

Company: Southern California Gas Company (U904G)
Proceeding: 2016 General Rate Case
Application: A.14-11-____
Exhibit: SCG-10

SOCALGAS

DIRECT TESTIMONY OF SARA A. FRANKE

(CUSTOMER SERVICES FIELD AND METER READING)

November 2014

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**



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SUMMARY

CUSTOMER SERVICES FIELD & METER READING – O&M COSTS			
Shown in Thousands of 2013 Dollars			
	2013 Adjusted-Recorded	TY2016 Estimated	Change
Total Non-Shared	171,188	200,803	29,615
Total Shared Services (Incurred)	1,571	2,406	835
Total O&M	172,759	203,209	30,450

CUSTOMER SERVICES FIELD & METER READING – CAPITAL COSTS			
Shown in Thousands of 2013 Dollars			
	2014	2015	2016
PACER MDT Replacement	2,675		
MDTs to Support Workforce Growth	421	193	544
Meter Reading Handheld Replacement		244	6,673
Total Capital	3,096	437	7,217

Summary of Requests

- **Customer Services Field** - For Test Year (“TY”) 2016, Southern California Gas Company (“SoCalGas” or the “company”) requests \$162.762 million (an increase of \$27.058 million above 2013 adjusted-recorded costs) for Customer Services Field (“CSF”) operations in order to complete customer- and company-generated work orders, including investigating reports of gas leaks and responding to other emergencies, establishing/terminating gas service, conducting customer appliance checks, shutting off and restoring gas service for fumigation, performing meter and regulator changes and other related services at customer premises. SoCalGas’ request reflects the following:
 - CSF work order forecasts that assume continuing operations without Advanced Metering Infrastructure (“AMI”) implementation since the benefits of AMI are accounted for in the Advanced Metering Infrastructure Balancing Account (“AMIBA”) pursuant to Commission Decision (“D.”) 10-04-027;
 - Proposed incremental funding for enhanced customer education while on customer premises, expanded customer appliance safety checks, and outreach customer appliance safety checks for customers who have not utilized SoCalGas’ CSF services for extended periods of time;
 - Proposed incremental funding to ensure ongoing and enhanced compliance with Department of Transportation (“DOT”)-required meter set assembly (“MSA”) inspections;
 - Proposed incremental funding for updating/modernizing field technician training, refresher training for technicians who remain in their positions for extended periods of time, formalized instruction for ongoing policy reviews to deepen employee understanding, job shadowing so retiring field technicians can transfer their knowledge to newer technicians before leaving the company, in-field training instructors for

- commercial and industrial field technicians, and more frequent Operator Qualification (“OpQual”) training; and
- Cost efficiency improvements.
- **Meter Reading** – SoCalGas is requesting \$38.041 million (an increase of \$2.557 million above 2013 adjusted-recorded costs) for Meter Reading operations, assuming continuing operations without AMI implementation since the benefits of AMI are accounted for in the AMIBA pursuant to D.10-04-027.
 - **Shared Services** – SoCalGas is requesting \$2.406 million (an increase of \$0.835 million above 2013 adjusted-recorded costs) for CSF Staff functions that support both SoCalGas and San Diego Gas & Electric Company (“SDG&E”). Most of the increase is for a proposed expansion of SoCalGas’ gas diversion (theft) investigation program, the cost of which would be allocated solely to SoCalGas.
 - The requested funding supports SoCalGas’ goal of providing safe, reliable and efficient gas service to customers.

1 **SOICALGAS DIRECT TESTIMONY OF SARA A. FRANKE**
2 **(CUSTOMER SERVICES FIELD AND METER READING)**

3 **I. INTRODUCTION**

4 **A. Summary of Costs**

5 **1. Operations and Maintenance Costs**

6 I sponsor the TY 2016 forecasts for operations and maintenance (“O&M”) costs, for both
7 non-shared and shared services, for SoCalGas’ Customer Services Field (“CSF”) and Meter
8 Reading operations. Table SAF-1 below summarizes my sponsored costs.

9 **TABLE SAF-1**

10 **Test Year 2016 Summary of Total O&M Costs**

CUSTOMER SERVICES FIELD & METER READING			
Shown in Thousands of 2013 Dollars	2013 Adjusted-Recorded	TY2016 Estimated	Change
Total Non-Shared	171,188	200,803	29,615
Total Shared Services (Incurred)	1,571	2,406	835
Total O&M	172,759	203,209	30,450

11 **2. Capital Costs**

12 Capital costs for the forecast years 2014, 2015 and 2016, for information technology
13 systems that support CSF and Meter Reading operations (summarized in Table SAF-2 below),
14 are sponsored by SoCalGas witness Chris Olmsted, Exhibit (“Ex.”) SCG-18. However, I will
15 cover in my testimony the operating need for these costs.

16 **TABLE SAF-2**

17 **Test Year 2016 Summary of Total Capital Costs**

CUSTOMER SERVICES FIELD & METER READING			
Shown in Thousands of 2013 Dollars	2014	2015	2016
PACER MDT ¹ Replacement	2,675		
MDTs to Support Workforce Growth	421	193	544
Meter Reading Handheld System Replacement		244	6,673
Total	3,096	437	7,217

¹ PACER (Portable, Automated, Centralized, Electronic Retrieval) is the system used by SoCalGas to manage CSF work orders. MDT, or mobile data terminal, is the related computer each CSF field employee uses to receive and track work orders assigned to them for completion in the field.

1 Capital costs for meters, regulators, tools and equipment required for CSF operations are
2 covered in the testimony of SoCalGas witness Frank Ayala, Ex. SCG-04.

3 **B. Summary of Activities**

4 CSF consists primarily of residential, commercial and industrial field technicians who
5 perform services at customer premises, including meter work, establishing and terminating gas
6 service, lighting gas pilot lights, conducting customer appliance checks, investigating reports of
7 gas leaks, investigating customer complaints of high bills, shutting off and restoring gas service
8 for fumigation, responding to structure fires (e.g., to check for gas leakage/turn off gas service)
9 and other emergency incidents, and other related field services for customers. Field technicians
10 work from 51 different operating base locations that are dispersed throughout SoCalGas' service
11 territory, which spans across 20,000 square miles and 500 communities, from Visalia to the
12 Mexico border, with a total population of more than 20 million.

13 Meter Reading consists primarily of meter readers who complete monthly meter reads at
14 customer premises each month so that gas consumption can be measured and bills can be
15 generated. SoCalGas anticipates its meter count will grow to 5.8 million connected meters,
16 resulting in a total of over 68 million meter reads annually by 2016.² Like CSF field technicians,
17 meter readers are geographically dispersed across SoCalGas operating base locations.

18 **C. Support for SoCalGas' Goals of Safe, Reliable and Efficient Service**

19 My cost forecasts support the company's goal of providing safe, reliable and efficient gas
20 service to customers, as well as complying with all federal, state, and local regulations. The CSF
21 and Meter Reading cost forecasts also support SoCalGas' focus on continuous improvement
22 from not only a safety perspective, but from both cost efficiency and customer experience
23 perspectives as well.

24 All requested O&M and capital expenses are described in detail in the remaining sections
25 of my testimony, which include the following:

- 26 • Section I summarizes requested O&M and capital expenses for CSF and
27 Meter Reading;
- 28 • Section II describes *non-shared* CSF and Meter Reading expenses, including
29 the forecasting methodology used for each cost category;

² See Section I.E for a description of how Advanced Metering Infrastructure ("AMI") implementation is being addressed from a TY 2016 forecast perspective.

- 1 • Section III provides the rationale for *shared* CSF services and associated
2 O&M expenses;
- 3 • Section IV provides a description of CSF and Meter Reading capital projects
4 and their respective business purposes;
- 5 • Section V summarizes continuous improvement efforts;
- 6 • Section VI reports on SoCalGas' A1 gas leak order response times pursuant to
7 the Commission's directive in SoCalGas' last general rate case ("GRC")
8 proceeding, Decision ("D.") 13-05-010;
- 9 • Section VII provides a conclusion;
- 10 • Section VIII provides my witness qualifications; and
- 11 • Appendices A-G contain: (A) a glossary of acronyms used in my testimony;
12 (B) an explanation of all adjustments to 2013 recorded costs; (C) illustrative
13 examples of comparison graphs of historical versus forecasted service order
14 volumes by individual order type³; (D) supporting information regarding the
15 Pest Control Operators of California's ("PCOC") forecast of growth in
16 fumigation work in 2014; (E) a southern California traffic congestion report,
17 prepared by INRIX, Inc., that substantiates forecasting assumptions for "drive
18 time" (the time it takes to travel to customer premises to complete service
19 orders); (F) SoCalGas' response time performance for all emergency orders;
20 and (G) SoCalGas' response to ORA's informal data request DR-05,
21 question 4.

22 **D. Support To/From Other Witnesses**

23 The CSF and Meter Reading costs set forth in my testimony are impacted by meter
24 counts and projected meter growth. Forecasted meter growth is covered in the testimony of
25 SoCalGas witness Rose-Marie Payan, Ex. SCG-30. CSF labor costs associated with providing
26 Operator Qualification ("OpQual") training and certification for the CSF workforce, as well as
27 CSF labor costs associated with replacing curb meter regulators, are included in the O&M costs
28 set forth in my testimony; however, the basis and rationale for these forecasted costs are
29 contained in the testimony of SoCalGas witness Frank Ayala, Ex. SCG-04. Information
30 Technology ("IT") costs for systems and technology that support CSF and Meter Reading
31 operations are covered in Witness Chris Olmsted's testimony, Ex. SCG-18. Costs associated
32 with company fleet vehicles used by the CSF and Meter Reading field workforce are covered in

³ A full set of such graphs, for all order types, is provided in the workpapers accompanying my testimony, Ex. SCG-10-WP.

1 the testimony of SoCalGas witness Carmen Herrera, Ex. SCG-15. Compensation and benefit
2 costs associated with the CSF and Meter Reading workforce are covered in the testimony of
3 SoCalGas witness Debbie Robinson, Ex. SCG-21. CSF-related miscellaneous revenues,
4 including the basis for the forecasted revenues and the projected revenues, are covered in the
5 testimony of SoCalGas witness Michelle Somerville, Ex. SCG-32. CSF costs to achieve
6 applicable miscellaneous revenues are embedded as a subset of historical and forecast CSF costs
7 covered in my testimony. Lastly, some of the costs associated with new CSF services proposed
8 in my testimony are contained in the testimony of SoCalGas witness Evan Goldman, Ex. SCG-
9 11, as well as the testimony of SoCalGas witness Ann Ayres, Ex. SCG-12.

10 **E. Excludes Advanced Metering Infrastructure (“AMI”)**

11 D.10-04-027 authorized SoCalGas to deploy AMI to approximately 6 million customers
12 over a period of 7 years.⁴ SoCalGas will not complete AMI deployment until
13 2017. Accordingly, and as described in the testimony of SoCalGas witness Rene Garcia (Ex.
14 SCG-39), all SoCalGas forecasts presented in this TY 2016 GRC, including the forecasts in this
15 testimony, reflect business operations, processes and practices without AMI deployment (i.e.,
16 “business as usual”).⁵ However, it should be noted that implementation of AMI involves both
17 costs (i.e., increases to revenue requirement) and benefits (i.e., decreases to revenue
18 requirement). The combined result is a net revenue requirement that is then embedded in
19 rates. Since a forecasted net revenue requirement for SoCalGas AMI over the 2010 through
20 2017 timeframe was already approved in a SoCalGas Advice Letter,⁶ a net revenue requirement is
21 already embedded in SoCalGas rates. Accordingly, if the Commission authorizes operating
22 expenses in this GRC that are materially different than those assumed in SoCalGas’ approved
23 AMI net revenue requirement that is currently in rates, then the differences will need to be
24 reconciled in an updated advice letter to ensure that embedded AMI operating benefits are
25 consistent with and no more or no less than what is authorized in this TY 2016 GRC.

⁴ Pursuant to D.10-04-027, SoCalGas’ AMI Decision, SoCalGas filed AL 4110 which, among other things, updated the AMI revenue requirement to reflect the total costs and benefits as adopted in D.10-04-027 to be collected in rates beginning on January 1, 2012 and continuing through December 31, 2017.

⁵ An exception to this forecasting methodology is the forecasting method used for the Meter Set Assembly (“MSA”) Inspection Program discussed in Section II.B.1.f. of this testimony.

⁶ AL 4110 was approved by letter dated August 4, 2010.

1 **II. NON-SHARED COSTS**

2 **A. Introduction**

3 On an annual basis, SoCalGas field technicians complete nearly 4 million work orders at
4 customer premises, and meter readers complete over 68 million meter reads. Table SAF-3 below
5 summarizes the total non-shared O&M expense forecasts for CSF and Meter Reading operations,
6 which include the forecasted costs of field technicians and meter readers, as well as costs for
7 other supporting activities required to enable CSF and Meter Reading services to customers.

8 **TABLE SAF-3**

9 **Non-Shared O&M Summary of Costs**

CUSTOMER SERVICES FIELD & METER READING			
Shown in Thousands of 2013 Dollars			
Categories of Management	2013 Adjusted-Recorded	TY2016 Estimated	Change
Customer Services Field	135,704	162,762	27,058
Meter Reading	35,484	38,041	2,557
Total	171,188	200,803	29,615

10 **B. Customer Services Field**

11 Table SAF-4 below summarizes the total non-shared O&M forecasts for the listed CSF
12 cost categories, each of which will be described more fully below.

13 **TABLE SAF-4**

14 **Non-Shared O&M Summary of Costs by CSF Cost Category**

CUSTOMER SERVICES FIELD			
Shown in Thousands of 2013 Dollars			
	2013 Adjusted-Recorded	TY2016 Estimated	Change
Customer Services Field - Operations	105,908	127,945	22,037
Customer Services Field - Supervision	11,118	13,388	2,270
Customer Services Field - Dispatch	8,920	8,806	(114)
Customer Services Field - Support	9,758	12,623	2,865
Total	135,704	162,762	27,058

15 Explanations of all adjustments to 2013 recorded costs are provided in Appendix B and in
16 the workpapers supporting this testimony, Ex. SCG-10-WP.

