
 Workpaper: 1FC001.000 - Customer Services Field - 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	8	0	0	0.1	1-Sided Adj	N/A	TPKAJ201311101 62742473
Transfer Operations labor from 1FC002.000 to 1FC001.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
<b>2010 Total</b>	<b>175</b>	<b>0</b>	<b>0</b>	<b>2.9</b>			
2011	-109	0	0	-1.6	1-Sided Adj	N/A	TPKAJ201311101 55550040
Transfer Collections Supervisors labor from 1FC001.000 to 1FC002.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2011	-70	0	0	-1.2	1-Sided Adj	N/A	TPKAJ201311101 55928530
Transfer Field Instructors labor from 1FC001.000 to 1FC004.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2011	-12	0	0	-0.3	1-Sided Adj	N/A	TPKAJ201311101 60710023
Transfer Collections Dispatchers labor from 1FC001.000 to 1FC003.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2011	-507	0	0	-7.3	1-Sided Adj	N/A	TPKAJ201311101 61118817
Transfer labor expense from 1FC004.000 to 1FC001.000. Costs funded by Smart Meter and recorded in the AMIBA during deployment. Beginning in 2012, these costs are recorded in O&M							
2011	216	0	0	3.2	1-Sided Adj	N/A	TPKAJ201311101 61916740
Transfer Operations training labor from 1FC004.000 to 1FC001.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2011	57	0	0	0.8	1-Sided Adj	N/A	TPKAJ201311101 62827707
Transfer Operations labor from 1FC002.000 to 1FC001.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
<b>2011 Total</b>	<b>-425</b>	<b>0</b>	<b>0</b>	<b>-6.4</b>			
2012	-113	0	0	-1.5	1-Sided Adj	N/A	TPKAJ201311101 55704750
Transfer Collections Supervisors labor from 1FC001.000 to 1FC002.000 in order to align historical costs with the workgroup in which the activity will be forecasted							

Note: Totals may include rounding differences.

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

Area: CS - FIELD  
 Witness: Sara Franke  
 Category: A. Customer Service Field  
 Category-Sub: 1. Customer Service Field - Operations  
 Workpaper: 1FC001.000 - Customer Services Field - 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	-175	0	0	-2.6	1-Sided Adj	N/A	TPKAJ201311101 60045833
Transfer Field Instructors labor from 1FC001.000 to 1FC004.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2012	-1	0	0	0.0	1-Sided Adj	N/A	TPKAJ201311101 60412920
Transfer Staff Assistants labor from 1FC001.000 to 1FC004.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2012	-51	0	0	-1.0	1-Sided Adj	N/A	TPKAJ201311101 60832380
Transfer Collections Dispatchers labor from 1FC001.000 to 1FC003.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2012	118	0	0	1.7	1-Sided Adj	N/A	TPKAJ201311101 62018140
Transfer Operations training labor from 1FC004.000 to 1FC001.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2012	26	0	0	0.4	1-Sided Adj	N/A	TPKAJ201311101 62911157
Transfer Operations labor from 1FC002.000 to 1FC001.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
<b>2012 Total</b>	<b>-196</b>	<b>0</b>	<b>0</b>	<b>-3.0</b>			
2013	-222	0	0	-2.7	1-Sided Adj	N/A	CTRINH2014020 6114742410
Transfer Collections Supervisors labor from 1FC001.000 to 1FC002.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2013	-126	0	0	-1.8	1-Sided Adj	N/A	CTRINH2014020 6120050980
Transfer Field Instructors labor from 1FC001.000 to 1FC004.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2013	-78	0	0	-1.7	1-Sided Adj	N/A	CTRINH2014020 6120250860
Transfer Collections Dispatchers labor from 1FC001.000 to 1FC003.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2013	5	0	0	0.0	1-Sided Adj	N/A	CTRINH2014020 6121422320
Transfer Operations labor expense from 1FC002.000 to 1FC001.000 in order to align historical costs with the workgroup in which the activity will be forecasted							

Note: Totals may include rounding differences.

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Area: CS - FIELD  
 Witness: Sara Franke  
 Category: A. Customer Service Field  
 Category-Sub: 1. Customer Service Field - Operations  
 Workpaper: 1FC001.000 - Customer Services Field - 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>
2013	0	308	0	0.0	1-Sided Adj	N/A	CTRINH2014020 6124120527

Transfer non-labor expense for multi-gas detection from 1FC004.000 to 1FC001.000 in order to align historical costs with the workgroup in which the activity will be forecasted

<b>2013 Total</b>	<b>-421</b>	<b>308</b>	<b>0</b>	<b>-6.2</b>			
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*Note: Totals may include rounding differences.*



**Supplemental Workpapers for Workpaper 1FC001.000**

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Order Types	Forecasted Order Counts		
	( A )		
	2014	2015	2016
Change of Account - Electric	609	614	620
Change of Account – Gas	1,297	1,312	1,327
Change of Account - Gas and Electric	426	431	435
Change of Account - Give Notice	6,952	6,751	6,566
Change of Account - Return to Owner	665	672	678
Collections - Credit Shutoff	1,725	1,742	1,760
Customer Service Order (“CSO”) - Appliance Adjustments	37,853	40,249	42,646
CSO - Appliance Mechanic Work	845	840	834
CSO - Carbon Monoxide Emergency	983	993	1,003
CSO - Carbon Monoxide Non-Emergency	1,675	1,692	1,709
CSO - High Pressure	172	176	181
CSO - No Gas	13,520	13,127	12,734
CSO – Other Miscellaneous Gas & Electric Requests	11,932	11,940	11,948
CSO - School Leak Surveys	433	448	462
CSO - Seasonal Off	788	756	723
CSO - Seasonal On Multiples	9,139	9,939	10,739
CSO - Seasonal On Singles	23,455	24,540	25,626
Fumigation - Fumigation/Bug Fogger	45,545	46,084	46,732
Gas Leak - Emergency - Broken & Blowing Inside	1,259	1,259	1,260
Gas Leak - Emergency - Broken & Blowing Outside	240	231	222
Gas Leak - Emergency –Agency Requests	532	516	501
Gas Leak - Fire & Explosions	29	28	28
Gas Leak – Hazardous	23,263	24,714	26,164
Gas Leak - Non-Hazardous	4,003	4,258	4,514
High Bill Investigation (“HBI”)	443	447	452
Meter Work - O&M - Atmospheric Corrosion	93	103	113
Meter Work - O&M – Curb	452	484	516
Meter Work - O&M - Customer/Company Change - Electric	205	160	116
Meter Work - O&M - Customer/Company Change - Gas	1,990	1,990	1,989
Meter Work - O&M - Customer/Company Test (Change) - Gas[1]	70	71	72
Meter Work - O&M - Miscellaneous Company Work	15,214	15,388	15,563
Meter Work - O&M - Periodic Test/Change – Electric	-	-	-
Meter Work - O&M - Periodic Test/Change – Gas	12,553	11,874	11,195
Non-pay Turn On	2,967	2,998	3,028
Read/Verify - Re-Read	7,868	7,949	8,029
Turn On/Shut Off - Customer/Company Remove/Reset – Electric	21	24	26
Turn On/Shut Off - Customer/Company Remove/Reset – Gas	258	284	309
Turn On/Shut Off - Give Notice Cut	3,692	2,673	1,662
Turn On/Shut Off - Shut Off Electric	4,465	4,507	4,549
Turn On/Shut Off - Shut Off Gas	7,987	8,079	8,170
Turn On/Shut Off - Shut Off Gas & Electric	635	642	648
Turn On/Shut Off - Shut Off in Error	240	243	245
Turn On/Shut Off - Soft Shut Off Gas Electric	21,280	21,497	21,714
Turn On/Shut Off - Soft Turn On Gas Turn On Electric	176	178	179
Turn On/Shut Off - Turn On Electric	6,310	6,369	6,429
Turn On/Shut Off - Turn On Gas & Electric	1,408	1,423	1,437
Turn On/Shut Off - Turn On Gas	9,326	9,433	9,539
Miscellaneous - Houseline Test/Purge - O&M	364	359	353
Miscellaneous - Smart Meter	6,601	6,471	6,340
Incomplete (excluding First, Second and Third Call Collections orders)	24,243	24,499	24,813
Proposed Service Enhancements - Customer Outreach Safety Checks			10,000
Proposed Service Enhancements - Enhanced Customer Education			143,337
<b>TOTAL</b>	<b>316,203</b>	<b>321,456</b>	<b>480,238</b>

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Forecasted On-Prem Time (Minutes)				Forecasted Average Drive Time Per Order (Minutes)			
(B)	(C) = (A * B)			(D) = (1% Increase From Previous Year)			
On-Prem Time Per Order (Minutes)	2014	2015	2016	2013 Average Drive Time Per Order (Minutes)	2014	2015	2016
6.6	4,035	4,073	4,111	13.1	13.2	13.4	13.5
8.3	10,767	10,891	11,014	13.1	13.2	13.4	13.5
5.3	2,274	2,297	2,321	13.1	13.2	13.4	13.5
7.2	50,089	48,640	47,311	13.1	13.2	13.4	13.5
12.0	7,977	8,059	8,140	13.1	13.2	13.4	13.5
8.6	14,786	14,937	15,088	13.1	13.2	13.4	13.5
28.2	1,067,969	1,135,590	1,203,210	13.1	13.2	13.4	13.5
53.6	45,285	44,987	44,689	13.1	13.2	13.4	13.5
46.0	45,247	45,708	46,170	13.1	13.2	13.4	13.5
36.7	61,435	62,062	62,689	13.1	13.2	13.4	13.5
37.5	6,440	6,616	6,791	13.1	13.2	13.4	13.5
27.4	370,334	359,567	348,801	13.1	13.2	13.4	13.5
30.6	365,529	365,778	366,028	13.1	13.2	13.4	13.5
100.5	43,476	44,963	46,450	13.1	13.2	13.4	13.5
18.1	14,292	13,699	13,106	13.1	13.2	13.4	13.5
13.1	119,980	130,484	140,988	13.1	13.2	13.4	13.5
26.6	624,118	652,994	681,870	13.1	13.2	13.4	13.5
33.7	1,533,980	1,552,127	1,573,978	13.1	13.2	13.4	13.5
36.0	45,288	45,307	45,327	13.1	13.2	13.4	13.5
81.9	19,657	18,915	18,174	13.1	13.2	13.4	13.5
53.9	28,664	27,814	26,964	13.1	13.2	13.4	13.5
50.5	1,449	1,432	1,416	13.1	13.2	13.4	13.5
38.2	888,083	943,448	998,813	13.1	13.2	13.4	13.5
33.2	133,055	141,555	150,054	13.1	13.2	13.4	13.5
45.4	20,107	20,312	20,517	13.1	13.2	13.4	13.5
4.8	449	498	546	13.1	13.2	13.4	13.5
38.0	17,184	18,396	19,607	13.1	13.2	13.4	13.5
16.2	3,318	2,601	1,883	13.1	13.2	13.4	13.5
29.0	57,725	57,704	57,684	13.1	13.2	13.4	13.5
35.4	2,488	2,517	2,553	13.1	13.2	13.4	13.5
7.0	105,782	106,993	108,204	13.1	13.2	13.4	13.5
-	-	-	-	13.1	13.2	13.4	13.5
31.9	400,387	378,730	357,072	13.1	13.2	13.4	13.5
13.2	39,042	39,441	39,839	13.1	13.2	13.4	13.5
11.7	91,987	92,925	93,864	13.1	13.2	13.4	13.5
14.9	318	352	387	13.1	13.2	13.4	13.5
16.6	4,290	4,713	5,135	13.1	13.2	13.4	13.5
10.5	38,941	28,192	17,536	13.1	13.2	13.4	13.5
8.7	38,821	39,188	39,554	13.1	13.2	13.4	13.5
7.7	61,830	62,538	63,246	13.1	13.2	13.4	13.5
12.4	7,893	7,973	8,054	13.1	13.2	13.4	13.5
20.6	4,960	5,010	5,061	13.1	13.2	13.4	13.5
6.8	144,463	145,937	147,411	13.1	13.2	13.4	13.5
14.2	2,502	2,527	2,553	13.1	13.2	13.4	13.5
12.1	76,227	76,947	77,666	13.1	13.2	13.4	13.5
36.1	50,843	51,362	51,880	13.1	13.2	13.4	13.5
36.1	337,049	340,907	344,766	13.1	13.2	13.4	13.5
91.2	33,242	32,737	32,232	13.1	13.2	13.4	13.5
16.5	109,080	106,922	104,764	13.1	13.2	13.4	13.5
10.7	259,027	261,765	265,119	13.1	13.2	13.4	13.5
38.7	-	-	387,494	13.1	13.2	13.4	13.5
1.5	-	-	215,005				

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Forecasted Drive Time (Minutes)			On-Prem & Drive Time (Hours)		
(E) = (A * D)			(F) = (C + E) / 60		
2014	2015	2016	2014	2015	2016
8,049	8,206	8,366	201	205	208
17,147	17,517	17,892	465	473	482
5,637	5,752	5,868	132	134	136
91,918	90,153	88,566	2,367	2,313	2,265
8,790	8,968	9,149	279	284	288
22,802	23,265	23,735	626	637	647
500,485	537,496	575,197	26,141	27,885	29,640
11,178	11,216	11,253	941	937	932
12,998	13,261	13,529	971	983	995
22,148	22,598	23,054	1,393	1,411	1,429
2,270	2,355	2,442	145	150	154
178,759	175,298	171,750	9,152	8,914	8,676
157,766	159,452	161,156	8,722	8,754	8,786
5,722	5,977	6,237	820	849	878
10,423	10,090	9,750	412	396	381
120,836	132,729	144,848	4,014	4,387	4,764
310,122	327,716	345,629	15,571	16,345	17,125
602,189	615,407	630,311	35,603	36,126	36,738
16,640	16,814	16,989	1,032	1,035	1,039
3,173	3,083	2,992	380	367	353
7,037	6,897	6,753	595	579	562
379	379	378	30	30	30
307,585	330,028	352,889	19,928	21,225	22,528
52,923	56,867	60,884	3,100	3,307	3,516
5,851	5,970	6,090	433	438	443
1,230	1,376	1,525	28	31	35
5,975	6,460	6,954	386	414	443
2,707	2,143	1,567	100	79	57
26,315	26,569	26,825	1,401	1,405	1,408
929	949	972	57	58	59
201,160	205,498	209,902	5,116	5,208	5,302
-	-	-	-	-	-
165,974	158,567	150,994	9,439	8,955	8,468
39,233	40,030	40,838	1,305	1,325	1,345
104,034	106,146	108,290	3,267	3,318	3,369
282	316	351	10	11	12
3,417	3,791	4,172	128	142	155
48,809	35,690	22,421	1,462	1,065	666
59,038	60,191	61,361	1,631	1,656	1,682
105,609	107,886	110,199	2,791	2,840	2,891
8,402	8,573	8,746	272	276	280
3,179	3,244	3,309	136	138	140
281,364	287,077	292,877	7,097	7,217	7,338
2,324	2,372	2,419	80	82	83
83,424	85,054	86,708	2,661	2,700	2,740
18,621	18,999	19,383	1,158	1,173	1,188
123,304	125,963	128,663	7,673	7,781	7,890
4,819	4,793	4,766	634	625	617
87,283	86,412	85,514	3,273	3,222	3,171
320,542	327,169	334,674	9,659	9,816	9,997
-	-	134,877	-	-	8,706
-	-	-	-	-	3,583

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Non Job time Loader (Hours)				Vacation & Sick Loader ( Hours )			
( G )	( H ) = ( F * ( 1 + G ) )			( I )	( J ) = ( H * ( 1 + I ) )		
Non Job Time (NJT) Loader	2014	2015	2016	V&S Rate for (\$)	2014	2015	2016
36.16%	274	279	283	15.86%	318	323	328
36.16%	633	645	656	15.86%	734	747	760
36.16%	180	183	186	15.86%	208	212	215
36.16%	3,223	3,150	3,083	15.86%	3,734	3,649	3,572
36.16%	380	386	392	15.86%	441	448	455
36.16%	853	867	881	15.86%	988	1,004	1,021
36.16%	35,593	37,967	40,357	15.86%	41,238	43,988	46,758
36.16%	1,281	1,275	1,269	15.86%	1,485	1,478	1,471
36.16%	1,322	1,338	1,355	15.86%	1,531	1,550	1,570
36.16%	1,897	1,921	1,946	15.86%	2,198	2,226	2,254
36.16%	198	204	210	15.86%	229	236	243
36.16%	12,460	12,138	11,813	15.86%	14,437	14,063	13,686
36.16%	11,875	11,919	11,963	15.86%	13,758	13,809	13,861
36.16%	1,116	1,156	1,196	15.86%	1,294	1,339	1,385
36.16%	561	540	519	15.86%	650	625	601
36.16%	5,465	5,973	6,486	15.86%	6,331	6,920	7,515
36.16%	21,200	22,255	23,317	15.86%	24,563	25,785	27,015
36.16%	48,476	49,187	50,021	15.86%	56,164	56,988	57,955
36.16%	1,405	1,410	1,414	15.86%	1,628	1,633	1,638
36.16%	518	499	480	15.86%	600	578	556
36.16%	810	788	765	15.86%	939	913	886
36.16%	41	41	41	15.86%	48	48	47
36.16%	27,133	28,899	30,674	15.86%	31,436	33,482	35,539
36.16%	4,220	4,503	4,787	15.86%	4,890	5,217	5,546
36.16%	589	596	604	15.86%	682	691	700
36.16%	38	43	47	15.86%	44	49	54
36.16%	526	564	603	15.86%	609	653	698
36.16%	137	108	78	15.86%	158	125	91
36.16%	1,907	1,912	1,918	15.86%	2,210	2,216	2,222
36.16%	78	79	80	15.86%	90	91	93
36.16%	6,965	7,091	7,219	15.86%	8,070	8,216	8,364
36.16%	-	-	-	15.86%	-	-	-
36.16%	12,852	12,193	11,529	15.86%	14,891	14,126	13,358
36.16%	1,776	1,803	1,831	15.86%	2,058	2,089	2,121
36.16%	4,448	4,517	4,587	15.86%	5,154	5,234	5,315
36.16%	14	15	17	15.86%	16	18	19
36.16%	175	193	211	15.86%	203	224	245
36.16%	1,991	1,450	907	15.86%	2,307	1,680	1,051
36.16%	2,221	2,255	2,290	15.86%	2,573	2,613	2,653
36.16%	3,800	3,867	3,936	15.86%	4,402	4,481	4,560
36.16%	370	375	381	15.86%	428	435	442
36.16%	185	187	190	15.86%	214	217	220
36.16%	9,663	9,826	9,991	15.86%	11,196	11,385	11,576
36.16%	110	111	113	15.86%	127	129	131
36.16%	3,623	3,676	3,730	15.86%	4,198	4,259	4,322
36.16%	1,576	1,597	1,617	15.86%	1,826	1,850	1,874
36.16%	10,447	10,595	10,743	15.86%	12,104	12,275	12,447
36.16%	864	852	840	15.86%	1,001	987	973
36.16%	4,456	4,387	4,318	15.86%	5,163	5,083	5,003
36.16%	13,152	13,365	13,611	15.86%	15,238	15,484	15,770
36.16%	-	-	11,854	15.86%	-	-	13,734
36.16%	-	-	4,879	15.86%	-	-	5,653

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Total Forecasted Workload With Vacation & Sick ( Dollars )				Total Forecasted Workload With Vacation & Sick ( FTE )			
( K )	( L ) = ( J * K )			( M )	( N ) = ( H * ( 1 + M ) ) / 2088		
2013 Blended Wage Rate	2014	2015	2016	V&S Rate for (FTE)	2014	2015	2016
\$ 38.34	\$ 12,182	\$ 12,379	\$ 12,578	17.52%	0.2	0.2	0.2
\$ 38.34	\$ 28,140	\$ 28,637	\$ 29,140	17.52%	0.4	0.4	0.4
\$ 38.34	\$ 7,975	\$ 8,114	\$ 8,255	17.52%	0.1	0.1	0.1
\$ 38.34	\$ 143,156	\$ 139,916	\$ 136,977	17.52%	1.8	1.8	1.7
\$ 38.34	\$ 16,903	\$ 17,165	\$ 17,429	17.52%	0.2	0.2	0.2
\$ 38.34	\$ 37,892	\$ 38,511	\$ 39,137	17.52%	0.5	0.5	0.5
\$ 38.34	\$ 1,581,145	\$ 1,686,623	\$ 1,792,797	17.52%	20.0	21.4	22.7
\$ 38.34	\$ 56,920	\$ 56,658	\$ 56,395	17.52%	0.7	0.7	0.7
\$ 38.34	\$ 58,715	\$ 59,447	\$ 60,182	17.52%	0.7	0.8	0.8
\$ 38.34	\$ 84,259	\$ 85,344	\$ 86,436	17.52%	1.1	1.1	1.1
\$ 38.34	\$ 8,781	\$ 9,043	\$ 9,307	17.52%	0.1	0.1	0.1
\$ 38.34	\$ 553,536	\$ 539,193	\$ 524,762	17.52%	7.0	6.8	6.6
\$ 38.34	\$ 527,529	\$ 529,480	\$ 531,449	17.52%	6.7	6.7	6.7
\$ 38.34	\$ 49,597	\$ 51,353	\$ 53,114	17.52%	0.6	0.7	0.7
\$ 38.34	\$ 24,915	\$ 23,982	\$ 23,041	17.52%	0.3	0.3	0.3
\$ 38.34	\$ 242,765	\$ 265,343	\$ 288,148	17.52%	3.1	3.4	3.7
\$ 38.34	\$ 941,799	\$ 988,644	\$ 1,035,812	17.52%	11.9	12.5	13.1
\$ 38.34	\$ 2,153,453	\$ 2,185,071	\$ 2,222,123	17.52%	27.3	27.7	28.2
\$ 38.34	\$ 62,429	\$ 62,624	\$ 62,820	17.52%	0.8	0.8	0.8
\$ 38.34	\$ 23,014	\$ 22,177	\$ 21,337	17.52%	0.3	0.3	0.3
\$ 38.34	\$ 35,990	\$ 34,992	\$ 33,990	17.52%	0.5	0.4	0.4
\$ 38.34	\$ 1,843	\$ 1,826	\$ 1,809	17.52%	0.0	0.0	0.0
\$ 38.34	\$ 1,205,342	\$ 1,283,780	\$ 1,362,639	17.52%	15.3	16.3	17.3
\$ 38.34	\$ 187,483	\$ 200,027	\$ 212,645	17.52%	2.4	2.5	2.7
\$ 38.34	\$ 26,168	\$ 26,495	\$ 26,823	17.52%	0.3	0.3	0.3
\$ 38.34	\$ 1,693	\$ 1,889	\$ 2,087	17.52%	0.0	0.0	0.0
\$ 38.34	\$ 23,346	\$ 25,057	\$ 26,777	17.52%	0.3	0.3	0.3
\$ 38.34	\$ 6,074	\$ 4,781	\$ 3,477	17.52%	0.1	0.1	0.0
\$ 38.34	\$ 84,720	\$ 84,955	\$ 85,193	17.52%	1.1	1.1	1.1
\$ 38.34	\$ 3,444	\$ 3,495	\$ 3,553	17.52%	0.0	0.0	0.0
\$ 38.34	\$ 309,426	\$ 315,019	\$ 320,680	17.52%	3.9	4.0	4.1
\$ 38.34	\$ -	\$ -	\$ -	17.52%	-	-	-
\$ 38.34	\$ 570,944	\$ 541,644	\$ 512,177	17.52%	7.2	6.9	6.5
\$ 38.34	\$ 78,909	\$ 80,113	\$ 81,330	17.52%	1.0	1.0	1.0
\$ 38.34	\$ 197,606	\$ 200,682	\$ 203,790	17.52%	2.5	2.5	2.6
\$ 38.34	\$ 605	\$ 674	\$ 744	17.52%	0.0	0.0	0.0
\$ 38.34	\$ 7,770	\$ 8,573	\$ 9,383	17.52%	0.1	0.1	0.1
\$ 38.34	\$ 88,460	\$ 64,398	\$ 40,280	17.52%	1.1	0.8	0.5
\$ 38.34	\$ 98,651	\$ 100,183	\$ 101,732	17.52%	1.2	1.3	1.3
\$ 38.34	\$ 168,794	\$ 171,803	\$ 174,848	17.52%	2.1	2.2	2.2
\$ 38.34	\$ 16,427	\$ 16,680	\$ 16,936	17.52%	0.2	0.2	0.2
\$ 38.34	\$ 8,205	\$ 8,321	\$ 8,438	17.52%	0.1	0.1	0.1
\$ 38.34	\$ 429,272	\$ 436,518	\$ 443,850	17.52%	5.4	5.5	5.6
\$ 38.34	\$ 4,865	\$ 4,938	\$ 5,012	17.52%	0.1	0.1	0.1
\$ 38.34	\$ 160,944	\$ 163,312	\$ 165,704	17.52%	2.0	2.1	2.1
\$ 38.34	\$ 70,026	\$ 70,930	\$ 71,840	17.52%	0.9	0.9	0.9
\$ 38.34	\$ 464,078	\$ 470,648	\$ 477,259	17.52%	5.9	6.0	6.0
\$ 38.34	\$ 38,369	\$ 37,834	\$ 37,297	17.52%	0.5	0.5	0.5
\$ 38.34	\$ 197,952	\$ 194,898	\$ 191,818	17.52%	2.5	2.5	2.4
\$ 38.34	\$ 584,258	\$ 593,700	\$ 604,646	17.52%	7.4	7.5	7.7
\$ 38.34	\$ -	\$ -	\$ 526,598	17.52%	-	-	6.7
\$ 38.34	\$ -	\$ -	\$ 216,745	17.52%	-	-	2.7
<b>TOTAL</b>	<b>\$ 11,686,765</b>	<b>\$ 11,957,865</b>	<b>\$ 12,981,338</b>	<b>TOTAL</b>	<b>148.1</b>	<b>151.5</b>	<b>164.5</b>

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

<u>SUMMARY OF OPERATIONS FORECAST</u>		<u>2014</u>	<u>2015</u>	<u>2016</u>
( a )	Paid Hours	2,088	2,088	2,088
( b )	5 Yr Avg Training To Workload Ratio (%) <sup>1</sup>	7.13%	7.13%	7.13%
( c )	Hourly Training Rate (\$) <sup>1</sup>	\$ 34.91	\$ 34.91	\$ 34.91
( d )	Non-Labor Per FTE (\$) <sup>2</sup>	\$ 4,700	\$ 4,700	\$ 4,700
( e )	Total Workload Labor (FTE) <sup>3</sup>	148	152	164
( f ) = ( b * e )	Total Training Labor (FTE)	11	11	12
( g ) = ( e + f )	Total Labor (FTE)	159	162	176
( h )	Total Workload Labor (\$) <sup>4</sup>	\$ 11,686,765	\$ 11,957,865	\$ 12,981,338
( i ) = ( a * c * f )	Total Training Labor (\$)	\$ 769,297	\$ 787,142	\$ 854,514
( j ) = ( h + i )	<b>Total Operations Labor (\$)</b>	<b>\$ 12,456,062</b>	<b>\$ 12,745,007</b>	<b>\$ 13,835,852</b>
( k ) = ( d * g )	<b>Total Operations Non-Labor (\$)</b>	<b>\$ 745,482</b>	<b>\$ 762,775</b>	<b>\$ 828,061</b>

<u>SUMMARY OF SUPERVISORS FORECAST</u>		<u>2014</u>	<u>2015</u>	<u>2016</u>
( l )	2013 Average Labor Rate <sup>5</sup>	\$ 41.95	\$ 41.95	\$ 41.95
( m )	5 Year Average Non-Labor Per FTE <sup>5</sup>	\$ 5,371	\$ 5,371	\$ 5,371
( n )	2013 Operations FTE Per Supervisor FTE <sup>5</sup>	12	12	12
( o ) = ( g / n )	Total Labor (FTE)	13.4357	14	15
( p ) = ( o * l * a )	<b>Total Supervisor Labor (\$)</b>	<b>\$ 1,176,749</b>	<b>\$ 1,204,046</b>	<b>\$ 1,307,100</b>
( q ) = ( o * m )	<b>Total Supervisor Non-Labor (\$)</b>	<b>\$ 72,159</b>	<b>\$ 73,833</b>	<b>\$ 80,153</b>

**Notes:**

- 1 - Detailed Calculations are Shown on Section 2 "Operations Training Labor"
- 2 - Detailed Calculations are Shown on Section 3 "Operations Non-Labor"
- 3 - Values Corresponds to Total Shown for ( N ) Total Forecasted Workload With Vacation & Sick ( FTE )
- 4 - Values Corresponds to Total Shown for ( L ) Total Forecasted Workload With Vacation & Sick ( Dollars )
- 5 - Detailed Calculations are Shown on Section 4 "Supervisor Labor & Non-Labor"

		<b>OPERATIONS TRAINING LABOR</b>				
Calculation Step	Description	2009	2010	2011	2012	2013
( A )	Adjusted Recorded Training Dollars (In Nominal Dollars, Without Vacation & Sick)	\$ 727,392	\$ 657,503	\$ 893,473	\$ 575,978	\$ 718,667
( B )	Vacation & Sick (Dollars Factor)	0.1544	0.1592	0.1473	0.1449	0.1586
( C ) = ( A * ( 1 + B ) )	Adjusted Recorded Training Dollars (In Nominal Dollars, With Vacation & Sick)	\$ 839,701	\$ 762,178	\$ 1,025,082	\$ 659,437	\$ 832,648
( D )	Labor O&M Escalation Rate	0.9127	0.9353	0.9587	0.9779	1.0000
( E ) = ( C / D )	Adjusted Recorded Training Dollars (In 2013 Dollars, With Vacation & Sick)	\$ 920,019	\$ 814,902	\$ 1,069,241	\$ 674,340	\$ 832,648
( F ) = ( A / H )	Adjusted Recorded Training Wage Rate (In Nominal Dollars)	\$ 29.09	\$ 31.01	\$ 32.86	\$ 34.18	\$ 34.91
( G ) = ( F / D )	Adjusted Recorded Training Wage Rate (In 2013 Dollars)	\$ 31.87	\$ 33.16	\$ 34.28	\$ 34.95	\$ 34.91
( H )	Adjusted Recorded Training Hours (Without Vacation & Sick)	25,004	21,203	27,191	16,851	20,588
( I )	Vacation & Sick (Hours Factor)	0.1674	0.1733	0.1641	0.1615	0.1752
( J ) = ( H * ( 1 + I ) )	Adjusted Recorded Training Hours (With Vacation & Sick)	29,190	24,877	31,652	19,573	24,195
( K )	Annual Paid Hours	2,088	2,088	2,080	2,088	2,088
( L ) = ( J / K )	Adjusted Recorded Training FTEs (With Vacation & Sick)	14	12	15	9	12
( M )	Total Adjusted Recorded WorkLoad FTEs	201	196	165	161	147
( N ) = ( L / M )	Training FTE as Percentage of Workload FTEs	6.9%	6.1%	9.2%	5.8%	7.9%
( O ) = Average L ( 2009 - 2013 )	5 Year Average Adjusted Recorded Training FTEs	12				
( P ) = Average M ( 2009 - 2013 )	5 Year Average Recorded Adjusted Workload FTEs	174				
( Q ) = ( O / P )	<b>5 Year Average Training to Workload Ratio</b>	<b>7.1%</b>				
( R ) = G ( 2013 Value )	<b>2013 Hourly Training Rate</b>	<b>\$ 34.91</b>				



		<u>OPERATIONS NON-LABOR</u>				
Calculation Step	Description	2009	2010	2011	2012	2013
( A )	Adjusted Recorded Non-Labor (In 2013 Dollars)	\$ 935,857	\$ 787,126	\$ 879,377	\$ 755,659	\$ 1,026,208
( B ) = Average A ( 2009 - 2013 )	5 Year Average Non-Labor Costs	\$ 876,845				
( C )	5 Year Average of Total FTE (Workload + Training) <sup>1</sup>	187				
( D ) = ( B / C )	<b>5 Year Average Non-Labor Cost Per FTE</b>	<b>\$ 4,700</b>				

Note:

1 - Total of ( O ) and ( P ) from "Operations Training Labor"

		<u>SUPERVISOR LABOR &amp; NON-LABOR</u>				
Calculation Step	Description	2009	2010	2011	2012	2013
( A )	Annual Paid Hours	2,088	2,088	2,080	2,088	2,088
( B )	Adjusted Recorded Supervisor Labor (FTE)	14	14	14	14	13
( C )	Adjusted Recorded Operations Training FTEs (With Vacation & Sick)	14	12	15	9	12
( D )	Total Adjusted Recorded Operations WorkLoad FTEs	201	196	165	161	147
( E ) = ( C + D )	Total Operations FTE	215	208	180	171	158
( F ) = ( E / B )	Average Supervisor FTE to Operations FTE Ratio	15	15	13	12	12
( G )	Adjusted Recorded Supervisor Labor (In 2013 Dollars, With Vacation & Sick)	\$ 1,279,571	\$ 1,199,185	\$ 1,209,175	\$ 1,218,146	\$ 1,174,137
( H ) = ( G / ( A * B ) )	Average Supervisor Wage Rate (In 2013 Dollars)	\$ 43.24	\$ 42.46	\$ 42.85	\$ 42.19	\$ 41.95
( I )	Adjusted Recored supervisor Non-Labor (In 2013 Dollars)	\$ 71,224	\$ 87,421	\$ 72,076	\$ 87,452	\$ 49,732
( J ) = Average B ( 2009 - 2013 )	5 Year Average Supervisor Labor (FTE)					14
( K ) = Average I ( 2009 - 2013 )	5 Year Average Supervisor Non-Labor (\$)					\$ 73,581
( L ) = H ( 2013 Value )	<b>2013 Average Supervisor Wage Rate</b>					<b>\$ 41.95</b>
( M ) = ( K / J )	<b>5 year Average Supervisor Non-Labor Per FTE</b>					<b>\$ 5,371</b>
( N ) = F ( 2013 Value )	<b>2013 Supervisor FTE to Operations FTE Ratio</b>					<b>12</b>

			<b>HISTORICAL ORDER VOLUMES</b>					<b>FORECASTED ORDER VOLUME</b>			<b>FORECASTED ON-PREM TIME (Minutes)</b>			
								<b>( A )</b>			<b>( B )</b>	<b>( C ) = ( A * B )</b>		
<b>Order Type</b>	<b>Forecast Method</b>	<b>Rational</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>Average On-Prem Time Per Order (Minutes)</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
Collections - FIRST CALL YTD	YTD May 2014	Pre Transition	317,500	321,415	313,453	274,409	278,656	99,384	-	-	2.78	276,606	-	-
Collections - SECOND CALL YTD	YTD May 2014	Pre Transition						2,264	-	-	8.99	20,358	-	-
Collections - THIRD CALL YTD	YTD May 2014	Pre Transition						648	-	-	9.41	6,099	-	-
Collections - INCOMPLETE YTD	YTD May 2014	Pre Transition	15,738	14,344	10,681	6,442	5,555	1,312	-	-	3.25	4,259	-	-
Collections - SECOND CALL	Zero-Based	Post Transition	40,314	38,982	35,941	33,783	8,054	6,656	12,660	13,968	8.99	59,853	113,839	125,601
Collections - SECOND CALL NPSO	Zero-Based	Post Transition						9,684	17,100	17,720	8.99	87,083	153,764	159,335
Collections - THIRD CALL	Zero-Based	Post Transition	14,130	11,145	13,474	14,815	2,573	2,778	4,836	4,940	9.41	26,147	45,519	46,494
Collections - INCOMPLETE	2013 ICPT rate for 2nd/3rd (1.66%)							46	80	82	7.54	348	605	618
			<b>TOTAL</b>					<b>122,773</b>	<b>34,677</b>	<b>36,709</b>				

FORECASTED AVERAGE DRIVE TIME PER ORDER (Minutes)				FORECASTED DRIVE TIME (Minutes)			FORECASTED JOB TIME (ON-PREM TIME + DRIVE TIME) (Hours)			NON JOB TIME (NJT) LOADER (Hours)					
( D ) = ( 1% Increase from Previous Year )				( E ) = ( A *D )			( F ) = ( C + E ) / 60			( G )			( H ) = ( F * G )		
Average Drive Time Per Order (Minutes) <sup>1</sup>	2014	2015	2016	2014	2015	2016	2014	2015	2016	2014 NJT Loader (For May YTD Orders)	2014 & 2015 NJT Loader	2016 NJT Loader	2014	2015	2016
3.94	3.98	4.02	4.06	395,386	-	-	11,200	-	-	119.60%	35.94%	72.86%	24,595	-	-
6.92	6.99	7.06	7.13	15,820	-	-	603	-	-				1,324	-	-
7.77	7.84	7.92	8.00	5,083	-	-	186	-	-				409	-	-
5.78	5.84	5.90	5.96	7,661	-	-	199	-	-				436	-	-
13.30	13.43	13.57	13.70	89,413	171,762	191,404	2,488	4,760	5,283				3,382	6,471	9,133
13.30	13.43	13.57	13.70	130,091	232,001	242,811	3,620	6,429	6,702				4,920	8,740	6,702
13.30	13.43	13.57	13.70	37,318	65,615	67,691	1,058	1,852	1,903				1,438	2,518	1,903
13.30	13.43	13.57	13.70	619	1,089	1,124	16	28	29				22	38	29

<u>VACATION &amp; SICK LOADER (\$)</u>				<u>TOTAL FORECASTED LABOR (\$)</u>					<u>TOTAL FORECASTES LABOR (FTE)</u>			
( I )	( J ) = ( H * ( 1 + I ) )			( K )		( L ) = ( J * K )			( M )	( N ) = ( H * ( 1 + M ) )		
Vacation & Sick Loader (\$)	2014	2015	2016	2014 Average Wage Rate	2015 - 2016 Average Wage Rate	2014	2015	2016	Vacation & Sick Loader (FTE)	2014	2015	2016
15.86%	28,495	-	-	\$ 27.00	\$ 29.20	\$ 769,389	\$ -	\$ -	17.52%	13.8	-	-
15.86%	1,534	-	-	\$ 27.00	\$ 29.20	\$ 41,421	\$ -	\$ -	17.52%	0.7	-	-
15.86%	474	-	-	\$ 27.00	\$ 29.20	\$ 12,803	\$ -	\$ -	17.52%	0.2	-	-
15.86%	505	-	-	\$ 27.00	\$ 29.20	\$ 13,647	\$ -	\$ -	17.52%	0.2	-	-
15.86%	3,918	7,497	10,581	\$ 27.00	\$ 29.20	\$ 114,422	\$ 218,932	\$ 308,994	17.52%	1.9	3.6	5.1
15.86%	5,701	10,126	7,765	\$ 27.00	\$ 29.20	\$ 166,478	\$ 295,713	\$ 226,770	17.52%	2.8	4.9	3.8
15.86%	1,666	2,917	2,205	\$ 27.00	\$ 29.20	\$ 48,650	\$ 85,191	\$ 64,389	17.52%	0.8	1.4	1.1
15.86%	25	44	34	\$ 27.00	\$ 29.20	\$ 741	\$ 1,299	\$ 982	17.52%	0.0	0.0	0.0
				<b>TOTAL</b>		<b>\$ 1,167,552</b>	<b>\$ 601,135</b>	<b>\$ 601,135</b>	<b>TOTAL</b>	<b>20.6</b>	<b>10.0</b>	<b>10.0</b>

	2009	2010	2011	2012	2013
( a ) Recorded Adjusted Collections Non-Labor (In 2013 Dollars)	\$ 149,885	\$ 138,617	\$ 177,638	\$ 158,631	\$ 137,368
( b ) Recorded Adjusted Collectons FTE	51	48	46	44	40
( c ) = ( a / b ) Recorded Adjusted Collections Non-Labor Per FTE	\$ 2,961	\$ 2,876	\$ 3,845	\$ 3,566	\$ 3,458
5 Year Average Collections Non-Labor Per FTE (2009 - 2013)	\$ 3,341				

	2014	2015	2016
Total Collections Labor <sup>2</sup>	\$ 1,167,552	\$ 601,135	\$ 601,135
Total Collections Non-Labor	\$ 68,689	\$ 33,412	\$ 33,412
Total Collections FTE <sup>3</sup>	20.6	10.0	10.0

2014 Annual Collections Supervisor Rate	\$ 85,704
2015 - 2016 Annual Collections Supervisor Rate	\$ 95,176
5 Year Average Collections Supervisor Non-Labor Per FTE (2009 - 2013)	\$ 1,010
Supervisor to Collectors Span of Control	10:1

	2014	2015	2016
Total Collections Supervisor Labor	\$ 157,123	\$ 95,176.31	\$ 95,176.31
Total Collections Supervisor Non-Labor	\$ 1,851	\$ 1,010	\$ 1,010
Total Collections Supervisor FTE	2	1	1

Notes:

1 - Use YTD May 2014 time per order except for future drive time. Used 13 minutes drive time due to lack of historical data for the new process and the closes is CSF drive time. This is due to fewer orders and widely dispersed routes.

2 - From Total of ( L ) for each year

3 - From Total of ( N ) for each year

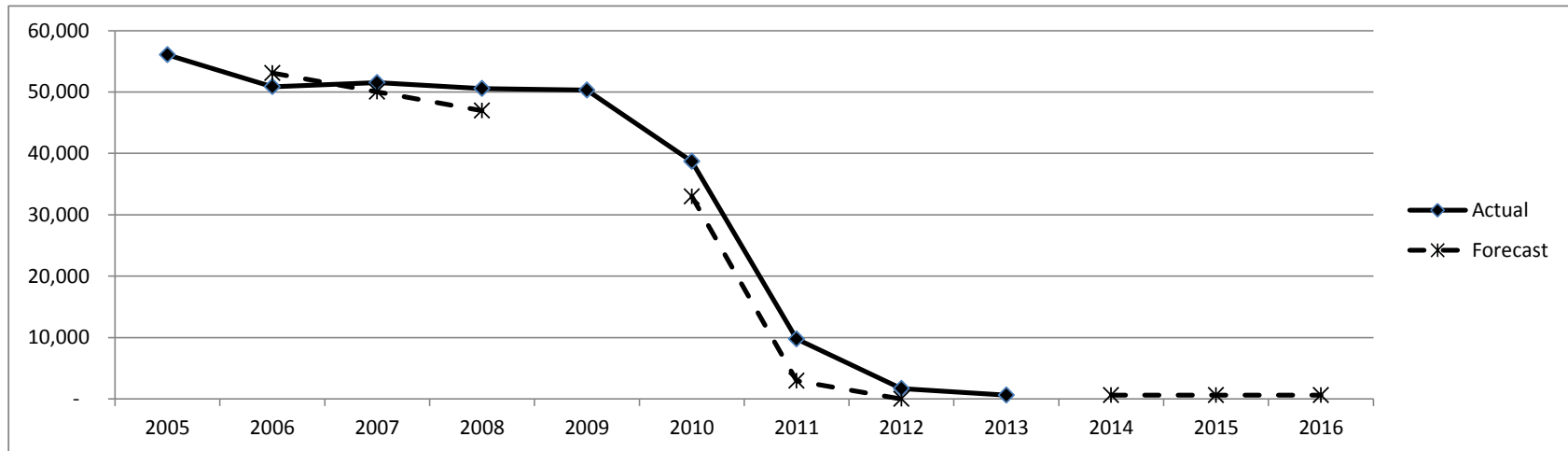
## CHANGE OF ACCOUNT - CA ELEC

**Source** Customer Work  
**Order Group** Change of Account  
**Order Type** CA ELEC

**Description:** This order type is used for field work performed to establish a new customer's account for electric service. No appliance work is performed.

Historical Averages	
5-Yr Avg	20,197
4-Yr Avg	12,672
3-Yr Avg	4,008

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	56,042	50,847	51,525	50,544	50,294	38,665	9,749	1,672	603			
Forecast		53,087	50,018	46,949		32,966	2,946	-		609	614	620



**Forecasting Method:** Base Year (Orders to Active Electric Meters)

This order type is impacted by Smart Meter. 2013 is the first full year post Smart Meter implementation.

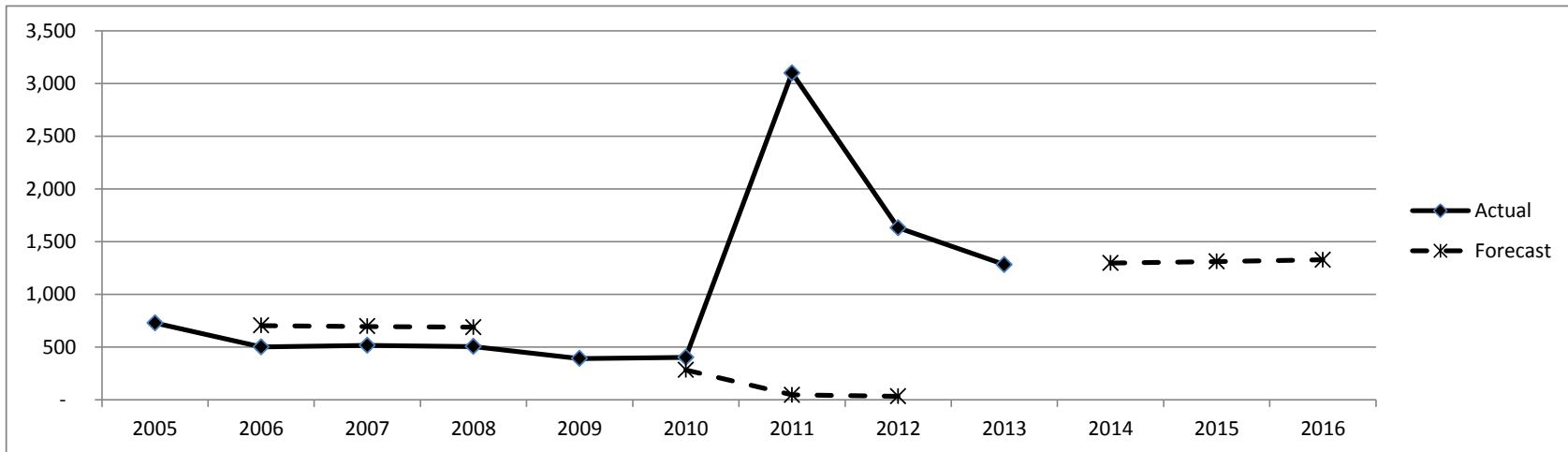
## CHANGE OF ACCOUNT - CA GAS

**Source** Customer Work  
**Order Group** Change of Account  
**Order Type** CA GAS

**Description:** This order type is used for field work performed to establish a new customer's account for gas service. These orders are issued when the gas meter had previously been closed.

Historical Averages	
5-Yr Avg	1,361
4-Yr Avg	1,604
3-Yr Avg	2,004

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	728	501	516	505	392	402	3,099	1,631	1,282			
Forecast		704	696	688		284	46	32		1,297	1,312	1,327



**Forecasting Method:** Base Year (Orders to Active Gas Meters)

This order type is impacted by Smart Meter. 2013 is the first full year post Smart Meter implementation.



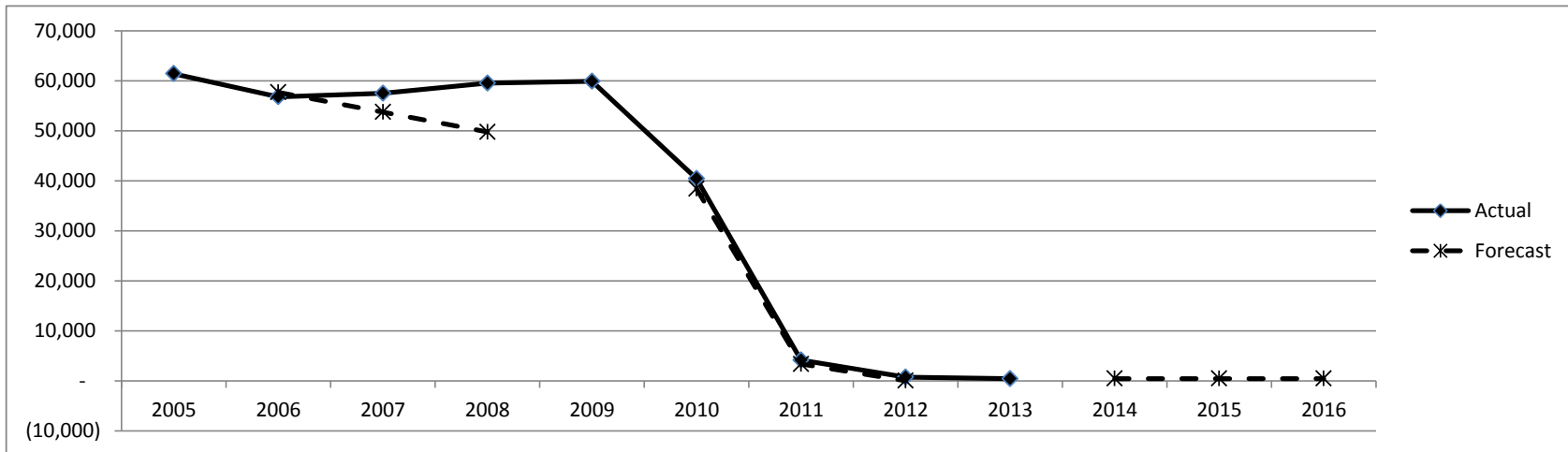
## CHANGE OF ACCOUNT - CA GAS ELEC

**Source** Customer Work  
**Order Group** Change of Account  
**Order Type** CA Gas and Elec

**Description:** This order type is used for field work performed to establish a new customer's account for gas and electric service. These orders are issued when the electricity cannot be turned on remotely and the gas meter has been closed.

Historical Averages	
5-Yr Avg	21,110
4-Yr Avg	11,418
3-Yr Avg	1,755

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	61,410	56,773	57,468	59,528	59,875	40,409	4,145	697	422			
Forecast		57,669	53,721	49,773		38,395	3,342	(0)		426	431	435



**Forecasting Method:** Base Year (Orders to Total Active Meters)

This order type is impacted by Smart Meter. 2013 is the first full year post Smart Meter implementation.

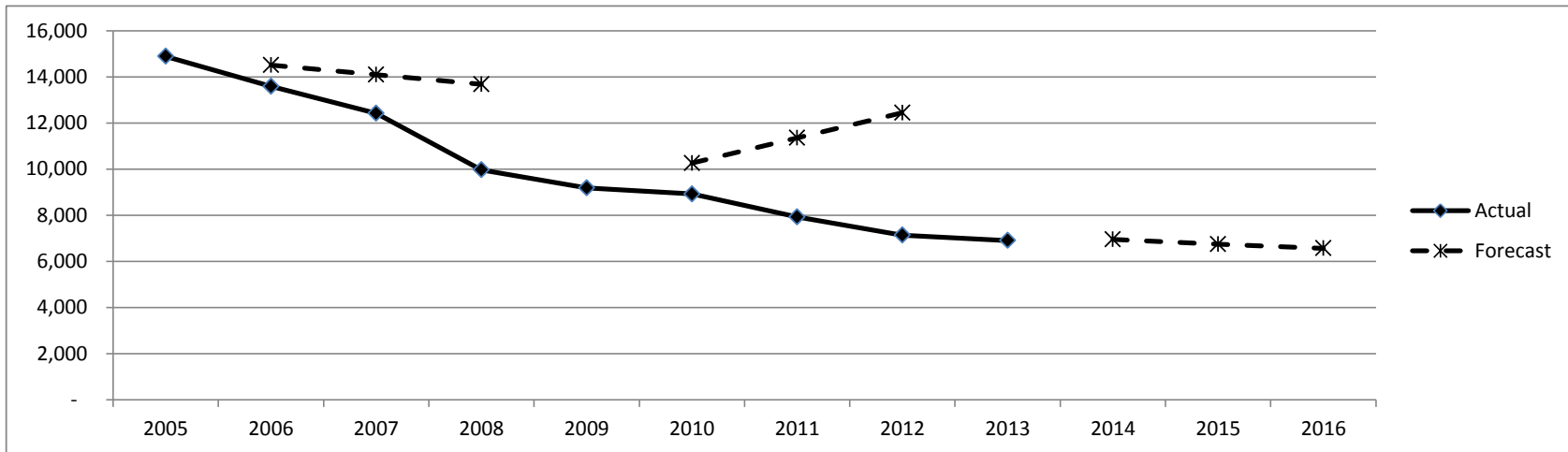
## CHANGE OF ACCOUNT - GIVE NOTICE

**Source** Customer Work  
**Order Group** Change of Account  
**Order Type** Give Notice

**Description:** This is a service order for which a field technician was going to shut off gas service but, while at the premises, determines that a new occupant has moved in. The new occupant is given a 24-hour notice of the requirement to establish an account. The gas is left on.

Historical Averages	
5-Yr Avg	8,013
4-Yr Avg	7,720
3-Yr Avg	7,320

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	14,891	13,589	12,423	9,968	9,183	8,922	7,921	7,136	6,902			
Forecast		14,504	14,093	13,682		10,259	11,353	12,447		6,952	6,751	6,566



**Forecasting Method:** Base Year + OBR Adjustment (Orders to Total Active Meters)

This order type is impacted by Smart Meter. 2013 is the first full year post Smart Meter implementation. An adjustment was made to account for an anticipated reduction in order volumes resulting from the Off But Registering project.

SDG&E

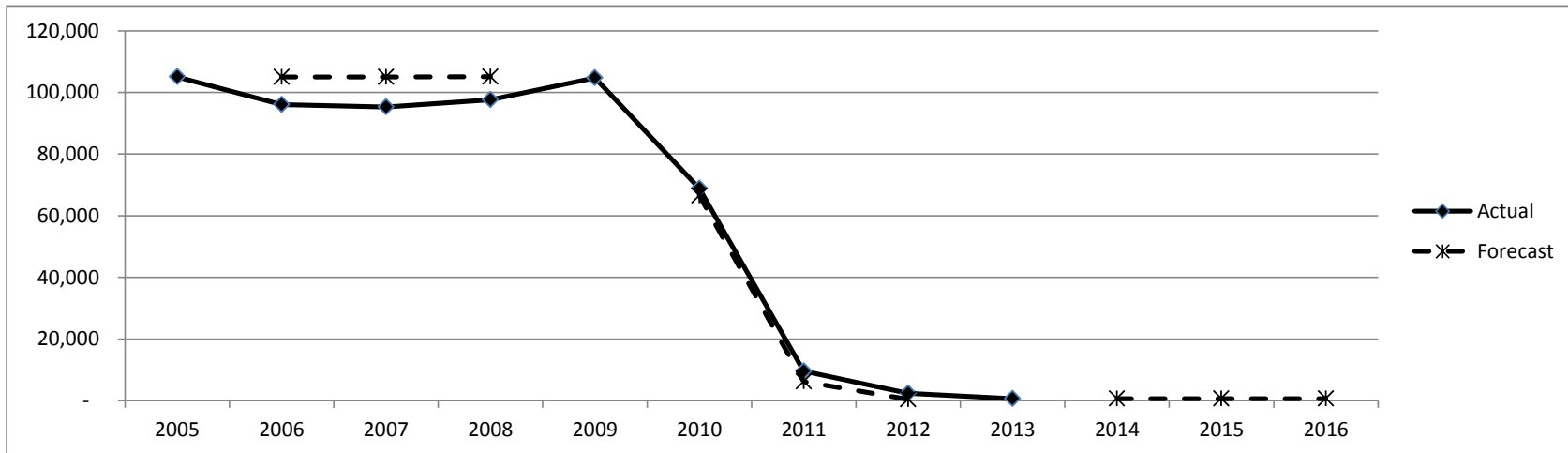
## CHANGE OF ACCOUNT - RTO

**Source** Customer Work  
**Order Group** Change of Account  
**Order Type** RTO

**Description:** This is a "Return to Owner" order. This order type is used when a tenant moves out. Responsibility for the account is moved to the property owner and a field technician restores service.

Historical Averages	
5-Yr Avg	37,246
4-Yr Avg	20,377
3-Yr Avg	4,208

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	105,060	96,065	95,316	97,616	104,720	68,884	9,577	2,389	658			
Forecast		104,982	105,046	105,111		66,536	6,216	455		665	672	678



**Forecasting Method:** Base Year (Orders to Total Active Meters)

This order type is impacted by Smart Meter. 2013 is the first full year post Smart Meter implementation.

SDG&E

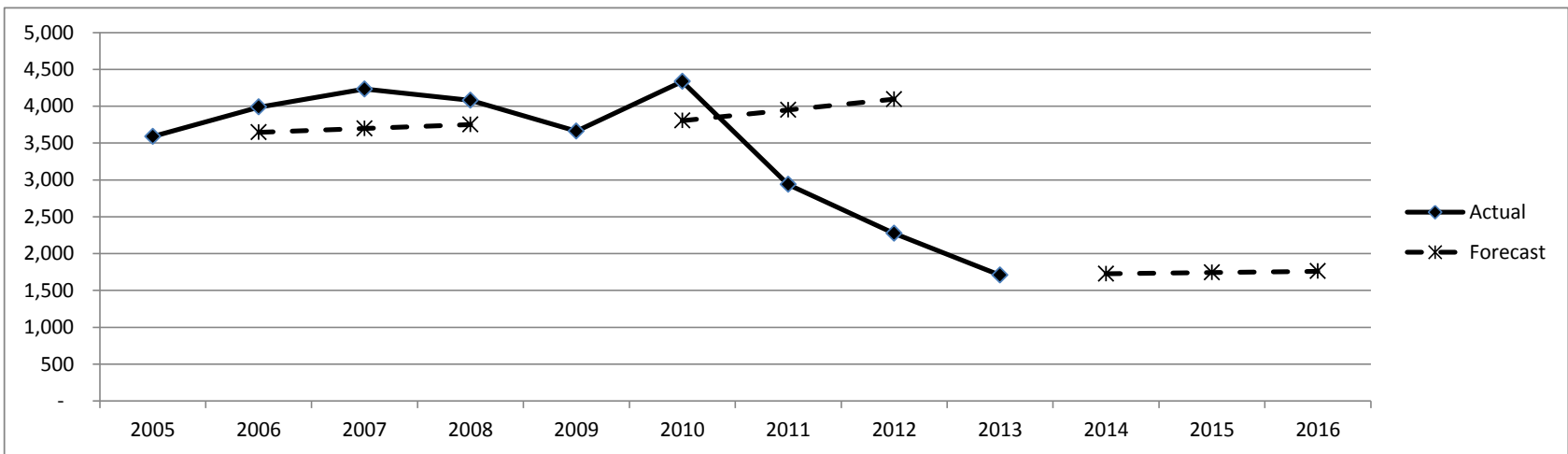
# COLLECTIONS - CREDIT SHUT OFF

**Source** Collections  
**Order Group** Collections  
**Order Type** Credit Shut Off

**Description:** This order type is used when a customer's service is manually shut off for nonpayment.

Order Averages	
5-Yr Avg	2,983
4-Yr Avg	2,813
3-Yr Avg	2,306

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	3,587	3,988	4,232	4,079	3,661	4,334	2,937	2,274	1,707			
Forecast		3,646	3,698	3,750		3,804	3,949	4,094		1,725	1,742	1,760



**Forecasting Method:** Base Year (Orders to Total Active Meters)

This order type is impacted by Smart Meter. 2013 is the first full year post Smart Meter.

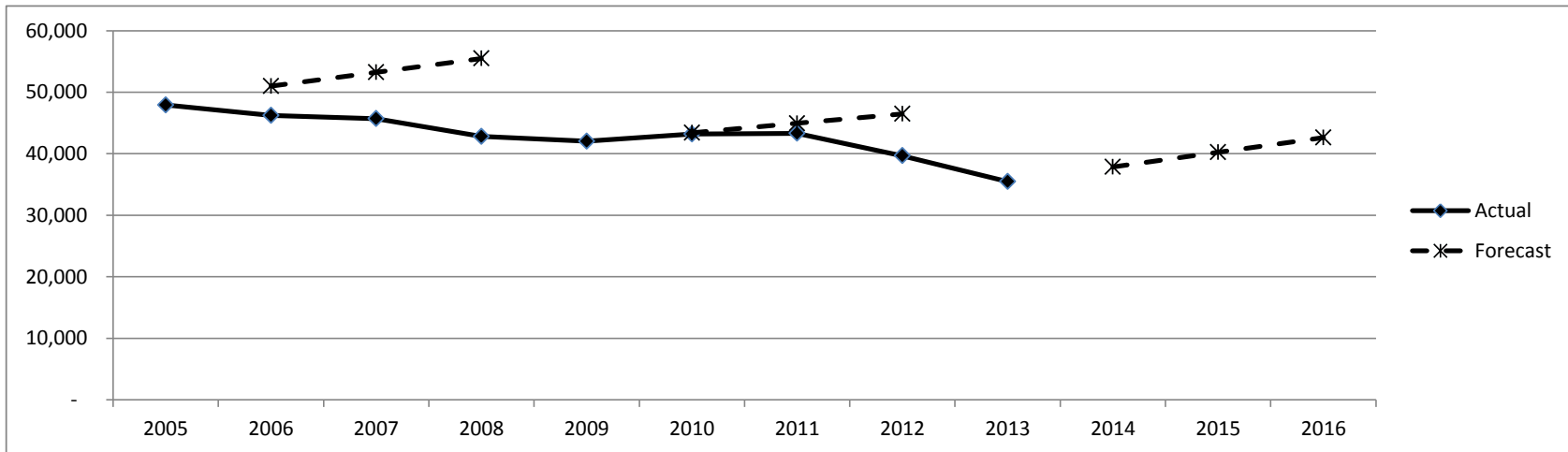
# CSO - APPLIANCE ADJUSTMENTS

**Source** Customer Work  
**Order Group** CSO  
**Order Type** APPLIANCE ADJUSTMENTS

**Description:** This order type is used when a customer requests service on a gas appliance (e.g., inoperative water heater).

Historical Averages	
5-Yr Avg	40,734
4-Yr Avg	40,411
3-Yr Avg	39,479

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	47,933	46,223	45,702	42,815	42,027	43,209	43,302	39,678	35,456			
Forecast		50,987	53,234	55,480		43,398	44,941	46,484		37,853	40,249	42,646



**Forecasting Method:** 5-Year Avg (Orders to Active Gas Meters)

Volumes fluctuate from year to year and are impacted by external factors outside the company's control, e.g., the economy, customers' appliance/equipment choices and condition, and weather and associated requests to check space heating equipment.

SDG&E

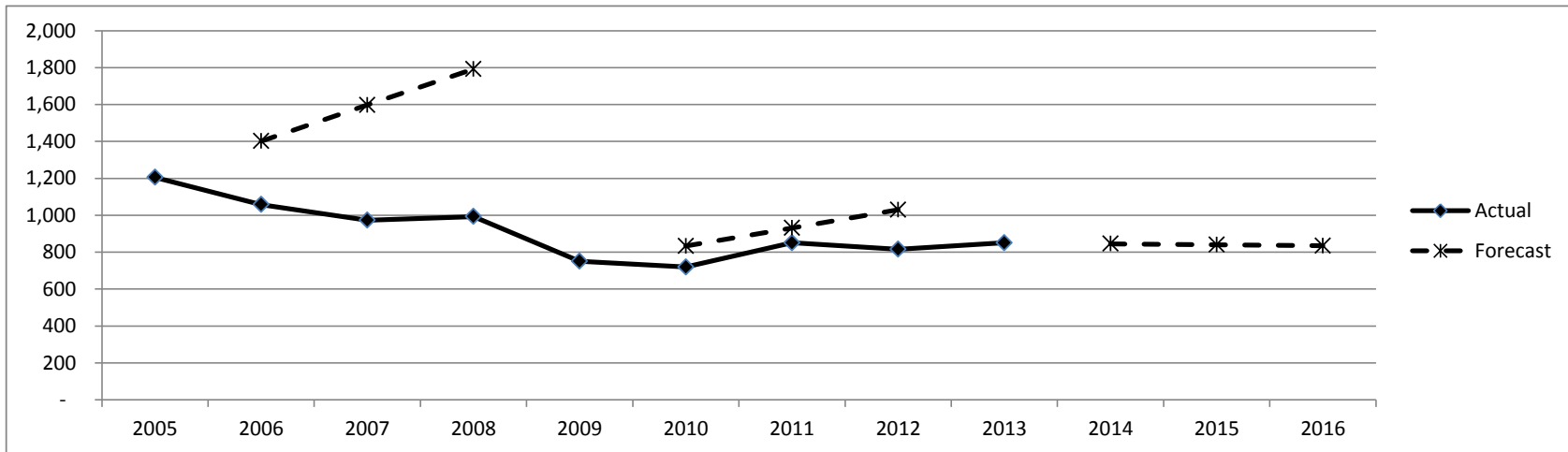
## CSO - APPLIANCE MECHANIC WORK

**Source** Customer Work  
**Order Group** CSO  
**Order Type** Appliance Mechanic Work

**Description:** This order type is used when a field technician performs gas appliance/equipment work at a commercial/industrial facility, as well as for follow-up orders where a higher skilled technician is needed to service a customer's gas appliance.

Historical Averages	
5-Yr Avg	798
4-Yr Avg	809
3-Yr Avg	839

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	1,205	1,058	973	993	751	719	851	816	851			
Forecast		1,402	1,597	1,793		834	931	1,029		845	840	834



**Forecasting Method:** 5-Year Avg (Orders to Active Gas Meters)

Volumes fluctuate from year to year and are impacted by external factors outside the company's control, e.g., the economy, customers' appliance/equipment choices and condition, and weather and associated requests to check space heating equipment.

SDG&E

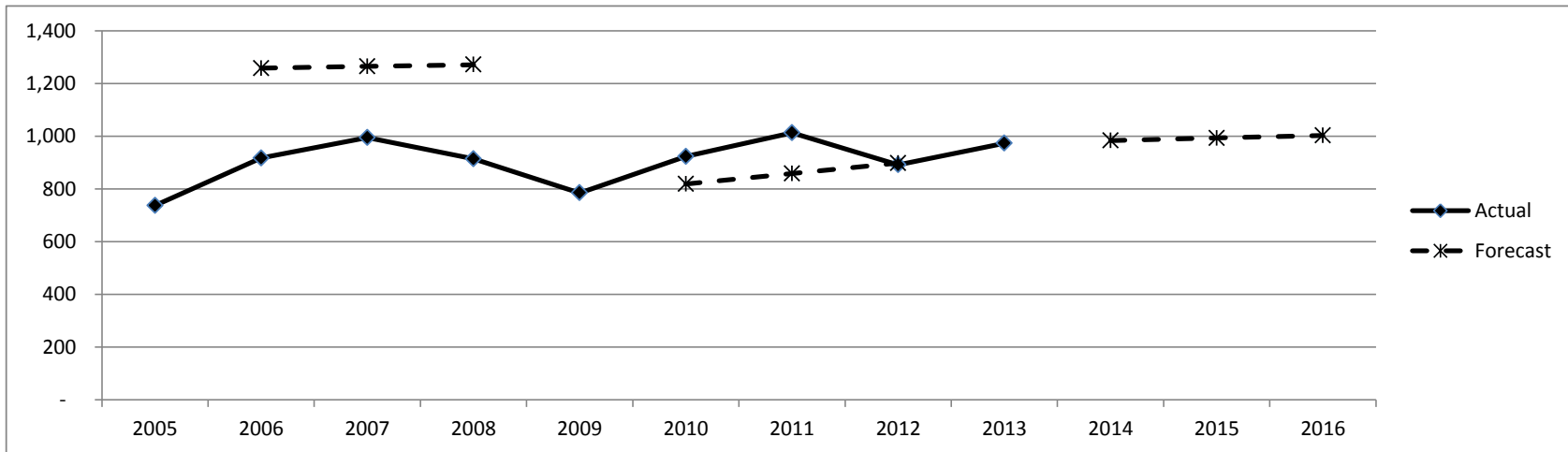
# CSO - CARBON MONOXIDE-EMERGENCY

**Source** Customer Work  
**Order Group** CSO  
**Order Type** Carbon Monoxide-Emergency

**Description:** This order type is used when a customer reports Carbon Monoxide (CO) symptoms or was transported for medical treatment where CO poisoning is suspected. The field technician validates the operation of the gas appliances and takes action to

Historical Averages	
5-Yr Avg	917
4-Yr Avg	950
3-Yr Avg	959

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	737	917	995	914	785	923	1,013	891	973			
Forecast		1,258	1,264	1,271		819	858	898		983	993	1,003



**Forecasting Method:** Base Year (Orders to Total Active Meters)

2013 reflects the most recent experience since Senate Bill 183 was enacted with the requirement to install CO detectors in residential dwellings.

SDG&E

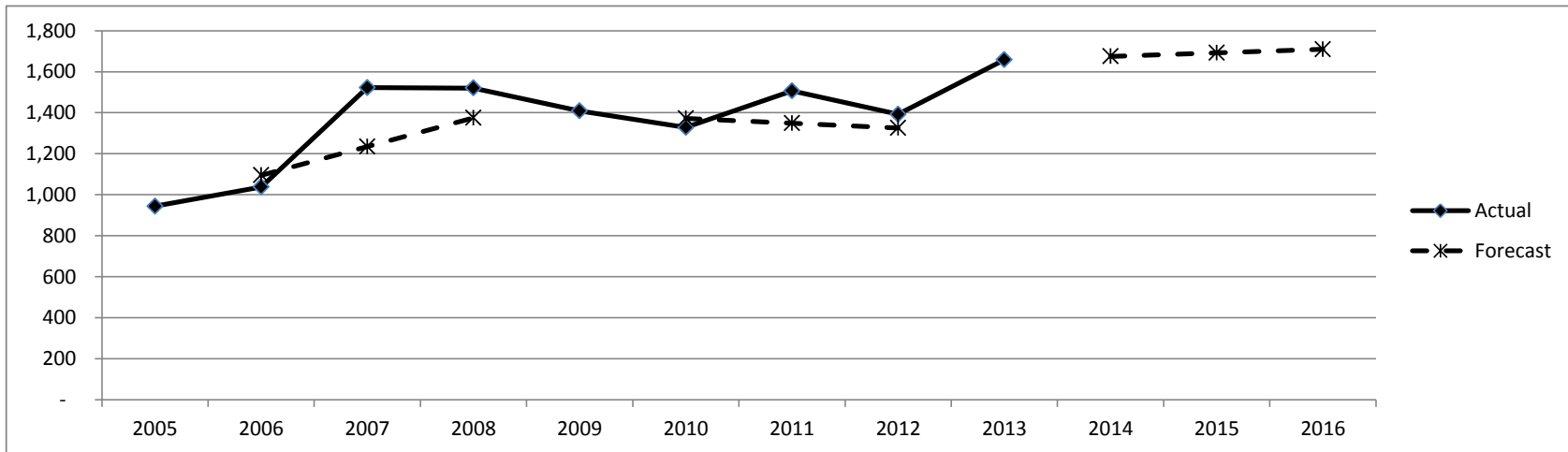
# CSO - CARBON MONOXIDE-NON EMERGENCY

**Source** Customer Work  
**Order Group** CSO  
**Order Type** Carbon Monoxide-Non Emergency

**Description:** This is a service order for which the customer has requested that a field technician check their premises for Carbon Monoxide (CO); the customer has not experienced any CO symptoms.

Historical Averages	
5-Yr Avg	1,459
4-Yr Avg	1,471
3-Yr Avg	1,519

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	944	1,038	1,522	1,520	1,409	1,328	1,506	1,392	1,658			
Forecast		1,095	1,235	1,375		1,372	1,349	1,326		1,675	1,692	1,709



**Forecasting Method:** Base Year (Orders to Total Active Meters)

2013 reflects the most recent experience since Senate Bill 183 was enacted with the requirement to install CO detectors in residential dwellings.

San Diego Gas & Electric Company  
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 Non-Shared Service Workpapers



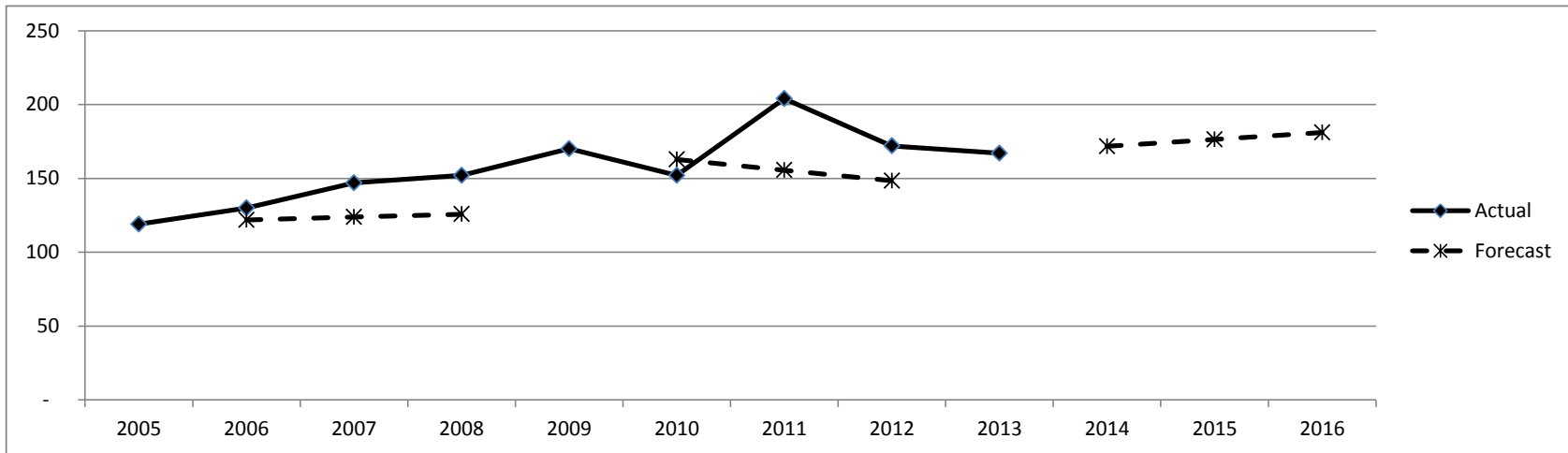
# CSO - HIGH PRESSURE

Source Customer Work  
 Order Group CSO  
 Order Type HIGH PRESSURE

**Description:** This order type is used when a customer has reported possible pressure problems at an appliance. The field technician checks the appliance for proper operation, as well as the pressure supplied at the meter.

Historical Averages	
5-Yr Avg	173
4-Yr Avg	174
3-Yr Avg	181

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	119	130	147	152	170	152	204	172	167			
Forecast		122	124	126		163	156	148		172	176	181



**Forecasting Method:** 5-Year Avg (Orders to Active Gas Meters)

Volumes fluctuate from year to year and are impacted by external factors outside the company's control, e.g., conditions which may cause a customer's appliance to not work properly.