1 **1. CSF Operations Cost Category**

2 **a. Description of Costs and Underlying Activities**

3 The CSF Operations cost category consists of labor and non-labor expenses for field
4 technicians to provide service at customer premises, including both customer- and company-
5 generated work orders. Examples of customer-generated work orders include requests to
6 establish/remove gas service, light gas pilots, check gas appliances, shut off and restore gas
7 service for fumigation, investigate the cause of high gas bills, respond to emergency incidents
8 (e.g., structure fires), investigate potential gas leaks, and other services. Examples of company-
9 generated work include performing meter and regulator changes and other meter work to
10 maintain company assets, and collecting customer payments for delinquent bills, the latter of
11 which is typically performed by field collectors. Non-labor costs include items such as company
12 uniforms and laundry expense, and materials used on the job.

13 Table SAF-5 below summarizes total labor and non-labor expenses requested for the CSF
14 Operations cost category.

15 **TABLE SAF-5**
16 **Non-Shared O&M Summary for CSF Operations**

CSF Operations			
Shown in Thousands of 2013 Dollars	2013 Adjusted-Recorded	TY2016 Estimated	Change
Labor	99,210	120,942	21,732
Non-Labor	6,699	7,003	304
Total⁷	105,908	127,945	22,037

17 **b. Forecast Method**

18 CSF Operations costs are primarily driven by work order volumes. Work order volumes,
19 in turn, are largely driven by factors outside of SoCalGas' control, including customer growth,
20 weather, the state of the economy, customer turnover, the level of natural gas prices, customer
21 appliance/equipment choices, emergency incidents such as structure fires, and laws/regulations.
22 In order to forecast TY 2016 expenses as accurately and transparently as possible, a team of CSF
23 staff members developed an order volume forecast for each individual order type, taking into
24 consideration key variables that influence order volumes. Where customer demand for services

⁷ Numbers may not add due to rounding.

1 is driven by factors outside SoCalGas' control, the order volume forecasts are based on historical
 2 averages of sufficient length to capture the cyclical conditions because variables influencing
 3 order volumes vary from year to year. For order types impacted by specific laws or regulations,
 4 the order volume forecasts take into account the timing and expected impacts. Where
 5 appropriate, work orders eliminated by AMI in 2013 were added back to 2013 order volumes for
 6 the purpose of forecasting TY 2016 order volumes. 2013 was the first year in which AMI
 7 implementation began to impact certain order types and the impacts of AMI on individual work
 8 order types will be trued up through the AMIBA pursuant to D.10-04-027.

9 Table SAF-6 below provides a summary of the forecasting methodology used for each
 10 order type, the associated rationale, and reasons alternative forecasting methods would not be
 11 appropriate. Order types are listed in alphabetical order. A description of each order type and
 12 graphs showing actual historical order volumes compared to prior GRC order volume forecasts,
 13 by order type, are provided in the workpapers supporting my testimony, Ex. SCG-10-WP.⁸

14 **TABLE SAF-6**
 15 **Forecasting Methodology by CSF Work Order Type**

Order Type	Forecasting Methodology	Rationale	Reasons an Alternative Forecasting Method Would Not Be Appropriate
Change of Account – Turn On (Not Entered)	4-year average (orders to active meters)	Volumes fluctuate from year to year and are impacted by external factors, such as the state of the economy and customer turnover, which are outside the company's control. Excluded 2009 since order volumes were significantly higher than normal due to economic conditions in the real estate market.	Use of base year or other shorter time periods would not provide a sufficient length of time to capture a variety of conditions which change from year to year and cause order volumes to fluctuate from year to year.
Change of Account – Close (Soft)			
Credit/Collections – 48 Hour (1 st Call)	5-year average (orders to active meters)	Volumes fluctuate from year to year and are impacted by external factors, such as the state of the economy and customers' ability to pay their bills, which are outside the company's control.	
Credit/Collections – Collect/Close (2 nd Call)			
Credit/Collections – Returned Check	3-year average (orders to active meters)	Used shorter period to account for the fact that the economy has improved and more customers are paying their bills electronically which results in fewer bounced checks (insufficient funds).	Use of an alternative forecast method would not achieve the same balance between recognizing recent trends and, at the same time, the fact that order volumes fluctuate from year due to factors outside the company's control.
Credit/Collections – Tenant Notification	5-year average (orders to active meters)	Volumes fluctuate from year to year and are impacted by external factors, such as the state of the economy and customer's ability to pay their bills, which are outside the company's control.	Use of base year or other shorter time periods do not provide a sufficient length of time to capture a variety of conditions which change from year to year and cause order volumes to fluctuate from year to year.
Credit/Collections - Other			

⁸ Illustrative examples of the graphs are provided in Appendix C of this testimony.

Customer Service Order (“CSO”)	Base year (orders to active meters)	Forecast method recognizes a declining trend. Factors outside the company’s control, such as weather and associated requests to check customers’ space heating equipment, may impact order volumes in the future.	Use of a longer time period may overstate anticipated volumes.
CSO – Carbon Monoxide Test	Base year plus average annual 2011-2013 growth rate (orders to active meters)	There has been continual growth in this order type since Senate Bill (“SB”) 183 ⁹ was enacted and that growth is expected to continue as more customers comply with the requirement to install Carbon Monoxide (“CO”) detectors in residential dwellings.	Use of an alternative forecast method would not recognize actual order volume trends.
CSO – No Gas	5-year average (orders to active meters)	Volumes fluctuate from year to year and are impacted by external factors, such as earthquake valves tripping, etc., which are outside the company’s control.	Use of base year or other shorter time periods do not provide a sufficient length of time to capture a variety of conditions which change from year to year and cause order volumes to fluctuate from year to year.
CSO – Seasonal Off	Base year (orders to active meters)	Forecast method recognizes a declining trend. Factors outside the company’s control, such as weather and customer comfort levels, may impact order volumes in the future.	Use of an alternative forecast method would not recognize recent trends and/or assume further reductions without any substantiated basis.
CSO – Seasonal On			
Fumigation – Turn On	Base year plus 6% increase in 2014, then orders to active meters	PCOC (Pest Control Operators of California) forecasts a fumigation growth rate of 6% in 2014. ¹⁰	Use of an alternate forecast method would ignore actual volume trends and expert predictions.
Fumigation – Close			
Gas Leak – CSO Leak	5-year average (orders to active meters)	Volumes fluctuate from year to year and are driven by external factors, such as leakage at customers’ appliances, reports of area odors and earthquakes, which are outside the company’s control.	Use of base year or other shorter time periods do not provide a sufficient length of time to capture a variety of conditions which change from year to year and cause order volumes to fluctuate from year to year.
Gas Leak – Pilot Out Only	Base year (orders to active meters)	Forecast method recognizes a declining trend.	Use of an alternative forecast method would not recognize recent trends and/or assume further reductions without any substantiated basis.
Gas Leak – Leak Investigation (Step 2)	5-year average (orders to active meters)	Volumes fluctuate from year to year and are driven by external factors, such as leakage at customers’ appliances, reports of area odors and earthquakes, which are outside the company’s control.	Use of base year or other shorter time periods do not provide a sufficient length of time to capture a variety of conditions which change from year to year and cause order volumes to fluctuate from year to year.
High Bill Investigation (“HBI”) – Entered	5-year average (orders to active meters)	Volumes fluctuate from year to year and are driven by external factors, such as weather (consumption), commodity prices and economic conditions, which are outside the company’s control.	Use of base year or other shorter time periods do not provide a sufficient length of time to capture a variety of conditions which change from year to year and cause order volumes to fluctuate from year to year.
HBI – Not Entered			
Meter Work (Capital) – Meter Set – Turn On	Follows capital forecast and growth in new meter set work completed by CSF	Volumes are driven by the forecasted growth in new business capital construction and associated meter sets.	Use of an alternative forecast method would likely understate anticipated growth in new meter sets.
Meter Work (Capital) – Meter Set – Left Off			
Meter Work (Capital) – Meter Set (PSI)			
Meter Work (O&M) – Meter Reset – Turn On	5-year average (orders to active meters)	Volumes fluctuate from year to year and are impacted by external factors, such as the state of the economy and customer turnover, which are outside the company’s control.	Use of base year or other shorter time periods do not provide a sufficient length of time to capture a variety of conditions which change from year to year and cause order volumes to fluctuate from year to year.
Meter Work (O&M) – Meter Reset – Left Off			

⁹ SB183 requires customers to install carbon monoxide (“CO”) detectors in all inhabited residences. The effective date of SB 183 is January 1, 2011 for new construction, July 1, 2011 for existing single family dwellings and January 1, 2013 for multi-family dwellings and buildings such as apartments and hotels.

¹⁰ Additional information regarding PCOC’s forecast is provided in Appendix D.

Meter Work (O&M) – Meter Change – Entered	180,000 per year ¹¹	Annual meter replacements adopted in D.13-05-010 and projected for TY 2016	Use of an alternative forecast method would conflict with assumed meter failure/replacement rates previously adopted by the Commission.
Meter Work (O&M) – Meter Change – Not Entered			
Meter Work (O&M) – Meter Change (Size)	5-year average (orders to active meters)	Volumes fluctuate from year to year and are impacted by external factors, such as economic conditions and customer appliance/equipment additions, which are outside the company’s control.	Use of base year or other shorter time periods do not provide a sufficient length of time to capture a variety of conditions which change from year to year and cause order volumes to fluctuate from year to year.
Meter Work (O&M) – Meter Remove	5-year average (orders to active meters)	Volumes fluctuate from year to year and are impacted by external factors, such as the state of the economy, which are outside the company’s control.	
Non Pay Turn On – Turn On	5-year average (orders to active meters)	Volumes fluctuate from year to year and are impacted by external factors, such as the state of the economy and customers’ ability to pay their bills, which are outside the company’s control.	
Read/Verify – Verify	5-year average (orders to active meters)	Volumes are driven by billing abnormalities, which fluctuate from year to year.	
Read/Verify – Verify – Soft Close	5-year average (orders to active meters)	Volumes fluctuate from year to year and are impacted by external factors, such as the state of the economy and customer turnover, which are outside the company’s control.	
Read/Verify – Verify – Soft Close – 180 Days			
Read/Verify – Load Survey – Residential			
Turn On/Shutoff – Turn On (Entered)	4-year average (orders to active meters)	Volumes fluctuate from year to year and are impacted by external factors, such as the state of the economy and customer turnover, which are outside the company’s control. Excluded 2009 since order volumes were significantly higher than normal due to economic conditions in the real estate market.	
Turn On/Shutoff – Turn On Entered (Gas On)			
Turn On/Shutoff – Turn On (Back On/Restore)	5-year average (orders to active meters)	Volumes fluctuate from year to year and are impacted by external factors, such as the state of the economy and customer turnover, which are outside the company’s control. 2013 order volume was adjusted to exclude orders caused by AMI implementation.	
Turn On/Shutoff – Turn On (PSI)	4-year average (orders to active meters)	Volumes fluctuate from year to year and are impacted by external factors, such as the state of the economy and customer turnover, which are outside the company’s control. Excluded 2009 since order volumes were significantly impacted by economic conditions in the real estate market.	
Turn On/Shutoff – Close (Hard)			
Miscellaneous – Service Order (MSO)	5-year average (orders to active meters)	Volumes fluctuate from year to year since this is a miscellaneous order type.	
Miscellaneous – Meter Reg (MMR)	5-year average (orders to active meters)	Volumes fluctuate from year to year and are impacted by external factors, e.g., corrosion or hazardous conditions found at meters, which are outside the company’s control.	
Miscellaneous – Assist	5-year average (orders to active meters)	Volumes fluctuate from year to year and are impacted by external factors, such as external work environment, which are outside the company’s control.	

¹¹ In order to adhere to the AMI implementation schedule, beginning in 2013, the AMI project assumed responsibility for above-ground meter changes (both planned and accelerated meter changes); CSF shifted its focus to curb meter changes.

Food Industry – Turn On (Entered)	5-year average (orders to active meters)	Volumes fluctuate from year to year due to external factors, such as malfunctioning gas equipment, leaks at customer equipment, the economy, customer turnover and other factors which are outside the company’s control.	Use of base year or other shorter time periods do not provide a sufficient length of time to capture a variety of conditions which change from year to year and cause order volumes to fluctuate from year to year.
Food Industry – CSO			
Food Industry – CSO Leak			
Commercial/Industrial - ISO			
Commercial/Industrial – Load Survey – I/C			
Commercial/Industrial – CSO			
Commercial/Industrial – Turn On (Entered)	5-year average (orders to active meters)	Although volumes are insignificant, they fluctuate from year to year.	
Customer/Company Work – Other			
Incomplete	Base year (orders to active meters)	Base year reflects a reduction in incomplete orders over the past five years.	Use of an alternate forecast method would overstate anticipated order volumes or assume even lower incomplete rates in the future with no substantiated basis.

1 As explained in the testimony of SoCalGas witness Rose-Marie Payan, Ex. SCG-30,
2 SoCalGas meter growth is expected to increase by a total of 1.9% from 2013 to 2016, to
3 approximately 5.7 million active meters in 2016. In almost all cases, CSF work order volumes
4 are forecasted on a number-of-orders-per-active-meter basis, by order type. The TY 2016
5 forecasted order volumes for each order type are the product of the forecasted number of orders
6 per meter and the number of forecasted active meters in 2016.

7 Table SAF-7 below provides historical and projected work order volumes, using the
8 forecast methods outlined above for each order type.