SDG&E

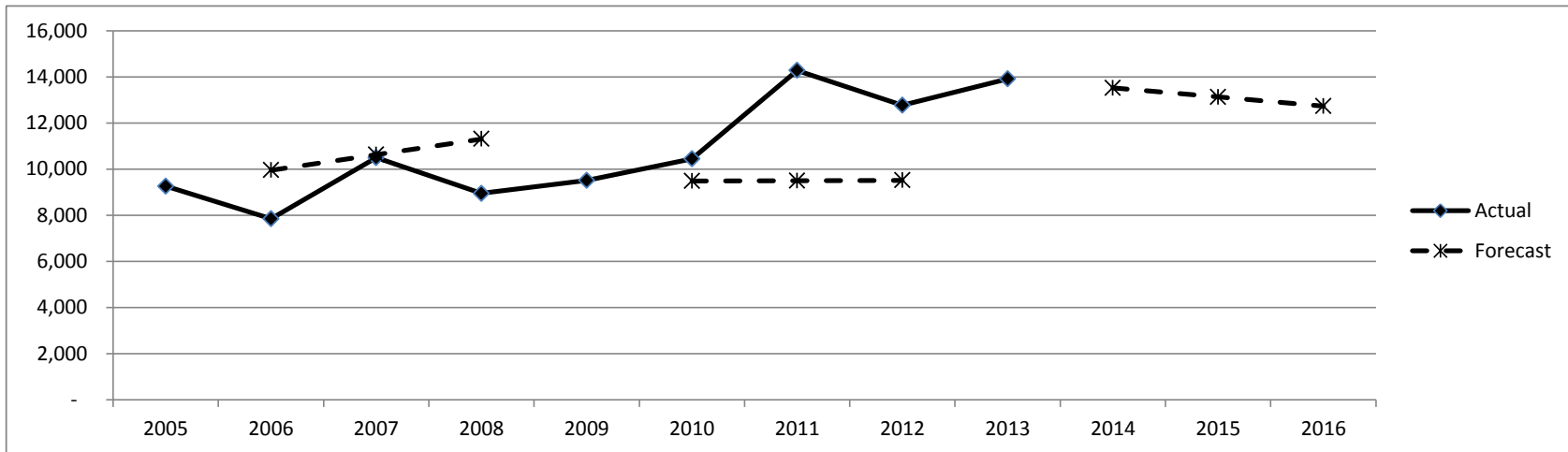
# CSO - NO GAS

**Source** Customer Work  
**Order Group** CSO  
**Order Type** NO GAS

**Description:** This is a service order for which a customer has indicated they have no gas. The field technician investigates the source of the problem, takes corrective action and restores gas service as needed.

Historical Averages	
5-Yr Avg	12,181
4-Yr Avg	12,850
3-Yr Avg	13,651

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	9,258	7,844	10,491	8,946	9,504	10,447	14,273	12,768	13,913			
Forecast		9,954	10,630	11,307		9,479	9,497	9,515		13,520	13,127	12,734



**Forecasting Method:** 5-Year Avg (Orders to Active Gas Meters)

Volumes fluctuate from year to year and are impacted by external factors outside the company's control, e.g., malfunctioning equipment or other conditions which may cause a customer to be without gas.

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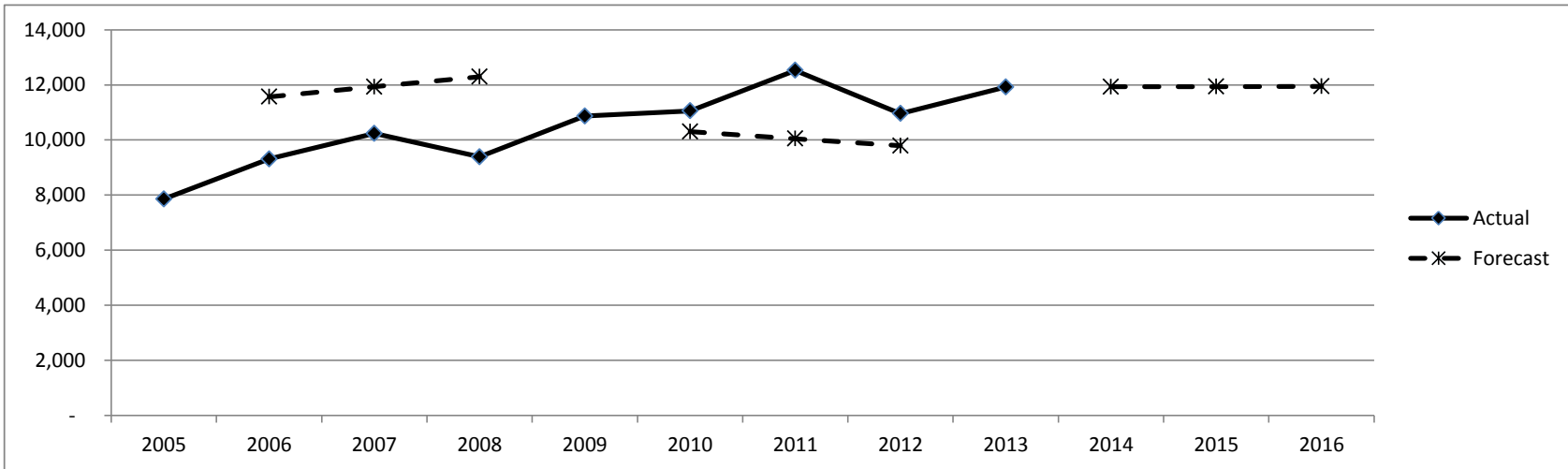
# CSO - OTHER MISC GAS ELEC CUSTOMER REQUESTS

**Source** Customer Work  
**Order Group** CSO  
**Order Type** OTHER MISC GAS & ELEC CUSTOMER REQUESTS

**Description:** This order type is used when a customer calls with a non-standard request. For example, they have no power in a portion of their home or want to know if an exposed pipe in their yard is a gas line. The

Historical Averages	
5-Yr Avg	11,467
4-Yr Avg	11,617
3-Yr Avg	11,803

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	7,853	9,310	10,238	9,387	10,864	11,059	12,526	10,960	11,924			
Forecast		11,570	11,934	12,298		10,307	10,048	9,788		11,932	11,940	11,948



**Forecasting Method:** 5-Yr Avg

Volumes fluctuate from year to year and are impacted by external factors outside the company's control, e.g., conditions at customer premises.

SDG&E

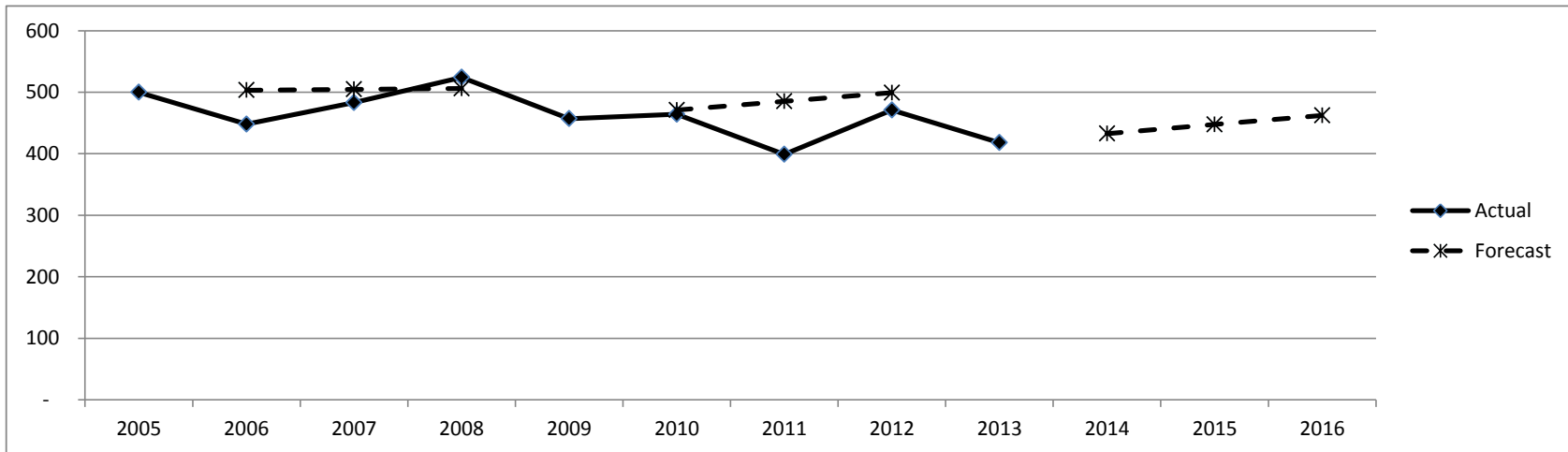
# CSO - SCHOOL LEAK SURVEYS

**Source** Customer Work  
**Order Group** CSO  
**Order Type** SCHOOL LEAK SURVEYS

**Description:** This order type is used when a school requests a complete survey of their gas lines to ensure the integrity of their gas system. The field technician performs an inspection, including inspecting all appliances, to validate the system is leak free and/or identify needed repairs.

Historical Averages	
5-Yr Avg	442
4-Yr Avg	438
3-Yr Avg	429

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	500	448	483	524	457	464	399	471	418			
Forecast		503	505	506		471	485	499		433	448	462



**Forecasting Method:** 5-Year Avg (Orders to Active Gas Meters)

Volumes fluctuate from year to year and are impacted by external factors outside the company's control, e.g., school maintenance schedules.

SDG&E

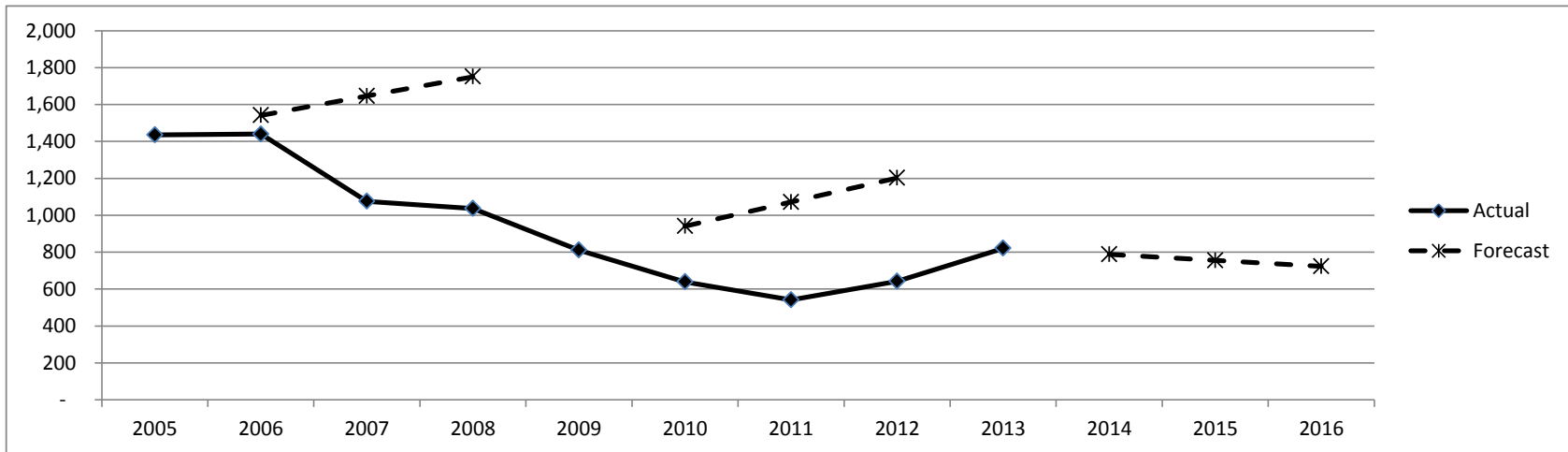
# CSO - SEASONAL OFF

**Source** Customer Work  
**Order Group** CSO  
**Order Type** SEASONAL OFF

**Description:** This order type is used when a customer requests the gas to be shut off on a heating appliance. The field technician performs a safety check of the appliance and leaves the appliance off.

Historical Averages	
5-Yr Avg	691
4-Yr Avg	661
3-Yr Avg	668

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	1,436	1,440	1,076	1,036	811	639	541	642	821			
Forecast		1,542	1,646	1,751		941	1,072	1,202		788	756	723



**Forecasting Method:** 5-Year Avg (Orders to Active Gas Meters)

Volumes fluctuate from year to year and are impacted by external factors outside the company's control, e.g., weather fluctuations.

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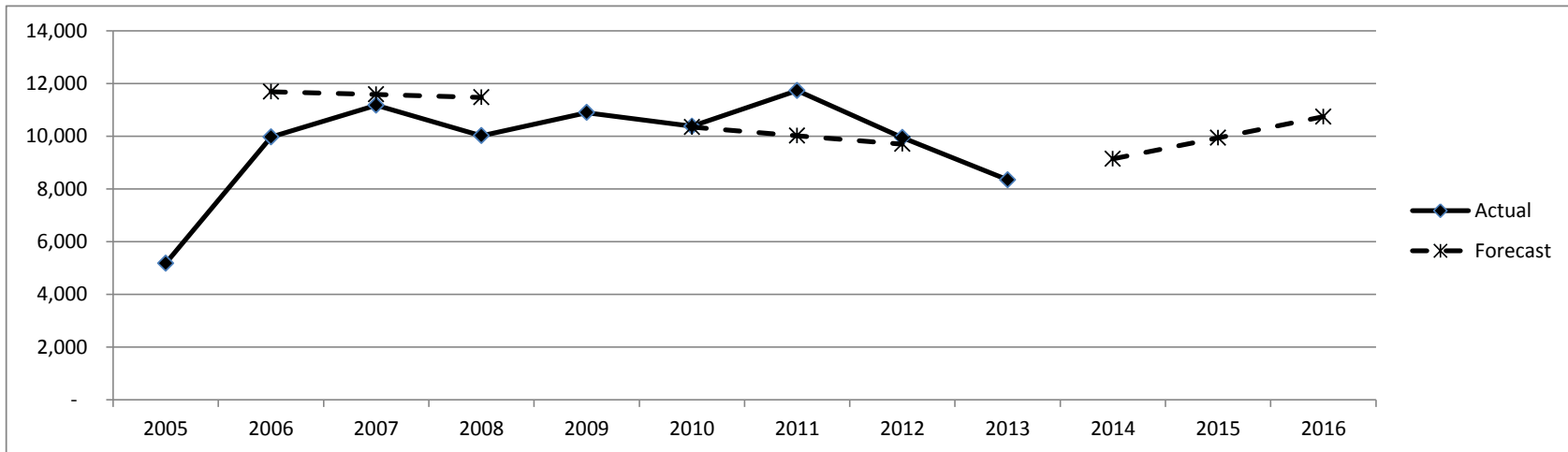
## CSO - SEASONAL ON MULTIPLES

**Source** Customer Work  
**Order Group** CSO  
**Order Type** SEASONAL ON MULTIPLES

**Description:** This order type is used when a multi-unit premise, such as an assisted living establishment, requests that a service technician light the pilots on gas space heating appliances. The appliances are also checked for safety.

Historical Averages	
5-Yr Avg	10,256
4-Yr Avg	10,097
3-Yr Avg	10,005

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	5,172	9,967	11,170	10,016	10,893	10,373	11,726	9,951	8,339			
Forecast		11,687	11,579	11,472		10,339	10,020	9,700		9,139	9,939	10,739



**Forecasting Method:** 5-Year Avg (Orders to Active Gas Meters)

Volumes fluctuate from year to year and are impacted by external factors outside the company's control, e.g., weather fluctuations.

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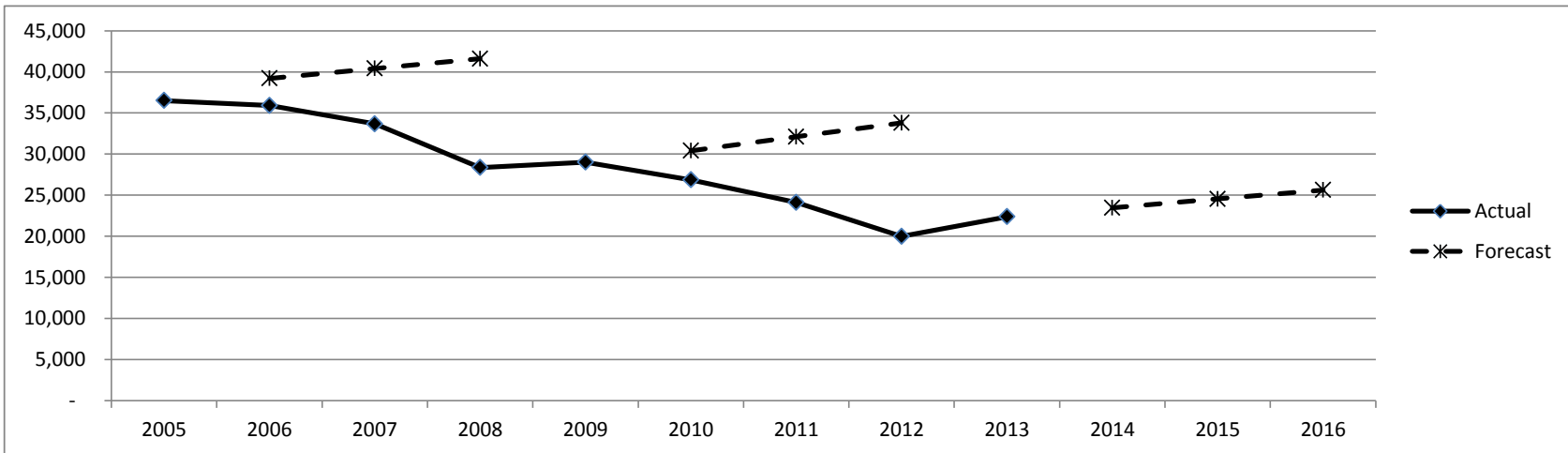
# CSO - SEASONAL ON SINGLES

**Source** Customer Work  
**Order Group** CSO  
**Order Type** SEASONAL ON SINGLES

**Description:** This order type is used when a customer (single-unit premise) requests that the pilot on their gas space heating appliance be lit. The appliance is also checked for safety.

Historical Averages	
5-Yr Avg	24,466
4-Yr Avg	23,329
3-Yr Avg	22,151

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	36,514	35,918	33,668	28,348	29,012	26,862	24,102	19,982	22,370			
Forecast		39,206	40,404	41,601		30,402	32,099	33,796		23,455	24,540	25,626



**Forecasting Method:** 5-Year Avg (Orders to Active Gas Meters)

Volumes fluctuate from year to year and are impacted by external factors outside the company's control, e.g., weather fluctuations.

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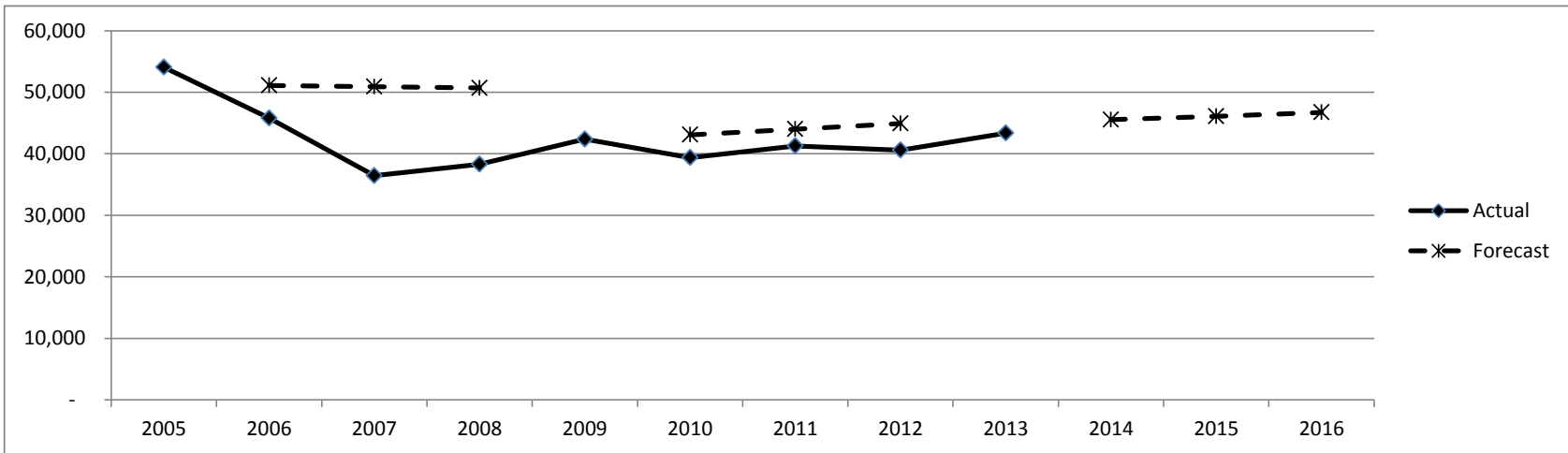
# FUMIGATION/BUG FOGGER

**Source** Customer Work  
**Order Group** Fumigation  
**Order Type** FUMIGATION/BUG FOGGER

**Description:** This order type is used when a customer requests that the gas be shut off or restored for fumigation activity. For shut off, the meter is closed and secured. For restore, the gas is restored and appliances are serviced.

Historical Averages	
5-Yr Avg	41,396
4-Yr Avg	41,151
3-Yr Avg	41,747

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	54,082	45,781	36,447	38,302	42,379	39,361	41,268	40,597	43,376			
Forecast		51,110	50,896	50,683		43,085	44,001	44,918		45,545	46,084	46,732



**Forecasting Method:** 2013 + 5%, then growth (Orders to Active Gas Meters)

Pest Control Operators of California (PCOC) projects 5% growth in fumigation in 2014 for San Diego County.



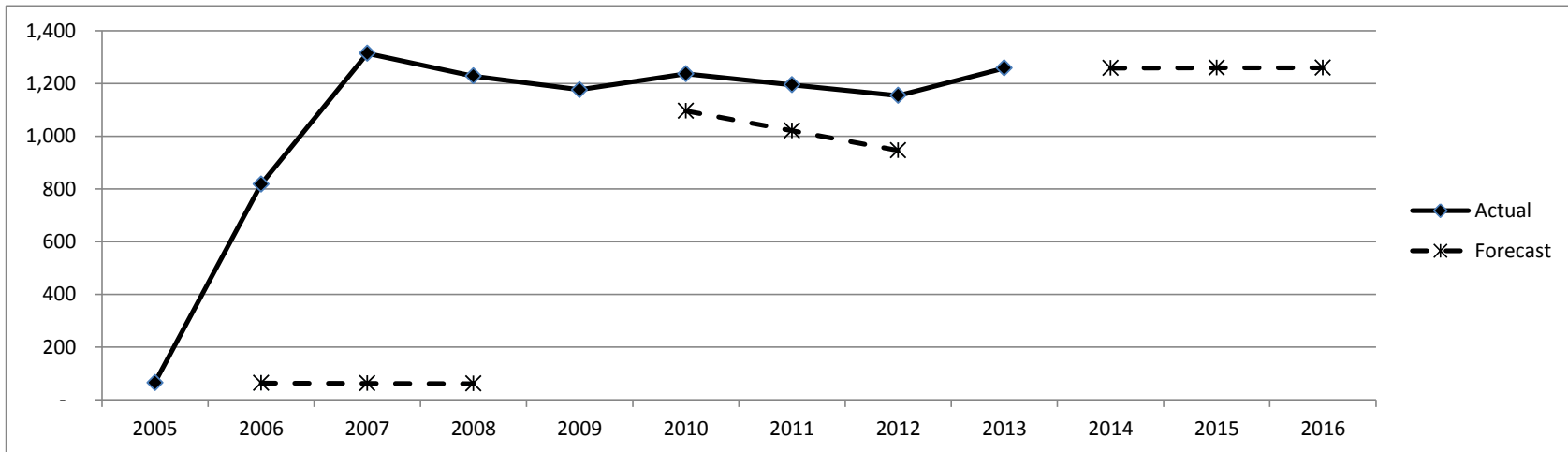
## GAS LEAKS - EMERGENCY B&B INSIDE

**Source** Customer Work  
**Order Group** Gas Leak  
**Order Type** EMERGENCY B&B INSIDE

**Description:** This order type is used when a customer requests emergency service to address an interior gas line or connector that is broken. (B&B = broken and blowing)

Historical Averages	
5-Yr Avg	1,204
4-Yr Avg	1,211
3-Yr Avg	1,202

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	65	818	1,314	1,228	1,176	1,236	1,195	1,154	1,258			
Forecast		64	62	61		1,096	1,021	946		1,259	1,259	1,260



**Forecasting Method:** 5-Year Avg (Orders to Active Gas Meters)

Volumes fluctuate from year to year and are impacted by external factors that are outside the company's control, e.g., condition of customers' gas lines, construction activity/hit lines, structure fires.

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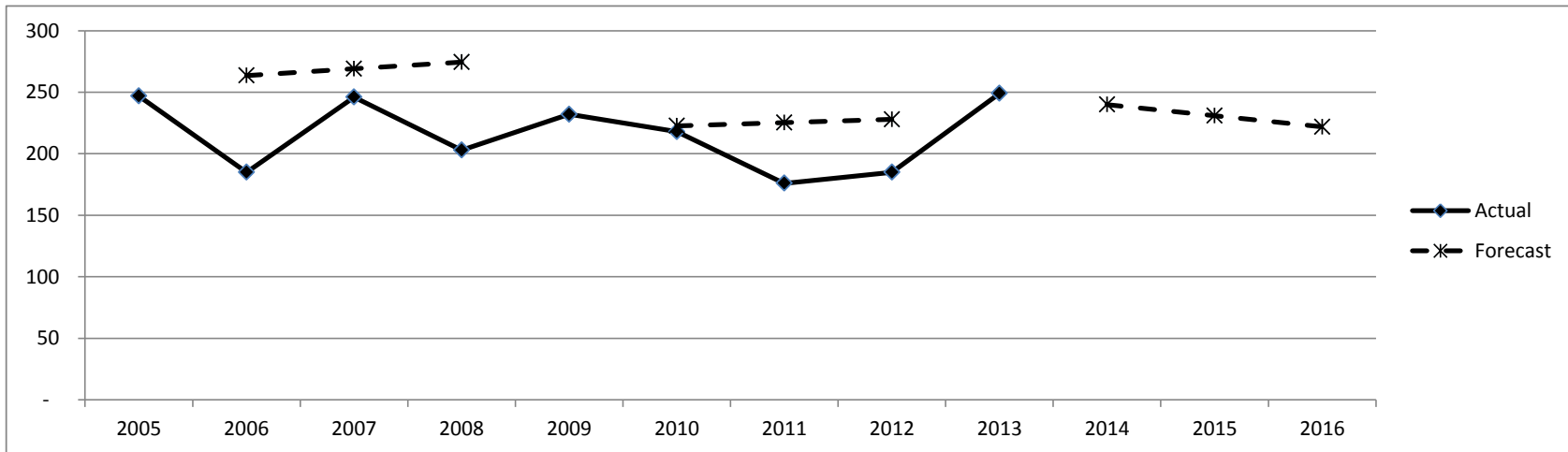
## GAS LEAKS - EMERGENCY B&B OUTSIDE

**Source** Customer Work  
**Order Group** Gas Leak  
**Order Type** EMERGENCY B&B OUTSIDE

**Description:** This order type is used when a customer requests emergency service to address an exterior gas line or connector that is broken. (B&B = broken and blowing)

Historical Averages	
5-Yr Avg	212
4-Yr Avg	207
3-Yr Avg	203

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	247	185	246	203	232	218	176	185	249			
Forecast		264	269	275		223	225	228		240	231	222



**Forecasting Method:** 5-Year Avg (Orders to Active Gas Meters)

Volumes fluctuate from year to year and are impacted by external factors that are outside the company's control, e.g., condition of customers' gas lines, construction activity/hit lines, structure fires.

SDG&E

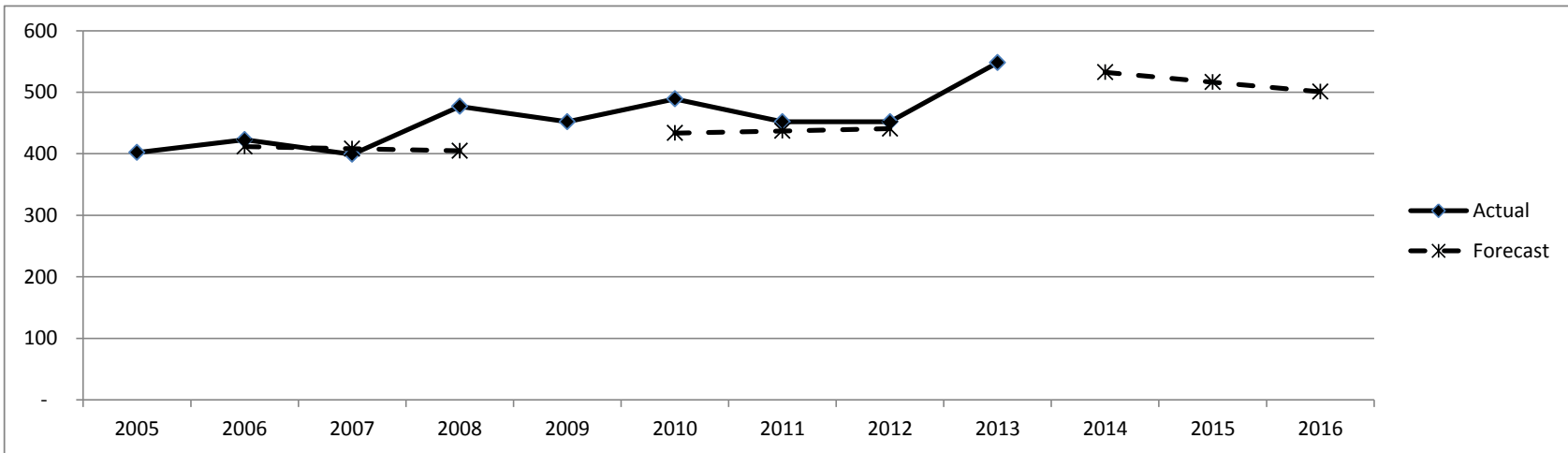
# GAS LEAKS - EMERGENCY-AGENCY REQUESTS

**Source** Customer Work  
**Order Group** Gas Leak  
**Order Type** EMERGENCY-AGENCY REQUESTS

**Description:** This order type is used when an external agency (e.g., fire department) contacts the company and a field technician responds to a gas leak, fire, etc.

Historical Averages	
5-Yr Avg	479
4-Yr Avg	485
3-Yr Avg	484

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	402	423	399	477	452	489	452	452	548			
Forecast		412	408	405		434	437	441		532	516	501



**Forecasting Method:** 5-Year Avg (Orders to Active Gas Meters)

Volumes fluctuate from year to year and are impacted by external factors that are outside the company's control, e.g., conditions at customer premises.

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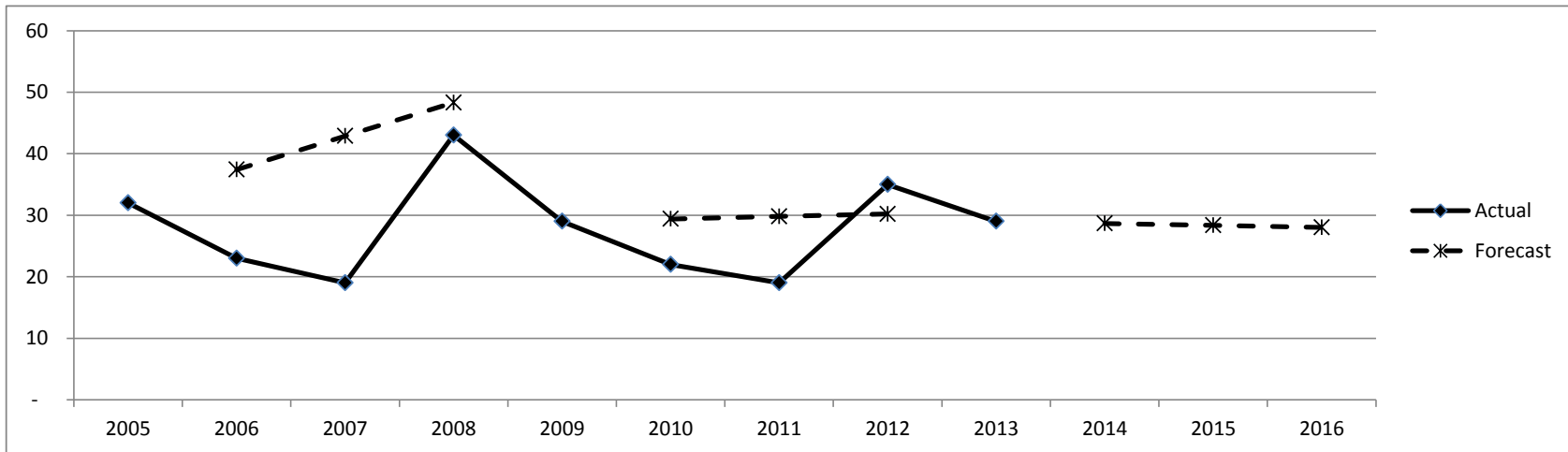
# GAS LEAKS - FIRE & EXPLOSIONS

**Source** Customer Work  
**Order Group** Gas Leak  
**Order Type** FIRE & EXPLOSIONS

**Description:** This order type is used when a customer requests field response to a fire or explosion.

Historical Averages	
5-Yr Avg	27
4-Yr Avg	26
3-Yr Avg	28

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	32	23	19	43	29	22	19	35	29			
Forecast		37	43	48		29	30	30		29	28	28



**Forecasting Method:** 5-Year Avg (Orders to Active Gas Meters)

Volumes fluctuate from year to year and are impacted by external factors that are outside the company's control, e.g., conditions at customer premises.

SDG&E

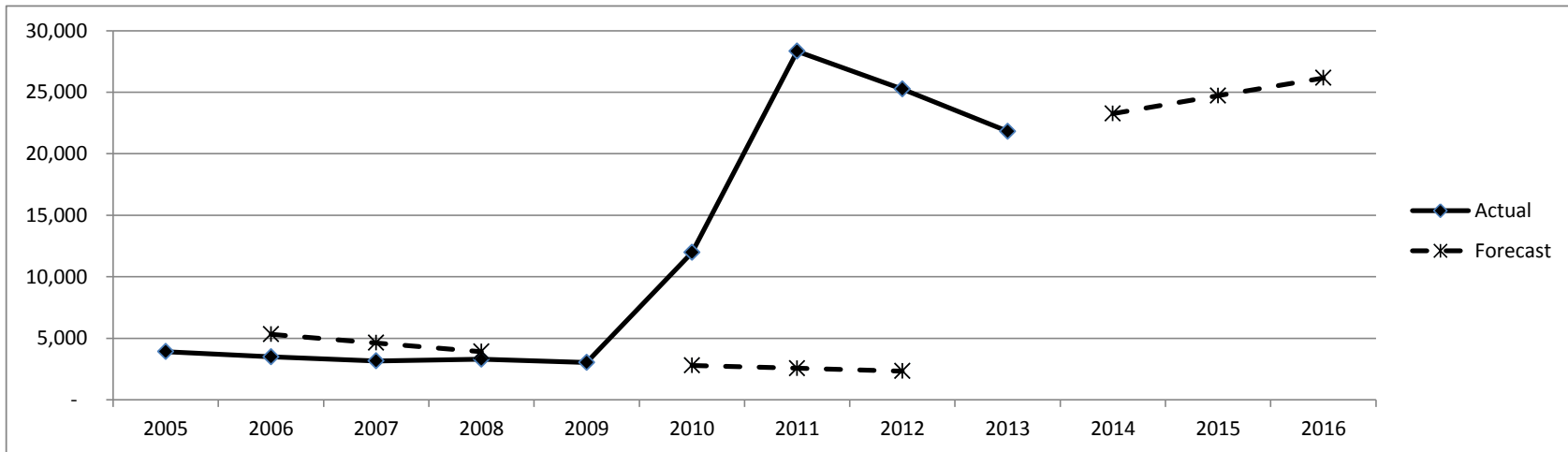
# GAS LEAKS-HAZARD

**Source** Customer Work  
**Order Group** Gas Leak  
**Order Type** GAS LEAKS-HAZARD

**Description:** This order type is used when a customer reports a gas leak and, based on the information provided, it is categorized as a possible hazard. The field technician investigates, makes the condition safe, and repairs any leaks to the extent possible. The customer may be referred to

Historical Averages	
5-Yr Avg	18,081
4-Yr Avg	21,841
3-Yr Avg	25,130

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	3,915	3,492	3,157	3,298	3,039	11,974	28,332	25,246	21,813			
Forecast		5,332	4,623	3,915		2,789	2,560	2,331		23,263	24,714	26,164



**Forecasting Method:** 3-Year Avg (Orders to Active Gas Meters)

In 2010, SDG&E reclassified leak orders, resulting in a shift of some orders from non-hazardous to hazardous. 2009 and 2010 were excluded to eliminate the effects of the reclassification of orders.

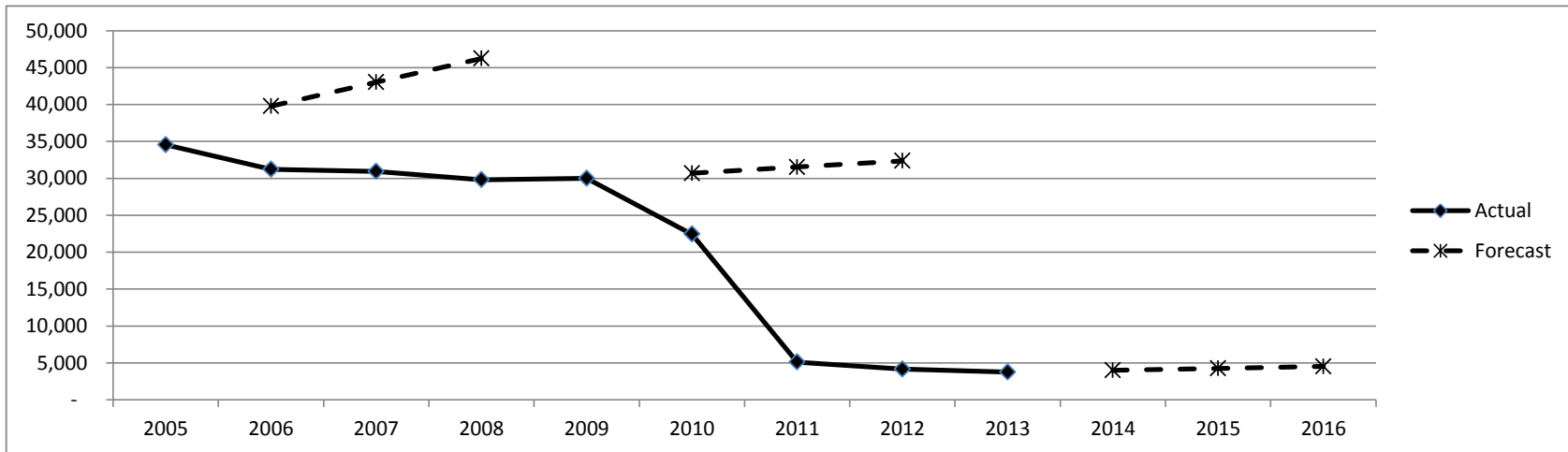
# GAS LEAKS-NON HAZARD

**Source** Customer Work  
**Order Group** Gas Leak  
**Order Type** GAS LEAKS-NON HAZARD

**Description:** This order type is used when a customer reports a gas leak and, based on the information provided, it is categorized as non-hazardous. The technician investigates, makes the condition safe, and repairs any leaks to the extent possible. The customer may be referred to

Historical Averages	
5-Yr Avg	13,089
4-Yr Avg	8,860
3-Yr Avg	4,335

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	34,541	31,221	30,940	29,811	30,006	22,434	5,112	4,147	3,747			
Forecast		39,787	43,016	46,244		30,680	31,525	32,371		4,003	4,258	4,514



**Forecasting Method:** 3-Year Avg (Orders to Active Gas Meters)

In 2010, SDG&E reclassified leak orders, resulting in a shift of some orders from non-hazardous to hazardous. 2009 and 2010 were excluded to eliminate the effects of the reclassification of orders.

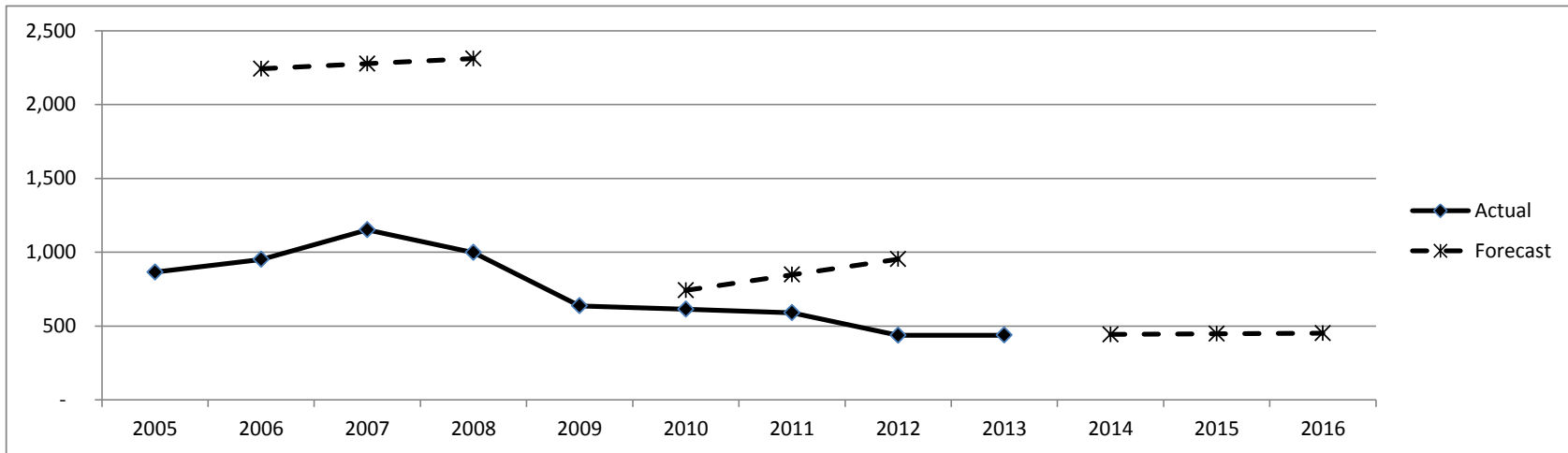
# HBI

Source Customer Work  
 Order Group HBI  
 Order Type HBI

**Description:** This order type is used when when a customer requests that a service technician inspect the facility and related appliances due to a higher than expected bill.

Historical Averages	
5-Yr Avg	543
4-Yr Avg	520
3-Yr Avg	488

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	865	951	1,151	998	637	614	590	437	438			
Forecast		2,242	2,277	2,311		742	847	953		443	447	452



**Forecasting Method:** Base Year (Orders to Total Active Meters)

This order type is impacted by Smart Meter. 2013 is the first full year post Smart Meter implementation.

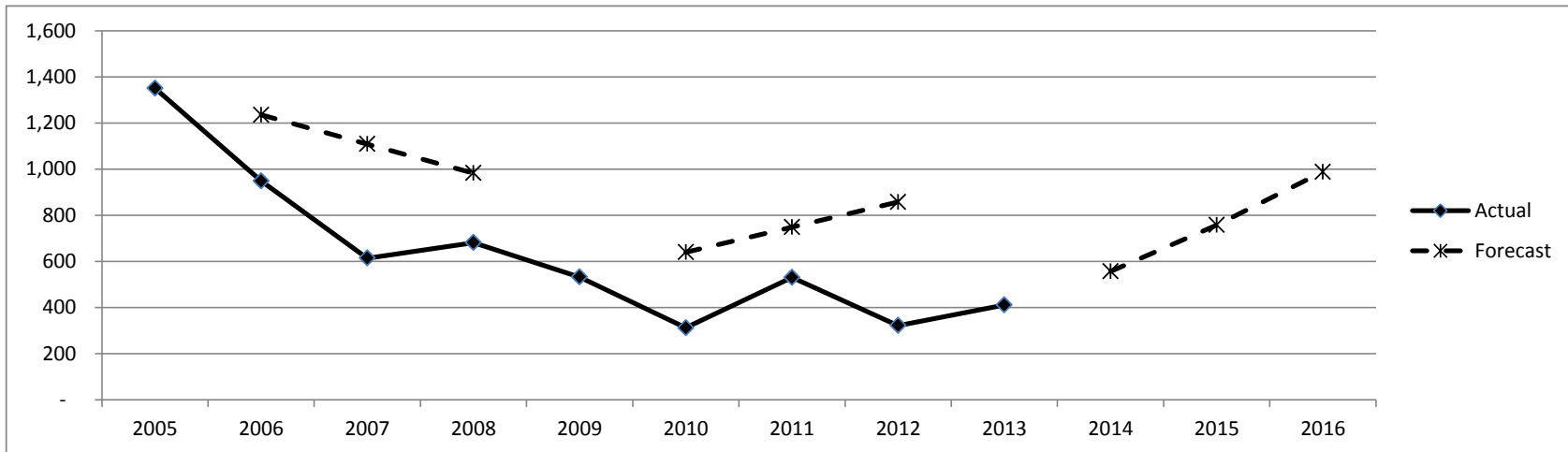
# METER WORK CAPITAL - HEADER WORK

**Source** Customer Work  
**Order Group** Meter Work - Capital  
**Order Type** HEADER WORK

**Description:** This is work performed prior to a new meter being set. The field technician installs a manifold that will accommodate two or more meters or a larger commercial meter.

Historical Averages	
5-Yr Avg	421
4-Yr Avg	394
3-Yr Avg	421

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	1,351	948	614	681	532	312	530	322	411			
Forecast		1,235	1,109	983		640	748	857		557	758	988



**Forecasting Method:** Follows Capital Forecast

Volumes are driven by the forecasted growth in new business capital construction and associated meter sets.

SDG&E



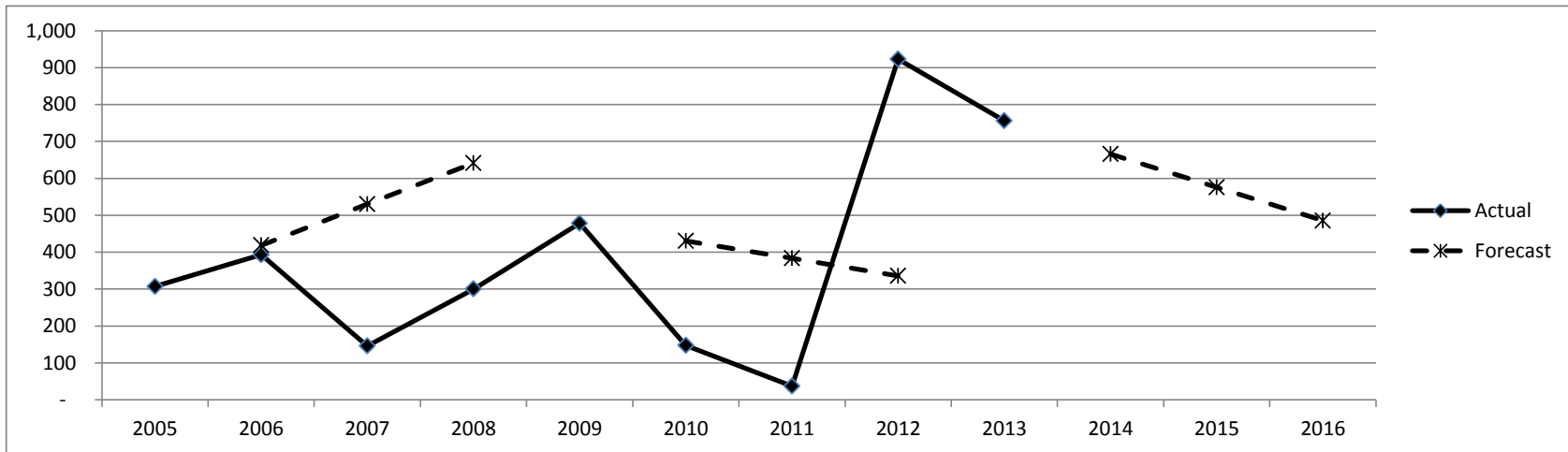
# METER WORK CAPITAL - METER SETS - ELECTRIC

**Source** Customer Work  
**Order Group** Meter Work - Capital  
**Order Type** METER SETS - ELECTRIC

**Description:** This order type is used when an electric meter is installed at a new customer facility. The field technician installs the appropriate electric meter and the customer's electric service is turned on.

Historical Averages	
5-Yr Avg	468
4-Yr Avg	466
3-Yr Avg	572

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	307	393	146	300	478	147	37	923	756			
Forecast		418	530	641		431	383	336		666	576	485



**Forecasting Method:** 5-Year Avg (Orders to Active Electric Meters)

Volumes fluctuate from year to year and are impacted by external factors that are outside the company's control, e.g., the state of the economy and construction activity.

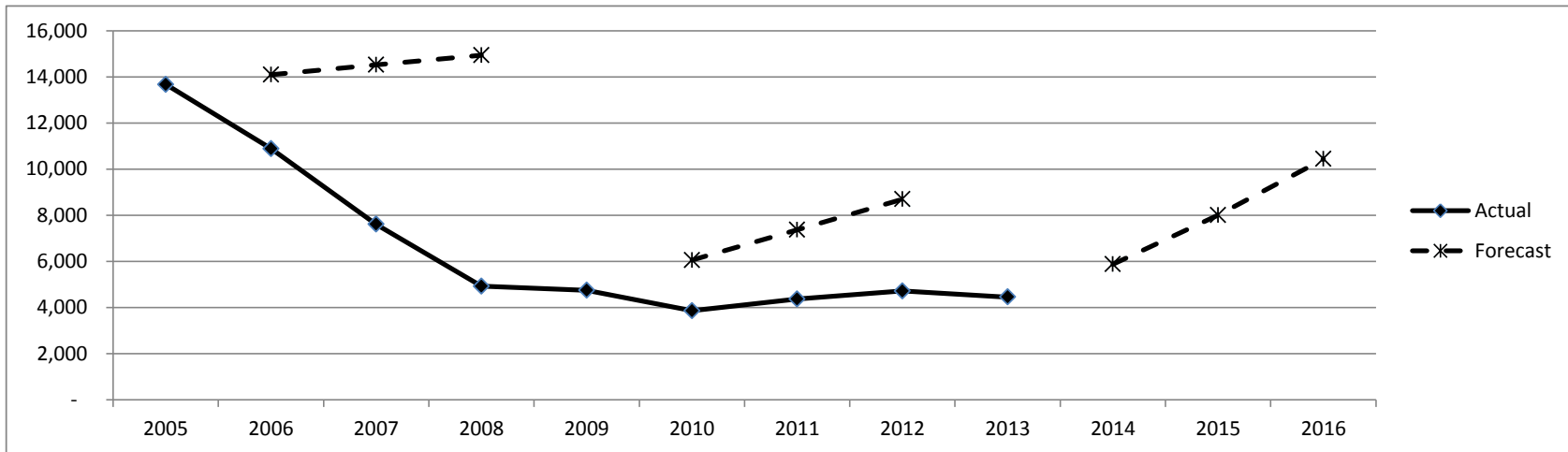
# METER WORK CAPITAL - METER SETS - GAS

**Source** Company Work  
**Order Group** Meter Work - Capital  
**Order Type** METER Sets - GAS

**Description:** This order type is used when a gas meter is installed at a new customer facility. The field technician installs the meter, inspects the customer's houseline, and services all gas appliances.

Historical Averages	
5-Yr Avg	4,427
4-Yr Avg	4,348
3-Yr Avg	4,511

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	13,672	10,880	7,608	4,922	4,742	3,857	4,366	4,716	4,452			
Forecast		14,095	14,517	14,940		6,051	7,372	8,693		5,880	8,002	10,438



**Forecasting Method:** Follows Capital Forecast

Volumes are driven by the forecasted growth in new business capital construction and associated meter sets.

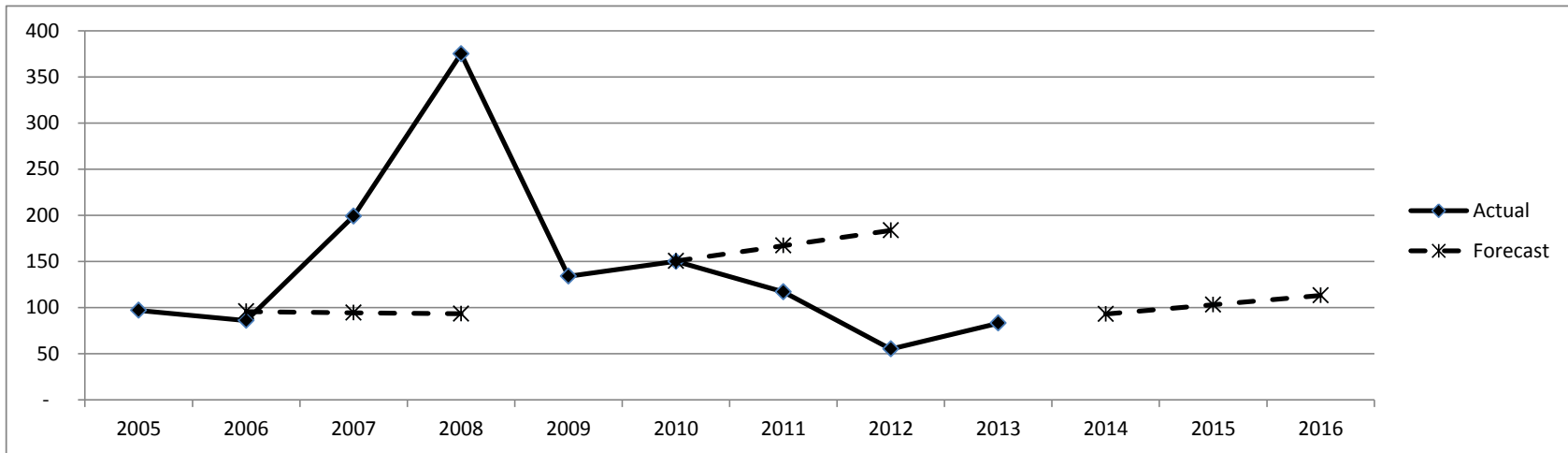
# METER WORK - O&M - ATMOSPHERIC CORROSION

**Source** Company Work  
**Order Group** Meter Work - O & M  
**Order Type** ATMOSPHERIC CORROSION

**Description:** This is a service order issued to remedy atmospheric corrosion or other abnormal operating conditions on an above ground meter set assembly (MSA). The field technician identifies and repairs abnormal operating conditions found on the MSA.

Historical Averages	
5-Yr Avg	108
4-Yr Avg	101
3-Yr Avg	85

Order Counts													
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	
Actual	97	86	199	375	134	150	117	55	83				
Forecast			96	94	93		151	167	184		93	103	113



**Forecasting Method:** 5-Year Avg (Orders to Active Electric Meters)

Volumes fluctuate from year to year and are impacted by external factors outside the company's control, e.g., corrosion or other abnormal operating conditions found at meters. These orders are issued following MSA inspections or when a field employee observes conditions requiring follow-up work.

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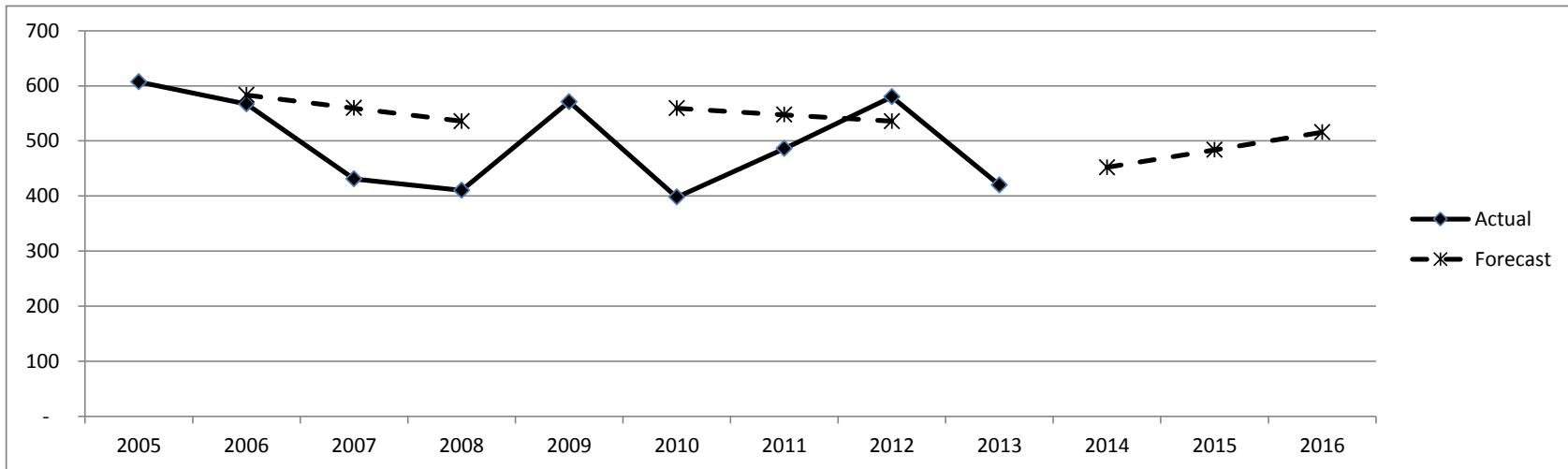
## Meter Work - O&M - CURB

**Source** Company Work  
**Order Group** Meter Work - O & M  
**Order Type** CURB

**Description:** This order type is used for DOT-required curb meter inspections. All curb meters are inspected every three years. Follow-up orders to correct conditions found that are not completed as part of the inspection are also included, e.g., replace fittings, regulator, or meter.

Historical Averages	
5-Yr Avg	491
4-Yr Avg	471
3-Yr Avg	495

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	607	567	431	410	571	398	486	580	420			
Forecast		583	559	536		559	547	536		452	484	516



**Forecasting Method:** 3-Yr Avg

Inspections are completed on a three-year cycle. Most other work orders in this order type category are the result of these inspections.

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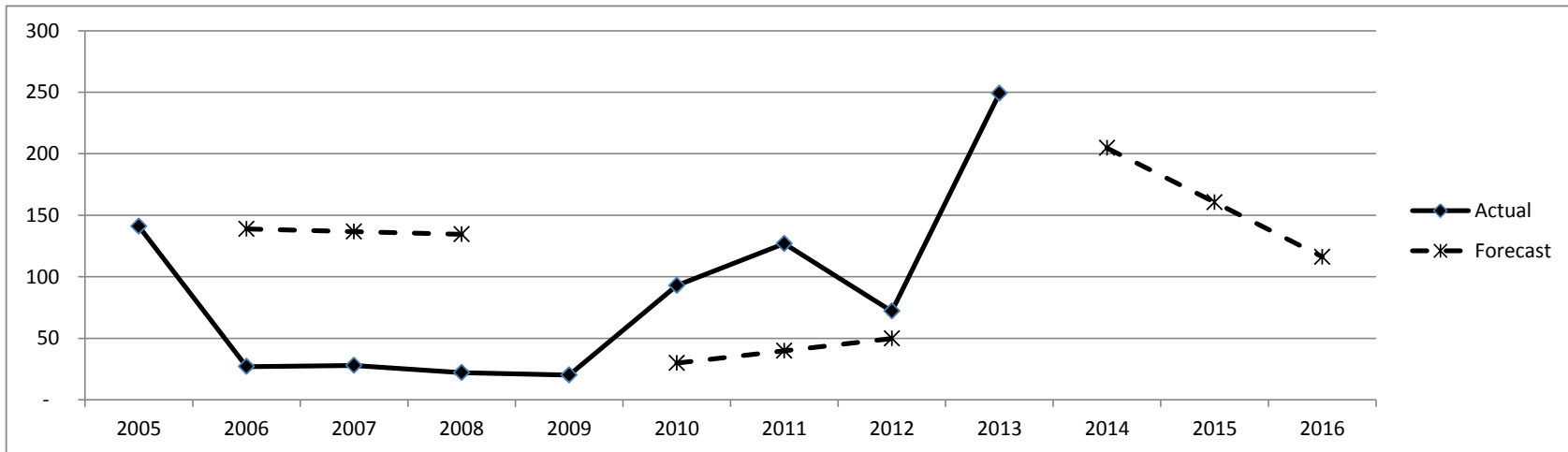
# METER WORK - O&M - CUST/COMPANY CHANGE - ELEC

**Source** Company Work  
**Order Group** Meter Work - O & M  
**Order Type** CUST/COMPANY CHANGE - ELEC

**Description:** This order type is used when an electric meter is changed due to routine maintenance issues.

Historical Averages	
5-Yr Avg	112
4-Yr Avg	135
3-Yr Avg	149

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	141	27	28	22	20	93	127	72	249			
Forecast		139	137	135		30	40	50		205	160	116



**Forecasting Method:** 5-Year Avg (Orders to Active Electric Meters)

Volumes fluctuate from year to year and are impacted by external factors outside the company's control, e.g., damages, customer meter requirements, etc.

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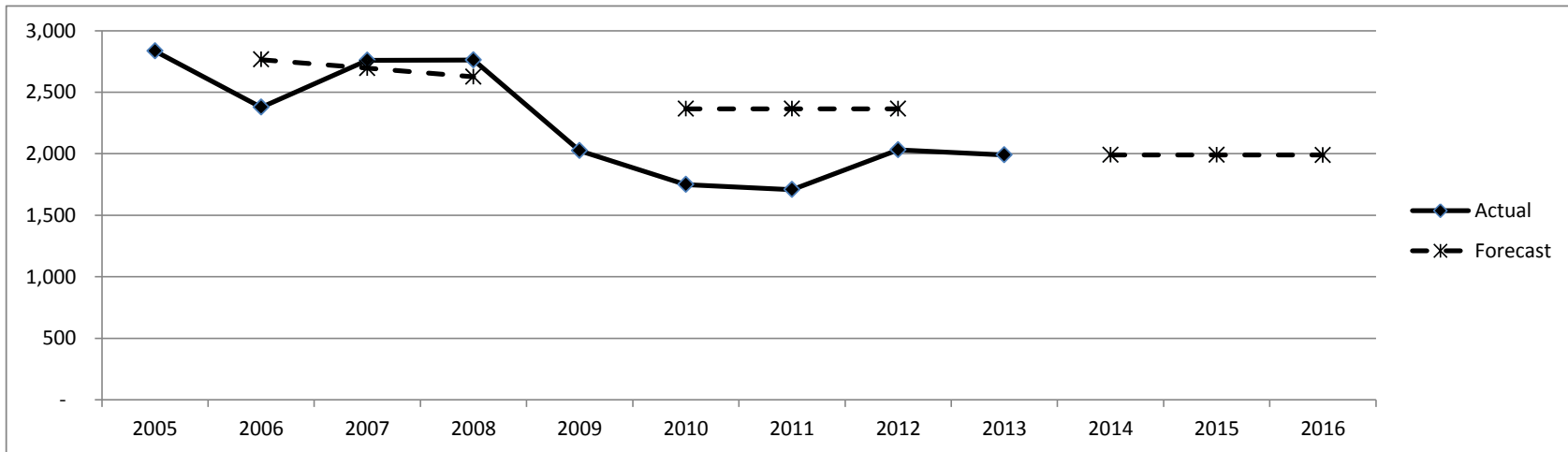
## METER WORK - O&M - CUST/COMPANY CHANGE - GAS

**Source** Company Work  
**Order Group** Meter Work - O & M  
**Order Type** CUST/COMPANY CHANGE - GAS

**Description:** This order type is used when a gas meter is changed due to routine maintenance issues.

Historical Averages	
5-Yr Avg	1,901
4-Yr Avg	1,870
3-Yr Avg	1,910

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	2,835	2,378	2,760	2,761	2,025	1,749	1,708	2,031	1,991			
Forecast		2,765	2,696	2,626		2,366	2,366	2,366		1,990	1,990	1,989



**Forecasting Method:** 5-Year Avg (Orders to Active Gas Meters)

Volumes fluctuate from year to year and are impacted by external factors outside the company's control, e.g., damages or a change in a customer's meter requirements.

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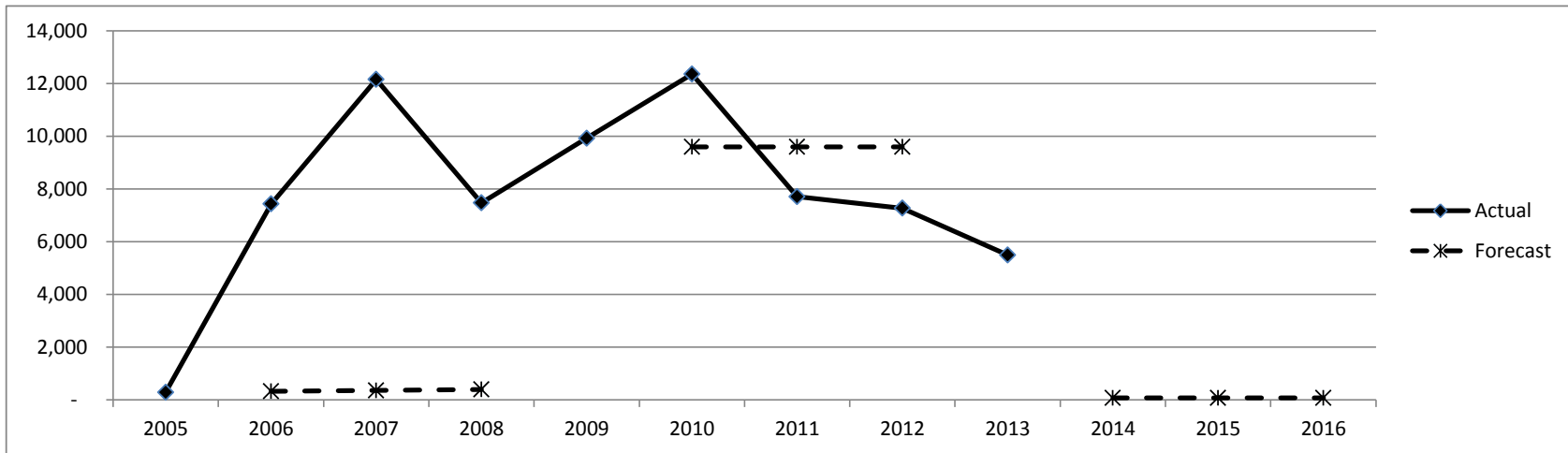
# METER WORK (O&M) - CUST COMPANY TEST(CHANGE) - GAS

**Source** Company Work  
**Order Group** Meter Work - O & M  
**Order Type** CUST/COMPANY TEST(CHANGE) - GAS

**Description:** This is an order where the meter is selected for replacement under SDG&E's Meter Performance Control Program, or is replaced in response to a customer request during a high bill investigation (HBI).

Historical Averages	
5-Yr Avg	8,545
4-Yr Avg	8,202
3-Yr Avg	6,819

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	286	7,425	12,147	7,471	9,918	12,349	7,703	7,267	5,488			
Forecast		320	354	388		9,593	9,593	9,593		70	71	72



**Forecasting Method:** 5-Year Avg (Orders to Active Gas Meters)

Used a 5-year average to reflect the fact that volumes have historically fluctuated from year to year. Meters planned for removal based strictly on age (i.e., >35 years old) were removed from the forecast, as this "age-only" selection criteria has been removed from our Meter Performance Control Program.

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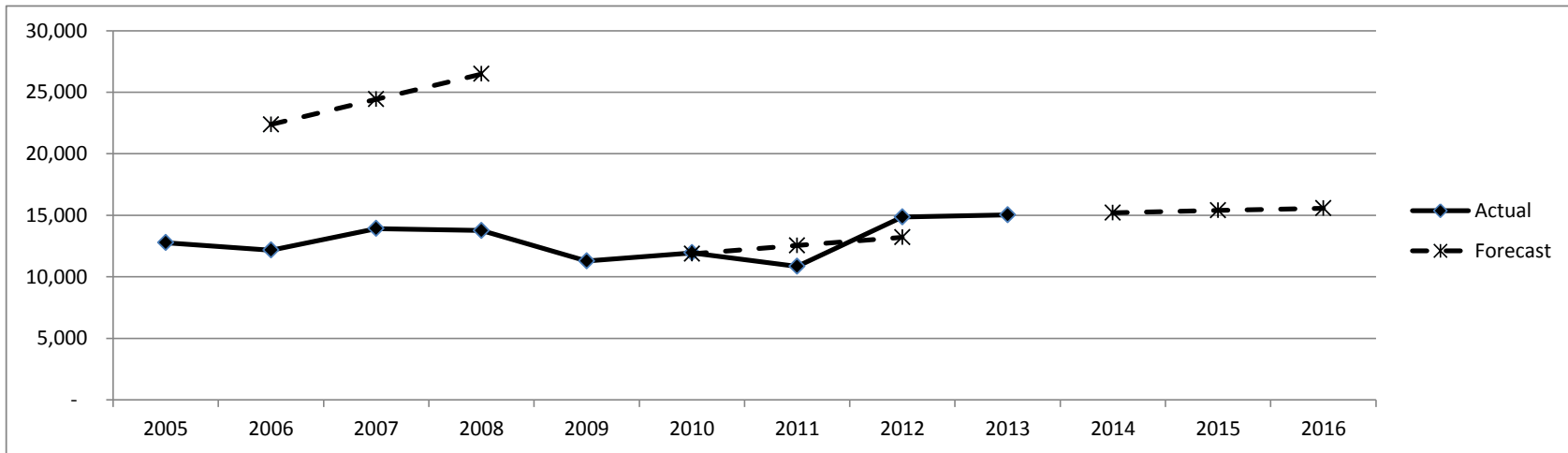
# METER WORK (O&M) - MISC COMPANY WORK

**Source** Company Work  
**Order Group** Meter Work - O & M  
**Order Type** MISC COMPANY WORK

**Description:** This order type is used when a field technician performs routine maintenance on the gas or electric meter. Examples include installing/removing life support seals and replacing an unreadable meter index.

Historical Averages	
5-Yr Avg	12,797
4-Yr Avg	13,177
3-Yr Avg	13,587

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	12,775	12,162	13,923	13,761	11,279	11,945	10,854	14,867	15,040			
Forecast		22,374	24,428	26,483		11,869	12,538	13,207		15,214	15,388	15,563



**Forecasting Method:** Base Year (Orders to Active Gas Meters)

This order type was impacted by Smart Meter. 2013 is the first full year post Smart Meter implementation.

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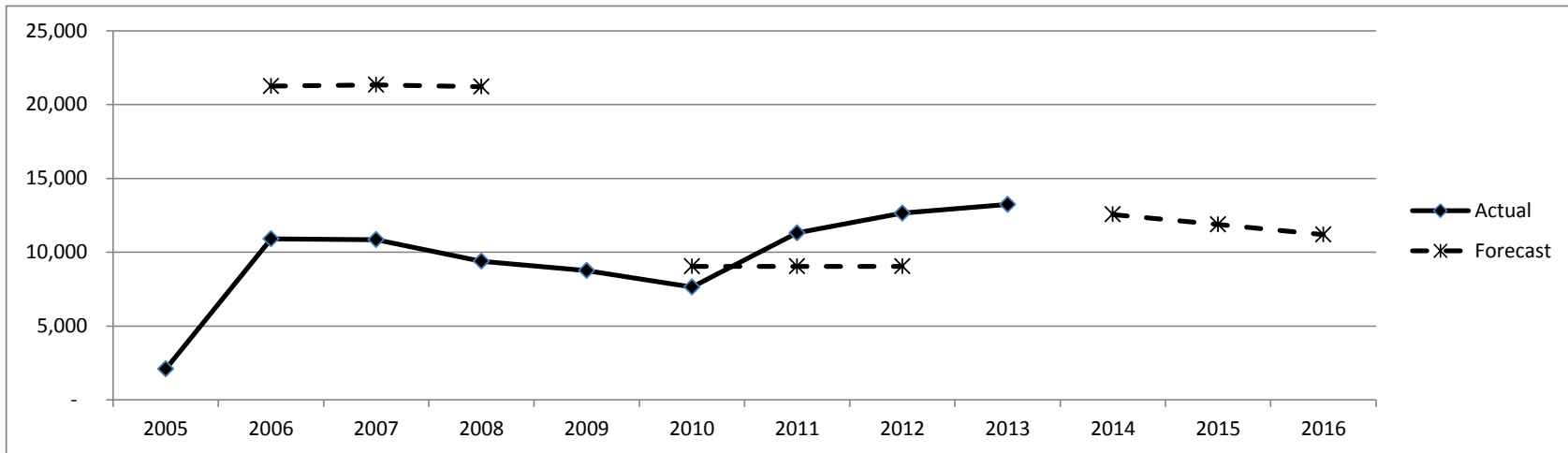
# METER WORK (O&M) - PERIODIC TEST CHANGE-GAS

**Source** Company Work  
**Order Group** Meter Work - O & M  
**Order Type** PERIODIC TEST/CHANGE-GAS

**Description:** This order type is used when a field technician changes a gas meter so it can be tested for accuracy. These orders are part of SDG&E's Meter Performance Control Program.

Historical Averages	
5-Yr Avg	10,713
4-Yr Avg	11,202
3-Yr Avg	12,391

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	2,083	10,897	10,850	9,389	8,758	7,636	11,301	12,640	13,232			
Forecast		21,250	21,338	21,217		9,041	9,041	9,041		12,553	11,874	11,195



**Forecasting Method:** 5-Year Avg (Orders to Active Gas Meters)

Volumes fluctuate from year to year based on the number of samples needed to validate the accuracy of meter families.

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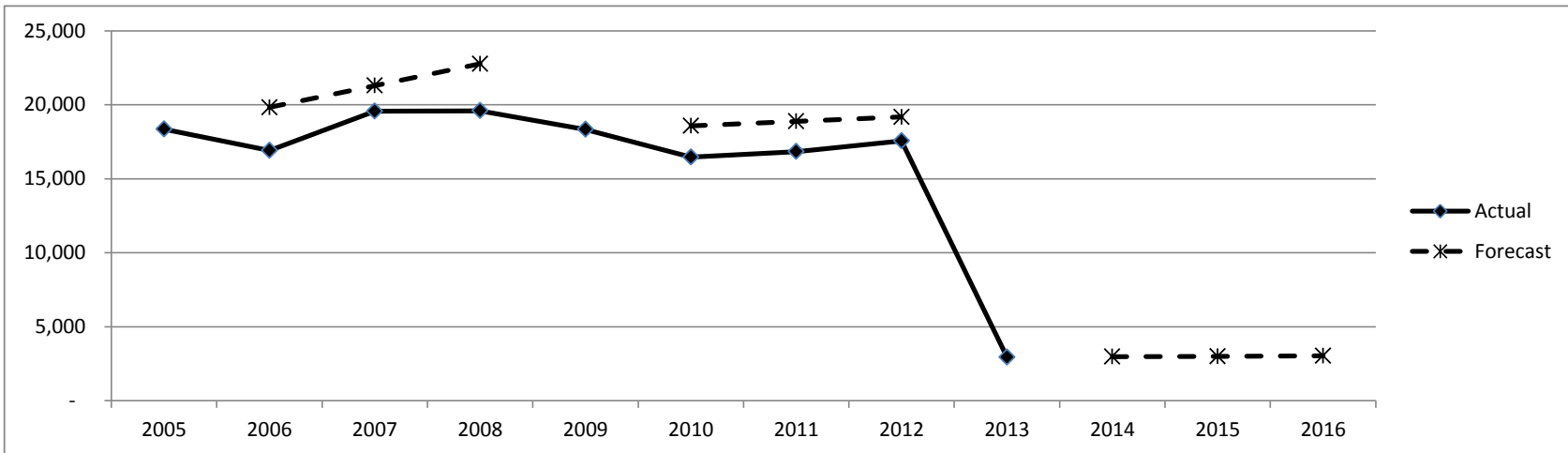
# NONPAY TURN ON - CREDIT CUT INS

Source Customer Work  
 Order Group Nonpay Turn On  
 Order Type CREDIT CUT INS

**Description:** This order type is used when a customer's service is turned back on after paying the balance on the account.

Historical Averages	
5-Yr Avg	14,425
4-Yr Avg	13,448
3-Yr Avg	12,442

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	18,352	16,912	19,560	19,596	18,335	16,465	16,832	17,556	2,937			
Forecast		19,826	21,297	22,769		18,574	18,874	19,175		2,967	2,998	3,028



**Forecasting Method:** Base Year (Orders to Total Active Meters)

This order was impacted by Smart Meter. 2013 is the first full year post Smart Meter implementation.