9 **TABLE SAF-7**
10 **CSF Order Volume Forecast**

Active Customers	5,480,314	5,516,668	5,549,177	5,576,355	5,606,113	5,631,340	5,667,131	5,709,903
	Historical Order Volumes					Forecast Order Volumes		
Order Type	2009	2010	2011	2012	2013	2014	2015	2016
Change of Account – Turn On (Not Entered)	867,948	853,524	817,040	829,470	816,110	827,797	839,483	851,170
Change of Account – Close (Soft)	739,373	700,716	661,230	657,993	614,703	635,258	655,814	676,369
Credit/Collections – 48 Hour (1 st Call)	35,974	40,054	41,450	44,640	40,298	40,755	41,212	41,668
Credit/Collections – Collect/Close (2 nd Call)	335,953	324,563	273,003	268,332	265,719	277,964	290,208	302,453
Credit/Collections – Returned Check	11,290	8,415	5,590	5,490	4,253	4,580	4,908	5,235
Credit/Collections – Tenant Notification	11,155	13,322	13,321	12,782	14,722	14,295	13,867	13,440
Credit/Collections – Other	95	117	83	89	61	71	81	92
Customer Service Order (“CSO”)	317,561	322,817	297,480	257,830	248,483	250,016	251,550	253,083
CSO – Carbon Monoxide Test	3,694	3,876	4,799	5,507	6,328	7,266	8,344	9,582
CSO – No Gas	17,931	17,084	15,643	15,338	15,011	15,571	16,131	16,691
CSO – Seasonal Off	10,620	9,144	8,788	7,878	7,261	7,306	7,351	7,395
CSO – Seasonal On	90,512	75,264	78,765	63,402	64,588	64,987	65,385	65,784
Fumigation – Turn On	53,839	57,406	57,822	58,601	64,691	68,572	69,008	69,529
Fumigation – Close	62,273	65,367	65,812	67,458	74,014	78,455	78,953	79,549
Gas Leak – CSO Leak	258,260	274,327	271,151	258,472	268,475	270,325	272,175	274,026
Gas Leak – Pilot Out Only	29,770	28,576	27,023	24,963	23,194	23,337	23,480	23,623
Gas Leak – Leak Investigation (Step 2)	14,853	14,184	12,686	10,797	12,543	12,831	13,120	13,408
High Bill Investigation (“HBI”) – Entered	5,780	8,425	7,084	5,779	7,515	7,384	7,252	7,121
HBI – Not Entered	6,398	9,462	9,853	8,594	13,235	12,082	10,929	9,776

Meter Work (Capital) – Meter Set – Turn On	22,473	17,216	11,488	12,047	16,571	25,556	29,380	32,697
Meter Work (Capital) – Meter Set – Left Off	2,346	1,741	1,683	1,745	1,467	2,877	3,307	3,681
Meter Work (Capital) – Meter Set (PSI)	3,374	2,558	679	2,741	3,100	3,989	4,586	5,104
Meter Work (O&M) – Meter Reset – Turn On	2,544	2,121	1,708	1,453	1,495	1,638	1,780	1,923
Meter Work (O&M) – Meter Reset – Left Off	689	576	550	603	566	582	599	615
Meter Work (O&M) – Meter Change – Entered	11,741	10,802	7,949	6,423	5,958	12,314	12,318	12,322
Meter Work (O&M) – Meter Change – Not Entered	143,908	147,658	124,886	104,677	66,443 ¹²	162,245	162,298	162,352
Meter Work (O&M) – Meter Change (Size)	5,066	5,179	5,029	5,096	5,498	5,441	5,383	5,326
Meter Work (O&M) – Meter Remove	5,325	4,688	5,059	5,193	5,356	5,329	5,302	5,276
Non Pay Turn On – Turn On	110,172	106,589	84,833	80,872	81,011	85,855	90,700	95,544
Read/Verify – Verify	84,105	88,098	81,186	79,694	78,893	80,882	82,872	84,861
Read/Verify – Verify – Soft Close	75,890	68,859	51,157	48,766	43,690	48,954	54,218	59,482
Read/Verify – Verify – Soft Close – 180 Days	40,907	38,611	29,418	27,028	24,522	27,382	30,241	33,101
Read/Verify – Load Survey – Residential	6,409	6,282	5,910	5,912	5,834	5,973	6,112	6,251
Turn On/Shutoff – Turn On (Entered)	180,320	171,262	145,088	131,103	118,167	127,207	136,247	145,287
Turn On/Shutoff – Turn On Entered (Gas On)	65,818	61,031	59,260	51,382	45,495	48,921	52,348	55,774
Turn On/Shutoff – Turn On (Back On/Restore)	63,236	58,926	55,714	51,053	54,423	53,496	55,939	58,382
Turn On/Shutoff – Turn On (PSI)	1,713	1,834	1,541	1,571	1,522	1,568	1,614	1,661
Turn On/Shutoff – Close (Hard)	52,268	51,596	48,658	47,330	46,669	47,735	48,801	49,867
Miscellaneous – Service Order (MSO)	29,144	21,821	23,796	23,753	28,469	27,696	26,923	26,151
Miscellaneous – Meter Reg (MMR)	66,124	45,183	38,049	51,665	30,916	36,557	42,199	47,840
Miscellaneous – Assist	15,325	13,265	13,456	13,914	15,165	14,992	14,820	14,647
Food Industry – Turn On (Entered)	2,778	2,934	2,996	3,132	3,103	3,094	3,085	3,076
Food Industry – CSO	54,773	52,755	51,342	53,753	55,366	55,306	55,246	55,186
Food Industry – CSO Leak	10,182	10,068	9,870	10,257	9,950	10,088	10,226	10,364
Commercial/Industrial - ISO	15,958	18,479	19,298	21,183	21,671	21,072	20,473	19,874
Commercial/Industrial – Load Survey – I/C	3,238	1,601	4,110	4,071	4,099	3,906	3,713	3,521
Commercial/Industrial - CSO	24,070	26,156	25,627	23,685	31,827	30,231	28,634	27,038
Commercial/Industrial – Turn On (Entered)	21,634	25,309	24,813	22,535	31,780	29,834	27,888	25,942
Customer/Company Work - Other	3	12	1	1	4	4	4	4
Incomplete	323,982	324,664	322,462	291,366	265,557	267,196	268,835	270,473
Total	4,318,794	4,214,517	3,926,239	3,787,419	3,665,791	3,866,775	3,955,346	4,043,617

1 As reflected in the graphs provided in the individual order forecast workpapers (Ex.
2 SCG-10-WP)¹³, there is a good deal of variability in historical actual versus forecast order
3 volumes; sometimes actual volumes are higher than forecasted order volumes and other times
4 they are lower. I believe SoCalGas’ estimates of TY 2016 CSF work order volumes are
5 reasonable and represent a normal year of CSF activity.

¹² This number excludes a total of 241,041 meter changes that were completed as part of AMI implementation. As mentioned previously, beginning in 2013, CSF focused on curb meter changes while the AMI project team focused on above-ground meter changes.

¹³ Illustrative examples of these historical and forecast order volume graphs are provided in Appendix C.

1 **c. Cost Drivers**

2 In addition to order volumes and customer growth, CSF field technician costs are driven
3 by the length of time it takes to travel to customer premises (“drive time”); the length of time it
4 takes to complete each type of work order (“on premise time”); the amount of “non-job” time
5 (e.g., for start of day and end of day non-order work, breaks, one-on-one discussions with
6 supervisors, and other non-order activities); training time; and vacation and sickness time.

7 **i. Drive Time**

8 Each CSF order has an associated average drive time per order to allow the field
9 technician time to travel to the customer’s premise (between orders). Historical and forecast
10 average drive times per order are summarized in Table SAF-8 below. Forecasted 2014-2016
11 average drive times per order assume a 1% increase per year due to increased traffic congestion,
12 resulting in an 18 second increase in drive time by TY 2016.

13 **TABLE SAF-8**

14 **Average Drive Time per CSF Order (Minutes)**

Historical Average Drive Time Per Order					Forecast Average Drive Time Per Order		
2009	2010	2011	2012	2013	2014	2015	2016
10.4	11.1	10.8	11.3	11.5	11.6	11.7	11.8

15 The projected 1% increase in drive time is based on the fact that total average drive time
16 increased by 10% from 2009 to 2013. A Southern California traffic congestion report prepared
17 by INRIX, Inc. also substantiates the reasonableness of an annual 1% increase in average drive
18 time per order.¹⁴ The increase in drive time forecasted for TY 2016 is also consistent with the
19 increasing traffic congestion assumptions the Commission adopted in SoCalGas’ last GRC
20 proceeding wherein the Commission stated,

21 Next, we address DRA’s recommendation to reduce SoCalGas’ costs by \$1.245
22 million due to SoCalGas’ proposal to increase drive time by 1%. We do not agree
23 with DRA’s recommendation that SoCalGas’ proposal to increase customer
24 service field drive time by 1% should be eliminated. The evidence demonstrates
25 that in 2009 the drive time was 10.4 minutes, while in 2010 drive time was 11.1
26 minutes. Therefore, we do not adopt DRA’s recommendation to eliminate
27 SoCalGas’ proposal to increase the customer service field drive time by 1%.
28 (D. 13-05-010).

¹⁴ A copy of INRIX Inc.’s traffic congestion report is provided in Appendix E.

1 **ii. On Premise Time**

2 Each CSF order type has an associated on premise average order completion time. On
3 premise times can change over time to the extent changes in procedures or new safety
4 requirements are implemented for a particular order type. SoCalGas recently conducted an
5 Engineering Labor Standards (“ELS”) study to determine how long it should take to complete
6 each subjected order type, assuming all applicable company procedures and safety requirements
7 are followed. Where available, the average on premise times per order resulting from the ELS
8 study were used to forecast TY 2016 costs. To the extent ELS data was not available, actual
9 base year 2013 average on premise times per order type were used to forecast because the most
10 current procedures and safety requirements are reflected in 2013 on premise times for each order
11 type.

12 Table SAF-9 below summarizes historical and forecast total average on premise times,
13 which change from year to year based on the order mix (number of each order type completed)
14 each year.

15 **TABLE SAF-9**
16 **Total Average On-Premise Time per Order (Minutes)**

Historical Average On Premise Time per Order					Forecast Average On Premise Time per Order		
2009	2010	2011	2012	2013	2014	2015	2016
15.59	16.13	16.66	16.98	17.74	17.70	17.70	17.70

17 Order types for which ELS study results are available are shown in Table SAF-10 below.
18 Both the 2013 actual average on premise times and the ELS study results are listed for each of
19 these order types.

1 **TABLE SAF-10**

2 **Actual 2013 versus ELS Average On Premise Times (Minutes)**

Order Type	Actual Average On Premise Time per Order	Forecast Average On Premise Time per Order Based on ELS Results		
	2013	2014	2015	2016
Change of Account – Turn On (Not Entered)	5.3	6.9	6.9	6.9
Change of Account – Close (Soft)	3.8	4.6	4.6	4.6
Customer Service Order (“CSO”)	23.4	20.4	20.4	20.4
Meter Work (O&M) – Meter Change – Not Entered	39.4	26.6	26.6	26.6
Non Pay Turn On – Turn On	34.4	32.8	32.8	32.8
Turn On/Shutoff – Turn On (Entered)	43.9	36.3	36.3	36.3
Turn On/Shutoff – Close (Hard)	5.4	4.6	4.6	4.6

3 **iii. Non-job Time, Training Time, Vacation and Sickness,**
 4 **Wage Rate, and Non-Labor Expense**

5 In addition to drive time and on premise time being converted to hours and then full-time
 6 equivalents (“FTEs”), the appropriate non-job time;¹⁵ meetings/training time; and the SoCalGas
 7 vacation and sickness factors were applied to compute forecasted FTEs by year. Base year 2013
 8 non-job time was used to determine the forecast non-job time per FTE on the basis that 2013 is
 9 most indicative of current experience. Time dedicated to training was computed using a five-
 10 year average because training time fluctuates from year to year, largely due to variations in the
 11 level of workforce turnover each year.

12 Table SAF-11 below provides a summary of the applicable “loaders” applied to
 13 determine the total number of FTEs required for completing the forecast order volumes.

¹⁵ E.g., for start/end of day non-order work, breaks, one-on-one discussions with supervisors, standby time, vehicle breakdown time and other non-work order time.

1 **TABLE SAF-11**

2 **Loaders Used to Determine Overall FTE Requirements**

	Loaders
Non-job time (e.g., start and end of day non-order work, breaks, etc.)	21.1%
Training (meetings/training)	5.9%
Vacation and Sickness	16.9%

3 A blended wage rate for the various CSF job classifications is used to compute total labor
4 expense. An associated non-labor expense per FTE for related small tools, uniforms, materials,
5 supplies and expenses is also added to compute total non-labor expenses for TY 2016. The non-
6 labor expense per FTE is based on a five-year average.

7 **d. Proposed Service Enhancements**

8 To further enhance customers' experience with the service provided by field technicians
9 and to address customer safety concerns, SoCalGas is requesting \$5.213 million in funding for
10 three additional, new CSF services: (i) expanded appliance safety checks, (ii) enhanced
11 customer education while on customer premises, and (iii) proactive customer outreach safety
12 checks.

13 **i. Expanded Appliance Safety Checks**

14 With the exception of turn-on orders, when a field technician is requested to check an
15 appliance at a customer's premise, the technician checks only the specific appliance for which
16 the customer requested service. The time required to check the specific appliance is the time
17 reflected in the on premise time calculated in the ELS study and included in the 2013 actual
18 average on premise times.

19 Contingent on receiving funding in this GRC proceeding and beginning in 2016,
20 SoCalGas proposes that when a customer requests an appliance check, the Customer Service
21 Representative ("CSR") will offer the option of having the field technician check all of the
22 customer's gas appliances when the technician is at the customer's premise. The enhanced
23 service will be offered by CSRs (and via the Interactive Voice Response system and web as well)
24 during non-winter peak periods, capacity permitting, in order to manage costs within approved
25 funding levels.

1 SoCalGas is requesting \$1.337 million for this enhanced service, which assumes 15.3
2 minutes of on premise time is added to applicable customer service orders. The cost for the
3 Customer Contact Center (“CCC”) to offer this service to customers is covered in the testimony
4 of SoCalGas witness Evan Goldman’s testimony, Ex. SCG-11. SoCalGas’ request to expand
5 appliance safety checks is consistent with services already in place at SDG&E and supports
6 SoCalGas’ goal of continuously improving safety.

7 **ii. Enhanced Customer Education While On Customer**
8 **Premises**

9 SB 183, effective January 1, 2011 for new construction¹⁶, requires customers to install
10 CO detectors in all inhabited residences. However, many customers are not aware of and have
11 not installed such detectors. Contingent on receiving funding in this GRC proceeding and
12 beginning in 2016, SoCalGas proposes that field technicians who are inside a customer’s
13 residence completing an entered service order will spend additional time on premise to ask the
14 customer if they have a CO detector. If the customer does not have a CO detector, the field
15 technician will explain to the customer the legal requirement and importance of installing a CO
16 detector.

17 In late 2013 and early 2014, SoCalGas provided new MDTs to all of its field technicians
18 to replace obsolete technology. The new MDTs have Intranet and some Internet access.
19 Contingent on receiving funding in this GRC proceeding and beginning in 2016, SoCalGas
20 proposes that field technicians who are at customer premises completing entered service orders
21 demonstrate to customers the types of safety and other information and programs available to
22 customers on SoCalGas’ website (socialgas.com).