San Diego Gas & Electric Company  
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 Non-Shared Service Workpapers

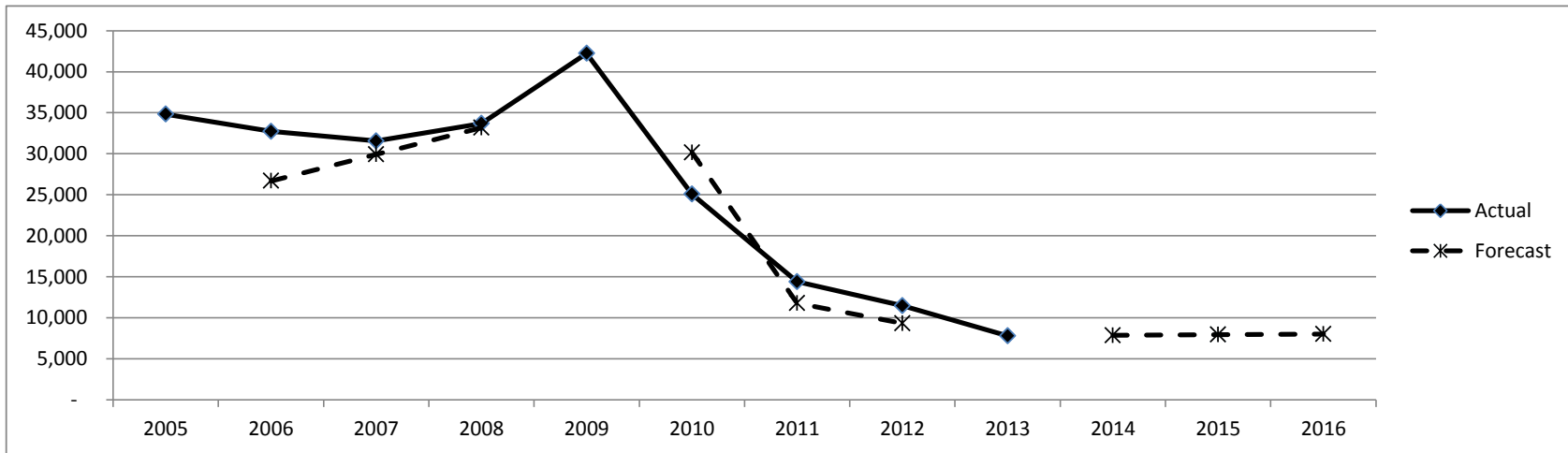
# READ VERIFY - REREADS

**Source** Company Work  
**Order Group** Read/Verify  
**Order Type** REREADS

**Description:** This order type is used when a meter is re-read for billing or other purposes.

Historical Averages	
5-Yr Avg	20,193
4-Yr Avg	14,685
3-Yr Avg	11,219

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	34,834	32,730	31,554	33,683	42,225	25,082	14,400	11,470	7,788			
Forecast		26,690	29,938	33,185		30,143	11,784	9,333		7,868	7,949	8,029



**Forecasting Method:** Base Year (Orders to Total Active Meters)

This order was impacted by Smart Meter. 2013 is the first full year post Smart Meter implementation.

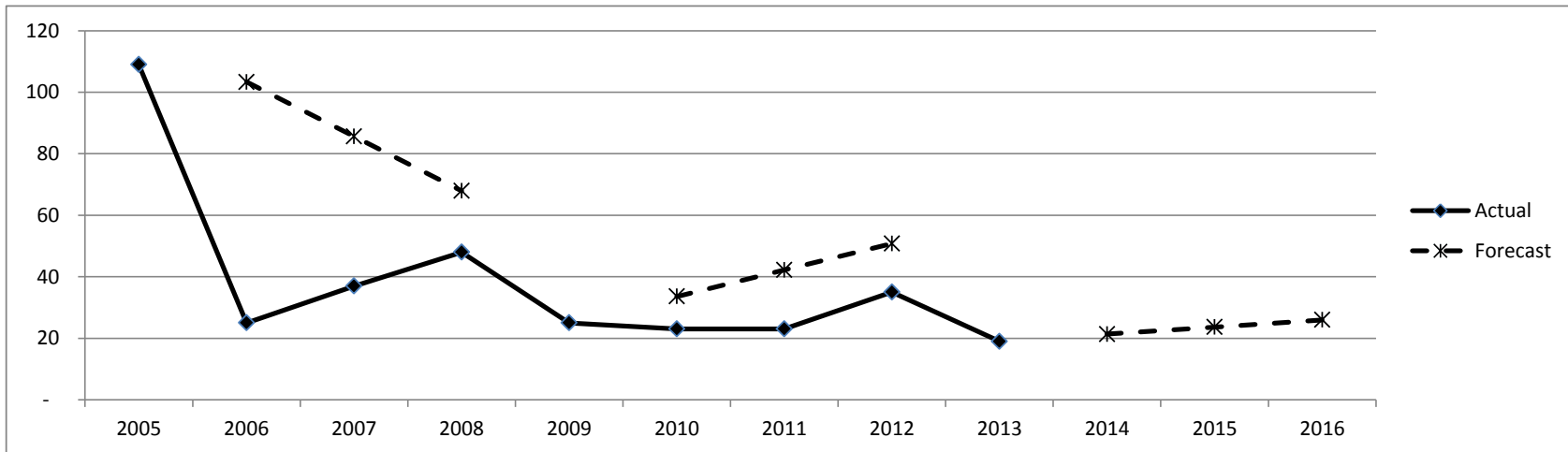
# TURN ON/SHUTOFF - CUST/COMPANY REMOVE/RESET - ELEC

**Source** Customer Work  
**Order Group** TurnOn/ShutOff  
**Order Type** CUST/COMPANY REMOVE/RESET - ELEC

**Description:** This order type is used when a field technician removes or reinstalls an electric meter.

Historical Averages	
5-Yr Avg	25
4-Yr Avg	25
3-Yr Avg	26

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	109	25	37	48	25	23	23	35	19			
Forecast		103	86	68		34	42	51		21	24	26



**Forecasting Method:** 5-Year Avg (Orders to Active Electric Meters)

Volumes fluctuate from year to year and are impacted by external factors outside the company's control, e.g., the state of the economy and customer turnover.

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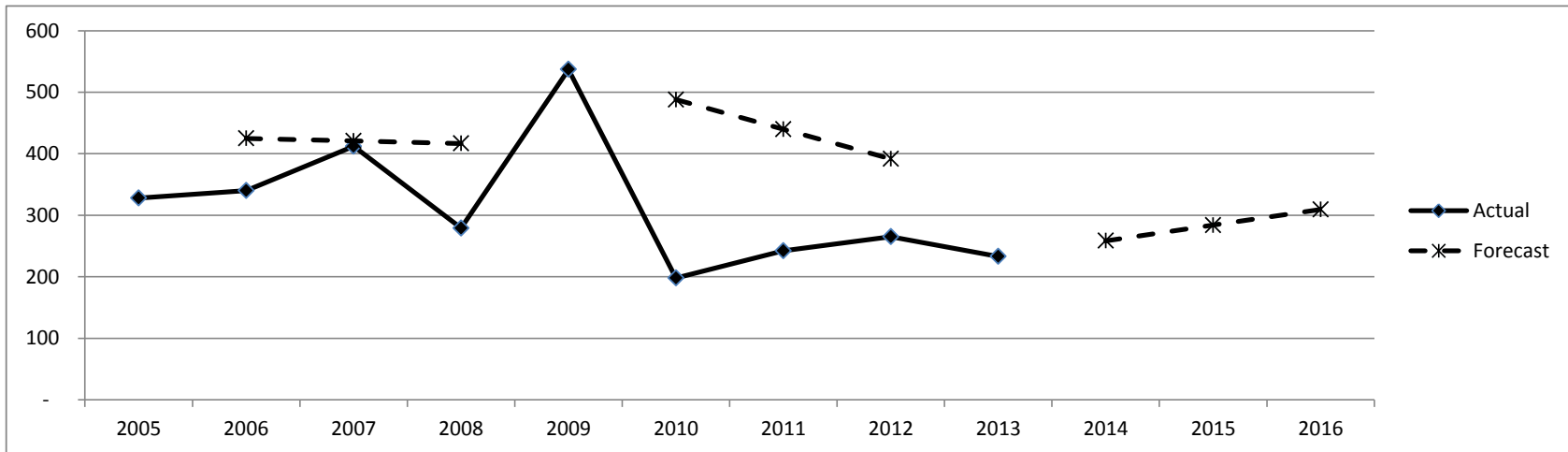
# TURN ON/SHUTOFF - CUST COMPANY REMOVE RESET - GAS

**Source** Customer Work  
**Order Group** TurnOn/ShutOff  
**Order Type** CUST/COMPANY REMOVE/RESET - GAS

**Description:** This order type is used when a field technician removes or reinstalls a gas meter.

Historical Averages	
5-Yr Avg	295
4-Yr Avg	235
3-Yr Avg	247

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	328	340	412	279	537	198	242	265	233			
Forecast		425	421	417		488	440	392		258	284	309



**Forecasting Method:** 5-Year Avg (Orders to Active Gas Meters)

Volumes fluctuate from year to year and are impacted by external factors outside the company's control, e.g., the state of the economy and customer turnover.

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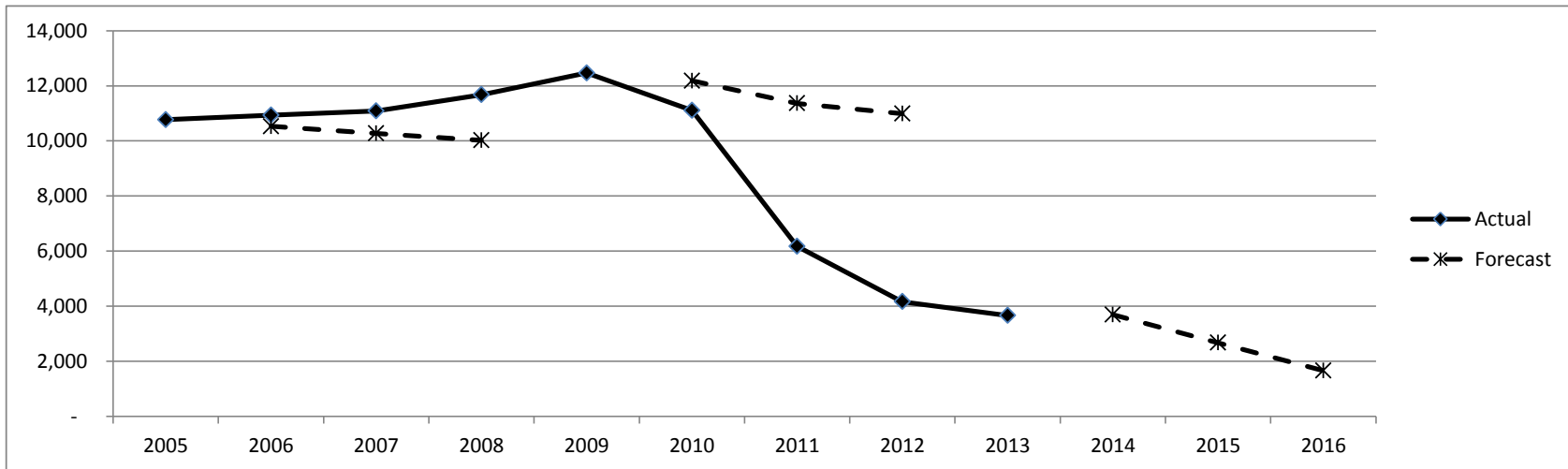
# TURN ON/SHUTOFF - GIVE NOTICE CUT

**Source** Customer Work  
**Order Group** TurnOn/ShutOff  
**Order Type** GIVE NOTICE CUT

**Description:** This order type is used when a customer has been given 24 hours to establish an account and they have not contacted the utility. The field technician closes and secures the meter.

Historical Averages	
5-Yr Avg	7,514
4-Yr Avg	6,276
3-Yr Avg	4,666

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	10,771	10,934	11,088	11,676	12,464	11,108	6,167	4,165	3,665			
Forecast		10,530	10,276	10,023		12,181	11,363	10,986		3,692	2,673	1,662



**Forecasting Method:** Base Year + OBR Adjustment

This order type was impacted by Smart Meter. 2013 is the first full year post Smart Meter implementation. An adjustment was made to account for an anticipated reduction in order volumes resulting from the Off But Registering project.

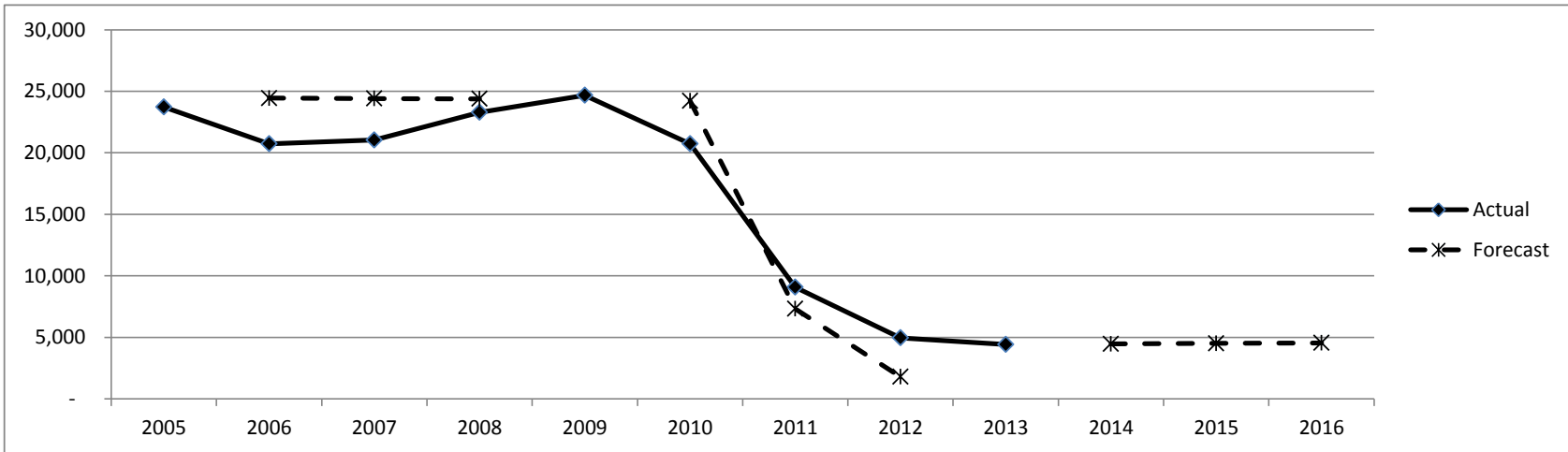
# TURN ON/SHUTOFF - SHUT OFF ELEC

**Source** Customer Work  
**Order Group** TurnOn/ShutOff  
**Order Type** SHUT OFF ELEC

**Description:** This order type is used when a customer requests that electric service be shut off. Electric service is shut off remotely when possible.

Historical Averages	
5-Yr Avg	12,772
4-Yr Avg	9,798
3-Yr Avg	6,153

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	23,724	20,730	21,035	23,294	24,670	20,734	9,069	4,966	4,423			
Forecast		24,443	24,413	24,384		24,220	7,319	1,784		4,465	4,507	4,549



**Forecasting Method:** Base Year (Orders to Active Electric Meters)

This order type was impacted by Smart Meter. 2013 is the first full year post Smart Meter implementation.

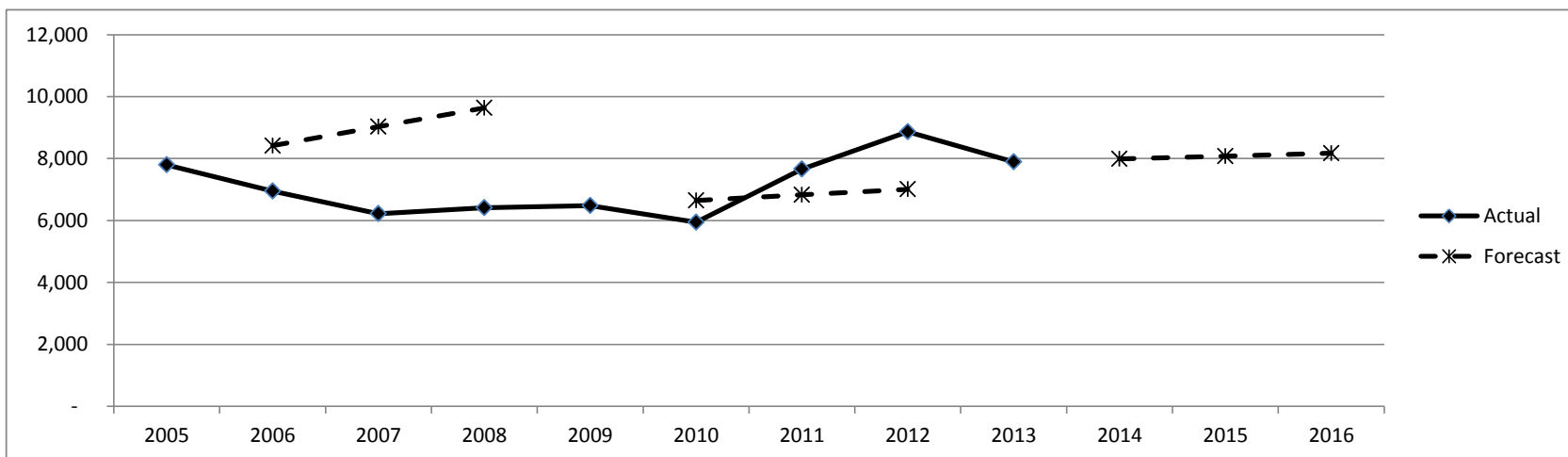
# TURN ON/SHUTOFF - SHUT OFF GAS

**Source** Customer Work  
**Order Group** TurnOn/ShutOff  
**Order Type** SHUT OFF GAS

**Description:** This is a service request to shut off gas service. The field technician turns off the gas service at the customer's meter.

Historical Averages	
5-Yr Avg	7,369
4-Yr Avg	7,591
3-Yr Avg	8,139

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	7,795	6,944	6,216	6,414	6,482	5,946	7,659	8,863	7,896			
Forecast		8,417	9,028	9,638		6,649	6,828	7,008		7,987	8,079	8,170



**Forecasting Method:** Base Year (Orders to Active Gas Meters)

This order type was impacted by Smart Meter. 2013 is the first full year post Smart Meter implementation.



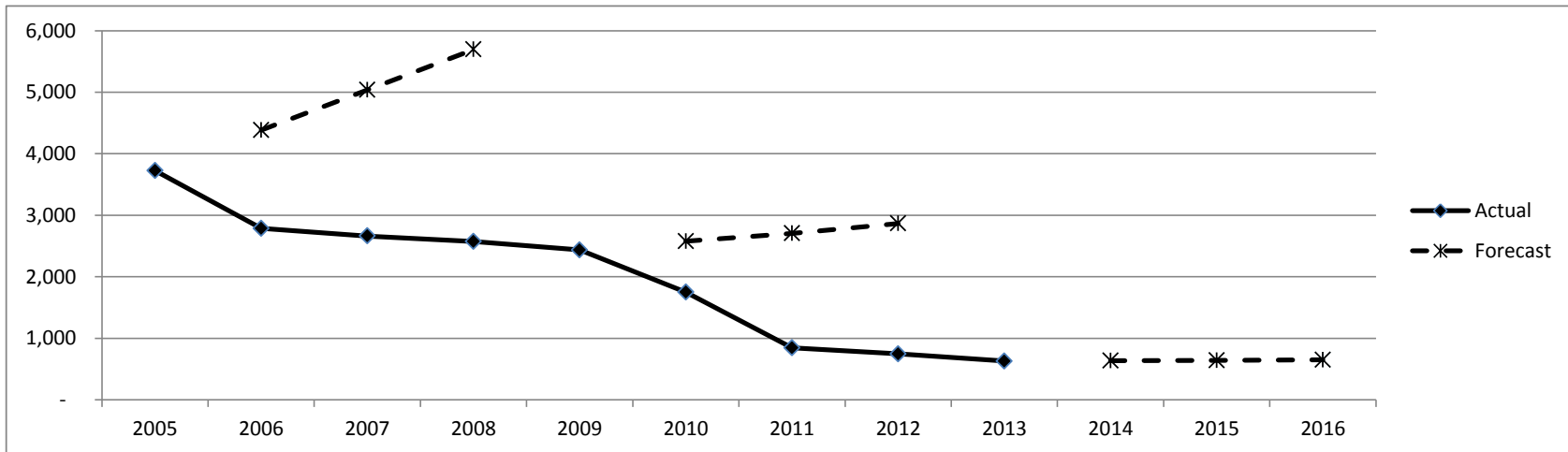
# TURN ON/SHUTOFF - SHUT OFF GAS AND ELEC

**Source** Customer Work  
**Order Group** TurnOn/ShutOff  
**Order Type** SHUT OFF GAS AND ELEC

**Description:** This order type is used when a customer requests that both their electric and gas service be shut off. The field technician closes and secures the gas meter. The electric service is shut off remotely when possible.

Historical Averages	
5-Yr Avg	1,282
4-Yr Avg	993
3-Yr Avg	740

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	3,727	2,787	2,662	2,573	2,436	1,751	846	746	629			
Forecast		4,382	5,039	5,696		2,576	2,705	2,867		635	642	648



**Forecasting Method:** Base Year (Orders to Total Active Meters)

This order type was impacted by Smart Meter. 2013 is the first full year post Smart Meter implementation.

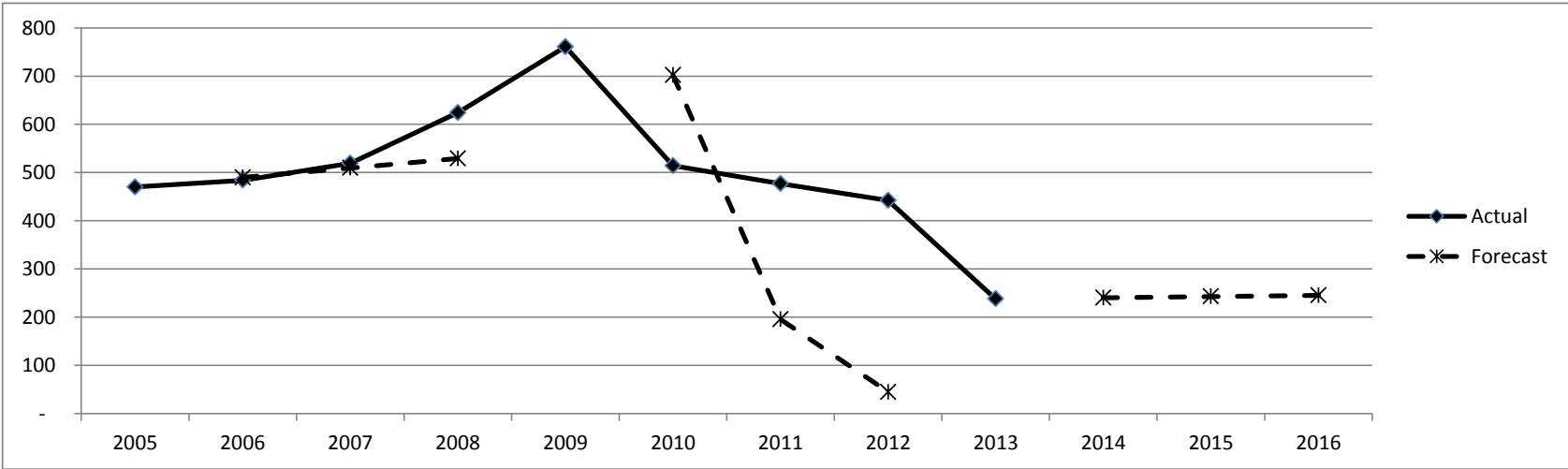
# TURN ON/SHUTOFF - SHUT OFF IN ERROR

**Source** Customer Work  
**Order Group** TurnOn/ShutOff  
**Order Type** SHUT OFF IN ERROR

**Description:** This order type is used when gas or electric service is restored after being turned off for an unknown reason.

Historical Averages	
5-Yr Avg	486
4-Yr Avg	418
3-Yr Avg	386

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	470	484	519	624	761	514	477	442	238			
Forecast		490	510	529		702	196	45		240	243	245



**Forecasting Method:** Base Year

This order type was impacted by Smart Meter. 2013 is the first full year post Smart Meter implementation.

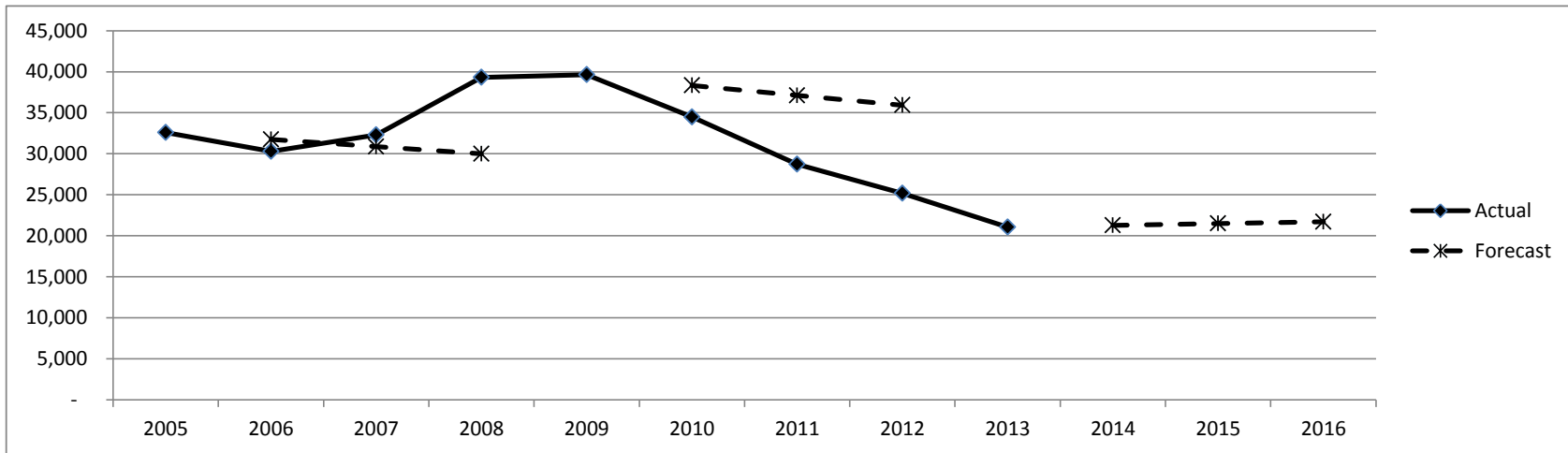
## TURN ON/SHUTOFF - SOFT SHUT OFF GAS ELEC

**Source** Customer Work  
**Order Group** TurnOn/ShutOff  
**Order Type** SOFT SHUT OFF GAS ELEC

**Description:** This is where a customer request was initiated to shut off both the electric and gas service. The service technician does not close the meters. Information is left informing the new customer to call for service.

Historical Averages	
5-Yr Avg	29,814
4-Yr Avg	27,360
3-Yr Avg	24,985

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	32,592	30,274	32,292	39,307	39,627	34,485	28,728	25,165	21,063			
Forecast		31,742	30,864	29,986		38,337	37,120	35,927		21,280	21,497	21,714



**Forecasting Method:** Base Year (Orders to Total Active Meters)

This order type was impacted by Smart Meter. 2013 is the first full year post Smart Meter implementation.

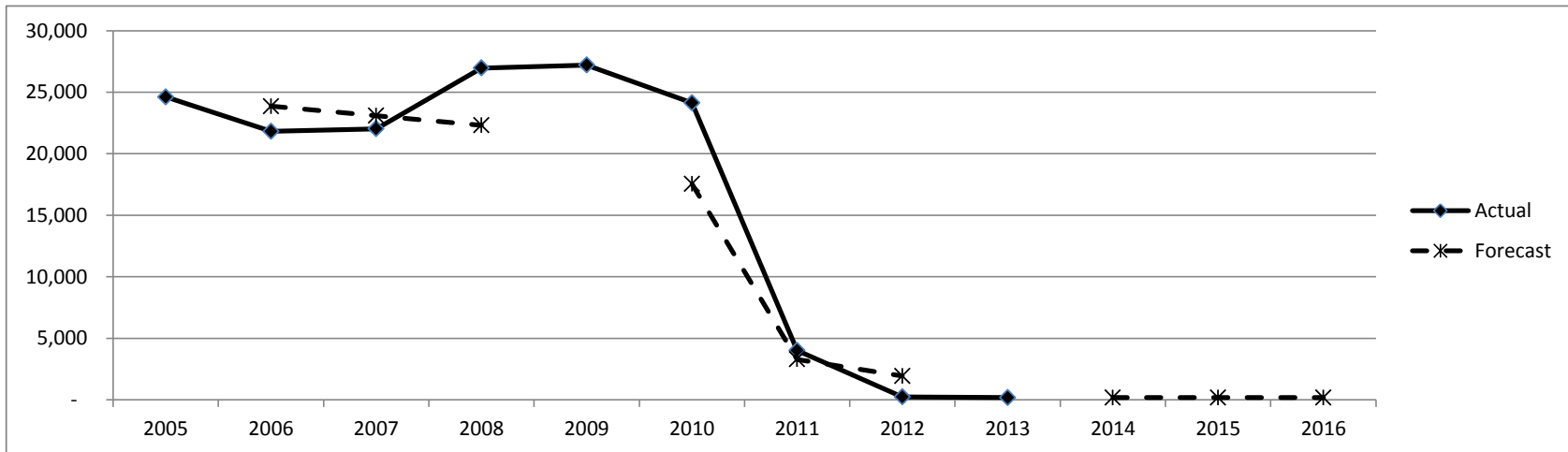
# TURN ON/SHUTOFF - SOFT TURN ON GAS TURN ON ELEC

**Source** Customer Work  
**Order Group** TurnOn/ShutOff  
**Order Type** SOFT TURN ON GAS TURN ON

**Description:** This is where a new customer has called for service. The gas meter is read and the electric service is turned on. No appliances are serviced.

Historical Averages	
5-Yr Avg	11,150
4-Yr Avg	7,134
3-Yr Avg	1,468

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	24,614	21,821	22,018	26,959	27,212	24,132	4,005	225	174			
Forecast		23,858	23,087	22,315		17,545	3,284	1,927		176	178	179



**Forecasting Method:** Base Year (Orders to Total Active Meters)

This order type was impacted by Smart Meter. 2013 is the first full year post Smart Meter implementation.

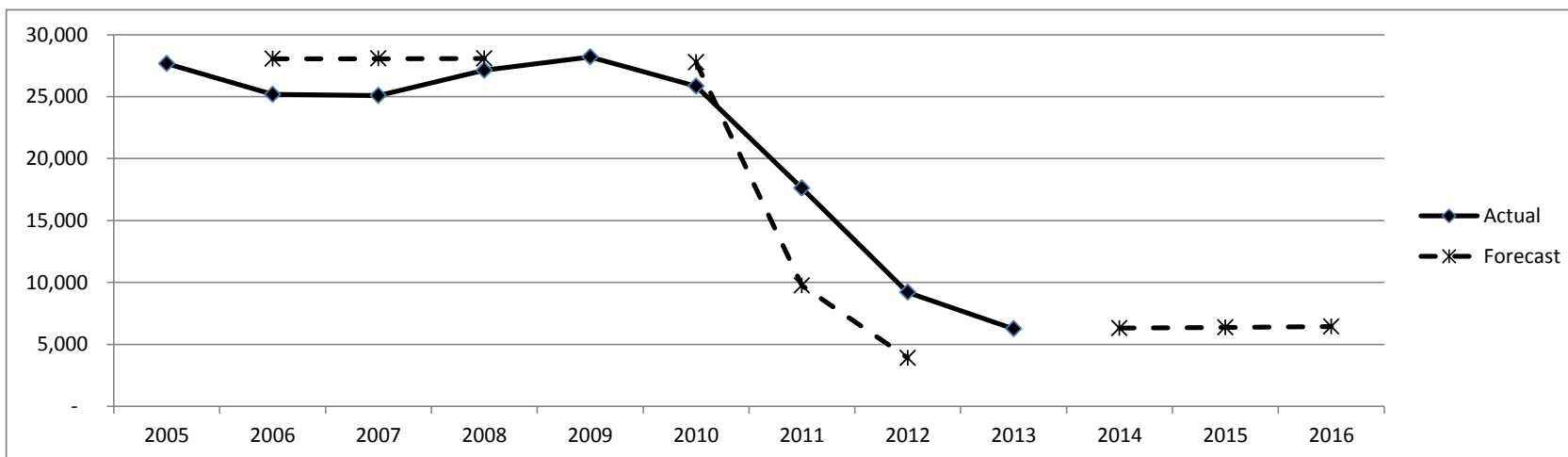
# TURN ON/SHUTOFF - TURN ON ELEC

**Source** Customer Work  
**Order Group** TurnOn/ShutOff  
**Order Type** TURN ON ELEC

**Description:** This is where a new customer has called for service. The field technician turns on the electric service.

Historical Averages	
5-Yr Avg	17,424
4-Yr Avg	14,728
3-Yr Avg	11,020

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	27,670	25,171	25,080	27,125	28,211	25,850	17,615	9,196	6,250			
Forecast		28,053	28,066	28,080		27,766	9,740	3,902		6,310	6,369	6,429



**Forecasting Method:** Base Year (Orders to Active Electric Meters)

This order type was impacted by Smart Meter. 2013 is the first full year post Smart Meter implementation.

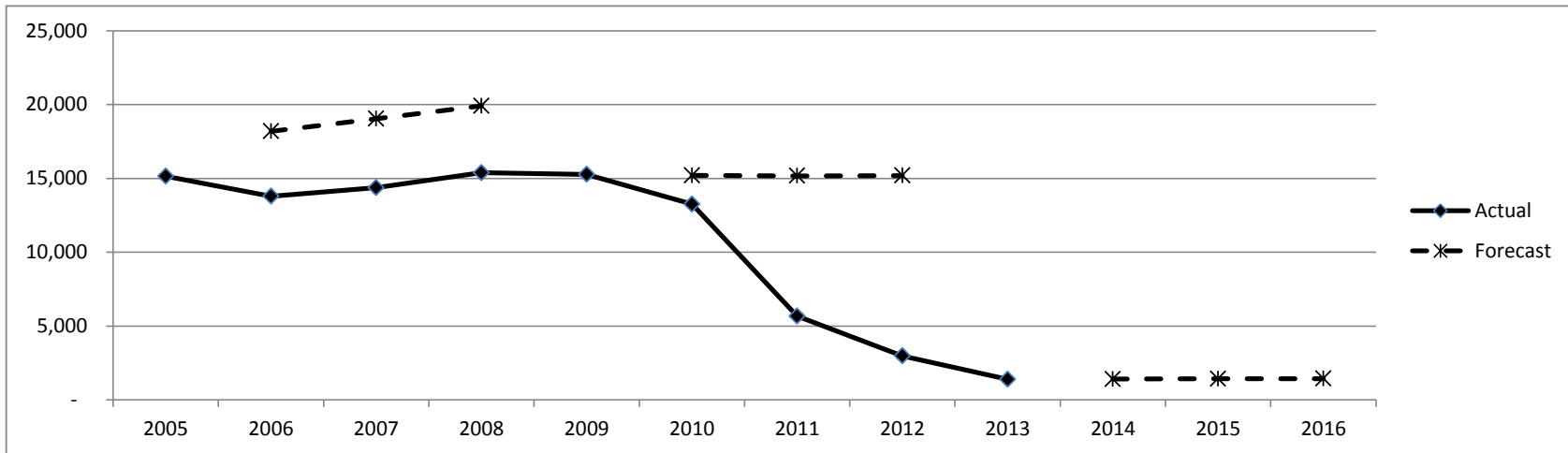
# TURNON/SHUTOFF - TURN ON G/E

**Source** Customer Work  
**Order Group** TurnOn/ShutOff  
**Order Type** TURN ON G/E

**Description:** This is where a new customer has called for service. The gas and electric service is turned on. All gas appliances are serviced.

Historical Averages	
5-Yr Avg	7,712
4-Yr Avg	5,825
3-Yr Avg	3,348

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	15,138	13,789	14,375	15,379	15,263	13,255	5,674	2,976	1,394			
Forecast		18,186	19,045	19,904		15,197	15,171	15,194		1,408	1,423	1,437



**Forecasting Method:** Base Year (Orders to Total Active Meters)

This order type was impacted by Smart Meter. 2013 is the first full year post Smart Meter implementation.

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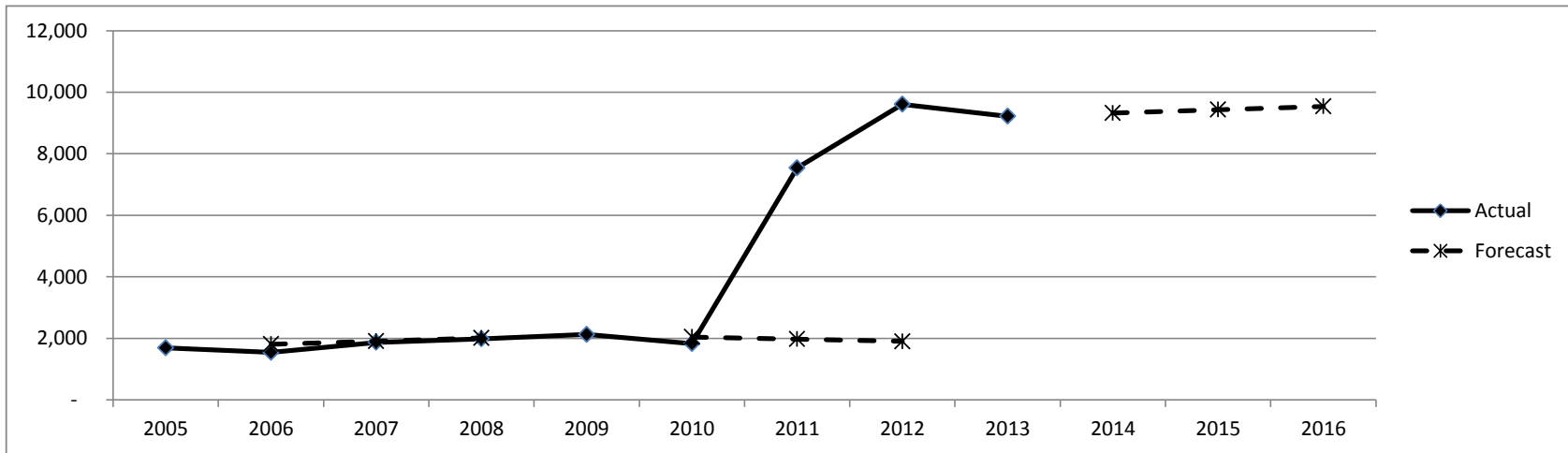
# TURN ON GAS

**Source** Customer Work  
**Order Group** TurnOn/ShutOff  
**Order Type** TURN ON GAS

**Description:** This is where a new customer has called for service. The field technician turns on the gas meter and all gas appliances are serviced.

Historical Averages	
5-Yr Avg	6,064
4-Yr Avg	7,048
3-Yr Avg	8,789

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	1,692	1,541	1,868	1,980	2,125	1,825	7,540	9,609	9,219			
Forecast		1,805	1,908	2,010		2,041	1,971	1,900		9,326	9,433	9,539



**Forecasting Method:** Base Year (Orders to Active Gas Meters)

This order type was impacted by Smart Meter. 2013 is the first full year post Smart Meter implementation.

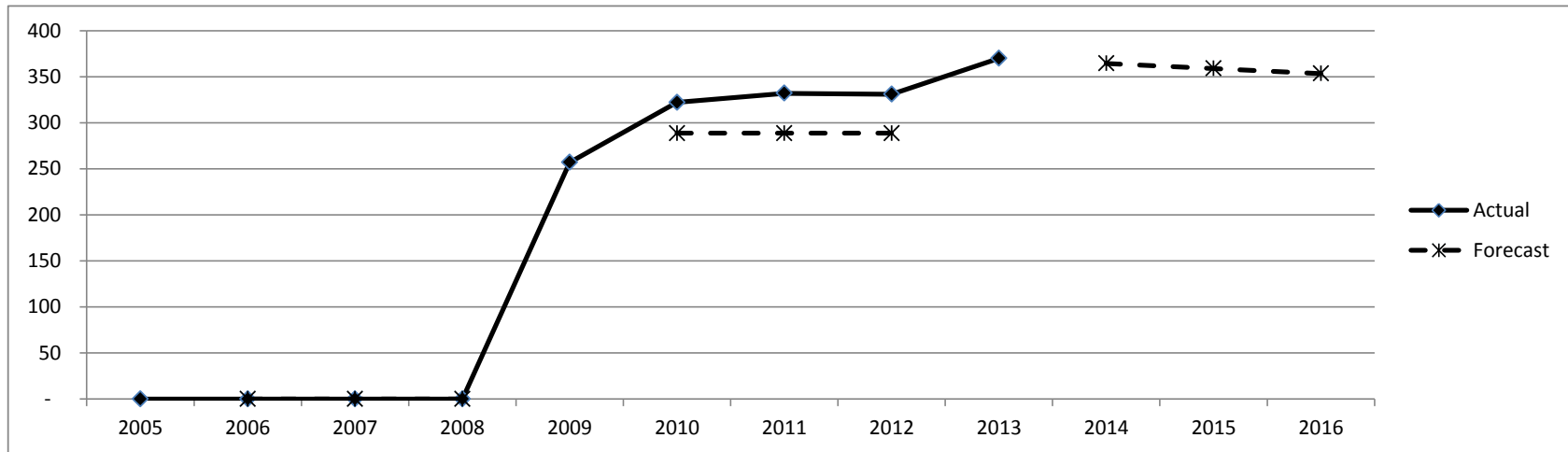
# MISCELLANEOUS - HOUSELINE TEST PURGE-O&M

**Source** Company Work  
**Order Group** Miscellaneous  
**Order Type** HOUSELINE TEST/PURGE - O&M

**Description:** This order type is used when customer-owned piping for a pre-established account is tested by the field technician to ensure the gas is odorized .

Historical Averages	
5-Yr Avg	322
4-Yr Avg	339
3-Yr Avg	344

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	-	-	-	-	257	322	332	331	370			
Forecast						289	289	289		364	359	353



**Forecasting Method:** 4-Year Avg (Orders to Active Gas Meters)

Volumes fluctuate from year to year and are impacted by external factors outside the company’s control, e.g., the condition of a customer’s houseline. Excluded 2009 given that new procedures were implemented which, in turn, impacted order volumes.



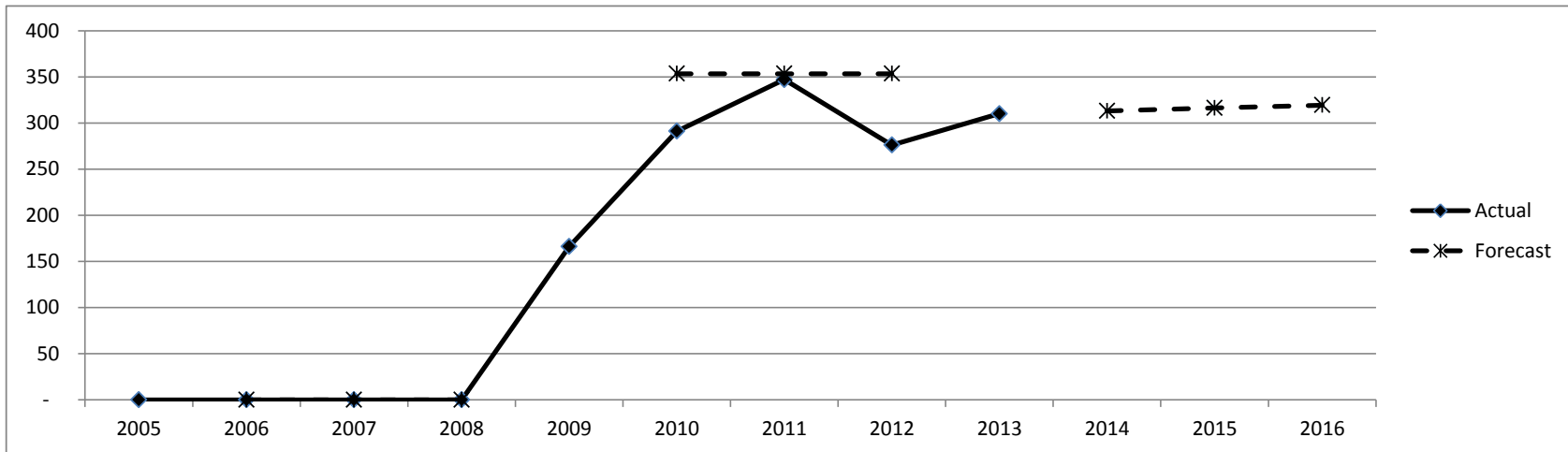
# MISCELLANEOUS - HOUSELINE TEST PURGE-CAPITAL

**Source** Company Work  
**Order Group** Miscellaneous  
**Order Type** HOUSELINE TEST/PURGE - CAPITAL

**Description:** This order type is used when a field technician tests customer-owned piping for a new facility to ensure the gas is odorized.

Historical Averages	
5-Yr Avg	278
4-Yr Avg	306
3-Yr Avg	311

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	-	-	-	-	166	291	347	276	310			
Forecast							353	353	353	313	316	319



**Forecasting Method:** 4-Year Avg (Orders to Active Gas Meters)

Volumes fluctuate from year to year and are impacted by external factors outside the company's control, e.g., the condition of a customer's houseline. Excluded 2009 given that new procedures were implemented which, in turn, impacted order volumes.

SDG&E

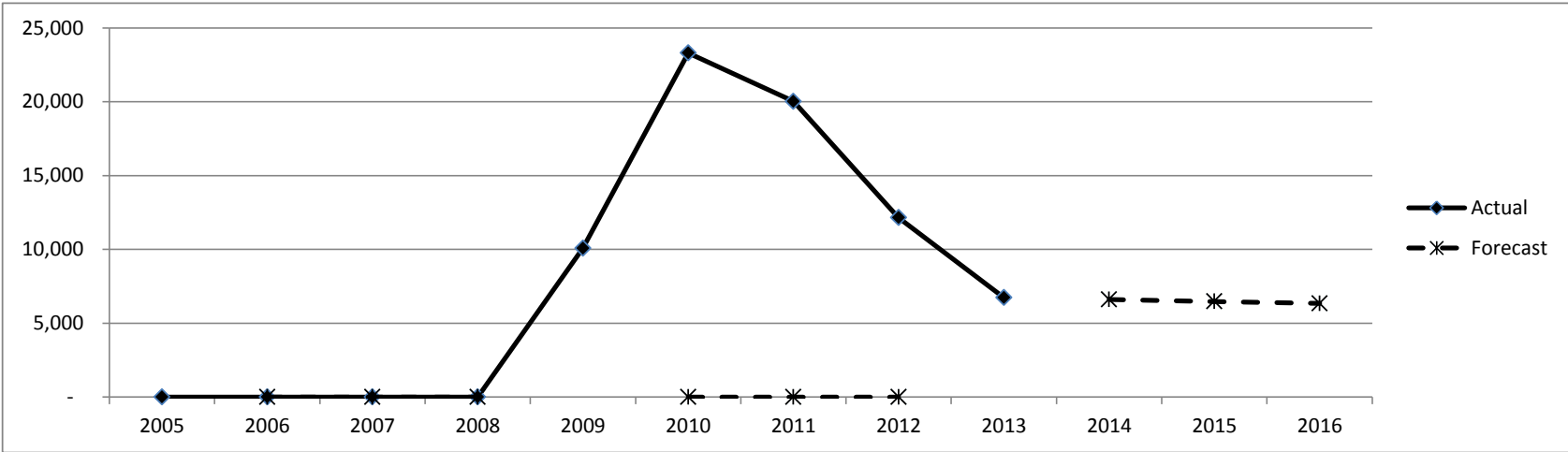
# SMART METER

**Source** Company Work  
**Order Group** Miscellaneous  
**Order Type** SMART METER

**Description:** Orders related to Smart Meter equipment. Examples include Opt-Out and MTU replacement.

Historical Averages	
5-Yr Avg	14,456
4-Yr Avg	15,551
3-Yr Avg	12,969

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	-	-	-	-	10,073	23,299	20,024	12,150	6,732			
Forecast										6,601	6,471	6,340



**Forecasting Method:** Base Year (Adj. to remove AM Deployment Work) (Orders to Total Active Meters)

This order type was created to account for Smart Meter work. 2013 is the first full year post Smart Meter implementation.

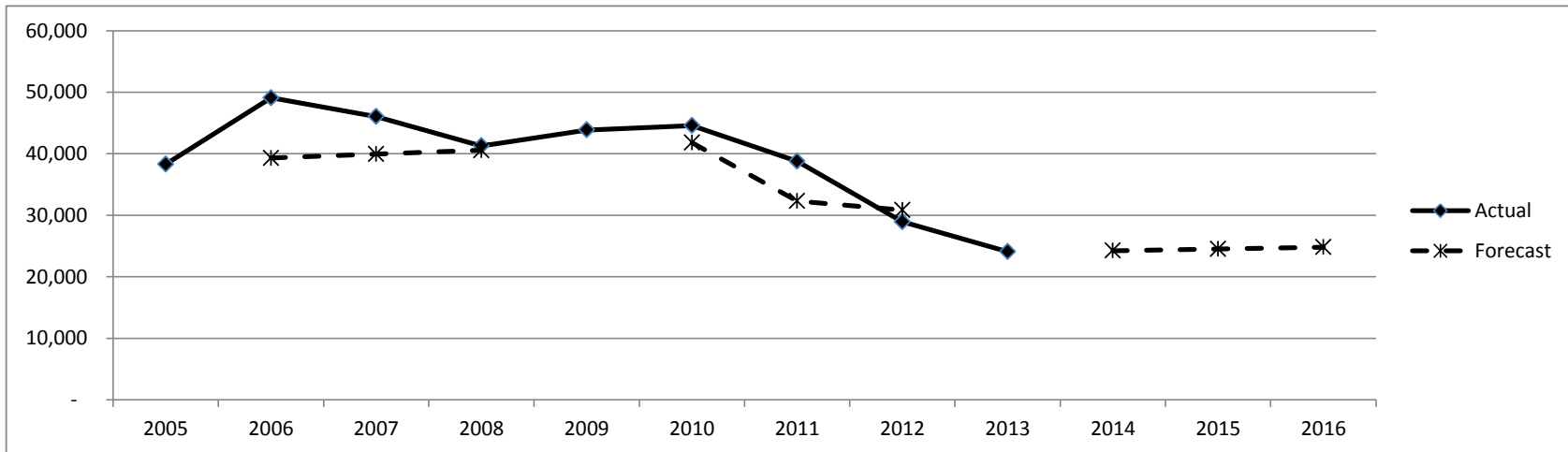
# CSF - INCOMPLETE

**Source** Incomplete  
**Order Group** CSF  
**Order Type** INCOMPLETE

**Description:** This order type is used when a field technician is not able to complete an order, e.g., customer not home, cannot access meter, etc.

Historical Averages	
5-Yr Avg	36,046
4-Yr Avg	34,092
3-Yr Avg	30,599

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	38,311	49,098	46,057	41,270	43,862	44,570	38,787	28,940	24,069			
Forecast		39,299	39,924	40,565		41,783	32,313	30,839		24,243	24,499	24,813



**Forecasting Method:** Base Year (Orders to Total Active Meters)

This order type was impacted by Smart Meter. 2013 is the first full year post Smart Meter implementation.

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**SDG&E**  
**TEST YEAR 2016 GENERAL RATE CASE**  
**Customer Services Field Operations**

**Calculations of Operator Qualification (Op Qual) Training**

Employee Count	2013 Straight Time Rate	2013 Over Time Rate	Job Title
----------------	-------------------------	---------------------	-----------

CUSTOMER SERVICE			
5	\$ 39.14	\$ 58.71	Appliance Mech
11	\$ 20.22	\$ 30.33	Collector
16	\$ 28.46	\$ 42.69	Header Truck Asst
50	\$ 34.27	\$ 51.41	Mtr Svcs Person
33	\$ 29.79	\$ 44.69	Sr Collector
83	\$ 38.01	\$ 57.02	Svc Tech

Projected Year for Completion	CFR Reference	Task #	Task Description	Employees Affected	Hours Need to Complete Training
2015	192.357	1161	B31Q-1161 Installation of Customer Meters and Regulators, Residential and Small Commercial	CSF	2
2015	192.461	1011	B31Q-1011 Coating Application and Repair: Wrapped	CSF	2
2016	192.703	1231	B31Q-1231 Inside Gas Leak Investigation (Needs research)	Svc Tech Only	4
2016	192.703	1241	B31Q-1241 Outside Gas Leak Investigation	Svc Tech Only	2
2016	192.481	0191	B31Q-0191 Measure Atmospheric Corrosion (Go-No Gauge)	CSF	1

**Impacted Employees ( A )**

	Task #	Appliance Mech	Collector	Header Truck Asst	Mtr Svcs Person	Sr Collector	Svc Tech
2015	1161	5	11	16	50	33	83
2015	1011	5	11	16	50	33	83
2016	1231	-	-	-	-	-	83
2016	1241	-	-	-	-	-	83
2016	0191	5	11	16	50	33	83

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**SDG&E**  
**TEST YEAR 2016 GENERAL RATE CASE**  
**Customer Services Field Operations**

**Calculations of Operator Qualification (Op Qual) Training**

**Total Incremental Hours Needed For Op Qual Training**  
**( B = A x Hours Needed To Complete Training Per Op Qual Task )**

	Task #	Appliance Mech	Collector	Header Truck Asst	Mtr Scs Person	Sr Collector	Svc Tech
2015	1161	10	22	32	100	66	166
2015	1011	10	22	32	100	66	166
2016	1231	-	-	-	-	-	332
2016	1241	-	-	-	-	-	166
2016	0191	5	11	16	50	33	83

**Total Cost For Op Qual**  
**( C = B x Job Title Specific Over Time Rate )**

	Task #	Appliance Mech	Collector	Header Truck Asst	Mtr Scs Person	Sr Collector	Svc Tech
2015	1161	\$ 587	\$ 667	\$ 1,366	\$ 5,141	\$ 2,950	\$ 9,465
2015	1011	\$ 587	\$ 667	\$ 1,366	\$ 5,141	\$ 2,950	\$ 9,465
2016	1231	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 18,931
2016	1241	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 9,465
2016	0191	\$ 294	\$ 334	\$ 683	\$ 2,571	\$ 1,475	\$ 4,733

**Total Incremental Cost for Operator Qualification Training**  
**( D = Sum of C for Each Year )**

	Appliance Mech	Collector	Header Truck Asst	Mtr Scs Person	Sr Collector	Svc Tech
<b>2015</b>	\$ 1,174	\$ 1,335	\$ 2,732	\$ 10,282	\$ 5,899	\$ 18,931
<b>2016</b>	\$ 294	\$ 334	\$ 683	\$ 2,571	\$ 1,475	\$ 33,129

<b>CSF Total Incremental Cost for Operator Qualification Training</b>	
	<b>(FTE)</b>
<b>2015</b>	<b>0.4</b>
<b>2016</b>	<b>0.3</b>

**Beginning of Workpaper**  
**1FC002.000 - Customer Services Field - Supervision**

San Diego Gas & Electric Company  
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Non-Shared Service Workpapers

Area: CS - FIELD  
 Witness: Sara Franke  
 Category: A. Customer Service Field  
 Category-Sub: 2. Customer Service Field - Supervision  
 Workpaper: 1FC002.000 - Customer Services Field - Supervision

**Activity Description:**

Labor and non-labor costs for front-line supervisors who provide direct supervision of CSF field technicians and field collectors who work from five operating bases and cover all of SDG&E's service territory.

**Forecast Explanations:**

**Labor - Zero-Based**

The CSF supervisor forecast is based on maintaining the current employee-to-supervisor ratio of 12:1. The forecasted supervisor full-time equivalents (FTEs) are calculated by applying the 12:1 ratio to the forecasted workforce in workgroup 1FC001.000. Incremental funding requests, which are forecasted using the zero-based methodology, are then added to determine total funding requirements. Forecasting by historical averaging or trending of expenses would not maintain the desired employee-to-supervisor span of control therefore is not suitable. An explanation of the forecast methodology for the CSF Operations workforce can be found in workgroup 1FC001.000

**Non-Labor - Zero-Based**

Non-labor expenses such as cell phones, office supplies and other miscellaneous expenses are driven by the forecasted number of supervisor FTEs. Incremental funding requests, which are forecasted using the zero-based methodology, are then added to determine total funding requirements. The non-labor forecast is based on the five-year average historical non-labor expense per supervisor FTE multiplied by the forecasted supervisor FTEs. Because non-labor expenses are driven by workforce levels, historical averaging or trending of expenses alone would not be aligned with the forecasted workforce levels and would therefore not be suitable.

**NSE - Zero-Based**

NSE is not applicable to this workgroup.

**Summary of Results:**

		In 2013\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2009	2010	2011	2012	2013	2014	2015	2016	
Labor		1,599	1,505	1,392	1,356	1,441	1,334	1,299	1,402	
Non-Labor		80	97	75	88	50	74	75	82	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>1,680</b>	<b>1,601</b>	<b>1,467</b>	<b>1,444</b>	<b>1,491</b>	<b>1,408</b>	<b>1,374</b>	<b>1,484</b>	
FTE		18.6	17.5	16.0	15.6	16.6	15.0	15.0	16.0	

*Note: Totals may include rounding differences.*

San Diego Gas & Electric Company  
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Area: CS - FIELD  
Witness: Sara Franke  
Category: A. Customer Service Field  
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Workpaper: 1FC002.000 - Customer Services Field - Supervision

**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	1,334	1,299	1,402	1,334	1,299	1,402
Non-Labor	Zero-Based	0	0	0	74	75	82	74	75	82
NSE	Zero-Based	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>1,408</b>	<b>1,374</b>	<b>1,484</b>	<b>1,408</b>	<b>1,374</b>	<b>1,484</b>
FTE	Zero-Based	0.0	0.0	0.0	15.0	15.0	16.0	15.0	15.0	16.0

**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	1,177	72	0	1,249	13.0	1-Sided Adj

Labor and non-labor costs for front-line CSF Operations Supervisors, who provide direct supervision of CSF field technicians, to maintain historical span of control. See supplemental workpaper "SDG&E-13-SFranke Supplemental Workpaper - Work Order Volume" for detailed analysis.

2014	157	2	0	159	2.0	1-Sided Adj
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Labor and non-labor costs for front-line Collections Supervisors, who provide direct supervision of Field Collectors, to maintain historical span of control.

<b>2014 Total</b>	<b>1,334</b>	<b>74</b>	<b>0</b>	<b>1,408</b>	<b>15.0</b>	
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2015	1,204	74	0	1,278	14.0	1-Sided Adj
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Labor and non-labor costs for front-line CSF Operations Supervisors, who provide direct supervision of CSF field technicians, to maintain historical span of control. See supplemental workpaper "SDG&E-13-SFranke Supplemental Workpaper - Work Order Volume" for detailed analysis.

2015	95	1	0	96	1.0	1-Sided Adj
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Labor and non-labor costs for front-line Collections Supervisors, who provide direct supervision of Field Collectors, to maintain historical span of control

<b>2015 Total</b>	<b>1,299</b>	<b>75</b>	<b>0</b>	<b>1,374</b>	<b>15.0</b>	
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Note: Totals may include rounding differences.



San Diego Gas & Electric Company  
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Area: CS - FIELD  
 Witness: Sara Franke  
 Category: A. Customer Service Field  
 Category-Sub: 2. Customer Service Field - Supervision  
 Workpaper: 1FC002.000 - Customer Services Field - Supervision

<u>Year/Expl.</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adi Type</u>
2016	1,307	81	0	1,388	15.0	1-Sided Adj

Labor and non-labor costs for front-line CSF Operations Supervisors, who provide direct supervision of CSF field technicians, to maintain historical span of control. See supplemental workpaper "SDG&E-13-SFranke Supplemental Workpaper - Work Order Volume" for detailed analysis.

2016	95	1	0	96	1.0	1-Sided Adj
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Labor and non-labor costs for front-line Collections Supervisors, who provide direct supervision of Field Collectors, to maintain historical span of control

<b>2016 Total</b>	<b>1,402</b>	<b>82</b>	<b>0</b>	<b>1,484</b>	<b>16.0</b>	
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*Note: Totals may include rounding differences.*

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Area: CS - FIELD  
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Category: A. Customer Service Field  
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Workpaper: 1FC002.000 - Customer Services Field - Supervision

**Determination of Adjusted-Recorded (Incurred Costs):**

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	1,577	1,520	1,502	1,527	1,481
Non-Labor	69	84	72	86	50
NSE	0	0	0	0	0
<b>Total</b>	<b>1,646</b>	<b>1,603</b>	<b>1,574</b>	<b>1,613</b>	<b>1,531</b>
FTE	21.0	20.1	18.6	18.5	17.6
<b>Adjustments (Nominal \$) **</b>					
Labor	-303	-300	-338	-367	-237
Non-Labor	4	6	1	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>-299</b>	<b>-294</b>	<b>-337</b>	<b>-367</b>	<b>-237</b>
FTE	-5.1	-5.2	-4.9	-5.1	-3.4
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	1,274	1,220	1,164	1,159	1,244
Non-Labor	73	89	72	86	50
NSE	0	0	0	0	0
<b>Total</b>	<b>1,347</b>	<b>1,309</b>	<b>1,237</b>	<b>1,246</b>	<b>1,294</b>
FTE	15.9	14.9	13.7	13.4	14.2
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	199	196	173	168	197
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>199</b>	<b>196</b>	<b>173</b>	<b>168</b>	<b>197</b>
FTE	2.7	2.6	2.3	2.2	2.5
<b>Escalation to 2013\$</b>					
Labor	126	90	55	29	0
Non-Labor	8	7	3	1	0
NSE	0	0	0	0	0
<b>Total</b>	<b>134</b>	<b>97</b>	<b>58</b>	<b>30</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2013\$)</b>					
Labor	1,599	1,505	1,392	1,356	1,441
Non-Labor	80	97	75	88	50
NSE	0	0	0	0	0
<b>Total</b>	<b>1,680</b>	<b>1,601</b>	<b>1,467</b>	<b>1,444</b>	<b>1,491</b>
FTE	18.6	17.5	16.0	15.6	16.7

\* 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.

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Non-Shared Service Workpapers

Area: CS - FIELD  
 Witness: Sara Franke  
 Category: A. Customer Service Field  
 Category-Sub: 2. Customer Service Field - Supervision  
 Workpaper: 1FC002.000 - Customer Services Field - Supervision

**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs					
Years	2009	2010	2011	2012	2013
Labor	-303	-300	-338	-367	-237
Non-Labor	4	6	0.686	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>-299</b>	<b>-294</b>	<b>-337</b>	<b>-367</b>	<b>-237</b>
FTE	-5.1	-5.2	-4.9	-5.1	-3.4

**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	30	0	0	0.4	1-Sided Adj	N/A	TPKAJ201311101 55352283
Transfer Collections Supervisors labor from 1FC001.000 to 1FC002.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2009	-61	0	0	-0.9	1-Sided Adj	N/A	TPKAJ201311101 62220677
Transfer Operations labor from 1FC002.000 to 1FC001.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2009	-141	0	0	-3.3	1-Sided Adj	N/A	TPKAJ201311101 63320450
Transfer Staff Assistants labor from 1FC002.000 to 1FC004.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2009	-131	0	0	-1.3	1-Sided Adj	N/A	TPKAJ201311101 63417297
Transfer District Ops Managers labor from 1FC002.000 to 1FC004.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2009	79	4	0	0.8	CCTR Transf	From 2200-2145.000	TPKAJ201312031 53213953
Transfer of District Operations Manager labor and non-labor expense from USS cost center 2200-2145 SDGE Eastern DOM to workgroup 1FC004.000 CSF Office Support, in order to align historical costs with the workgroup in which the activity will be forecasted							
2009	0	0.062	0	0.0	CCTR Transf	From 2200-2145.000	TPKAJ201312031 53239917
Transfer of District Operations Manager labor and non-labor expense from USS cost center 2200-2145 SDGE Eastern DOM to workgroup 1FC004.000 CSF Office Support, in order to align historical costs with the workgroup in which the activity will be forecasted							

*Note: Totals may include rounding differences.*

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Area: CS - FIELD  
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 Workpaper: 1FC002.000 - Customer Services Field - Supervision

<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	-79	0	0	-0.8	CCTR Transf	To 2100-3459.000	TPKAJ201312032 11710017
Transfer of District Operations Manager labor and non-labor expense from USS cost center 2200-2145 SDGE Eastern DOM to workgroup 1FC004.000 CSF Office Support, in order to align historical costs with the workgroup in which the activity will be forecasted							
<b>2009 Total</b>	<b>-303</b>	<b>4</b>	<b>0</b>	<b>-5.1</b>			
2010	8	0	0	0.1	1-Sided Adj	N/A	TPKAJ201311101 55514160
Transfer Collections Supervisors labor from 1FC001.000 to 1FC002.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2010	-8	0	0	-0.1	1-Sided Adj	N/A	TPKAJ201311101 62803850
Transfer Operations labor from 1FC002.000 to 1FC001.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2010	-165	0	0	-3.9	1-Sided Adj	N/A	TPKAJ201311101 63234177
Transfer Staff Assistants labor from 1FC002.000 to 1FC004.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2010	-135	0	0	-1.3	1-Sided Adj	N/A	TPKAJ201311101 63513107
Transfer District Operations Managers labor from 1FC002.000 to 1FC004.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2010	88	6	0	0.9	CCTR Transf	From 2200-2145.000	TPKAJ201312031 53349510
Transfer of District Operations Manager labor and non-labor expense from USS cost center 2200-2145 SDGE Eastern DOM to Workgroup 1FC004.000 CSF Office Support in order to align historical costs with the workgroup in which the activity will be forecasted							
2010	-88	0	0	-0.9	CCTR Transf	To 2100-3459.000	TPKAJ201312032 11755560
Transfer of District Operations Manager labor and non-labor expense from USS cost center 2200-2145 SDGE Eastern DOM to Workgroup 1FC004.000 CSF Office Support in order to align historical costs with the workgroup in which the activity will be forecasted							
<b>2010 Total</b>	<b>-300</b>	<b>6</b>	<b>0</b>	<b>-5.2</b>			
2011	109	0	0	1.6	1-Sided Adj	N/A	TPKAJ201311101 55621687
Transfer Collections Supervisors labor from 1FC001.000 to 1FC002.000 in order to align historical costs with the workgroup in which the activity will be forecasted							

Note: Totals may include rounding differences.

San Diego Gas & Electric Company  
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Area: CS - FIELD  
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 Category: A. Customer Service Field  
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<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	-57	0	0	-0.8	1-Sided Adj	N/A	TPKAJ201311101 62846397
Transfer Operations labor from 1FC002.000 to 1FC001.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2011	-146	0	0	-3.4	1-Sided Adj	N/A	TPKAJ201311101 63149783
Transfer Staff Assistants labor from 1FC002.000 to 1FC004.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2011	-243	0	0	-2.3	1-Sided Adj	N/A	TPKAJ201311101 63605337
Transfer District Operations Managers labor from 1FC002.000 to 1FC004.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2011	1	0	0	0.0	CCTR Transf	From 2200-2145.000	TPKAJ201312031 53810527
Transfer of District Operations Manager labor and non-labor expense from shared services cost center 2200-2145 SDGE Eastern DOM to Workgroup 1FC004.000 CSF Office Support in order to align historical costs with the workgroup in which the activity will be forecasted							
2011	77	0.686	0	0.7	CCTR Transf	From 2200-2145.000	TPKAJ201312031 54439620
Transfer of District Operations Manager labor and non-labor expense from shared services cost center 2200-2145 SDGE Eastern DOM to Workgroup 1FC004.000 CSF Office Support in order to align historical costs with the workgroup in which the activity will be forecasted							
2011	-79	0	0	-0.7	CCTR Transf	To 2100-3459.000	TPKAJ201312032 11851100
Transfer of District Operations Manager labor and non-labor expense from shared services cost center 2200-2145 SDGE Eastern DOM to Workgroup 1FC004.000 CSF Office Support in order to align historical costs with the workgroup in which the activity will be forecasted							
<b>2011 Total</b>	<b>-338</b>	<b>0.686</b>	<b>0</b>	<b>-4.9</b>			

2012	113	0	0	1.5	1-Sided Adj	N/A	TPKAJ201311101 55720910
Transfer Collections Supervisors labor expense from 1FC001.000 to 1FC002.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2012	-26	0	0	-0.4	1-Sided Adj	N/A	TPKAJ201311101 62926563
Transfer Operations labor expense from 1FC002.000 to 1FC001.000 in order to align historical costs with the workgroup in which the activity will be forecasted							

Note: Totals may include rounding differences.

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Area: CS - FIELD  
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<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	-155	0	0	-3.5	1-Sided Adj	N/A	TPKAJ201311101 63010990
Transfer Staff Assistants labor expense from 1FC002.000 to 1FC004.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2012	-299	0	0	-2.7	1-Sided Adj	N/A	TPKAJ201311101 63649237
Transfer District Operations Managers labor expense from 1FC002.000 to 1FC004.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
<b>2012 Total</b>	<b>-367</b>	<b>0</b>	<b>0</b>	<b>-5.1</b>			
2013	222	0	0	2.7	1-Sided Adj	N/A	CTRINH2014020 6114903607
Transfer Collections Supervisors labor from 1FC001.000 to 1FC002.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2013	-5	0	0	0.0	1-Sided Adj	N/A	CTRINH2014020 6121322597
Transfer Operations labor expense from 1FC002.000 to 1FC001.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2013	-148	0	0	-3.3	1-Sided Adj	N/A	CTRINH2014020 6122924913
Transfer Staff Assistants labor expense from 1FC001.000 to 1FC004.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2013	-306	0	0	-2.8	1-Sided Adj	N/A	CTRINH2014020 6123412727
Transfer District Operations Manager labor expense from 1FC002.000 to 1FC004.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
<b>2013 Total</b>	<b>-237</b>	<b>0</b>	<b>0</b>	<b>-3.4</b>			

Note: Totals may include rounding differences.

**Beginning of Workpaper**  
**1FC003.000 - Customer Services Field - Dispatch**

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

Area: CS - FIELD  
 Witness: Sara Franke  
 Category: A. Customer Service Field  
 Category-Sub: 3. Customer Service Field - Dispatch  
 Workpaper: 1FC003.000 - Customer Services Field - Dispatch

**Activity Description:**

Includes labor and non-labor costs for Dispatch personnel who route and dispatch work orders to CSF field employees 24 hours a day, 365 days a year, including dispatching emergency orders real time as they are received, redistributing work orders when employees call in sick or otherwise become unavailable, redistributing work orders when employees are not able to complete all work that has been assigned for the day and other related dispatching tasks.

**Forecast Explanations:**

**Labor - 5-YR Average**

Dispatch operations were not impacted by Smart Meter implementation, and both labor and non-labor costs have remained relatively flat over time. A five-year average was used to forecast labor costs to avoid the potential for artificially inflating or deflating results based on short-term anomalies.

**Non-Labor - 5-YR Average**

Non-labor expenses such as office materials and cell phone expenses have remained relatively flat over time. A five-year average was used to forecast non-labor costs to avoid the potential for artificially inflating or deflating results based on short-term anomalies.

**NSE - 5-YR Average**

NSE is not applicable to this workgroup.

**Summary of Results:**

		In 2013\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2009	2010	2011	2012	2013	2014	2015	2016	
Labor		2,876	3,045	2,992	2,955	2,940	2,962	2,962	2,962	
Non-Labor		50	37	45	36	33	40	40	40	
NSE		0	0	0	0	0	0	0	0	
<b>Total</b>		<b>2,926</b>	<b>3,082</b>	<b>3,037</b>	<b>2,991</b>	<b>2,973</b>	<b>3,002</b>	<b>3,002</b>	<b>3,002</b>	
FTE		35.7	38.1	36.1	34.8	34.9	35.9	35.9	35.9	

*Note: Totals may include rounding differences.*



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

Area: CS - FIELD  
 Witness: Sara Franke  
 Category: A. Customer Service Field  
 Category-Sub: 3. Customer Service Field - Dispatch  
 Workpaper: 1FC003.000 - Customer Services Field - Dispatch

**Forecast Summary:**

In 2013 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2014	2015	2016	2014	2015	2016	2014	2015	2016
Labor	5-YR Average	2,962	2,962	2,962	0	0	0	2,962	2,962	2,962
Non-Labor	5-YR Average	40	40	40	0	0	0	40	40	40
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>3,002</b>	<b>3,002</b>	<b>3,002</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3,002</b>	<b>3,002</b>	<b>3,002</b>
FTE	5-YR Average	35.9	35.9	35.9	0.0	0.0	0.0	35.9	35.9	35.9

**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>
<b>2014 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
<b>2015 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	
<b>2016 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>	

*Note: Totals may include rounding differences.*

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

Area: CS - FIELD  
Witness: Sara Franke  
Category: A. Customer Service Field  
Category-Sub: 3. Customer Service Field - Dispatch  
Workpaper: 1FC003.000 - Customer Services Field - Dispatch

**Determination of Adjusted-Recorded (Incurred Costs):**

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	2,295	2,470	2,493	2,475	2,460
Non-Labor	45	35	43	35	33
NSE	0	0	0	0	0
<b>Total</b>	<b>2,340</b>	<b>2,505</b>	<b>2,537</b>	<b>2,511</b>	<b>2,492</b>
FTE	30.6	32.5	30.7	28.9	28.0
<b>Adjustments (Nominal \$) **</b>					
Labor	0	0	12	51	78
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>51</b>	<b>78</b>
FTE	0.0	0.0	0.3	1.0	1.7
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	2,295	2,470	2,506	2,527	2,538
Non-Labor	45	35	43	35	33
NSE	0	0	0	0	0
<b>Total</b>	<b>2,340</b>	<b>2,505</b>	<b>2,549</b>	<b>2,562</b>	<b>2,570</b>
FTE	30.6	32.5	31.0	29.9	29.7
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	354	393	369	366	402
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>354</b>	<b>393</b>	<b>369</b>	<b>366</b>	<b>402</b>
FTE	5.1	5.6	5.1	4.8	5.2
<b>Escalation to 2013\$</b>					
Labor	228	181	118	62	0
Non-Labor	5	3	2	1	0
NSE	0	0	0	0	0
<b>Total</b>	<b>232</b>	<b>184</b>	<b>119</b>	<b>63</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2013\$)</b>					
Labor	2,876	3,045	2,992	2,955	2,940
Non-Labor	50	37	45	36	33
NSE	0	0	0	0	0
<b>Total</b>	<b>2,926</b>	<b>3,082</b>	<b>3,037</b>	<b>2,991</b>	<b>2,973</b>
FTE	35.7	38.1	36.1	34.7	34.9

\* 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.