23 SoCalGas is requesting \$1.367 million for the above two customer education
24 enhancements, which is based on the assumption that 1.5 minutes of additional on premise time
25 will be incurred during entered orders where the customer is present.¹⁷ The additional on
26 premise time is intended to increase customer awareness of SoCalGas programs and services, as

¹⁶ The effective date of SB 183 is July 1, 2011 for existing single family dwellings and January 1, 2013 for multi-family dwellings and buildings such as apartments and hotels.

¹⁷ Some SoCalGas customers leave keys for SoCalGas field technicians to enter their homes to complete service order requests in their absence. These orders have been excluded for the purpose of forecasting costs.

1 well as enhance customer safety. The cost of producing and printing collateral materials for the
2 field technicians' use is covered in the testimony of SoCalGas witness Ann Ayres, Ex. SCG-12.

3 **iii. Customer Outreach Safety Checks**

4 Approximately 42% of SoCalGas' customers have not requested field technician service
5 from SoCalGas within the last seven years.¹⁸ In support of SoCalGas' goal to continuously
6 improve safety, contingent on receiving funding in this GRC proceeding and beginning in 2016,
7 SoCalGas proposes to mail postcards to customers offering them the opportunity to have a field
8 technician come out to the customer's premise to perform a safety check on all of the customer's
9 gas appliances. Postcards would be mailed on a targeted basis to these customers, workload
10 permitting, to manage order volumes within each geographic area served by each operating base
11 and within authorized funding levels.

12 SoCalGas is requesting \$2.509 million for field technicians to perform the proposed
13 customer outreach safety checks described above, which assumes 50,000 such orders are
14 completed per year, with an average on premise time of 38.7 minutes and other drive time and
15 non-job time elements factored into the calculation. The costs associated with mailing postcards
16 to customers and responding to resulting customer calls to SoCalGas' CCC are covered the
17 testimonies of SoCalGas witness Ann Ayres and SoCalGas witness Evan Goldman's testimony,
18 Exs. SCG-12 and SCG-11, respectively.

19 **e. Incremental Field Technician Training**

20 SoCalGas is requesting incremental funding totaling \$1.583 million for improvements to
21 CSF field technician training, including: (i) periodic refresher training, (ii) job shadowing so
22 retiring field technicians can transfer their knowledge to newer technicians before leaving the
23 company, and (iii) more frequent OpQual training.

24 **i. Refresher Training**

25 SoCalGas is requesting \$0.447 million in incremental funding for field technicians to
26 complete a five-day refresher training program every five years, if they remain in the field
27 technician job classification for an extended period of time. Policies, procedures and customer
28 appliances/equipment change over time and SoCalGas is concerned that employees who remain
29 in the same job for extended periods of time may not remain current in their job knowledge. The
30 need for refresher training has become more pronounced now that residential field technicians

¹⁸ SoCalGas maintains records of completed customer service orders for a period of seven years.

1 are contractually obligated, per the collective bargaining agreement, to remain in the job
2 classification for at least five years.

3 The refresher training will be conducted at SoCalGas' Pico Rivera training center and
4 will be similar to refresher training that has been in place at SDG&E. The cost estimate is based
5 on the number of field technicians SoCalGas anticipates would need the refresher training each
6 year (based on length of time in the job). For employees from outlying areas, the estimated cost
7 also includes lodging and per diem meal expenses while attending training in Pico Rivera.

8 **ii. Job Shadowing**

9 Table SAF-12 below shows the number of residential field technicians who have retired
10 in each of the past five years.

11 **TABLE SAF-12**
12 **Residential Field Technician Retirements**

Year	Number of Retirements
2009	20
2010	27
2011	29
2012	22
2013	37

13 SoCalGas does not have an established process for capturing and passing on to less
14 experienced field technicians the knowledge and skills of retiring residential field technicians
15 before they leave the company. SoCalGas recognizes that a formal knowledge transfer process
16 is an important opportunity to strengthen the skills of residential field technician workforce. In
17 the interest of facilitating knowledge transfer before experienced field technicians leave the
18 company, SoCalGas requests \$0.398 million for retiring residential field technicians to mentor
19 and pass on their knowledge and experience to newer field employees. Newer, less experienced
20 field technicians would spend time "job shadowing" with retiring residential field technicians in
21 order to facilitate the knowledge transfer process.

22 The cost estimate assumes retiring field technicians would spend 60 days accompanying
23 multiple, newer employees in the field, passing on their knowledge and expertise. The cost
24 estimate is based on the number of projected residential field technician retirements during the
25 TY 2016 GRC period.

1 **iii. Operator Qualification Training**

2 SoCalGas is requesting incremental funding totaling \$0.738 million for CSF technicians
3 to complete OpQual training and be re-certified every three years rather than the current five-
4 year cycle. The basis for the forecasted costs and rationale for the increased frequency of the
5 OpQual re-certification is covered in the testimony of SoCalGas witness Frank Ayala, Ex. SCG-
6 04.

7 **f. Department of Transportation-Required Meter Set Assembly**
8 **Inspection Program**

9 The Department of Transportation (“DOT”) Code of Federal Regulations (“CFR”) (i.e.,
10 CFR 192.481) requires that each meter set assembly (“MSA”) be inspected every three years
11 (not to exceed 39 months) for atmospheric corrosion. Meter readers have historically performed
12 this function but, as provided for in the Commission’s AMI decision¹⁹, SoCalGas plans to
13 transition this compliance work to CSF Field Service Assistants (“FSAs”) as AMI is
14 implemented and meter readers are eliminated.

15 With an estimated 5.8 million connected meters in 2016, SoCalGas will be required to
16 inspect approximately 1.933 million MSAs per year. The first meter reading routes (and
17 associated meter reader positions) were eliminated in 2013 as a result of AMI, so the first MSA
18 inspections to be performed by FSAs will begin in 2016. Given the time required to ramp up,
19 including hiring, training and leveling the workforce in order to complete the required number of
20 inspections each year, SoCalGas plans to begin hiring and training FSAs, and conducting MSA
21 inspections, in 2015 such that SoCalGas is in a position to begin completing approximately 1.933
22 million MSA inspections per year beginning in 2016.

23 SoCalGas is requesting \$4.899 million above the authorized funding levels adopted in
24 Commission D. 10-04-027 because, upon further review, SoCalGas has identified additional
25 costs associated with performing the required MSA inspections, post AMI implementation.

26 Table SAF-13 below summarizes the annual funding adopted in D.10-04-027 and the
27 incremental funding being requested in TY 2016 for FSAs to complete the required inspections.

¹⁹ D.10-04-027

1 **TABLE SAF-13**

2 **Non-Shared O&M Costs for DOT-Required MSA Inspections**

3 **(Shown in Thousands of 2013 Dollars)**

MSA Inspections	AMI Funding	Incremental TY 2016 GRC Request
	2016	2016
Labor	661	4,717
Non-Labor	112	182
Total	773 (40 cents per MSA inspection, assuming approximately 1.933 million inspections per year)	4,899 (\$2.53 per MSA inspection, assuming approximately 1.933 million inspections per year)

4 Specifically, SoCalGas is requesting funding for 74 additional FSA positions (beyond the
5 10 FSA positions funded in D.10-04-027) in order to comply with the DOT regulations, for the
6 reasons set forth below.

7 First, given the heightened natural gas pipeline safety concerns, coupled with the fact that
8 meter readers will no longer be at customer premises to visually see and read meters each month,
9 SoCalGas proposes to complete a more comprehensive inspection of each MSA every three
10 years. FSAs, who are Operator Qualified in more elements and higher skilled than meter
11 readers, will be required to thoroughly inspect all aspects of the MSA, including the gas riser, all
12 piping, the regulator and the meter, from all directions and angles, while physically present at
13 each MSA.

14 Table SAF-14 below provides a summary of the MSA inspection elements currently
15 performed by meter readers along with the elements SoCalGas proposes to add.

1 **TABLE SAF-14**

2 **Current and Proposed MSA Inspection Elements**

General Inspection Elements	Current Inspection Element (Performed by Meter Readers)	Proposed Additional Inspection Element
Look/listen/smell for indications of gas	X	
Check for electricity at meter, where applicable	X	
Identify prohibited meter locations	X	
Upstream of Stopcock (Riser)		
Identify light/medium rust	X	
Identify heavy rust/scale	X	
Identify swollen coating	X	
Identify through-wall anodeless (AL) riser casing corrosion and ensure steel nipple is visible	X	
Identify exposed polyethylene pipe/through-wall casing	X	
Identify damage to coatings		X
Identify epoxy repair defects/damage		X
Identify low AL riser conditions		X
Service Valve/Stopcock		
Identify leaking, embedded, buried, inoperable service valves/stopcocks	X	
Identify broken tangs	X	
Downstream of Stopcock		
Identify atmospheric corrosion	X	
Identify indications of leakage	X	
Verify approved regulator is installed		X
Verify regulator is properly vented	X	
Verify vent cap installed		X
Identify loose, damaged or defective parts for follow-up		X
Verify MSA is insulated (where applicable)		X
Verify meter has security tabs	X	
Identify meter damage	X	
Identify meter index damage/painting	X	
Identify broken/cloudy meter dial glass	X	
Ensure Dig Alert sticker is installed	X	
Identify need for meter guard (if necessary)	X	
Identify potential gas diversion	X	

3 In addition to average drive time and walk/read time for each meter reading route
 4 (estimates for which are based on actual 2013 Meter Reading experience), SoCalGas estimates it
 5 will take an average of one minute to access and complete each above-ground MSA inspection
 6 and an average of seven minutes per curb meter inspection. Curb meters require more time
 7 because the heavy curb lid and any debris in the vault must be safely removed before a full
 8 inspection can be completed.

9 SoCalGas anticipates a 10% “cannot get in” (“CGI”) rate due to meter accessibility
 10 issues. The CGI rate assumed for MSA inspections is consistent with the CGI rate SoCalGas
 11 encounters when performing other meter work. Because these MSA inspections will not be
 12 completed on the first attempt and will be spread further apart for the second attempt, the FTEs
 13 required to complete the follow-up inspections for CGI inspections were derived using the
 14 average drive time incurred for other customer service orders (11.5 minutes per order) plus an
 15 estimated 4.6 minutes for gaining access to and inspecting each meter.

1 Total hours required to inspect one-third of all meters each year were converted to FTEs.
2 Non-job time, training, and vacation and sickness factors, as well as the FSA straight-time wage
3 rate were then applied to determine total FTEs and costs. A non-labor cost (for uniform,
4 laundry, etc.) of \$3,500 was applied on a per FTE basis.

5 In instances where the MSA is inaccessible, the FSA will leave a notice instructing the
6 customer to contact the CCC to schedule the inspection. Costs associated with anticipated calls
7 to the CCC are covered in the testimony of SoCalGas witness Evan Goldman, Ex. SCG-11.
8 Supervisor costs for the MSA Inspection Program, and costs for clerical support (to manage
9 chronically inaccessible meters), quality assurance (to inspect a portion of the FSAs' work) and
10 technical support (to maintain MSA inspection routes and MDTs) are covered in subsequent
11 sections of my testimony.

12 **g. Curb Meter Regulator Replacements**

13 The TY 2016 funding being requested for the CSF Operations cost category includes
14 \$0.177 million in costs for replacing additional curb meter regulators. The basis and rationale
15 for this forecasted cost are covered in the testimony of SoCalGas witness Frank Ayala, Ex. SCG-
16 04.

17 **h. Vehicles**

18 CSF field employees are provided with company fleet vehicles to transport gas meters,
19 piping, tools, parts and materials needed to perform their jobs. Based on the forecasted work and
20 associated incremental positions, SoCalGas anticipates a need for the additional vehicles shown
21 in Table SAF-15 below. Vehicle costs are covered in the testimony of SoCalGas witness
22 Carmen Herrera, Ex. SCG-15.

23 **TABLE SAF-15**

24 **Forecast Number of Incremental Company Vehicles**

2014	2015	2016	Total
65	114	85	264

i. Summary of CSF Operations Costs

In summary, SoCalGas' TY 2016 funding request of \$127.908 million for the CSF Operations cost category (an increase of \$22.0 million compared to 2013 adjusted-recorded costs) consists of the elements summarized in Table SAF-16 below.

TABLE SAF-16

Summary of TY 2016 O&M Expenses for CSF Operations Cost Category

Activity	TY 2016 Forecast Shown in Thousands of 2013 Dollars		
	Labor	Non-labor	Total
TY 2016 Base Workload Forecast (excluding customer growth)	106,597	6,252	112,849
<i>2013 Adjusted Recorded</i>	<i>99,210</i>	<i>6,699</i>	<i>105,908</i>
<i>Change Due to TY 2016 Order Forecast</i>	<i>7,387</i>	<i>(447)²⁰</i>	<i>6,940</i>
Order Forecast Due to Customer Growth	1,799	105	1,904
TY 2016 Increase in Drive Time Due to Increasing Traffic Congestion	1,318	77	1,395
TY 2016 Efficiency Improvement from PACER MDT Refresh Project²¹	(75)	0	(75)
Subtotal	109,639	6,434	116,073
New Services for Customers			
Enhanced Appliance Safety Checks (includes customer growth)	1,263	74	1,337
Enhanced Customer Education (includes customer growth)	1,291	76	1,367
Customer Outreach Safety Checks (includes annual increase in drive time)	2,370	139	2,509
Subtotal	4,924	289	5,213
Incremental Costs for Improved Field Technician Training			
Refresher Training	371	76	447
Job Shadowing/Knowledge Transfer with Retiring Technicians	376	22	398
Operator Qualification Training	738	0	738
Subtotal	1,485	98	1,583
Incremental Costs for DOT-Required MSA Inspections	4,717	182	4,899
Incremental Costs for Curb Meter Regulator Replacements	177	0	177
2016 Total Adjusted Forecast	120,942	7,003	127,945

²⁰ Removed costs associated with seasonal contractors to avoid double counting costs that are already reflected in labor costs to complete TY 2016 forecasted work order volumes.

²¹ The new MDTs rolled out to CSF field employees are connected to AT&T's wireless broadband network. Fewer connectivity issues (less down time) are expected as a result of using the new MDTs. The estimated savings reflect an anticipated reduction in employee down time due to a loss of MDT connectivity.

1 Additional details regarding each of the above cost elements are provided in the
2 workpapers supporting my testimony, Ex. SCG-10-WP.