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

Area: CS - FIELD  
 Witness: Sara Franke  
 Category: A. Customer Service Field  
 Category-Sub: 3. Customer Service Field - Dispatch  
 Workpaper: 1FC003.000 - Customer Services Field - Dispatch

**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs					
Years	2009	2010	2011	2012	2013
Labor	0	0	12	51	78
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>51</b>	<b>78</b>
FTE	0.0	0.0	0.3	1.0	1.7

**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>
<b>2009 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>			
<b>2010 Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.0</b>			
2011	12	0	0	0.3	1-Sided Adj	N/A	TPKAJ201311101 60752630
Transfer Collections Dispatchers labor from 1FC001.000 to 1FC003.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
<b>2011 Total</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>0.3</b>			
2012	51	0	0	1.0	1-Sided Adj	N/A	TPKAJ201311101 60850453
Transfer Collections Dispatchers labor expense from 1FC001.000 to 1FC003.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
<b>2012 Total</b>	<b>51</b>	<b>0</b>	<b>0</b>	<b>1.0</b>			
2013	78	0	0	1.7	1-Sided Adj	N/A	CTRINH2014020 6120443743
Transfer Collections Dispatchers labor expense from 1FC001.000 to 1FC003.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
<b>2013 Total</b>	<b>78</b>	<b>0</b>	<b>0</b>	<b>1.7</b>			

*Note: Totals may include rounding differences.*

**Beginning of Workpaper**  
**1FC004.000 - Customer Services Field - Support**

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

Area: CS - FIELD  
 Witness: Sara Franke  
 Category: A. Customer Service Field  
 Category-Sub: 4. Customer Service Field - Support  
 Workpaper: 1FC004.000 - Customer Services Field - Support

**Activity Description:**

The CSF Support cost category includes centralized training (classroom instructors and a training manager located at SDG&E's skills training center), field instructors who accompany new field employees immediately following their formal training to ensure they are ready to work in the field safely on their own, quality assurance ("QA") inspectors and a QA supervisor who inspect the work of field technicians to ensure quality service to customers, operations clerks who are located at the field operating bases, district operations managers who oversee the day to day operations of each field operating base, a Meter Access group that resolves any difficulty field technicians are experiencing in gaining safe access to meters at customer premises, a Safety group that fosters safe work practices among CSF employees, and a financial analyst.

**Forecast Explanations:**

**Labor - Base YR Rec**

Forecasted TY 2016 labor expenses are based on base year 2013 recorded costs given that this cost category was impacted by organizational changes in 2013. The Meter Access group was expanded from 6 to 8 positions due to a reorganizing of the Smart Meter function and in order to address workload requirements. A new Safety group was also created, consisting of one project manager and two advisors, to foster safe work practices among CSF employees. Incremental funding requests, which are forecasted using the zero-based methodology, are then added to determine total funding requirements. Use of any forecast methodology other than the base year would not accurately reflect current operations.

**Non-Labor - Base YR Rec**

Non-labor costs include cell phones, office supplies and other miscellaneous expenses. Base year 2013 recorded costs were used for the same reasons noted above. Incremental funding requests, which are forecasted using the zero-based methodology, are then added to determine total funding requirements.

**NSE - Base YR Rec**

NSE is not applicable to this workgroup.

**Summary of Results:**

		In 2013\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years	2009	2010	2011	2012	2013	2014	2015	2016		
Labor	1,476	1,698	2,152	2,474	2,556	2,515	2,484	2,584		
Non-Labor	121	132	127	189	292	292	292	390		
NSE	0	0	0	0	0	0	0	0		
<b>Total</b>	<b>1,597</b>	<b>1,831</b>	<b>2,278</b>	<b>2,663</b>	<b>2,848</b>	<b>2,807</b>	<b>2,776</b>	<b>2,974</b>		
FTE	19.7	21.9	27.0	31.6	33.1	32.5	32.1	33.1		

*Note: Totals may include rounding differences.*

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

Area: CS - FIELD  
Witness: Sara Franke  
Category: A. Customer Service Field  
Category-Sub: 4. Customer Service Field - Support  
Workpaper: 1FC004.000 - Customer Services Field - Support

**Forecast Summary:**

In 2013 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2014	2015	2016	2014	2015	2016	2014	2015	2016
Labor	Base YR Rec	2,556	2,556	2,556	-41	-72	28	2,515	2,484	2,584
Non-Labor	Base YR Rec	292	292	292	0	0	98	292	292	390
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
<b>Total</b>		<b>2,848</b>	<b>2,848</b>	<b>2,848</b>	<b>-41</b>	<b>-72</b>	<b>126</b>	<b>2,807</b>	<b>2,776</b>	<b>2,974</b>
FTE	Base YR Rec	33.1	33.1	33.1	-0.6	-1.0	0.0	32.5	32.1	33.1

**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	-41	0	0	-41	-0.6	1-Sided Adj

Reduction of Collections Field Instructor due to reduction in Field Collectors.

<b>2014 Total</b>	<b>-41</b>	<b>0</b>	<b>0</b>	<b>-41</b>	<b>-0.6</b>	
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2015	-72	0	0	-72	-1.0	1-Sided Adj
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Reduction of Collections Field Instructor due to reduction in Field Collectors.

<b>2015 Total</b>	<b>-72</b>	<b>0</b>	<b>0</b>	<b>-72</b>	<b>-1.0</b>	
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2016	100	98	0	198	1.0	1-Sided Adj
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Labor and non-labor expenses for a senior training instructor position and \$93k in non-labor for new video/training equipment. The instructor and video equipment are needed to update and keep current all existing training videos

2016	-72	0	0	-72	-1.0	1-Sided Adj
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Reduction of Collections Field Instructor due to reduction in Field Collectors.

<b>2016 Total</b>	<b>28</b>	<b>98</b>	<b>0</b>	<b>126</b>	<b>0.0</b>	
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Note: Totals may include rounding differences.

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

Area: CS - FIELD  
Witness: Sara Franke  
Category: A. Customer Service Field  
Category-Sub: 4. Customer Service Field - Support  
Workpaper: 1FC004.000 - Customer Services Field - Support

**Determination of Adjusted-Recorded (Incurred Costs):**

	2009 (\$000)	2010 (\$000)	2011 (\$000)	2012 (\$000)	2013 (\$000)
<b>Recorded (Nominal \$)*</b>					
Labor	736	1,024	710	1,227	1,475
Non-Labor	66	117	117	178	594
NSE	0	0	0	0	0
<b>Total</b>	<b>803</b>	<b>1,141</b>	<b>827</b>	<b>1,405</b>	<b>2,068</b>
FTE	11.1	13.8	8.3	15.4	18.4
<b>Adjustments (Nominal \$) **</b>					
Labor	441	354	1,092	888	731
Non-Labor	43	5	5	8	-302
NSE	0	0	0	0	0
<b>Total</b>	<b>484</b>	<b>360</b>	<b>1,097</b>	<b>896</b>	<b>429</b>
FTE	5.8	4.9	14.9	11.8	9.8
<b>Recorded-Adjusted (Nominal \$)</b>					
Labor	1,177	1,378	1,802	2,115	2,206
Non-Labor	110	122	122	186	292
NSE	0	0	0	0	0
<b>Total</b>	<b>1,287</b>	<b>1,500</b>	<b>1,924</b>	<b>2,301</b>	<b>2,498</b>
FTE	16.9	18.7	23.2	27.2	28.2
<b>Vacation &amp; Sick (Nominal \$)</b>					
Labor	182	219	265	306	350
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
<b>Total</b>	<b>182</b>	<b>219</b>	<b>265</b>	<b>306</b>	<b>350</b>
FTE	2.8	3.2	3.8	4.4	4.9
<b>Escalation to 2013\$</b>					
Labor	117	101	85	52	0
Non-Labor	12	10	5	3	0
NSE	0	0	0	0	0
<b>Total</b>	<b>128</b>	<b>111</b>	<b>89</b>	<b>55</b>	<b>0</b>
FTE	0.0	0.0	0.0	0.0	0.0
<b>Recorded-Adjusted (Constant 2013\$)</b>					
Labor	1,476	1,698	2,152	2,474	2,556
Non-Labor	121	132	127	189	292
NSE	0	0	0	0	0
<b>Total</b>	<b>1,597</b>	<b>1,831</b>	<b>2,278</b>	<b>2,663</b>	<b>2,848</b>
FTE	19.7	21.9	27.0	31.6	33.1

\* After company-wide exclusions of Non-GRC costs

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

Note: Totals may include rounding differences.

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

Area: CS - FIELD  
Witness: Sara Franke  
Category: A. Customer Service Field  
Category-Sub: 4. Customer Service Field - Support  
Workpaper: 1FC004.000 - Customer Services Field - Support

**Summary of Adjustments to Recorded:**

In Nominal \$ (000) Incurred Costs					
Years	2009	2010	2011	2012	2013
Labor	441	354	1,092	888	731
Non-Labor	43	5	5	8	-302
NSE	0	0	0	0	0
<b>Total</b>	<b>484</b>	<b>360</b>	<b>1,097</b>	<b>896</b>	<b>429</b>
FTE	5.8	4.9	14.9	11.8	9.8

**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	From 2100-3549.000	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	132	10	0	1.6	1-Sided Adj	N/A	CTRINH2014022 7100106797
Adjustment to move labor and non-labor from shared service cost center 2100-3456 to non-shared workgroup 1FC004.000 as activities in this cost center will no longer be shared.							
2009	28	0	0	0.6	1-Sided Adj	N/A	TPKAJ201311101 60319193
Transfer Staff Assistants labor from 1FC001.000 to 1FC004.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2009	-287	0	0	-5.1	1-Sided Adj	N/A	TPKAJ201311101 61741370
Transfer Operations Training labor from 1FC004.000 to 1FC001.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2009	141	0	0	3.3	1-Sided Adj	N/A	TPKAJ201311101 63334657
Transfer Staff Assistants labor from 1FC002.000 to 1FC004.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2009	131	0	0	1.3	1-Sided Adj	N/A	TPKAJ201311101 63448343
Transfer District Ops Managers labor from 1FC002.000 to 1FC004.000 in order to align historical costs with the workgroup in which the activity will be forecasted							

*Note: Totals may include rounding differences.*



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

Area: CS - FIELD  
 Witness: Sara Franke  
 Category: A. Customer Service Field  
 Category-Sub: 4. Customer Service Field - Support  
 Workpaper: 1FC004.000 - Customer Services Field - 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	79	0	0	0.8	CCTR Transf	From 2100-3666.000	TPKAJ201312032 11710017
Transfer of District Operations Manager labor and non-labor expense from USS cost center 2200-2145 SDGE Eastern DOM to workgroup 1FC004.000 CSF Office Support, in order to align historical costs with the workgroup in which the activity will be forecasted							
<b>2009 Total</b>	<b>441</b>	<b>43</b>	<b>0</b>	<b>5.8</b>			

2010	141	5	0	1.7	1-Sided Adj	N/A	CTRINH2014022 7102920663
Adjustment to move costs from shared service cost center 2100-3456 to non-shared workgroup 1FC004.000 as activities in this cost center will no longer be shared.							
2010	-175	0	0	-2.9	1-Sided Adj	N/A	TPKAJ201311101 61839610
Transfer Operations training labor from 1FC004.000 to 1FC001.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2010	165	0	0	3.9	1-Sided Adj	N/A	TPKAJ201311101 63250587
Transfer Staff Assistants labor from 1FC002.000 to 1FC004.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2010	135	0	0	1.3	1-Sided Adj	N/A	TPKAJ201311101 63531803
Transfer District Operations Managers labor from 1FC002.000 to 1FC004.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2010	88	0	0	0.9	CCTR Transf	From 2100-3666.000	TPKAJ201312032 11755560
Transfer of District Operations Manager labor and non-labor expense from USS cost center 2200-2145 SDGE Eastern DOM to Workgroup 1FC004.000 CSF Office Support in order to align historical costs with the workgroup in which the activity will be forecasted							
<b>2010 Total</b>	<b>354</b>	<b>5</b>	<b>0</b>	<b>4.9</b>			

2011	146	5	0	1.7	1-Sided Adj	N/A	CTRINH2014022 7103007410
Adjustment to transfer labor and non-labor expenses from shared service cost center 2100-3456 to non-shared workgroup 1FC004.000 as activities in this cost center will no longer be shared							
2011	116	0	0	1.5	CCTR Transf	From 2100-3586.000	JREISTET201310 30110659283
Transfer labor for two Safety Advisors to 2100-3889 Field Services Safety Support in order to align historical costs with the workgroup in which the activity will be forecasted							

Note: Totals may include rounding differences.

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

Area: CS - FIELD  
 Witness: Sara Franke  
 Category: A. Customer Service Field  
 Category-Sub: 4. Customer Service Field - Support  
 Workpaper: 1FC004.000 - Customer Services Field - 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	70	0	0	1.2	1-Sided Adj	N/A	TPKAJ201311101 55947387
Transfer Field Instructors labor from 1FC001.000 to 1FC004.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2011	507	0	0	7.3	1-Sided Adj	N/A	TPKAJ201311101 61434337
Transfer labor expense from 1FC004.000 to 1FC001.000. Costs funded by Smart Meter and recorded in the AMIBA during deployment. Beginning in 2012, these costs are recorded in O&M							
2011	-216	0	0	-3.2	1-Sided Adj	N/A	TPKAJ201311101 61935780
Transfer Operations training labor from 1FC004.000 to 1FC001.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2011	146	0	0	3.4	1-Sided Adj	N/A	TPKAJ201311101 63206640
Transfer Staff Assistants labor expense from 1FC002.000 to 1FC004.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2011	243	0	0	2.3	1-Sided Adj	N/A	TPKAJ201311101 63622667
Transfer District Operations Managers labor from 1FC002.000 to 1FC004.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2011	79	0	0	0.7	CCTR Transf	From 2100-3666.000	TPKAJ201312032 11851100
Transfer of District Operations Manager labor and non-labor expense from shared services cost center 2200-2145 SDGE Eastern DOM to Workgroup 1FC004.000 CSF Office Support in order to align historical costs with the workgroup in which the activity will be forecasted							
<b>2011 Total</b>	<b>1,092</b>	<b>5</b>	<b>0</b>	<b>14.9</b>			

2012	82	0	0	1.3	CCTR Transf	From 2100-3547.000	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	150	8	0	1.7	1-Sided Adj	N/A	CTRINH2014022 7103110647
Adjustment to move costs from shared service cost center 2100-3456 to non-shared workgroup 1FC004.000 NSS as activities in this cost center will no longer be shared.							

Note: Totals may include rounding differences.

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

Area: CS - FIELD  
 Witness: Sara Franke  
 Category: A. Customer Service Field  
 Category-Sub: 4. Customer Service Field - Support  
 Workpaper: 1FC004.000 - Customer Services Field - 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	144	0	0	1.7	CCTR Transf	From 2100-3586.000	JREISTET201310 30110832760
Transfer labor expense for two Safety Advisors to 2100-3889 Field Services Safety Support in order to align historical costs with the workgroup in which the activity will be forecasted							
2012	175	0	0	2.6	1-Sided Adj	N/A	TPKAJ201311101 60109230
Transfer Field Instructors labor expense from 1FC001.000 to 1FC004.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2012	1	0	0	0.0	1-Sided Adj	N/A	TPKAJ201311101 60537093
Transfer Staff Assistants labor expense from 1FC001.000 to 1FC004.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2012	-118	0	0	-1.7	1-Sided Adj	N/A	TPKAJ201311101 62037767
Transfer Operations training labor expense from 1FC004.000 to 1FC001.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2012	155	0	0	3.5	1-Sided Adj	N/A	TPKAJ201311101 63049677
Transfer Staff Assistants labor expense from 1FC002.000 to 1FC004.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2012	299	0	0	2.7	1-Sided Adj	N/A	TPKAJ201311101 63703853
Transfer District Operations Managers labor expense from 1FC002.000 to 1FC004.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
<b>2012 Total</b>	<b>888</b>	<b>8</b>	<b>0</b>	<b>11.8</b>			

2013	54	0	0	0.8	CCTR Transf	From 2100-3547.000	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	126	0	0	1.8	1-Sided Adj	N/A	CTRINH2014020 6120132177
Transfer Field Instructors labor expense from 1FC001.000 to 1FC004.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2013	148	0	0	3.3	1-Sided Adj	N/A	CTRINH2014020 6123304293
Transfer Staff Assistants labor expense from 1FC002.000 to 1FC004.000 in order to align historical costs with the workgroup in which the activity will be forecasted							

Note: Totals may include rounding differences.

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

Area: CS - FIELD  
 Witness: Sara Franke  
 Category: A. Customer Service Field  
 Category-Sub: 4. Customer Service Field - Support  
 Workpaper: 1FC004.000 - Customer Services Field - 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	306	0	0	2.8	1-Sided Adj	N/A	CTRINH2014020 6123622113
Transfer District Operations Manager labor expense from 1FC002.000 to 1FC004.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2013	0	-308	0	0.0	1-Sided Adj	N/A	CTRINH2014020 6124039473
Transfer non-labor expense for multi-gas detection from 1FC004.000 to 1FC001.000 in order to align historical costs with the workgroup in which the activity will be forecasted							
2013	97	6	0	1.1	1-Sided Adj	N/A	CTRINH2014022 7103152163
Adjustment to move costs from shared service cost center 2100-3456 to non-shared workgroup 1FC004.000 as activities in this cost center will no longer be shared							
<b>2013 Total</b>	<b>731</b>	<b>-302</b>	<b>0</b>	<b>9.8</b>			

*Note: Totals may include rounding differences.*

**Supplemental Workpapers for Workpaper 1FC004.000**

## **RESPONSES TO INFORMAL DATA REQUESTS & DEFICIENCIES**

### **ORA INFORMAL-SDG&E/SOCALSGAS-DR-05, SDG&E-ORA-DEF-009-TLG, and SDG&E-ORA-DEF-040-TLG**

#### **Supporting the Request of Sara A. Franke**

##### **Customer Services Field**

Note 1: Responses to ORA-DR-05 has been updated to reflect Application Testimony & Workpapers from NOI Testimony & Workpapers.

Note 2: Responses to ORA-DEF-009-TLG has been updated to reflect Application Testimony & Workpapers from NOI Testimony & Workpapers.

Note 3: Responses to ORA-DEF-040-TLG has been updated to reflect Application Testimony & Workpapers from NOI Testimony & Workpapers.

**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**

1. Please provide a reference document for all Customer Service witness exhibits, showing the links between the Testimony Exhibit sections, Workpaper Exhibit page numbers, relevant MDR responses, and the cost centers included in each workpaper grouping.

**SDG&E-SoCalGas Response:**

SoCalGas and SDG&E Customer Service witnesses provided roadmaps of all Customer Service witness exhibits, to ORA witness Tamera Godfrey during their meeting in San Francisco on Wednesday, August 20, 2014.

**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**

2. Please provide summaries for all Customer Service witness O&M requests, by workpaper group, broken out to show the labor and non-labor details, for the years 2009 - 2016.

**SDG&E-SoCalGas Response:**

SoCalGas and SDG&E Customer Service witnesses provided summaries of all Customer Service witness O&M requests, by workpaper group, broken out to show the labor and non-labor details, for the years 2009 – 2016, to ORA witness Tamera Godfrey during their meeting in San Francisco on Wednesday, August 20, 2014.



**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**

3. Please provide copies of IT Capital project workpapers for all Customer Service witness sponsored projects.

**SDG&E-SoCalGas Response:**

SoCalGas and SDG&E Customer Service witnesses provided copies of all Customer Service witness sponsored projects within the IT capital workpaper exhibits to ORA witness Tamera Godfrey during their meeting in San Francisco on Wednesday, August 20, 2014.

Each witness packet includes the IT Capital Workpaper cover page and the overall summary by sponsoring witness (page 1) prior to the page ranges listed below.

SDG&E Ex. SDG&E-19-CWP sponsored by witness Stephen J. Mikovits, as follows:

- a. Sara Franke Ex. SDG&E-13 IT capital projects are contained on pages 3 of 513 through 7 of 513
- b. Brad Baugh Ex. SDG&E-14 IT capital projects are contained on pages 8 of 513 through 174 of 842

SoCalGas Ex. SCG-18-CWP sponsored by witness Christopher R. Olmsted, as follows:

- a. Sara Franke Ex. SCG-10 IT capital projects are contained on pages 2 of 842 through 17 of 842
- b. Evan Goldman Ex. SCG-11 IT capital projects are contained on pages 18 of 842 through 121 of 842
- c. Gwen Marelli Ex. SCG-12 IT capital projects are contained on pages 122 of 842 through 184 of 842

**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**

5. Please provide a mapping of the total forecasted order counts shown in Ex. SDG&E-13, Table SAF-6 on p. SAF-11, to the workpapers in Ex. SDG&E-13-WP.

**SDG&E-SoCalGas Response:**

The SDG&E Customer Services Field witness team provided ORA witness Tamera Godfrey with a workpaper that compares Table SAF-6 in testimony Ex. SDG&E-13 to the workpaper table shown on page SAF-16 of Ex. SDG&E-13-WP. Included in the comparison is a reconciliation of the tables. The workpaper was provided to Ms. Godfrey on Wednesday, August 20, 2014.

File name: ORA Informal DR-05 Q5 Attachment.xlsx

ORA Informal Data Request  
 ORA INFORMAL-SDG&E/SoCalGas-DR-05 Question 1 Attachments

Functional Area	Testimony Area	Work Paper Group	Ex. SDG&E-13 Testimony Pages	Ex. SDG&E-13-WP Workpaper Pages X of 107	MDR Chapter 9 Question #	WP Group FERC Accounts	FERC Allocation %	Cost Centers in Group	Cost Center Name
	Customer Services Field; Witness: Sara A. Franke				Q.10				
	Section I: Introduction		SAF-1-3						
	Section II: Non-Shared Costs		SAF-3-21	1-107					
	A - Introduction		SAF-3-4						
	B - CSF Operations	1FC001.000 Customer Services Field - Operations	SAF-4-18	4-14	Q. 1-4	879.1	31.5%	2100-0024	FIELD COLLECTIONS SDGE SOUTHERN
		Supplemental Workpapers for Workpaper 1FC001.000				586.4	18.2%	2100-0025	FIELD COLLECTIONS SDGE NORTHERN
		Work Order Volume (Section 1 of 4) Work Order Volume Model		16-21		878.2	17.9%	2100-0030	CUSTOMER SERVICE FIELD BEACH CITIES
		Work Order Volume (Section 2 of 4) Operations Training Labor		22		878.1	9.3%	2100-0031	CUSTOMER SERVICE FIELD EASTERN
		Work Order Volume (Section 3 of 4) Operations Non-labor		23		880.4	8.7%	2100-0032	CUSTOMER SERVICE FIELD METRO
		Work Order Volume Charts		25-77		903.3	6.8%	2100-0033	CUSTOMER SERVICE FIELD NORTHEAST
		Collections Work Order Volume		78-81		879.5	5.6%	2100-0034	CUSTOMER SERVICE FIELD NORTH COAST
		Operator Qualification Training		82-83		893.2	2.1%	2100-0640	LOS MANAGER SEASONALS
						Total	100%		
	C - CSF Supervision	1FC002.000 Customer Services Field - Supervision	SAF-18-19	84-92	Q. 1-3	879.0	75%	2100-3664	SO INL CS DOM BC
		Supplemental Workpapers for Workpaper 1FC002.000				586.0	18.2%	2100-3665	SO INL CS DOM CM
		Work Order Volume (Section 4 of 4) Supervisor Labor & Non-labor		24		903.3	6.8%	2100-3666	SO INL CS DOM EA
						Total	100.0%	2100-3667	SO INL CS DOM NC
								2100-3668	SO INL CS DOM NE
	D - CSF Dispatch	1FC003.000 Customer Services Field - Dispatch	SAF-19-20	93-97	Q. 1-3	879.0	44.6%	2100-0129	DISPATCH MANAGER
						587.0	43.5%		
						903.0	11.9%		
						Total	100%		
	E - CSF Support	1FC004.000 Customer Service Field - Support	SAF-20-22	98-106	Q. 1-3	879.0	56.0%	2100-0639	CSF TRAINING
						870.1	28.0%	2100-3457	CUSTOMER SERVICES FIELD TRAINING MANAGER
						880.3	7.0%	2100-3459	CUSTOMER SERVICE-SOUTH INLAND DIRECTOR
						586.0	6.0%	2100-3605	QUALITY ASSURANCE
						880.4	3.0%	2100-3753	CUST SVC METER ACCES
						Total	100%	2100-3809	SCG METER READING ASSOCIATE
								2100-3889	FIELD SRVC SAFETY SUPPORT
	Section III: Capital		SAF-22		Q.11				
GRID WP #	Capital Project #	Capital Project Name							
00834A	13024	SORT Customer Service Field MDT Refresh	SAF-22	Witness S. Mikovits; Ex. SDG&E-19-CWP; pp. 2-7					
	Section IV: SDG&E Response Times For Priority 1 Gas Leak Orders		SAF-23-25						
	Section V: Conclusion		SAF-25						
	Section VI: Witness Qualifications		SAF-26						
	List of Appendices								
	A. Glossary of Acronyms		A-1						
	B. Customer Services Field Adjustments to 2013-Recorded Costs		B-1-2						
	C. Illustrative Examples of Work Order Volume Forecasts by Individual Order Type		C-1-2						
	D. Report Prepared by INRIX, Inc. Regarding Traffic Congestion in Southern California		D-1						
	E. SDG&E Response Time Performance for All P1 and P2 Orders		E-1-2						

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2016 GRC - APP  
Non-Shared Service Workpapers

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

Witness Name	Sara Franke									
Constant 2013\$ in Thousands										
	Adjusted Recorded					Forecast			Workpaper Page	
	2009	2010	2011	2012	2013	2014	2015	2016		
SDG&E										
Exh No:SDG&E-13-WP										
<b>OM Total</b>	<b>25,731</b>	<b>25,305</b>	<b>24,232</b>	<b>23,445</b>	<b>22,988</b>	<b>21,165</b>	<b>20,648</b>	<b>22,212</b>		
Non-Shared										
1FC001.000 - Customer Services Field Operations										
Labor	18,444	17,867	16,389	15,432	14,514	13,124	12,688	13,777		
NLbr	1,986	927	1,059	918	1,164	850	830	898		
NSE	0	0	0	0	0	0	0	0		
1FC001.000 Total	19,530	18,793	17,448	16,350	15,678	13,974	13,518	14,675		Page 5 of 107
1FC002.000 - Customer Services Field Supervision										
Labor	1,599	1,505	1,392	1,356	1,441	1,334	1,299	1,402		
NLbr	80	97	75	88	50	74	75	82		
NSE	0	0	0	0	0	0	0	0		
1FC002.000 Total	1,680	1,601	1,467	1,444	1,491	1,408	1,374	1,484		Page 81 of 107
1FC003.000 - Customer Services Field Dispatch										
Labor	2,876	3,045	2,992	2,955	2,940	2,962	2,962	2,962		
NLbr	50	37	45	36	33	40	40	40		
NSE	0	0	0	0	0	0	0	0		
1FC003.000 Total	2,926	3,082	3,037	2,991	2,973	3,002	3,002	3,002		Page 90 of 107
1FC004.000 - Customer Services Field Support										
Labor	1,476	1,698	2,152	2,474	2,556	2,515	2,484	2,584		
NLbr	121	132	127	189	292	292	292	390		
NSE	0	0	0	0	0	0	0	0		
1FC004.000 Total	1,597	1,831	2,278	2,663	2,848	2,807	2,776	2,974		Page 95 of 107

Note: Totals may include rounding differences.

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Capital Workpapers

**Beginning of Workpaper Group**  
**00834A - PT13024 SORTCustomer Service Field MDT Refresh**

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Non-Shared Service Workpapers

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

Area: INFORMATION TECHNOLOGY  
 Witness: Stephen J. Mikovits  
 Budget Code: 00834.0  
 Category: A. CS - Field & SCG Mtr Reading  
 Category-Sub: 1. Technical Obsolescence  
 Workpaper Group: 00834A - PT13024 SORT Customer Service Field MDT Refresh

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

Forecast Method		Adjusted Recorded					Adjusted Forecast		
		2009	2010	2011	2012	2013	2014	2015	2016
<b>Years</b>									
Labor	Zero-Based	0	0	0	0	0	96	0	0
Non-Labor	Zero-Based	0	0	0	0	0	25	0	0
NSE	Zero-Based	0	0	0	0	0	0	0	0
<b>Total</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>121</b>	<b>0</b>	<b>0</b>
FTE	Zero-Based	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0

**Business Purpose:**

Replacing the MDTs for CSF will provide new devices to replace critical tools used to link the field technicians with not only the SORT System, but with Service Dispatch and Field Management.  
 Replacing the aging hardware will allow the project team to implement wireless capabilities for CSF, including GPS tracking capability to improve safety for these field technicians.  
 Replacing the aging AEG with wireless broadband and deliver expanded wireless data capacity  
 Minimize current hardware breakdown and downtime issues.

**Physical Description:**

Install and Implement ~250 MDT devices and associated hardware/software.  
 Windows XP OS  
 Hardware Encryption  
 NetMotion VPN  
 Verizon/ATT Backhaul  
 Replace ~250 docking stations for all current CSF service vehicles  
 Install ~250 CSF field employees added to Verizon/ATT wireless contract  
 Work with Desktop Services to develop CSF base image.  
 Microsoft Office Suite 2003 (Upon agreement with field management)

**Project Justification:**

The purpose of this project is to replace the current Mobile Data Terminals (MDTs) for Customer Service Field (CSF). The MDTs are at end of life (most are at least eight (8) years old) and must be upgraded to meet minimum requirements for wireless broadband and GPS capabilities. The MDT Refresh Project will replace approximately 215 Panasonic Toughbooks and all associated peripheral devices (docking stations, vehicle mounts, printers, etc.).  
 This wireless capability will eliminate the current requirement for the Advanced Enterprise Gateway (AEG) and the Motorola 900MHz Data Radio Network. Those areas are the two biggest points of failure in the current SORT System. In the event of failure of either the AEG or the Data Radio Network, the CSF Technicians would be stranded with no ability to communicate data within the SORT System.

*Note: Totals may include rounding differences.*

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: INFORMATIONTECHNOLOGY  
Witness: Stephen J. Mikovits  
Budget Code: 00834.0  
Category: A. CS - Field & SCG Mtr Reading  
Category-Sub: 1. Technical Obsolescence  
Workpaper Group: 00834A - PT13024 SORTCustomer Service Field MDT Refresh

**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 00834A**



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Non-Shared Service Workpapers

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

Area: INFORMATION TECHNOLOGY  
 Witness: Stephen J. Mikovits  
 Budget Code: 00834.0  
 Category: A. CS - Field & SCG Mtr Reading  
 Category-Sub: 1. Technical Obsolescence  
 Workpaper Group: 00834A - PT13024 SORT Customer Service Field MDT Refresh  
 Workpaper Detail: 00834A.001 - SORT Customer Service Field MDT Refresh  
 In-Service Date: 03/31/2014  
 Description:

		Forecast In 2013 \$(000)		
Years		<u>2014</u>	<u>2015</u>	<u>2016</u>
Labor		96	0	0
Non-Labor		25	0	0
NSE		0	0	0
	<b>Total</b>	<b>121</b>	<b>0</b>	<b>0</b>
FTE		0.9	0.0	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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ORA Informal Data Request  
ORA INFORMAL-SDG&E/SoCalGas-DR-05 Question 5 Attachments

**EX. SDG&E-13, TABLE SAF-6, PAGE 9**

**CUSTOMER SERVICES FIELD ORDER VOLUME FORECAST**

Order Type	Historical Order Volumes					Forecast Order Volumes			
	2009	2010	2011	2012	2013	2014	2015	2016	
Change of Account - Electric	50,294	38,665	9,749	1,672	603	609	614	620	
Change of Account - Gas	392	402	3,099	1,631	1,282	1,297	1,312	1,327	
Change of Account - Gas and Electric	59,875	40,409	4,145	697	422	426	431	435	
Change of Account - Give Notice	9,183	8,922	7,921	7,136	6,902	6,952	6,751	6,566	
Change of Account - Return to Owner	104,720	68,884	9,577	2,389	658	665	672	678	
Collections - Credit Shutoff	3,661	4,334	2,937	2,274	1,707	1,725	1,742	1,760	
Collections - First Call	317,500	321,415	313,453	274,409	278,656	The forecast for these order types is discussed further below.			
Collections - Second Call	40,314	38,982	35,941	33,783	8,054				
Collections - Third Call	14,130	11,145	13,474	14,815	2,573				
Customer Service Order ("CSO") - Appliance Adjustments	42,027	43,209	43,302	39,678	35,456	37,853	40,249	42,646	
CSO - Appliance Mechanic Work	751	719	851	816	851	845	840	834	
CSO - Carbon Monoxide Emergency	785	923	1,013	891	973	983	993	1,003	
CSO - Carbon Monoxide Non-Emergency	1,409	1,328	1,506	1,392	1,658	1,675	1,692	1,709	
CSO - High Pressure	170	152	204	172	167	172	176	181	
CSO - No Gas	9,504	10,447	14,273	12,768	13,913	13,520	13,127	12,734	
CSO - Other Miscellaneous Gas & Electric Requests	10,864	11,059	12,526	10,960	11,924	11,948	11,973	11,997	
CSO - School Leak Surveys	457	464	399	471	418	433	448	462	
CSO - Seasonal Off	811	639	541	642	821	788	756	723	
CSO - Seasonal On Multiples	10,893	10,373	11,726	9,951	8,339	9,139	9,939	10,739	
CSO - Seasonal On Singles	29,012	26,862	24,102	19,982	22,370	23,455	24,540	25,626	
Fumigation - Fumigation/Bug Fogger	42,379	39,361	41,268	40,597	43,376	45,545	46,084	46,732	
Gas Leak - Emergency - Broken & Blowing Inside	1,176	1,236	1,195	1,154	1,258	1,259	1,259	1,260	
Gas Leak - Emergency - Broken & Blowing Outside	232	218	176	185	249	240	231	222	
Gas Leak - Emergency - Agency Requests	452	489	452	452	548	532	516	501	
Gas Leak - Fire & Explosions	29	22	19	35	29	29	28	28	
Gas Leak - Hazardous	3,039	11,974	28,332	25,246	21,813	23,263	24,714	26,164	
Gas Leak - Non-Hazardous	30,006	22,434	5,112	4,147	3,747	4,003	4,258	4,514	
High Bill Investigation ("HBI")	637	614	590	437	438	443	447	452	
Meter Work - Capital - Header Work	532	312	530	322	411	557	758	988	
Meter Work - Capital - Meter Sets - Electric	478	147	37	923	756	666	576	485	
Meter Work - Capital - Meter Sets - Gas	4,742	3,857	4,366	4,716	4,452	5,880	8,002	10,438	
Meter Work - O&M - Atmospheric Corrosion	134	150	117	55	83	93	103	113	
Meter Work - O&M - Curb	571	398	960	615	420	511	602	693	
Meter Work - O&M - Customer/Company Change - Electric	20	93	127	72	249	205	160	116	
Meter Work - O&M - Customer/Company Change - Gas	2,025	1,749	1,708	2,031	1,991	1,990	1,990	1,989	
Meter Work - O&M - Customer/Company Test (Change) - Gas	9,918	12,349	7,703	7,267	5,488	7,918	71	72	
Meter Work - O&M - Miscellaneous Company Work	11,279	11,945	10,854	14,867	15,040	15,214	15,388	15,563	
Meter Work - O&M - Periodic Test/Change - Gas	8,758	7,636	11,301	12,640	13,232	12,553	11,874	11,195	
Non-pay Turn On	18,335	16,465	16,832	17,556	2,937	2,967	2,998	3,028	
Read/Verify - Re-Read	42,225	25,082	14,400	11,470	7,788	7,868	7,949	8,029	
Turn On/Shut Off - Customer/Company Remove/Reset - Electric	25	23	23	35	19	21	24	26	
Turn On/Shut Off - Customer/Company Remove/Reset - Gas	537	198	242	265	233	258	284	309	
Turn On/Shut Off - Give Notice Cut	12,464	11,108	6,167	4,165	3,665	2,634	1,615	3,778	
Turn On/Shut Off - Shut Off Electric	24,670	20,734	9,069	4,966	4,423	4,465	4,507	4,549	
Turn On/Shut Off - Shut Off Gas	6,482	5,946	7,659	8,863	7,896	7,987	8,079	8,170	
Turn On/Shut Off - Shut Off Gas & Electric	2,436	1,751	846	746	629	635	642	648	
Turn On/Shut Off - Shut Off in Error	761	514	477	442	238	241	244	246	
Turn On/Shut Off - Soft Shut Off Gas Electric	39,627	34,485	28,728	25,165	21,063	21,280	21,497	21,714	
Turn On/Shut Off - Soft Turn On Gas Turn On Electric	27,212	24,132	4,005	225	174	176	178	179	
Turn On/Shut Off - Turn On Electric	28,211	25,850	17,615	9,196	6,250	6,310	6,369	6,429	
Turn On/Shut Off - Turn On Gas & Electric	15,263	13,255	5,674	2,976	1,394	1,408	1,423	1,437	
Turn On/Shut Off - Turn On Gas	2,125	1,825	7,540	9,609	9,219	9,326	9,433	9,539	
Miscellaneous - Houseline Test/Purge - O&M	257	322	332	331	370	364	359	353	
Miscellaneous - Houseline Test/Purge - Capital	166	291	347	276	310	313	316	319	
Miscellaneous - Smart Meter	10,073	23,299	20,024	12,150	6,732	6,601	6,471	6,340	
Incomplete (excluding First, Second and Third Call Collections orders)	43,862	44,570	38,787	28,940	24,069	24,243	24,499	24,813	
<b>TOTAL (excluding First, Second and Third Call Collections orders)</b>	<b>725,946</b>	<b>632,625</b>	<b>441,485</b>	<b>366,659</b>	<b>319,453</b>	<b>322,636</b>	<b>330,201</b>	<b>341,475</b>	
						Subtract Capital Orders	7,416	9,652	12,231
						Add Proposed Service Enhancements	-	-	153,337
						<b>New Total</b>	<b>315,220</b>	<b>320,549</b>	<b>482,581</b>

Note: Totals may include rounding differences.

SDG&E/CS - FIELD & METER READING/Exh No:SDG&E-13-WP/Witness: S. Franke

San Diego Gas & Electric Company  
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ORA Informal Data Request  
ORA INFORMAL-SDG&E/SoCalGas-DR-05 Question 5 Attachments

<b>SDG&amp;E-13-WP, PAGE 16</b>			
<b>SUPPLEMENTAL WORKPAPER FOR WORKPAPER IFC001.000</b>			
<b>SDG&amp;E-13-Sfranke Supplemental Workpaper - Work Order Volume (Section 1 of 4)</b>			
Order Type	2014	2015	2016
Change of Account - Electric	609	614	620
Change of Account - Gas	1,297	1,312	1,327
Change of Account - Gas and Electric	426	431	435
Change of Account - Give Notice	6,952	6,751	6,566
Change of Account - Return to Owner	665	672	678
Collections - Credit Shutoff	1,725	1,742	1,760
Customer Service Order ("CSO") - Appliance Adjustments	37,853	40,249	42,646
CSO - Appliance Mechanic Work	845	840	834
CSO - Carbon Monoxide Emergency	983	993	1,003
CSO - Carbon Monoxide Non-Emergency	1,675	1,692	1,709
CSO - High Pressure	172	176	181
CSO - No Gas	13,520	13,127	12,734
CSO - Other Miscellaneous Gas & Electric Requests	11,948	11,973	11,997
CSO - School Leak Surveys	433	448	462
CSO - Seasonal Off	788	756	723
CSO - Seasonal On Multiples	9,139	9,939	10,739
CSO - Seasonal On Singles	23,455	24,540	25,626
Fumigation - Fumigation/Bug Fogger	45,545	46,084	46,732
Gas Leak - Emergency - Broken & Blowing Inside	1,259	1,259	1,260
Gas Leak - Emergency - Broken & Blowing Outside	240	231	222
Gas Leak - Emergency - Agency Requests	532	516	501
Gas Leak - Fire & Explosions	29	28	28
Gas Leak - Hazardous	23,263	24,714	26,164
Gas Leak - Non-Hazardous	4,003	4,258	4,514
High Bill Investigation ("HBI")	443	447	452
Meter Work - O&M - Atmospheric Corrosion	93	103	113
Meter Work - O&M - Curb	511	602	693
Meter Work - O&M - Customer/Company Change - Electric	205	160	116
Meter Work - O&M - Customer/Company Change - Gas	1,990	1,990	1,989
Meter Work - O&M - Customer/Company Test (Change) - Gas	70	71	72
Meter Work - O&M - Miscellaneous Company Work	15,214	15,388	15,563
Meter Work - O&M - Periodic Test/Change - Gas	12,553	11,874	11,195
Non-pay Turn On	2,967	2,998	3,028
Read/Verify - Re-Read	7,868	7,949	8,029
Turn On/Shut Off - Customer/Company Remove/Reset - Electric	21	24	26
Turn On/Shut Off - Customer/Company Remove/Reset - Gas	258	284	309
Turn On/Shut Off - Give Notice Cut	2,634	1,615	3,778
Turn On/Shut Off - Shut Off Electric	4,465	4,507	4,549
Turn On/Shut Off - Shut Off Gas	7,987	8,079	8,170
Turn On/Shut Off - Shut Off Gas & Electric	635	642	648
Turn On/Shut Off - Shut Off in Error	241	244	246
Turn On/Shut Off - Soft Shut Off Gas Electric	21,280	21,497	21,714
Turn On/Shut Off - Soft Turn On Gas Turn On Electric	176	178	179
Turn On/Shut Off - Turn On Electric	6,310	6,369	6,429
Turn On/Shut Off - Turn On Gas & Electric	1,408	1,423	1,437
Turn On/Shut Off - Turn On Gas	9,326	9,433	9,539
Miscellaneous - Houseline Test/Purge - O&M	364	359	353
Miscellaneous - Smart Meter	6,601	6,471	6,340
Incomplete (excluding First, Second and Third Call Collections orders)	24,243	24,499	24,813
Proposed Service Enhancements - Customer Outreach Safety Checks			10,000
Proposed Service Enhancements - Enhanced Customer Education			143,337
<b>TOTAL</b>	<b>315,220</b>	<b>320,549</b>	<b>482,581</b>
Add Capital Orders	7,416	9,652	12,231
Subtract Proposed Service Enhancements	-	-	153,337
<b>New Total</b>	<b>322,636</b>	<b>330,201</b>	<b>341,475</b>

Note: Totals may include rounding differences.

**ORA MASTER DATA REQUEST  
SDG&E 2016 GRC – A.14-11-XXX  
SDG&E-ORA-DEF-009-TLG  
RESPONSE**

**DATE RECEIVED: AUGUST 21, 2014  
DATE RESPONDED: SEPTEMBER 4, 2014**

**Deficiency Item #:** SDG&E-DEF-009-TLG

**Reference:** SDG&E-13 and SDG&E-14

**Deficiency:**

- A. D.89-01-040 Appendix B, page B-22 item F requires SDG&E to include “at least five years of recorded data for each FERC account used in the development of the test year revenues and revenue requirement. **Where subaccounts and/or other than FERC accounts are used to develop test year values, include at least five years of recorded data supporting those values also...**”.

SDG&E needs to:

1. Provide five years of recorded data for Customer Service Capital projects (including shared and non-shared capital projects) and the specific accounts/line items as shown within Customer Service Field and Customer Service Operations, Information, and Technologies where SDG&E’s testimony shows in detail where it is requesting increases for 2014-2016. See Exhibit SDG&E-13 page SAF-22 and SDG&E-14 pages BMB-119 through BMB-140 as some of the examples of the detailed manner in which SDG&E forecasted its TY capital projects but failed to provide five years of historical data for its capital expenditures associated with its Customer Service. SDG&E requested and was authorized funding in its 2008 and 2012 GRCs to address Customer Service capital projects and there should be historical data associated with the capital projects.

**SDG&E Response:**

Please see separate attachments:

SDG&E-ORA-DEF-009-TLG-A1-CAP-SDG&E-13 (Sara Franke)

SDG&E-ORA-DEF-009-TLG-A1-CAP-SDG&E-14 (Bradley Baugh)

**ORA MASTER DATA REQUEST  
SDG&E 2016 GRC – A.14-11-XXX  
SDG&E-ORA-DEF-009-TLG  
RESPONSE**

**DATE RECEIVED: AUGUST 21, 2014  
DATE RESPONDED: SEPTEMBER 4, 2014**

B. D.89-01-040 Appendix B, page B-22 item 4 requires SDG&E to furnish base year historical and estimated data and subsequent years with evaluation of changes up to and including the test year.

SDG&E needs to:

1. Provide account/line item detail that shows explanations “**and**” a breakdown of the calculation for “**all**” recorded increases/decreases in the last five years for “labor and non-labor” expenses and capital expenditures. In the sections included in SDG&E-13 and SDG&E-14, SDG&E did not provide discussions in its testimony or workpapers on the increases/decreases of the changes in expense levels during the last five years.

**SDG&E Response:**

Please see separate attachments:

SDG&E-ORA-DEF-009-TLG-B1-O&M-SDG&E-13 (Sara Franke)  
SDG&E-ORA-DEF-009-TLG-B1-O&M-SDG&E-14 (Bradley Baugh)

SDG&E-ORA-DEF-009-TLG RESPONSE

Question 1 Attachment

Exh No:SDG&E-13-IT Capital Projects										
Witness Name		Sara A. Franke								
Constant 2013\$ in Thousands										
							<b>Adjusted Recorded</b>		<b>Forecast</b>	
<b>Capital Project Name</b>	<b>WP#</b>	<b>Project #</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
Sort MDT Refresh	00834A	13024	\$51	\$429			\$1,357	\$121		
<b>Sub-Total Technical Obsolescence</b>			<b>\$51</b>	<b>\$429</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,357</b>	<b>\$121</b>	<b>\$0</b>	<b>\$0</b>
Other Customer Service projects in IT Capital History			<b>\$171</b>			<b>\$214</b>	<b>\$202</b>			
<b>GRAND TOTAL ALL</b>			<b>\$222</b>	<b>\$429</b>	<b>\$0</b>	<b>\$214</b>	<b>\$1,559</b>	<b>\$121</b>	<b>\$0</b>	<b>\$0</b>
<b>Year to Year Explanations:</b>										
<p>Year to year change is attributable to fluctuations in operating requirements and the number and types of Information Technology (IT) projects that are implemented each year. IT investments are typically made to enable/improve operations, meet regulatory requirements, address technology obsolescence and/or other reasons. As described in the testimony of Witness Stephen Mikovits, Ex. SDG&amp;E-19 pages SJM 23 - SJM 25, IT investments are prioritized in a manner that takes into consideration a number of different factors. Additionally, the timing of any project can also be affected by availability of vendor services/products, and operational impact to the client group.</p>										

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

SDG&E-ORA-DEF-009-TLG RESPONSE  
Question 2 Attachment

Exh No: SDG&E-13										
Witness Name: Sara Franke										
Constant 2013\$ in Thousands										
	Adjusted Recorded					Variance				Workpaper Page
	2009	2010	2011	2012	2013	2009-10	2010-11	2011-12	2012-13	
1FC001.000 - Customer Services Field Operations										
Labor	18,444	17,867	16,389	15,432	14,514	(577)	(1,478)	(957)	(918)	
NLbr	1,086	927	1,059	918	1,164	(159)	132	(141)	246	
NSE	0	0	0	0	0	-	-	-	-	
1FC001.000 Total	19,530	18,793	17,448	16,350	15,678	(737)	(1,345)	(1,098)	(672)	Page 6 of 107
Variance Explanation						Variance Amount				
2009-10										
<b>Labor</b>										
Decrease in Labor is due to the net result of declining O&M order volume from Smart Meter deployment, and an offsetting increase in drive time and on-premise time for the remaining Non-Smart Meter impacted orders.										
						(577)				
<b>NLbr</b>										
Decrease in Non-Labor is due to reduction in labor.										
						(159)				
						(737)				
2010-11										
<b>Labor</b>										
Decrease in Labor is due to the net result of declining O&M order volume from Smart Meter deployment, and an offsetting increase in drive time and on-premise time for the remaining Non-Smart Meter impacted orders.										
						(1,478)				
<b>NLbr</b>										
Decrease in Non-Labor is due to timing of when expenses are recorded. Variance from year to year is minimal and follows a cyclical pattern.										
						132				
						(1,345)				
2011-12										
<b>Labor</b>										
Decrease in Labor is due to the net result of declining O&M order volume from Smart Meter deployment, and an offsetting increase in drive time and on-premise time for the remaining Non-Smart Meter impacted orders.										
						(957)				
<b>NLbr</b>										
Decrease in Non-Labor is due to timing of when expenses are recorded. Variance from year to year is minimal and follows a cyclical pattern.										
						(141)				
						(1,098)				
2012-13										
<b>Labor</b>										
Decrease in Labor is due to the net result of declining O&M order volume from Smart Meter deployment, and an offsetting increase in drive time and on-premise time for the remaining Non-Smart Meter impacted orders. Additionally, there was a reduction of seasonal part-time workforce used during the heating season.										
						(918)				
<b>NLbr</b>										
Decrease in Non-Labor is due to timing of when expenses are recorded. Variance from year to year is minimal and follows a cyclical pattern.										
						246				
						(672)				

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

SDG&E-ORA-DEF-009-TLG RESPONSE  
Question 2 Attachment

Exh No: SDG&E-13										
Witness Name: Sara Franke										
Constant 2013\$ in Thousands										
	Adjusted Recorded					Variance				Workpaper Page
	2009	2010	2011	2012	2013	2009-10	2010-11	2011-12	2012-13	
1FC002.000 - Customer Services Field Supervision										
Labor	1,599	1,505	1,392	1,356	1,441	(94)	(113)	(36)	85	
NLbr	80	97	75	88	50	17	(22)	13	(38)	
NSE	0	0	0	0	0	-	-	-	-	
1FC002.000 Total	1,680	1,601	1,467	1,444	1,491	(79)	(134)	(23)	47	Page 85 of 107
Variance Explanation						Variance Amount				
2009-10										
<b>Labor</b>										
Decrease in Labor is due to reduction in supervisors to correspond with reduction in field operation employees.										
						(94)				
<b>NLbr</b>										
Increase in Non-Labor is due to timing of when expenses are recorded. Variance from year to year is minimal and follows a cyclical pattern.										
						17				
						(79)				
2010-11										
<b>Labor</b>										
Decrease in Labor is due to reduction in supervisors to correspond with reduction in field operation employees.										
						(113)				
<b>NLbr</b>										
Decrease in Non-Labor is due to timing of when expenses are recorded. Variance from year to year is minimal and follows a cyclical pattern.										
						(22)				
						(134)				
2011-12										
<b>Labor</b>										
Decrease in Labor is due to reduction in supervisors to correspond with reduction in field operation employees.										
						(36)				
<b>NLbr</b>										
Increase in Non-Labor is due to timing of when expenses are recorded. Variance from year to year is minimal and follows a cyclical pattern.										
						13				
						(23)				
2012-13										
<b>Labor</b>										
Increase in Labor is due to timing of backfilling of positions.										
						85				
<b>NLbr</b>										
Decrease in Non-Labor is due to timing of when expenses are recorded. Variance from year to year is minimal and follows a cyclical pattern.										
						(38)				
						47				



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

SDG&E-ORA-DEF-009-TLG RESPONSE  
Question 2 Attachment

Exh No: SDG&E-13										
Witness Name: Sara Franke										
Constant 2013\$ in Thousands										
	Adjusted Recorded					Variance				Workpaper Page
	2009	2010	2011	2012	2013	2009-10	2010-11	2011-12	2012-13	
1FC003.000 - Customer Services Field Dispatch										
Labor	2,876	3,045	2,992	2,955	2,940	169	(53)	(37)	(15)	
NLbr	50	37	45	36	33	(13)	8	(9)	(3)	
NSE			0	0	0	-	-	-	-	
1FC003.000 Total	2,926	3,082	3,037	2,991	2,973	156	(45)	(46)	(18)	Page 94 of 107
Variance Explanation						Variance Amount				
2009-10										
<b>Labor</b>										
Increase in Labor is due to timing of backfilling of positions in Dispatch.										
						169				
<b>NLbr</b>										
Decrease in Non-Labor is due to timing of when expenses are recorded. Variance from year to year is minimal and follows a cyclical pattern.										
						(13)				
						156				
2010-11										
<b>Labor</b>										
Decrease in Labor is due to timing of backfilling of positions in Dispatch and Field Collections Support staff.										
						(53)				
<b>NLbr</b>										
Increase in Non-Labor is due to timing of when expenses are recorded. Variance from year to year is minimal and follows a cyclical pattern.										
						8				
						(45)				
2011-12										
<b>Labor</b>										
Decrease in Labor is due to timing of backfilling of positions in Dispatch										
						(37)				
<b>NLbr</b>										
Decrease in Non-Labor is due to timing of when expenses are recorded. Variance from year to year is minimal and follows a cyclical pattern.										
						(9)				
						(46)				
2012-13										
<b>Labor</b>										
Immaterial										
						(15)				
<b>NLbr</b>										
Immaterial										
						(3)				
						(18)				

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

SDG&E-ORA-DEF-009-TLG RESPONSE  
Question 2 Attachment

Exh No: SDG&E-13										
Witness Name: Sara Franke										
Constant 2013\$ in Thousands										
	Adjusted Recorded					Variance				Workpaper Page
	2009	2010	2011	2012	2013	2009-10	2010-11	2011-12	2012-13	
1FC004.000 - Customer Services Field Support										
Labor	1,476	1,698	2,152	2,474	2,556	222	454	322	82	
NLbr	121	132	127	189	292	11	(5)	62	103	
NSE	0	0	0	0	0	-	-	-	-	
1FC004.000 Total	1,597	1,831	2,278	2,663	2,848	234	447	385	185	Page 99 of 107
Variance Explanation						Variance Amount				
2009-10										
<b>Labor</b>										
Increase in Labor is due to SoCalGas/SDG&E Director/District Operation Manager ("DOM") re-organization where existing Director and Gas Distribution DOMs were added to Customer Services Field ("CSF").						222				
<b>NLbr</b>										
Increase in Non-Labor is related to the increase in labor.						11				
						234				
2010-11										
<b>Labor</b>										
Increase in Labor is due to hiring of 1 additional Meter Access team member, 1 additional Field Safety Advisor for Gas Distribution support, and 1 additional Quality Assurance Specialist. These are incremental positions and are not backfill.						454				
<b>NLbr</b>										
Immaterial						(5)				
						447				
2011-12										
<b>Labor</b>										
Increase in Labor is due to formation and staffing of Safety Field Support group including a Project Manager position, and hiring of 3 additional positions within the Meter Access team. These are incremental positions and are not backfill.						322				
<b>NLbr</b>										
Increase in Non-Labor is due to additional employee expenses, safety initiatives for Behavior Based Safety and First Responder.						62				
						385				
2012-13										
<b>Labor</b>										
Increase in Labor is due to hiring 1 additional position within the Meter Access team. This is an incremental position and is not backfill.						82				
<b>NLbr</b>										
Increase in Non-Labor is due to additional hires, and full year effect of safety initiatives for Behavior Based Safety and First Responder.						103				
						185				

**ORA DEFICIENCY DATA REQUEST  
SDG&E 2016 GRC – A.14-11-XXX  
SDG&E-ORA-DEF-040-TLG  
RESPONSE**

**DATE RECEIVED: SEPTEMBER 3, 2014  
DATE RESPONDED: SEPTEMBER 12, 2014**

**Deficiency Item #:** SDG&E-DEF-040-TLG

**Reference:** SDG&E-13 and SDG&E-14

**Deficiency:**

A. D.89-01-040 Appendix B, page B-21 item 5 requires SDG&E to provide complete explanations of exhibits and special studies. Items 6 require SDG&E to provide workpapers that show the calculation and documentation supporting the exhibits. The workpapers are also required to be arranged in an orderly sequence and be appropriately indexed and cross referenced. Appendix B, page B-21 item B requires SDG&E to “Show the derivation of each individual estimate” that is included in the Test Year forecast. Number B-7 on page B-22 requires that SDG&E’s “Supporting material must have a clear tieback to base data from the stated expenditure”.

SDG&E needs to:

1. Provide complete and detailed explanations **“and”** a breakdown of the calculation for **“all”** forecast estimates, including detail on expected positions (i.e., provide all line item detail included in the calculation of the costs). SDG&E needs to show complete explanations, calculations and documentations to support Test Year forecasts. For example in Exhibit SDG&E-14 pp. 1 through 11 of the workpapers SDG&E requests an increase of \$9.463 million for Non-Shared expenses, an increase of 16.55% over 2013 expenses, yet SDG&E did not provide the detailed documentation or the breakdown of each individual estimate included in the calculation for the requested increase of \$9.463 million. There are similar problems with lacking full explanations and documentation and workpapers failing to show the calculations for forecast in SDG&E-13 and SDG&E-14 (note that workpapers are arranged in a similar manner) that are too burdensome to mention.
2. Provide the detailed discussion on Test Year forecast in testimony as well as the associated calculations in workpapers showing the derivation of each individual estimate included in the forecast that is proposed to increase expenses over 2013 recorded expenses (the requested data should be provided for figures included in tables that are similar to tables on pp. 1 and 2 of workpapers and tables in testimony similar to the table on page BMB-1 and Table 3 on page BMB-9 in SDG&E-14). Note that SDG&E includes lump sum numbers and summarizes the expenses but does not provide any documentation that demonstrates specifically how each of these costs and individual line items included in the forecast were calculated (see workpapers pp. 7-11 in SDG&E-14 as an example).

**ORA DEFICIENCY DATA REQUEST  
SDG&E 2016 GRC – A.14-11-XXX  
SDG&E-ORA-DEF-040-TLG  
RESPONSE**

**DATE RECEIVED: SEPTEMBER 3, 2014  
DATE RESPONDED: SEPTEMBER 12, 2014**

**Question 1A (Continued)**

3. Provide the associated calculation and supporting documentation on the specifics of how the forecasts were determined/basis for numbers.

**SDG&E Response:**

Please see separate attachments as consolidated responses for A.1, A.2, and A.3 in one file per witness exhibit as described below:

SDG&E-ORA-DEF-040-TLG-SDG&E-13 (Sara Franke)  
SDG&E-ORA-DEF-040-TLG-SDG&E-14 (Bradley Baugh)

San Diego Gas & Electric Company  
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Witness Name	Sara Franke				
Constant 2013\$ in Thousands					
	<b>Base Year Adjusted Recorded</b>	<b>Test Year Request</b>	<b>Incremental Request</b>	<b>Testimony Page</b>	<b>Workpaper Page</b>
	<b>2013</b>	<b>2016</b>			
SDG&E					
Exh No:SDG&E-13-WP					
<b>OM Total</b>	<b>22,990</b>	<b>22,135</b>	<b>-855</b>		
Non-Shared					
1FC001.000 - Customer Services Field Operations					
Labor	14,514	13,777	-737		
NLbr	1,164	898	-266		
NSE	0	0	0		
1FC001.000 Total	15,678	14,675	-1,003	SAF 1 - 18	Page 6 of 107
1FC002.000 - Customer Services Field Supervision					
Labor	1,441	1,402	-39		
NLbr	50	82	32		
NSE	0	0	0		
1FC002.000 Total	1,491	1,484	-7	SAF 18 - 19	Page 85 of 107
1FC003.000 - Customer Services Field Dispatch					
Labor	2,940	2,962	22		
NLbr	33	40	7		
NSE	0	0	0		
1FC003.000 Total	2,973	3,002	29	SAF 19 - 20	Page 94 of 107
1FC004.000 - Customer Services Field Support					
Labor	2,556	2,584	28		
NLbr	292	390	98		
NSE	0	0	0		
1FC004.000 Total	2,848	2,974	126	SAF 20 - 22	Page 99 of 107
Note: Numbers may not add due to rounding					

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Testimony				Testimony Page #	Workpaper Group	Workpaper Page #	Forecast Methodology	Work Group Name	Cost Driver	Total (\$000)	Labor (\$000)	Non-Labor (\$000)	NSE	FTE	Note
II	B	2		17	1FC001.000	9, 16		Customer Services Field - Operations	Customer Services Field Operations base workload forecast	\$ (163)	\$ 116	\$ (279)	\$ -	2.3	These figures represent the incremental change from Base Year 2013 adjusted recorded to Test Year 2016 due to the individual order type forecasts. For more details on the individual order type forecast please refer to testimony pages 5 - 12. For details on the calculations please refer to "Forecast Model Info" worksheet included
II	B	2		17	1FC001.000	9, 16		Customer Services Field - Operations	Customer growth	\$ 429	\$ 405	\$ 24	\$ -	5.2	These figures represent the incremental change from Base Year 2013 adjusted recorded to Test Year 2016 due to the upward pressures listed here. For more an explanation of these upward pressure please refer to testimony pages 12 - 16. For details on the calculations please refer to "Forecast Model Info" worksheet included with this document.
II	B	3	a	17	1FC001.000	9, 17		Customer Services Field - Operations	Increase in drive time due to increasing traffic congestion	\$ 147	\$ 139	\$ 8	\$ -	1.8	
II	B	5	b	17	1FC001.000	9, 16		Customer Services Field - Operations	Customer outreach safety checks	\$ 595	\$ 561	\$ 34	\$ -	7.1	
II	B	5	a	17	1FC001.000	9, 16		Customer Services Field - Operations	Enhanced customer education while on customer premises	\$ 245	\$ 231	\$ 14	\$ -	2.9	
II	B	4		17	1FC001.000	9		Customer Services Field - Operations	Efficiency Improvements	\$ (698)	\$ (698)	\$ -	\$ -	(8.9)	Reflects efficiency target currently in place.
II	B	2		17	1FC001.000	9, 81		Customer Services Field - Operations	Collections base workload forecast	\$ (1,633)	\$ (1,529)	\$ (104)	\$ -	(30.3)	These figures represent the decremental changes from Base Year 2013 adjusted recorded to Test Year 2016 due to the individual order type forecasts of the orders worked by Collections. For more details on the individual order type forecast please refer to testimony pages 11, and workpaper pages 78 - 81. For 2013 adjusted recorded expense for Collections please refer to "Forecast Model Info" worksheet included with this document.
II	B	6		17	1FC001.000	9, 83		Customer Services Field - Operations	Operator Qualification Training	\$ 38	\$ 38	\$ -	\$ -	0.3	
II	B	7		17	1FC001.000	9		Customer Services Field - Operations	AT&T wireless network access fee	\$ 37	\$ -	\$ 37	\$ -	-	Based on contract agreement with service provider.
									<b>Sub Total</b>	<b>\$ (1,003)</b>	<b>\$ (737)</b>	<b>\$ (266)</b>	<b>\$ -</b>	<b>(19.6)</b>	
							Testimony page 5-12								

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II	C	3			18,19	1FC002.000	87, 21, 81		Customer Services Field - Supervision	Maintaining a span of control (12 : 1), number of operations employee, and geographic coverage	\$ (7)	\$ (39)	\$ 32	\$ -	(0.6)	Supervisors are forecasted based on a span of control of 12 : 1. Please see workpaper pages 21 and 24 for CSF supervision forecast, and workpaper pages 81 for Collection supervision forecast.
									Testimony page 18-19	<b>Sub Total</b>	<b>\$ (7)</b>	<b>\$ (39)</b>	<b>\$ 32</b>	<b>\$ -</b>	<b>(0.6)</b>	

II	D	3			19,20	1FC003.000	95		Customer Services Field - Dispatch	Number of dispatchers needed to provide 24/7, 365 days per year coverage.	\$ 29	\$ 22	\$ 7	\$ -	1.0	Increase is due to the difference between the applicable forecast methodology and the base year.
									Testimony page 20	<b>Sub Total</b>	<b>\$ 29</b>	<b>\$ 22</b>	<b>\$ 7</b>	<b>\$ -</b>	<b>1.0</b>	

II	E	3			20,21	1FC004.000	100		Customer Services Field - Support	Senior Training Instructor position	\$ 105	\$ 100	\$ 5		1.0	Labor and Non-Labor is estimated based on prior experience and the judgment of subject matter experts.
II	E	3			20,22	1FC004.000	100		Customer Services Field - Support	Training video/equipment	\$ 93	\$ -	\$ 93		-	
II	E	3			20,23	1FC004.000	100		Customer Services Field - Support	Reduction of a collections field instructor	\$ (72)	\$ (72)	\$ -	\$ -	(1.0)	
									Testimony page 21	<b>Sub Total</b>	<b>\$ 126</b>	<b>\$ 28</b>	<b>\$ 98</b>	<b>\$ -</b>	<b>-</b>	

Note: Numbers may not add due to rounding

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**Explanation of Customer Services Field ("CSF") & Collections Forecast Model:**

Workgroup 1FC001.000 expenses are forecasted using a work order volume forecast model (workpaper pages 15 - 24 for CSF, and pages 78 - 81 for Collections). The forecast model starts with a forecast for each order type, as performed by CSF or Collections. This results in a forecast work order volume, which is then multiplied by the sum of ( average on premise time per order + average drive time per order) to arrive at the total time required to complete all the forecasted work. Then loaders Non Job Time, Vacation/Sick, and Formalized training time are added. This results in the total number of total hours needed. Total hours are translated into FTEs and total dollars required by using a blended wage rate. Non-Labor is then added by taking the forecasted total FTEs multiplied by the five year average non-labor spending per FTE.

**VARIATIONS OF CUSTOMER SERVICES FIELD FORECAST MODEL SHOWN ON WORKPAPER PAGE 15 - 24**

	(A) <b>Forecast Model</b>			(B) <b>Forecast Model Without increase in Drive Time due to increasing traffic congestion, without Customer Outreach Safety Checks</b>			(C) <b>Forecast Model without Customer Outreach Safety Checks</b>			(D) <b>Forecast Model without increase in Drive Time due to increasing traffic congestion, without Enhanced Customer Education while on customer premises</b>		
	2014	2015	2016	2014	2015	2016	2014	2015	2016	2014	2015	2016
<b>Labor</b>	\$ 12,456,062	\$ 12,745,007	\$ 13,835,852	\$ 12,411,586	\$ 12,654,125	\$ 13,135,264	\$ 12,456,062	\$ 12,745,007	\$ 13,274,590	\$ 12,411,586	\$ 12,654,125	\$ 13,461,251
<b>Non-Labor</b>	\$ 745,482	\$ 762,775	\$ 828,061	\$ 742,820	\$ 757,336	\$ 786,131	\$ 745,482	\$ 762,775	\$ 794,470	\$ 742,820	\$ 757,336	\$ 805,641
<b>FTE</b>	158.6	162.3	176.2	158.1	161.1	167.3	158.6	162.3	169.0	158.1	161.1	171.4
<b>TOTAL (\$)</b>	\$ 13,201,544	\$ 13,507,782	\$ 14,663,912	\$ 13,154,406	\$ 13,411,461	\$ 13,921,395	\$ 13,201,544	\$ 13,507,782	\$ 14,069,060	\$ 13,154,406	\$ 13,411,461	\$ 14,266,892

	(C - B) <b>Impact of increase in Drive Time due to increasing traffic congestion</b>			(A - C) <b>Impact of Customer Outreach Safety Check</b>			(E - D) <b>Impact of Enhanced Customer Education while on customer premises</b>			(G - F) <b>Impact of Customer Growth</b>		
	2014	2015	2016	2014	2015	2016	2014	2015	2016	2014	2015	2016
<b>Labor</b>	\$ 44,476	\$ 90,882	\$ 139,326	\$ -	\$ -	\$ 561,262	\$ -	\$ -	\$ 231,012	\$ 112,350	\$ 254,717	\$ 404,670
<b>Non-Labor</b>	\$ 2,662	\$ 5,439	\$ 8,339	\$ -	\$ -	\$ 33,591	\$ -	\$ -	\$ 13,826	\$ 6,724	\$ 15,245	\$ 24,219
<b>FTE</b>	0.6	1.2	1.8	-	-	7.1	-	-	2.9	1.4	3.2	5.2
<b>TOTAL (\$)</b>	\$ 47,138	\$ 96,321	\$ 147,665	\$ -	\$ -	\$ 594,852	\$ -	\$ -	\$ 244,838	\$ 119,074	\$ 269,961	\$ 428,890

Note: Numbers may not add due to rounding



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(E)			
Forecast Model without increase in Drive Time due to Increasing traffic congestion			
	2014	2015	2016
Labor	\$ 12,411,586	\$ 12,654,125	\$ 13,692,263
Non-Labor	\$ 742,820	\$ 757,336	\$ 819,467
FTE	158.1	161.1	174.4
<b>TOTAL (\$)</b>	<b>\$ 13,154,406</b>	<b>\$ 13,411,461</b>	<b>\$ 14,511,730</b>

(F)			
Forecast Model without increase in Drive Time due to increasing traffic congestion, without Enhanced Customer Education while on customer premises, without Customer Growth			
	2014	2015	2016
Labor	\$ 12,299,237	\$ 12,399,409	\$ 13,056,581
Non-Labor	\$ 736,096	\$ 742,091	\$ 781,422
FTE	156.6	157.9	166.3
<b>TOTAL (\$)</b>	<b>\$ 13,035,333</b>	<b>\$ 13,141,500</b>	<b>\$ 13,838,003</b>

(G)			
Forecast Model without increase in Drive Time due to increasing traffic congestion, without Enhanced Customer Education while on customer premises, with Customer Growth			
	2014	2015	2016
Labor	\$ 12,411,586	\$ 12,654,125	\$ 13,461,251
Non-Labor	\$ 742,820	\$ 757,336	\$ 805,641
FTE	158.1	161.1	171.4
<b>TOTAL (\$)</b>	<b>\$ 13,154,406</b>	<b>\$ 13,411,461</b>	<b>\$ 14,266,892</b>

(H)			
Forecast Model without increase in Drive Time due to increasing traffic congestion, without Enhanced Customer Education while on customer premises, without Customer Growth, without Customer Outreach Safety Checks			
	2014	2015	2016
Labor	\$ 12,299,237	\$ 12,399,409	\$ 12,499,581
Non-Labor	\$ 736,096	\$ 742,091	\$ 748,086
FTE	156.6	157.9	159.2
<b>TOTAL (\$)</b>	<b>\$ 13,035,333</b>	<b>\$ 13,141,500</b>	<b>\$ 13,247,667</b>

	(I+J)	(I)	(J)
2013 Adjusted Recorded (In 2013\$)			
	Total	CSF	Collections
Labor	\$ 14,514,000	\$ 12,385,000	\$ 2,130,000
Non-Labor	\$ 1,164,000	\$ 1,026,000	\$ 137,000
FTE	198.0	157.7	40.3
<b>TOTAL (\$)</b>	<b>\$ 15,678,000</b>	<b>\$ 13,411,000</b>	<b>\$ 2,267,000</b>

(H - I)
Impact of Base CSF Workload Forecast
\$ 114,581
\$ (277,914)
1.5
\$ (163,333)

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Functional Area	Testimony Area	Work Paper Group	Ex. SDG&E-13 Testimony Pages	Ex. SDG&E-13-WP Workpaper Pages X of 107	MDR Chapter 9 Question #	WP Group FERC Accounts	FERC Allocation %	Cost Centers in Group	Cost Center Name
Customer Services Field; Witness: Sara A. Franke					Q.10				
	Section I: Introduction		SAF-1-3						
	Section II: Non-Shared Costs		SAF-3-21	1-107					
	A - Introduction		SAF-3-4						
	B - CSF Operations	1FC001.000 Customer Services Field - Operations	SAF-4-18	4-14	Q. 1-4	879.1	31.5%	2100-0024	FIELD COLLECTIONS SDGE SOUTHERN
		Supplemental Workpapers for Workpaper 1FC001.000				586.4	18.2%	2100-0025	FIELD COLLECTIONS SDGE NORTHERN
		Work Order Volume (Section 1 of 4) Work Order Volume Model		16-21		878.2	17.9%	2100-0030	CUSTOMER SERVICE FIELD BEACH CITIES
		Work Order Volume (Section 2 of 4) Operations Training Labor		22		878.1	9.3%	2100-0031	CUSTOMER SERVICE FIELD EASTERN
		Work Order Volume (Section 3 of 4) Operations Non-labor		23		880.4	8.7%	2100-0032	CUSTOMER SERVICE FIELD METRO
		Work Order Volume Charts		25-77		903.3	6.8%	2100-0033	CUSTOMER SERVICE FIELD NORTHEAST
		Collections Work Order Volume		78-81		879.5	5.6%	2100-0034	CUSTOMER SERVICE FIELD NORTH COAST
		Operator Qualification Training		82-83		893.2	2.1%	2100-0640	LOS MANAGER SEASONALS
						Total	100%		
	C - CSF Supervision	1FC002.000 Customer Services Field - Supervision	SAF-18-19	84-92	Q. 1-3	879.0	75%	2100-3664	SO INL CS DOM BC
		Supplemental Workpapers for Workpaper 1FC002.000				586.0	18.2%	2100-3665	SO INL CS DOM CM
		Work Order Volume (Section 4 of 4) Supervisor Labor & Non-labor		24		903.3	6.8%	2100-3666	SO INL CS DOM EA
						Total	100.0%	2100-3667	SO INL CS DOM NC
								2100-3668	SO INL CS DOM NE
	D - CSF Dispatch	1FC003.000 Customer Services Field - Dispatch	SAF-19-20	93-97	Q. 1-3	879.0	44.6%	2100-0129	DISPATCH MANAGER
						587.0	43.5%		
						903.0	11.9%		
						Total	100%		
	E - CSF Support	1FC004.000 Customer Service Field - Support	SAF-20-22	98-106	Q. 1-3	879.0	56.0%	2100-0639	CSF TRAINING
						870.1	28.0%	2100-3457	CUSTOMER SERVICES FIELD TRAINING MANAGER
						880.3	7.0%	2100-3459	CUSTOMER SERVICE-SOUTH INLAND DIRECTOR
						586.0	6.0%	2100-3605	QUALITY ASSURANCE
						880.4	3.0%	2100-3753	CUST SVC METER ACCES
						Total	100%	2100-3809	SCG METER READING ASSOCIATE
								2100-3889	FIELD SRVC SAFETY SUPPORT
	Section III: Capital		SAF-22		Q.11				
GRID WP #	Capital Project #	Capital Project Name							
00834A	13024	SHORT Customer Service Field MDT Refresh	SAF-22		Witness S. Mikovits; Ex. SDG&E-19-CWP; pp. 2-7				
	Section IV: SDG&E Response Times For Priority 1 Gas Leak Orders		SAF-23-25						
	Section V: Conclusion		SAF-25						
	Section VI: Witness Qualifications		SAF-26						
	List of Appendices								
	A. Glossary of Acronyms		A-1						
	B. Customer Services Field Adjustments to 2013-Recorded Costs		B-1-2						
	C. Illustrative Examples of Work Order Volume Forecasts by Individual Order Type		C-1-2						
	D. Report Prepared by INRIX, Inc. Regarding Traffic Congestion in Southern California		D-1						
	E. SDG&E Response Time Performance for All P1 and P2 Orders		E-1-2						

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

Area: CS - FIELD  
Witness: Sara Franke

**Appendix A: List of Non-Shared Cost Centers**

<b>Cost Center</b>	<b>Sub</b>	<b>Description</b>
2100-0024	000	FIELD COLLECTIONS SDGE SOUTHERN
2100-0025	000	FIELD COLLECTIONS SDGE NORTHERN
2100-0030	000	CUSTOMER SERVICE FIELD BEACH CITIES
2100-0031	000	CUSTOMER SERVICE FIELD EASTERN
2100-0032	000	CUSTOMER SERVICE FIELD METRO
2100-0033	000	CUSTOMER SERVICE FIELD NORTHEAST
2100-0034	000	CUSTOMER SERVICE FIELD NORTH COAST
2100-0129	000	DISPATCH MANAGER
2100-0639	000	CSF TRAINING
2100-0640	000	LOS MANAGER SEASONALS
2100-3457	000	CUSTOMER SERVICES FIELD TRAINING MANAGER
2100-3459	000	CUSTOMER SERVICE-SOUTH INLAND DIRECTOR
2100-3605	000	QUALITY ASSURANCE
2100-3664	000	SO INL CS DOM BC
2100-3665	000	SO INL CS DOM CM
2100-3666	000	SO INL CS DOM EA
2100-3667	000	SO INL CS DOM NC
2100-3668	000	SO INL CS DOM NE
2100-3753	000	CUST SVC METER ACCES
2100-3809	000	SCG METER READING ASSOCIATE
2100-3889	000	FIELD SRVC SAFETY SUPPORT