3 **2. CSF Supervision Cost Category**

4 Table SAF-17 below summarizes SoCalGas' requested TY 2016 expenses for the CSF
5 Supervision cost category.

6 **TABLE SAF-17**
7 **CSF Supervision Expense Forecast**
8 **(Shown in Thousands of 2013 Dollars)**

	2013 Adjusted- Recorded	TY 2016 Forecast	Change
Labor	10,144	12,158	2,014
Non-labor	974	1,230	256
Total	11,118	13,388	2,270

9 **a. Description of Costs and Underlying Activities**

10 Organizationally, CSF field employees report to CSF field supervisors. Like field
11 employees, field supervisors are geographically dispersed across all of SoCalGas' 51 operating
12 bases. Field supervisors hire and coach employees, conduct safety and job observations,
13 coordinate with the dispatch office and others to address and resolve issues, respond to
14 emergency incidents to provide on-site leadership, and manage the overall performance of the
15 CSF employees who work from each of the 51 operating bases.

16 **b. Forecast Method**

17 The estimated number of field supervisors in TY 2016 is based on maintaining the base
18 year 2013 average employee-to-supervisor ratio of 12:1. A ratio of 12:1 is appropriate given the
19 geographic area covered by each operating base; the variety of work performed and conditions
20 encountered at customer premises; and the expectation that supervisors spend as much time as
21 possible in the field performing safety and job observations, coaching employees, and managing
22 performance. The TY 2016 funding request also includes four supervisors for the DOT-required
23 MSA Inspection Program. The span of control for MSA Inspection Program supervisors (20:1)
24 will be greater than that for other field supervisors because the FSAs performing MSA
25 inspections will likely be less geographically dispersed at any given time and will be performing
26 more routine work. A zero-based forecast of expenses was used in lieu of other forecasting

1 methodologies because a zero-based forecast is the only method that appropriately maintains the
2 desired span of control.

3 Non-labor expenses include cell phones, office supplies and other miscellaneous
4 expenses. The non-labor cost estimate is based on a five-year average of historical non-labor
5 expenses per supervisor multiplied by the forecasted number of supervisors. Because non-labor
6 costs are driven by the number of supervisors, historical averaging or trending of expenses alone
7 would not be appropriate because expenses would not be aligned with the forecasted number of
8 supervisors.

9 **c. Cost Drivers**

10 Costs are driven by the number of supervisors and applicable salary levels for
11 supervisory employees. The number of supervisors is driven by the number of field employees,
12 maintaining a span of control of 12:1, and the need to provide adequate supervision across all 51
13 operating bases at all times.

14 **d. Vehicles**

15 Field supervisors are provided with company fleet vehicles because they spend time in
16 the field supervising and coaching employees, as well as respond to emergency incidents. Based
17 on the forecasted number of supervisors, additional vehicles will be required as summarized in
18 Table SAF-18 below. All costs associated with company vehicles are covered in the testimony
19 of SoCalGas witness Carmen Herrera, Ex. SCG-15 and are not included in the costs set forth in
20 my testimony.

21 **TABLE SAF-18**
22 **Forecast Number of Incremental Company Vehicles**
23 **for Field Supervisors**

2014	2015	2016	Total
7	3	13	23

24 **3. CSF Dispatch Cost Category**

25 Table SAF-19 below summarizes SoCalGas' requested TY 2016 expenses for CSF
26 dispatch activities, which reflect a \$0.114 million reduction in costs.

TABLE SAF-19
CSF Dispatch Expense Forecast
(Shown in Thousands of 2013 Dollars)

	2013 Adjusted-Recorded	TY 2016 Forecast	Change
Labor	8,762	8,617	(145)
Non-labor	158	188	30
Total²²	8,920	8,806	(114)

a. Description of Costs and Underlying Assumptions

Dispatch personnel route and dispatch work orders to CSF field employees on a day before and same day basis, 24 hours a day, 365 days a year. Dispatchers are located at four central locations and handle all matters that come up during the day, including: 1) dispatching emergency orders real time as they are received; 2) redistributing work when employees call in sick or otherwise become unavailable; and 3) redistributing work orders when employees are not able to complete all work that has been assigned for the day and other related tasks. Non-labor expenses include cell phone expenses, office materials and other miscellaneous expenses.

b. Forecast Method

Both labor and non-labor costs remain relatively flat over time. Nonetheless, a five-year average was used to forecast both labor and non-labor costs. A five-year average was used to avoid the potential for artificially inflating or deflating results based on short-term anomalies. Forecasted TY 2016 labor costs also reflect \$0.280 million in savings resulting from the Forecasting and Scheduling Project (“FSP”) that was described in the testimony of SoCalGas witness Ed Fong in SoCalGas’ 2012 GRC proceeding.

c. Cost Drivers

Costs are primarily driven by the number of dispatchers needed to provide 24/7, 365-days-per-year coverage to perform dispatching functions for all 51 operating districts and all field employees, including being able to immediately dispatch all emergency orders.

4. CSF Support Cost Category

Table SAF-20 below summarizes SoCalGas’ requested TY 2016 expenses for CSF support activities.

²² Numbers may not add due to rounding.

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TABLE SAF-20
CSF Support Expense Forecast
(Shown in Thousands of 2013 Dollars)

	2013 Adjusted-Recorded	TY 2016 Forecast	Change
Labor	8,804	10,980	2,176
Non-labor	954	1,643	689
Total	9,758	12,623	2,865

a. Description of Costs and Underlying Activities

The CSF Support cost category includes: (1) centralized training (classroom instructors, supervisors and a training manager located at SoCalGas’ Pico Rivera skills training center); (2) field instructors who accompany new residential field technicians immediately following their formal training; quality assurance (“QA”) inspectors and a QA supervisor who inspect the work of field technicians to ensure policy adherence and quality of the work performed; (3) field technology support personnel who maintain the field MDTs, work management, routing and reporting systems used for CSF operations; (4) operations clerks who are located at the field operating bases; (5) region and district management; and administrative associates. Non-labor costs include cell phones, office supplies and other miscellaneous expenses.

b. Forecast Method

Forecasted TY 2016 expenses for both labor and non-labor are based on five-year historical averages, given the variability in CSF support requirements and associated non-labor expenses. Costs associated with new, incremental activities were then added to determine total funding requirements for CSF support functions.

1 **c. Cost Drivers**

2 Costs are primarily driven by the need to train new employees, maintain a technically
3 skilled and proficient workforce, and ensure work is performed in a manner that meets the
4 company's quality standards.

5 **d. Proposed Incremental Funding Requests**

6 SoCalGas is requesting \$2.087 million in incremental funding above the five-year
7 historical average cost for the CSF Support cost category, for the following eight new items that
8 are not included in historical costs: (i) a new MSA Inspection Program manager position, (ii)
9 four meter access clerks for the MSA Inspection Program; (iii) a quality assurance inspector
10 position for the MSA Inspection Program; (iv) a technical specialist position for the MSA
11 Inspection Program; (v) five additional instructor/training specialist positions to implement field
12 technician training, policy review improvements and update/modernize training materials; (vi)
13 four new commercial/industrial field instructor positions; (vii) a technology specialist position to
14 manage wireless network access for CSF field employees; and (viii) new AT&T wireless access
15 fees. The need for each of these incremental items is outlined below.

16 **i. MSA Inspection Program Manager**

17 A new CSF manager position was established in early 2014 to manage and oversee the
18 start-up and ongoing completion of the new MSA Inspection Program that will replace the
19 current DOT-required inspections performed by meter readers.²³ A manager position is needed
20 to lead the overall program and facilitate compliance with the regulations given the large number
21 of MSA inspections (approximately 1.933 million) that must be performed each year. SoCalGas
22 is requesting TY 2016 forecast expenses of \$0.130 million for this position, including the salary
23 level for this position and associated non-labor costs. The forecasted non-labor cost is based on
24 the 2013 non-labor cost for similar positions.

25 **ii. Meter Access Clerks for MSA Inspection Program**

26 SoCalGas requests \$0.290 million in incremental funding to establish four clerical
27 positions to support the MSA Inspection Program. Two clerks would support Southeast Region
28 (formerly Orange Coast and Inland Regions), or half of SoCalGas' 20,000-square-miles service
29 territory, and the other two clerks would support Northwest Region (formerly Pacific and

²³ Beginning in 2014, the QA and residential field instructor work groups also report to this new manager position.

1 Northern Regions), the other half of SoCalGas' service territory. These positions are necessary
2 to manage and gain access to chronically inaccessible/difficult-to-access meters, as well as
3 provide other general administrative and clerical support for the MSA Inspection Program.

4 In addition to office supplies and other miscellaneous non-labor expenses, the forecasted
5 non-labor cost includes the cost of printing "CGI" tags for FSAs to leave at customer premises
6 when they are not able to access a meter to perform the required MSA inspection. While the
7 CCC will handle resulting calls to SoCalGas' call center,²⁴ the meter access clerks will manage
8 and arrange access to chronically inaccessible/difficult to access meters.

9 **iii. Quality Assurance Inspector for MSA Inspection Program**

10 Similar to the quality assurance inspectors who inspect the work of CSF field technicians,
11 SoCalGas requests \$0.090 million in incremental funding to establish a QA inspector position for
12 the MSA Inspection Program. The QA inspector will inspect the work of the FSAs performing
13 the inspections to ensure MSA inspections are completed in accordance with policies and
14 procedures and in a manner that complies with the DOT regulations.

15 **iv. Technical Specialist for MSA Inspection Program**

16 Similar to the way Meter Reading currently manages meter reading routes, including
17 incorporating new meters into the routes as new meters are added, the new MSA Inspection
18 Program will require a position to design and maintain meter inspection routes, including
19 incorporating new meters. The new position will also be responsible for maintaining the MDT
20 handheld units that will be used by the FSAs performing the MSA inspections. SoCalGas is
21 requesting \$0.091 million for this position, including both labor and non-labor costs associated
22 with this position.

23 **v. Instructors/Training Specialist to Implement Training** 24 **Improvements**

25 SoCalGas is requesting \$0.563 million in incremental funding for four additional training
26 instructors and a specialist (and associated training equipment) to implement improvements to
27 SoCalGas' field technician training program. This funding request consists of the three elements
28 discussed further below.

²⁴ The cost of which is contained in the testimony of SoCalGas witness Evan Goldman, Ex. SCG-11.

1 **1. Refresher Training Instructors**

2 SoCalGas proposes to add two new senior training instructor positions to design and
3 conduct refresher training at SoCalGas’ Pico Rivera training center for residential field
4 technicians who have been in their positions for extended periods of time. As described
5 previously in my testimony, and similar to the annual, one-week refresher training that has been
6 in place at SDG&E²⁵ for a number of years, SoCalGas residential field technicians who remain
7 in the same position for extended periods of time will be required to complete refresher training
8 every five years in order to keep their skills and knowledge current. These two instructor
9 positions will also be used to conduct FSA training for SoCalGas’ new MSA Inspection
10 Program.

11 **2. Policy Review and Reinforcement Instructors**

12 SoCalGas proposes to add two senior training instructor positions to provide more
13 comprehensive and more formalized instruction on new/modified policies at all 51 CSF
14 operating bases on an ongoing basis. Currently supervisors meet regularly with their employees
15 to review policies, including communicating ongoing changes/updates to policies and
16 procedures. More formalized policy instruction to supplement the supervisor reviews will
17 facilitate a deeper level of understanding of policies/changes and greater consistency in policy
18 interpretation and adherence across SoCalGas’ service territory. Given the size of SoCalGas’
19 service territory it will be more efficient for SoCalGas to send trained, certified instructors to
20 each of the operating bases than to require field technicians to travel to the Pico Rivera training
21 center for policy reviews.

22 **3. Training Modernization Specialist**

23 SoCalGas proposes to add a training modernization specialist position and associated
24 video equipment in order to update and keep current all existing training videos used at the Pico
25 Rivera training center, to reflect the types and conditions of appliances and equipment
26 technicians are currently encountering in the field. This position would also create short video
27 clips and electronic links embedded in company policies and procedures so that field technicians
28 can readily look up “how to” visual demonstrations as needed using their new MDTs in the field.
29 SoCalGas has not been able to modernize its policies and procedures in this manner because,

²⁵ The annual refresher training conducted at SDG&E also includes formal policy reviews by trained instructors, which SoCalGas has addressed in a different manner given the size of SoCalGas’ service territory and the distance employees would have to travel for such policy reviews.

1 until recently, field technicians have not had Intranet connectivity in the field to be able to view
2 “how to” video clips in the field.

3 **vi. Commercial/Industrial Field Instructors**

4 SoCalGas is requesting \$0.398 million in incremental funding for two commercial and
5 two industrial field instructor positions, to supplement the existing residential field instructor
6 positions. One commercial and one industrial field instructor would support Southeast Region
7 (formerly Orange Coast and Inland Regions), or half of SoCalGas’ 20,000-square-miles service
8 territory, and the other two field instructors would support Northwest Region (formerly Pacific
9 and Northern Regions), the other half of SoCalGas’ service territory.

10 Commercial and industrial field technicians work on much larger and more complex gas-
11 fired equipment, such as boilers, restaurant cooking equipment, and industrial ovens and kilns, as
12 well as respond to reports of gas leaks and other emergency incidents at commercial/industrial
13 customer premises. Organizationally, commercial and industrial field technicians report to field
14 supervisors at each of SoCalGas’ operating bases. Typically, the field supervisors to whom these
15 technicians report have residential field technician experience but no experience as a commercial
16 or industrial field technician. In support of SoCalGas’ goal of continuously improving
17 employee, customer and public safety, it is important to provide commercial and industrial field
18 technicians with not only the centralized, formalized training they receive at SoCalGas’ Pico
19 Rivera training center, but also with in-field, field instructor personnel. The field instructor
20 personnel have experience working on large commercial/industrial gas-fired equipment (as well
21 as emergency response experience involving commercial/industrial customers) and can help
22 commercial and industrial field technicians become technically proficient in their job skills and
23 safely perform their jobs in the field.

24 In addition to supporting all commercial and industrial field technicians on a regular,
25 ongoing basis throughout SoCalGas’ service territory, the commercial/industrial field instructors
26 would also accompany newly trained commercial and industrial field technicians to help new
27 technicians to perform their new jobs safely on their own. Table SAF-21 below shows the
28 number of commercial and industrial field technicians who have retired over the past five years
29 and who are projected to retire over the next five years. The projected number of retirements
30 reflects the anticipated number of new commercial and industrial field technicians whom the

1 commercial/industrial field instructors would support immediately following their formalized
2 training and on an ongoing basis along with all other commercial and industrial field technicians.

3 **TABLE SAF-21**
4 **Historical and Projected Number of Retirements for Commercial**
5 **and Industrial Field Technicians**

Year	Number of Retirements	Year	Number of Projected Retirements
2009	10	2014	11
2010	13	2015	11
2011	9	2016	11
2012	5	2017	10
2013	11	2018	8

6 **vii. CSF Technology Specialist**

7 SoCalGas is requesting \$0.087 million for an incremental technology specialist position
8 needed to manage wireless access. The CSF technology specialist is also needed to address all
9 AT&T wireless broadband network access issues that may arise for the new MDTs that were
10 rolled out to all CSF field employees in late 2013 and early 2014. The requested labor and non-
11 labor costs for this position are based on the 2013 costs for comparable positions.

12 **viii. MDT Wireless Network Access Fees**

13 SoCalGas is requesting \$0.438 million in incremental non-labor funding to cover the cost
14 of new wireless access fees. The forecast expenses are based on wireless network access fees
15 charged by AT&T. In late 2013 and early 2014, SoCalGas replaced all MDTs and vehicle
16 mount docking stations used by CSF field employees. The MDTs were replaced due to their age
17 and the fact that they did not support the Windows 7 operating system and the upgraded
18 Windows 7 PACER application system.²⁶

19 The new MDTs are connected to AT&T's broadband wireless network whereas the prior
20 MDTs had to be cradled in the technicians' service trucks in order for the technician to receive
21 work orders over SoCalGas' radio network.

²⁶ PACER is the system SoCalGas uses to schedule, dispatch and track CSF work orders. Each CSF field employee is equipped with an MDT; work orders are sent to field employees via their MDTs.

e. Summary of CSF Support Costs

Table SAF-22 below summarizes SoCalGas' funding request for the incremental CSF support needs described above.

TABLE SAF-22
Summary of TY 2016 O&M Expenses for CSF Support
(Shown in Thousands of 2013 Dollars)

Activity	TY 2016 Forecast		
	Labor	Non-labor	Total
Forecast Based on Historical 5-Year Average	9,454	1,082	10,536
Incremental Funding Requests			
MSA Inspection Program Manager	120	10	130
Meter Access Clerks for MSA Inspection Program	273	17	290
Quality Assurance Inspector for MSA Inspection Program	80	10	90
Technical Specialist for MSA Inspection Program (to manage inspection routes)	86	5	91
Field Technician Training Improvements (two senior instructors to conduct formal refresher training, two senior instructors to conduct formal policy/procedure reviews at all 51 operating bases, one training modernization specialist to update/create training videos and other training tools)	498	65	563
Four Commercial/Industrial Field Instructors to provide in-field support to C/I field technicians.	384	14	398
Technology Specialist position to manage new wireless access for all field MDTs	85	2	87
New AT&T Wireless Network Access Fees for Field MDTs	0	438	438
Subtotal – Incremental Requests	1,526	561	2,087
Total²⁷	10,980	1,643	12,623

²⁷ Numbers may not add due to rounding.

1 Additional details regarding each of these cost elements are provided in the workpapers
2 supporting my testimony, Ex. SCG-10-WP. I believe these costs are based on reasonable
3 assumptions and are needed to ensure ongoing compliance with the DOT's MSA inspection
4 requirements, as well as improve the overall safety, quality and consistency of work performed
5 by SoCalGas' field technicians.

6 C. Meter Reading

7 Table SAF-23 below summarizes the total non-shared O&M forecasts for the listed Meter
8 Reading cost categories, each of which will be described more fully below.

9 **TABLE SAF-23**

10 **Non-Shared O&M Summary of Costs by Meter Reading Cost Category**

METER READING			
Shown in Thousands of 2013 Dollars			
	2013 Adjusted-Recorded	TY2016 Estimated	Change
1. Meter Reading – Operations	28,937	30,382	1,445
2. Meter Reading – Clerical	1,079	1,113	34
3. Meter Reading - Supervision & Training	3,426	4,058	632
4. Meter Reading – Support	2,042	2,488	446
Total	35,484	38,041	2,557

11 **1. Meter Reading Operations Cost Category**

12 **a. Description of Costs and Underlying Assumptions**

13 The Meter Reading Operations cost category includes full- and part-time meter readers
14 who are dispersed across SoCalGas' operating bases. Meter readers are equipped with MDTs
15 (aka handheld devices) which are used to record customers' gas consumption. Meter readers
16 capture monthly meter reads at customer premises and read over 68 million meters per year.
17 Data from the meter readers' MDTs are uploaded each night and transferred to the company's
18 mainframe computer for processing and billing. Meter readers are also supported by meter
19 reading technicians.

20 SoCalGas is requesting TY 2016 forecast expenses of \$ 30.382 million for this cost
21 category, an increase of \$1.445 million compared to 2013 adjusted-recorded costs.

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b. Forecast Method

The forecast of TY 2016 expenses uses 2010 as a base year.²⁸ Use of 2010 as a base year is appropriate because use eliminates the effects of AMI implementation on Meter Reading costs given that those costs and benefits will be trued up through the AMIBA as discussed in Section I.E. of my testimony. Actual and forecasted meter growth was added to 2010 costs to develop the TY 2016 expense forecast for this cost category. The TY 2016 forecast also includes the incremental funding requests outlined below.

Use of an alternative forecast methodology would not be appropriate because alternative methodologies would not properly account for the effects of AMI implementation.

c. Cost Drivers

The cost of meter readers is primarily driven by the number of gas meters to be read each month and, to some degree, by the proficiency level of each part-time meter reader. Based on the collective bargaining agreement that is in place between SoCalGas and the two unions on SoCalGas' property,²⁹ part-time meter readers are paid an hourly rate based on actual time worked until they become proficient at reading meter reading routes and, subsequently, they are paid on a "pay-per-route" basis. Costs increase as there is turnover in the workforce. In addition, cost increases reflect the fact that new employees are paid more to read a route of meters than more experienced employees due to the fact that new meter readers are paid for actual hours worked until they become proficient.

d. Incremental Funding Requests

SoCalGas has included in its TY 2016 forecast the following incremental cost elements in order to accurately reflect the total cost of Meter Reading operations:

²⁸ The Meter Reading Operations group began reacting to the inevitable AMI deployment before implementation actually began. 2010 is the most recent full year not impacted by AMI implementation.
²⁹ Utility Workers Union of America ("UWUA") and International Chemical Workers Union Council ("ICWUC")

i. Incremental Training Costs Due to Increased Part-Time Meter Reader Attrition Not Related to AMI Implementation

Part-time meter readers are the feeder pool for full-time, entry level jobs within SoCalGas. Table SAF-24 below shows the number of part-time meter readers who moved to non-AMI related, full-time SoCalGas positions over the past eight years.

**TABLE SAF-24
Part-Time Meter Reader Attrition**

SoCalGas Full-Time Positions	Number of Part-Time Meter Reader Moves to Other SoCalGas Positions							
	2006	2007	2008	2009	2010	2011	2012	2013
Admin Clerk	2	5	1				2	3
Base Assistant	1							
Cashier		1						
Construction Tech	91	54	34	1	6	82	91	67
Customer Contact Rep		1						
Customer Service Rep	1				1		1	
Dispatch Specialist		1						
District Operations Clerk	1							
Energy Technician - Apprentice	61	51	12			121	88	80
Energy Tech - Residential	2				2	1	2	1
Facilities Helper		1						
Field Collector	1	1	1				1	
Field Services Assistant	12	37	2	5		7	3	
Fleet Assistant	4		1					
Leakage Control Clerk	2	3	1	2			1	
Logistics Rep						1		
Mail Payments Clerk							1	
Mapping Assistant		1						
Meter Reader-R	54	41	47	8	8	74	31	11
Meter Reading Clerk		1						
Meter Reading Technician							2	1
Meter Repair Technician	2						1	
Pipeline Technician		1						
Station Operations Specialist	3					1	1	
Transportation Logistics Rep	1		1			1	1	
Total	238	199	100	16	17	288	226	163

The lack of job movement in 2009 and 2010 reflects the poor external economic climate that existed at the time. Using 2010 as the base forecast of expenses understates costs that are driven by employee attrition rates. For example, training expenses are required to train new part-time meter readers who are hired to fill behind part-time meter readers who leave their positions. Training costs were lower than normal in 2010 due to the unusually low part-time meter reader attrition rate. To adjust for the abnormally low attrition rate in 2010, SoCalGas included in its TY 2016 forecast \$0.231 million for incremental training costs. The incremental training cost estimate was derived using a normal attrition rate (based on a historical average attrition rate) to

1 determine the projected number of new hires and the number of training hours required per new
2 hire.³⁰

3 **ii. Incremental “Learning Curve” Costs Due to Increased**
4 **Part-Time Meter Reader Attrition Not Related to AMI**
5 **Implementation**

6 For the same reasons noted above, using 2010 for the base forecast understates “learning
7 curve” costs associated with normal part-time meter reader attrition and hiring rates. SoCalGas
8 has included in its TY 2016 forecast \$0.575 million in incremental costs associated with the time
9 it takes new part-time employees to “climb the learning curve” and transition from being paid for
10 actual hours worked to “pay-per-route”. It takes new meter readers longer to read the meters in
11 their meter reading routes than it does a more experienced meter reader therefore costs go up
12 when attrition is higher. The incremental cost estimate was developed using projected attrition
13 and hiring rates, rather than the unusually low 2010 attrition rate.³¹

14 **iii. Operator Qualification Training**

15 SoCalGas is requesting incremental funding totaling \$0.127 million for meter readers and
16 meter reading technicians to complete OpQual training and be re-certified every three years
17 rather than the current five-year cycle. The basis for the forecasted costs and rationale for the
18 increased frequency of the OpQual re-certification is covered in Witness Frank Ayala’s
19 testimony, Ex. SCG-04.

20 **iv. Adjustment to Account for AMI Benefits Included in the**
21 **AMIBA - New Meter Reading Handheld System**

22 As set forth in the capital section of my testimony (Section IV), the meter reading
23 handheld system must be replaced due to obsolescence. Replacement of the handheld system
24 will require employees to be trained on the new handheld system. SoCalGas’ TY 2016 forecast
25 includes \$0.144 million (\$0.134 million labor and \$0.010 million non-labor) to cover the cost of
26 one day of training on how to use the new handheld system for all meter readers. The cost
27 assumes the training is conducted on a Saturday and employees are paid applicable wage rates
28 and mileage reimbursement for their attendance.

³⁰ Additional details are provided in the workpapers supporting this testimony, Ex. SCG-10-WP.

³¹ Additional details are provided in the workpapers supporting this testimony, Ex. SCG-10-WP.

1 This cost was included as a benefit in SoCalGas' AMI business case. Because AMI
 2 related costs and benefits are recorded in the AMIBA for this GRC period, historical and forecast
 3 expenses are being adjusted to reflect costs without AMI benefits.

4 **e. Summary of Meter Reading Operations Costs**

5 Table SAF-25 below summarizes SoCalGas' TY 2016 funding request for the Meter
 6 Reading Operations cost category.

7 **TABLE SAF-25**
 8 **Summary of TY 2016 O&M Expenses for Meter Reading Operations Cost Category**
 9 **(Shown in Thousands of 2013 Dollars)**

Activity	TY 2016 Forecast		
	Labor	Non-labor	Total
Base Forecast using Base Year 2010 (to exclude effects of AMI)	27,563	1,500	29,063
Meter Growth	219	23	242
Incremental Funding Requests			
Incremental Training Costs to Account for Normal Part-Time Meter Reader Attrition	231	0	231
Incremental "Learning Curve" Costs to Account for Normal Part-Time Meter Reader Attrition	575	0	575
OpQual Training	127	0	127
Subtotal	933	0	933
Adjustment to Account for AMI Benefits Included in AMIBA			
Training on New Meter Reading Handheld System	134	10	144
Total	28,849	1,533	30,382

10 **2. Meter Reading Clerical Cost Category**

11 **a. Description of Costs and Underlying Activities**

12 SoCalGas is requesting TY 2016 forecast expenses of \$1.113 million for meter reading
 13 clerical personnel. Meter reading clerks handle the timekeeping, payroll, scheduling of part-time
 14 meter readers, and various customer facility record updates necessary for meter reading
 15 operations. The clerical group also handles meter access issues and provides general
 16 administrative support to the meter reading organization.

1 **b. Forecast Method**

2 Forecasted TY 2016 expenses are based on a five-year average of historical costs because
3 AMI has not yet impacted this group. In addition, the TY 2016 forecast includes the AMIBA-
4 related adjustment explained below. Use of an alternative forecast methodology would not be
5 appropriate because any shorter period of time would potentially artificially inflate or deflate
6 results based on short-term change and/or not properly account for the impacts of AMI
7 implementation.

8 **c. Cost Drivers**

9 Costs for the meter reading clerical group are primarily driven by the number of clerical
10 personnel and applicable wage rates.

11 **d. Adjustment to Account for AMI Benefits Included in the AMIBA**

12 Similar to meter readers, meter reading clerical personnel must be trained on the new
13 meter reading handheld system since they utilize the same system to perform certain aspects of
14 their jobs. SoCalGas has included in its forecasted TY 2016 expenses \$0.014 million to cover
15 the cost of training the clerical support group on the new system. It is anticipated the training
16 will be conducted on two Saturdays so as not to interfere with meter reading operations. The
17 cost of the training is based on the applicable clerical wage rate.

18 This training cost was included as a benefit in SoCalGas’ AMI-authorized operating
19 benefits. Because AMI-related costs and benefits are recorded in the AMIBA for this GRC
20 period, historical and forecast expenses are being adjusted to reflect costs without AMI benefits.

21 **e. Summary of Meter Reading Clerical Costs**

22 Table SAF-26 below summarizes SoCalGas’ TY 2016 funding request for Meter Reading
23 Clerical Operations.

24 **TABLE SAF-26**

25 **Summary of TY 2016 O&M Expenses for Meter Reading Clerical Cost Category**
26 **(Shown in Thousands of 2013 Dollars)**

Activity	TY 2016 Forecast		
	Labor	Non-labor	Total
Base Forecast (5-Year Average)	1,078	21	1,099
Adjustment to Account for AMI Benefits Included in AMIBA			
Training on New Meter Reading Handheld System	14	0	14
Total	1,092	21	1,113

1 **3. Meter Reading Supervision, Training and Programs**

2 **a. Description of Costs and Underlying Activities**

3 SoCalGas is requesting TY 2016 forecast expenses of \$4.058 million for meter reading
4 supervisors, meter reading training instructors and meter reading field instructors (an increase of
5 \$0.632 million compared to 2013 adjusted-recorded costs). Supervisors are distributed across
6 SoCalGas’ operating bases from which meter readers work, to supervise, coach and manage the
7 performance of meter reading employees. Training instructors conduct the formal training that is
8 required in order to become a meter reader. Field instructors accompany new meter readers out
9 in the field immediately following their completion of formal training to ensure that newly
10 trained meter readers are capable of safely and accurately performing their jobs out in the field
11 on their own.

12 **b. Forecast Method**

13 Forecasted TY 2016 expenses are based on a five-year average of historical costs.³²
14 Forecasted expenses also include the AMIBA-related adjustments outlined below. Use of an
15 alternative forecast methodology would not be appropriate because any shorter period of time
16 would potentially artificially inflate or deflate results based on short-term change.

17 **c. Cost Drivers**

18 The number of supervisors, training instructors and field instructors, and applicable wage
19 rates, are the primary driver of costs in this category.

20 **d. Adjustments to Account for AMI Benefits Included in the AMIBA**

21 The following two additional items are included in the TY 2016 forecasted expenses:

22 **i. Unfilled Positions from 2008 GRC**

23 The 2008 GRC authorized \$0.467 million for additional meter reading supervisors and a
24 field instructor. This cost increase was included (assumed) in SoCalGas’ authorized AMI
25 benefits. The historical 5-year average costs for 2009-2013 do not include the \$0.467 million
26 that was requested and authorized in SoCalGas’ 2008 GRC. These positions would have been
27 added if not for AMI implementation. But because of AMI implementation, SoCalGas did not
28 add these positions in anticipation of AMI implementation and associated job reductions that

³² 2013 recorded costs were adjusted to add back 2.2 supervisor FTEs that were eliminated in 2013 due to AMI. This adjustment was made so that the 5-year historical average would reflect Meter Reading operations without AMI.

would result. Because these costs are included in the AMIBA benefits, they need to be added here to avoid double counting of AMI benefits.

ii. Training on New Handheld System

When the new meter reading handheld system is rolled out to meter reading employees, it is assumed that meter reading management personnel will serve as instructors for the Saturday training classes on the new system. SoCalGas plans to schedule Saturday training sessions to avoid interfering with normal meter reading operations. SoCalGas is requesting \$0.016 million for this purpose, as the instructors would each be paid for working on Saturday.

This training cost was included as a benefit in SoCalGas’ AMI-authorized operating benefits. As mentioned previously, because AMI related costs and benefits are recorded in the AMIBA for this GRC period, consistent with the treatment of other AMI implementation benefits, historical expenses are being adjusted to reflect costs without Advanced Meter benefits.

e. Summary of Meter Reading Supervision and Training Costs

Table SAF-27 below summarizes SoCalGas’ TY 2016 funding request for Meter Reading Supervision and Training.

TABLE SAF-27

**Summary of TY 2016 O&M Expenses for Meter Reading Supervision and Training
(Shown in Thousands of 2013 Dollars)**

Activity	TY 2016 Forecast		
	Labor	Non-labor	Total
Base Forecast (5-Year Average)	3,143	432	3,575
Adjustments to Account for AMI Benefits Included in AMIBA			
Supervisors and Field Instructor	443	24	467
Instructors for Saturday Training on New Meter Reading Handheld System	15	1	16
Total	3,601	457	4,058

4. Meter Reading Support Cost Category

a. Description of Costs and Underlying Activities

SoCalGas is requesting TY 2016 forecast expenses of \$2.488 million for this cost category. The Meter Reading Support cost category consists of meter reading managers who support meter reading operations and business analysts who support the meter reading technologies, including the daily process to download and upload data to meter reading handheld

1 computers, conduct meter reading route analyses and route realignments, project management,
2 and other reporting and analysis.

3 **b. Forecast Method**

4 Forecasted TY 2016 expenses are based on a five-year average of historical costs
5 because, similar to the clerical group, the support function has not yet been impacted by AMI.
6 Forecasted expenses also include the adjustment described below. Use of an alternative forecast
7 methodology would not be appropriate because any shorter period of time would potentially
8 artificially inflate or deflate results based on short-term change.

9 **c. Cost Drivers**

10 The primary cost driver for this cost category is the number of meter reading support
11 personnel and applicable wage rates.

12 **d. Adjustment to Account for AMI Benefits Included in AMIBA**

13 Similar to the explanation provided above for the additional meter reading supervisors
14 and field instructor authorized in SoCalGas' 2008 GRC, the 2008 GRC authorized \$0.428
15 million for additional meter reading route analysts. This cost increase was included (assumed) in
16 SoCalGas' authorized AMI benefits. The historical 5-year average costs for 2009-2013 do not
17 include the \$0.428 million that was requested and authorized in SoCalGas' 2008 GRC. These
18 positions would have been added if not for AMI implementation. But because of AMI
19 implementation, SoCalGas did not add these positions in anticipation of AMI implementation
20 and associated job reductions that would result. Because these costs are included in the AMIBA
21 benefits, they need to be added here to avoid double counting of AMI benefits.

22 **e. Summary of Meter Reading Support Costs**

23 Table SAF-28 below summarizes SoCalGas' TY 2016 funding request for the Meter
24 Reading Support cost category.

25 **TABLE SAF-28**

26 **Summary of TY 2016 O&M Expenses for Meter Reading Staff Support**

27 **(Shown in Thousands of 2013 Dollars)**

Activity	TY 2016 Forecast		
	Labor	Non-labor	Total
Base Forecast (5-Year Average)	1,505	555	2,060
Adjustment to Account for AMI Benefits Included in AMIBA			
Route Analysts	406	22	428
Total	1,911	577	2,488

1 **III. SHARED COSTS**

2 **A. Introduction**

3 The purpose of this section is to present SoCalGas' estimated TY 2016 expenses for
4 shared services that are required for both SoCalGas and SDG&E CSF operations. There are no
5 shared services for Meter Reading operations.

6 The CSF shared service expenses include personnel who manage and support certain
7 aspects of both SoCalGas and SDG&E CSF operations. Therefore, labor and non-labor expenses
8 for these employees must be allocated across both utilities. Table SAF-29 summarizes the
9 shared services for CSF.

10 **TABLE SAF-29**
11 **CSF Shared Services O&M Summary of Costs**

CUSTOMER SERVICES FIELD			
Shown in Thousands of 2013 Dollars Incurred Costs (100% Level)			
Categories of Management	2013 Adjusted-Recorded	TY2016 Estimated	Change
Customer Services Field Staff	1,571	2,406	835
Total Shared Services (Incurred)	1,571	2,406	835

12 **B. Customer Services Field Staff**

13 **1. Description of Costs and Underlying Assumptions**

14 SoCalGas is requesting TY 2016 forecast expenses of \$2.406 million for this cost
15 category, an increase of \$0.835 million compared to 2013 adjusted-recorded costs. CSF Staff is
16 comprised primarily of management personnel who develop and implement processes, policies
17 and procedures, including Gas Standards and Information Bulletins; track, analyze and report
18 operational data; and manage special projects for CSF operations. Although the CSF Staff is
19 primarily centralized in SoCalGas' Los Angeles headquarters building, this organization
20 supports both SoCalGas' and SDG&E's CSF organizations.

21 CSF Staff is needed to ensure policies and procedures are in place for CSF field
22 personnel to follow. Policies and procedures are continuously updated to reflect new rules and
23 regulations, manufacturer safety alerts, manufacturer appliance recalls and other related changes.
24 Analysts within CSF Staff track and analyze customer and company-generated work order
25 volumes, drive time, on premise time and other associated operating metrics. Project managers
26 oversee and implement process and other changes that impact CSF operations. The CSF Staff

1 cost category also includes an administrative assistant who provides clerical support to the CSF
2 Staff organization.

3 Non-labor costs include cell phone costs, office supplies, travel and other miscellaneous
4 expenses.

5 **2. Forecast Method**

6 A five-year historical average was used to forecast both labor and non-labor costs to
7 avoid the potential for artificially inflating or deflating results based on short-term anomalies.
8 The TY 2016 forecast also includes the incremental funding requests described below.

9 The shared services allocation percentage is based on an assessment of the specific
10 activities performed by each individual CSF Staff employee. Some positions assigned to this
11 cost category perform work solely for SoCalGas and their costs are allocated accordingly. As a
12 result of assessing the work performed by positions in this cost category, 9.66% of CSF Staff
13 costs are allocated to SDG&E in 2016.

14 **3. Cost Drivers**

15 Costs associated with this cost category are primarily labor costs and are driven by the
16 size of the CSF Staff organization. The number of CSF Staff personnel required is in turn driven
17 by the breadth and depth of the various CSF operational functions supported.

18 **4. Incremental Funding Requests**

19 SoCalGas is requesting \$0.669 million in incremental funding for the following two new
20 cost elements, each of which will be described more fully below: (a) a newly-created Customer
21 Services Staff Director position and (b) an expanded gas diversion (theft) investigation program
22 for SoCalGas.

23 **a. Customer Services Staff Director**

24 As a result of a reorganization in early 2014, the Region CSF and Gas Distribution
25 operations and associated supporting staffs were separated into CSF-only and Distribution-only
26 Regions and Staffs. In addition, a new CSF Staff Director position was created to lead and
27 oversee SoCalGas' CSF Training and Development, CSF Quality Assurance and Inspections,
28 CSF Technology, and CSF Staff functions, the latter of which is the shared services function
29 providing services to both SoCalGas and SDG&E. Prior to the reorganization, these functions
30 reported to other existing managers and directors within the company. The broader scope of
31 responsibilities necessitated that a director position be created. In addition, combining these

1 functions under a single director enables closer coordination across these functions, all of which
2 support and enable CSF operations.

3 SoCalGas is requesting \$0.186 million for this position, including both labor and
4 anticipated non-labor costs associated with this position.

5 **b. Diversion Investigation Program (SoCalGas)**

6 The historical five-year average cost for CSF Staff includes one SoCalGas Diversion
7 Investigator who investigates potential diversion (theft) instances that are observed and reported
8 by SoCalGas CSF field technicians, meter readers and other field employees who work at meters
9 located at customer premises. Below are photos illustrating an example of gas diversion that was
10 discovered in the field and turned over to SoCalGas' diversion investigator to follow-up.



Someone tapped into SoCalGas' district pressure service and ran gas into the wall of the closet. A regulator was installed inside the wall and the wall was closed, leaving the regulator with nowhere to vent.



1 Table SAF-30 below summarizes the number of diversion “leads” SoCalGas’ diversion
2 investigator has received and been able to follow up on during the past three years.

3 **TABLE SAF-30**

4 **Diversion Investigator Workload**

Year	Number of Instances of Potential Diversion Reported by Field Employees	Number Followed-up and Closed Out by Diversion Investigator	Percentage
2011	1496	265	18%
2012	1674	242	14%
2013	1302	237	18%

5 As reflected in Table SAF-30 above, a single diversion investigator is able to follow-up
6 on an average of approximately 17% of potential diversion “leads” generated by field employees
7 who observe conditions at customer premises in the field. Given the inherent safety risks
8 associated with gas diversion and SoCalGas’ goal of continuously improving safety, SoCalGas is
9 requesting \$0.483 million to add four diversion investigators and one diversion investigation
10 supervisor. SoCalGas’ current program will be expanded in 2016, contingent on receiving the
11 requested GRC funding. The number of positions requested is based on the number of
12 investigators SoCalGas estimates it would need in order to follow-up on a much greater
13 percentage of the “diversion leads” generated in the field each year, as well as conduct periodic,
14 proactive site visits to look for possible instances of gas diversion, on a workload-permitting
15 basis.

16 **5. Summary**

17 Table SAF-31 below provides a summary of the abovementioned CSF Staff costs. All
18 costs associated with the expanded diversion investigation program being requested for
19 SoCalGas will be allocated to SoCalGas.

1 **TABLE SAF-31**

2 **Summary of TY 2016 O&M Expenses for CSF Staff Cost Category**

3 **(Shown in Thousands of 2013 Dollars)**

Activity	TY 2016 Forecast		
	Labor	Non-labor	Total
Forecast Based on Historical 5-Year Average	1,634	103	1,737
Incremental Funding Requests			
1. New Director position	176	10	186
2. Expanded Diversion Investigation Program (SoCalGas)	465	18	483
Subtotal – Incremental Requests	641	28	669
Total	2,275	131	2,406

4 **IV. CAPITAL**

5 Capital costs for the forecast years 2014, 2015 and 2016, for information technology
6 systems that support CSF and Meter Reading operations (Table SAF-32 below), are sponsored
7 by SoCalGas witness Chris Olmsted, Ex. SCG-18. The purpose of this section of my testimony
8 is to describe the operating need for these costs. Refer to Mr. Olmsted’s workpapers, Ex. SCG-
9 18-CWP for the basis for the costs.

10 **TABLE SAF-32**

11 **Test Year 2016 Summary of Total Capital Costs**

CUSTOMER SERVICES FIELD & METER READING			
Shown in Thousands of 2013 Dollars	2014	2015	2016
PACER MDT Replacement	2,675		
MDTs to Support Workforce Growth	421	193	544
Meter Reading Handheld System Replacement		244	6,673
Total	3,096	437	7,217

12 **A. PACER MDT Replacement**

13 PACER is SoCalGas’ CSF work order management system. CSF field employees are
14 equipped with MDTs through which they receive and track work orders in the field using the
15 PACER system. For the reasons set forth in Witness Ed Fong’s testimony in SoCalGas’ last
16 GRC proceeding,³³ in late 2013 and early 2014, all CSF field employees’ MDTs and vehicle

³³ Exh. SCG-07-R, p. 62

1 mount docking stations were replaced. The MDTs were replaced due to their age and the fact
2 that they did not support the Windows 7 operating system and upgraded Windows 7 PACER
3 application system.

4 The new MDTs are connected to AT&T's broadband wireless network and are equipped
5 with Internet/Intranet capability enabling the field technicians to access the most current
6 company policies, procedures and safety information, as well as send and receive company
7 communications, in the field. The new MDTs are expected to provide increased network
8 coverage within SoCalGas' service territory. Cost savings resulting from less employee "down
9 time" due to lack of coverage are included in the funding requests previously set forth in my
10 testimony.

11 **B. MDTs to Support CSF Workforce Growth**

12 Field technicians are equipped with MDTs so that they can receive their work
13 assignments for each day, capture as found/as left conditions at each customer premise based on
14 the specific work order being performed, and transmit this information to the company's data
15 repository for recordkeeping purposes. The anticipated increase in work order volumes and
16 associated increase in the number of field technicians needed to perform this work will
17 necessitate that SoCalGas incur the cost of providing MDTs for the incremental positions.
18 SoCalGas is requesting funding to cover the cost of the MDTs and associated vehicle docking
19 stations.

20 **C. Meter Reading Handheld System Replacement**

21 The 2008 GRC authorized capital funding for replacing the current meter reading
22 handheld computers that are used to capture meter reads for billing purposes. The meter reading
23 handheld units are at the end of their useful life and the vendor will no longer support the current
24 DAP 9500 and 9800 units. The project has two main components, hardware acquisition and
25 integration of software with SoCalGas' Customer Information System ("CIS"). The hardware
26 component involves upgrading the handheld computer units with new radio frequency based
27 units, cradles, antennas and set-up of the associated software into the units. The other
28 component primarily involves the integration of new system software with CIS. This work
29 involves IT working with the vendor, consultants and includes necessary CIS testing.

30 Because this cost is included as a benefit in the AMIBA, it is being included herein to
31 avoid overstating benefits in the AMIBA.

1 **V. CONTINUOUS IMPROVEMENT**

2 SoCalGas strives to continuously improve the efficiency of its operations. In addition to
3 the cost savings already discussed (reduced CSF technician “down time” resulting from
4 improved MDT network coverage and reduced Dispatch costs resulting from the FSP), the TY
5 2016 expenses requested herein reflect the following other cost efficiency improvements:

6 **A. Engineering-Based Labor Standards**

7 Time studies completed as part of SoCalGas’ development of Customer Services Field
8 ELS suggest that certain work order types can, on average, be safely and effectively completed
9 more efficiently than CSF field technicians are, on average, currently performing them.

10 SoCalGas used the ELS results as the basis for the on premise time estimates included in its TY
11 2016 cost forecast, where ELS results were available, for the CSF Operations cost category. Use
12 of the ELS results reflects net³⁴ cost savings of approximately \$2.469 million/year.³⁵ SoCalGas
13 plans to manage overall performance in such a way that will achieve the lower ELS average on
14 premise times for applicable work order types.

15 **B. Lean Six Sigma Initiatives**

16 SoCalGas has begun to train CSF managers on Lean Six Sigma (“LSS”) process
17 improvement principles in order to identify and achieve additional efficiency improvements. A
18 number of potential improvement opportunities identified by a core team of LSS-trained
19 employees are in the process of being evaluated, as part of a broader “Grow Renewable
20 Opportunities Within” (“GROW”) initiative described below in order to determine feasibility,
21 upfront/ongoing resource and investment requirements, and prioritization.

22 **C. GROW Initiative**

23 In April 2014, SoCalGas contracted with PricewaterhouseCoopers (“PwC”) to assist
24 SoCalGas in identifying and prioritizing potential efficiency improvement opportunities. This
25 initiative, the GROW initiative, is expected to be completed by the end of 2014. The expected
26 outcome of this initiative is a prioritized listing of potential efficiency improvements (integrating
27 both existing internally-generated ideas and externally-generated ideas based on PwC’s

³⁴ Based on the ELS results, average on premise times are higher for some order types and lower for others.

³⁵ The total ELS savings of \$2.469 million shown here includes \$0.238 million in savings for the CSF Supervision cost category. The \$2.469 million savings are already reflected in the TY 2016 expenses being requested for the CSF Operations and CSF Supervision cost categories.

1 experience with other utilities) that can be implemented in priority order, beginning with pilot
 2 implementations that will be used to measure effectiveness and whether or not to proceed with a
 3 full scale rollout.

4 **VI. SOCALGAS RESPONSE TIMES FOR A1 GAS LEAK ORDERS**

5 In its decision in SoCalGas' last GRC proceeding (D.13-05-010), the Commission
 6 directed SoCalGas to provide annual and monthly data showing SoCalGas' performance
 7 responding to A1 gas leak orders, as well as an explanation of the efforts SoCalGas has taken to
 8 minimize delays in responding to A1 leak calls. Table SAF-33 and Table SAF-34 below show
 9 SoCalGas' annual and monthly A1 leak response times, respectively.

10 **TABLE SAF-33**

11 **SoCalGas Response to A1 Leak Orders – Annual**

Year³⁶	Reported A1 Leaks	Missed Window	% Missed	Average Response Time Minutes
2011	86,564	7,286	8.4	22.4
2012	85,290	6,661	7.8	22.2
2013	87,657	7,267	8.3	22.6
2014 (YTD May)	36,354	3,005	8.3	22.2

12 **TABLE SAF-34**

13 **SoCalGas Response to A1 Leak Orders - Monthly**

Month	Reported A1 Leaks	Missed Window	% Missed	Average Response Time Minutes	Month	Reported A1 Leaks	Missed Window	% Missed	Average Response Time Minutes
Jan 2011	10,133	1,116	11.0	23.5	Jan 2013	10,696	910	8.5	22.3
Feb 2011	7,791	863	11.1	23.8	Feb 2013	7,486	646	8.6	22.3
Mar 2011	7,441	612	8.3	22.2	Mar 2013	7,066	678	9.6	25.6
Apr 2011	5,827	437	7.6	21.7	Apr 2013	5,733	401	7.0	21.3
May 2011	5,508	353	6.4	21.3	May 2013	5,671	464	8.2	22.0
June 2011	5,272	352	6.7	21.4	June 2013	5,207	402	7.7	21.7
July 2011	5,029	347	6.9	22.0	July 2013	5,623	393	7.0	21.3
Aug 2011	5,806	416	7.2	21.6	Aug 2013	5,689	422	7.4	21.7
Sept 2011	5,641	402	7.2	21.9	Sept 2013	5,852	548	9.4	23.0
Oct 2011	7,493	658	8.8	23.4	Oct 2013	8,417	861	10.3	24.8
Nov 2011	9,871	845	8.6	22.4	Nov 2013	8,963	657	7.3	21.7
Dec 2011	10,752	885	8.3	22.5	Dec 2013	11,254	885	7.9	22.3
Jan 2012	9,039	656	7.3	21.9	Jan 2014	8,791	665	7.6	22.0

³⁶ Results for 2009 and 2010 were provided in the rebuttal testimony of Witness Ed Fong in SoCalGas' 2012 GRC proceeding, Exh. SCG-207, p. 65.

Feb 2012	7,896	630	8.0	22.5	Feb 2014	6,996	581	8.3	22.0
Mar 2012	7,993	505	6.3	21.3	Mar 2014	7,705	780	10.1	23.4
Apr 2012	6,388	396	6.2	20.9	Apr 2014	6,816	537	7.9	22.1
May 2012	5,744	344	6.0	20.9	May 2014	6,046	442	7.3	21.6
June 2012	5,497	426	7.8	22.6					
July 2012	5,147	319	6.2	21.1					
Aug 2012	5,581	406	7.3	22.2					
Sept 2012	5,732	591	10.4	24.2					
Oct 2012	7,550	787	10.5	23.6					
Nov 2012	9,336	733	7.9	22.3					
Dec 2012	9,387	868	9.3	23.0					

1 SoCalGas' A1 leak response orders are higher in 2011-2013 than they were during the
2 time period reported on during SoCalGas' last GRC proceeding primarily because, in September
3 2010, SoCalGas revised the decision tree it uses to classify gas leaks and other emergency
4 orders. Consequently, many of the lower priority leak orders were elevated to the A1 priority,
5 resulting in more leaks being classified as A1 priority subsequent to the change in procedure. In
6 spite of the increased volume of A1 leak orders due to the change in classification procedure, on
7 an annual basis and on a monthly basis (with the exception of one or two winter peak season
8 months each year when reports of A1 leaks tend to climb), SoCalGas consistently met its goal of
9 responding to at least 90% of A1 leak orders within 30 minutes of a customer's call during
10 regular business hours and within 45 minutes during off hours.³⁷ Average response times have
11 also remained relatively flat at approximately 22 minutes.

12 SoCalGas has taken the following steps to minimize delays in responding to A1 leak
13 calls: (1) ensuring adequate workforce coverage to respond to reports of gas leaks while, at the
14 same time, optimizing processes and the performance of each employee (e.g., ensuring
15 Dispatchers are trained and utilizing available Global Positioning System ("GPS") technology to
16 assist in determining the closest available field technician); (2) ensuring Dispatch processes A1
17 orders in a timely manner and that field technicians promptly reply to A1 alerts sent from
18 Dispatch; and (3) investigating all A1 orders that are not responded to within the allotted time
19 windows to determine and address root causes. SoCalGas also renegotiated its union contract to
20 require field technicians to remain in their positions longer before bidding to other positions
21 within the company which assists in managing the percentage of the field technician workforce
22 that is qualified to respond to A1 orders. (Newly-hired technicians are typically not assigned to

³⁷ Regular hours are 7:00am – 5:00pm Monday-Saturday (excluding holidays).

1 work emergency orders or cover off-hour shifts.) SoCalGas plans to continue these efforts going
2 forward.

3 Like reports of gas leaks, other emergency orders (e.g., reports of carbon monoxide) are
4 also classified as A1 or A2 in terms of their priority. SoCalGas' goal is to respond to 90% of all
5 A1 orders within 30 minutes during regular business hours and within 45 minutes off hours, and
6 to A2 orders within four hours. Order volumes and average response times for all A1 and A2
7 orders are provided in Appendix F of this testimony.

8 **VII. CONCLUSION**

9 My O&M and capital forecasts were carefully developed and scrutinized by my staff and
10 me as representing a reasonable and prudent level of funding for CSF and Meter Reading
11 operations. The expense forecasts are based on diligent, thorough and transparent consideration
12 of the myriad of factors influencing costs associated with providing field services and reading
13 gas meters at customer premises. The funding requested in my testimony is critical to providing
14 safe, reliable, and efficient services at customer premises and reflects SoCalGas' efforts to
15 continuously improve its operations.

16 This concludes my prepared direct testimony.

1 **VIII. WITNESS QUALIFICATIONS**

2 My name is Sara Franke. I am currently the Director of Customer Services Staff for
3 Southern California Gas Company. I am responsible for leading and overseeing the policies and
4 procedures, training, quality assurance, technology and other staff functions that support
5 Customer Services Field operations, including CSF shared service functions performed on behalf
6 of SDG&E. I have held this position since January 2014. Prior to assuming my current position,
7 I was the Director of Pacific Region, one of SoCalGas’ operating regions, responsible for
8 Customer Services and Distribution field operations within the greater Los Angeles area. For
9 seven years prior to my two most recent positions, I was the Director of Labor Relations,
10 responsible for negotiating and administering the collective bargaining agreement between
11 SoCalGas and the two unions on its property, Utility Workers Union of America (“UWUA”) and
12 International Chemical Workers Union Council (“ICWUC”). And for a portion of the same
13 time period, I served as the Director of Labor Relations for SDG&E.

14 I have been employed by SoCalGas since 1981 and have held management positions of
15 increasing responsibility in Customer Services, including Energy Systems Engineer serving
16 SoCalGas’ Commercial/Industrial customers and Director of SoCalGas’ and SDG&E’s
17 Customer Contact Centers; Regulatory Affairs; Human Resources; Demand-Side Management
18 and Fleet Operations.

19 I received a Bachelor of Science degree in Engineering from the University of California,
20 Davis and a Masters in Business Administration from California State University, Long Beach. I
21 also attended the United States Naval Academy my freshman year of college.

22 I have previously testified before the California Public Utilities Commission on matters
23 pertaining to SoCalGas’ demand-side management programs.

APPENDIX A
Glossary of Acronyms

A1/A2 – Priority 1 and Priority 2 emergency orders
AMI – Advanced Metering Infrastructure
AMIBA – Advanced Metering Infrastructure Balancing Account
CCC – Customer Contact Center
CGI – Cannot Get In
C/I – Commercial/Industrial
CIS – Customer Information System
CO – Carbon Monoxide
CSF – Customer Services Field
CSO – Customer Service Order
CSR – Customer Service Representative
D - Decision
DOT – Department of Transportation
ELS – Engineering Labor Standards
FSA – Field Service Assistant
FTE – Full-time Equivalent
GPS – Global Positioning System
GRC – General Rate Case
GROW – Grow Renewable Opportunities Within
HBI – High Bill Investigation
ICWUC – International Chemical Workers Union Council
ISO – Industrial Service Order
LSS – Lean Six Sigma
MDT – Mobile Data Terminal
MSA – Meter Set Assembly
O&M – Operations and Maintenance
OpQual – Operator Qualification
PACER – Portable, Automated, Centralized, Electronic Retrieval – the system used to manage
CSF work orders
PCOC – Pest Control Operators of California
PSI – Pounds per Square Inch
PwC – PricewaterhouseCoopers
QA – Quality Assurance
SB – Senate Bill
TY – Test Year
UWUA – Utility Workers Union of America

APPENDIX B

Customer Services Field & Meter Reading Adjustments to 2013-Recorded Costs

Base Year 2013 Adjusted Recorded Expenses
Shown in Thousands of 2013 Dollars

Cost Category	2013 Recorded Without V&S	2013 Adjustments	2013 Recorded Adjusted Without V&S	V&S	2013 Recorded Adjusted With V&S
CSF - Operations (2FC001)	\$89,504	\$2,265	\$91,769	\$14,139	\$105,908
CSF - Supervision (2FC002)	\$7,210	\$2,462	\$9,672	\$1,446	\$11,118
CSF - Dispatch (2FC003)	\$6,737	\$935	\$7,672	\$1,249	\$8,920
CSF - Support (2FC004)	\$2,745	\$5,758	\$8,503	\$1,255	\$9,758
Sub-total CSF	\$106,196	\$11,420	\$117,616	\$18,089	\$135,704
Meter Reading - Operations (2FC005)	\$23,444	\$1,619	\$25,063	\$3,877	\$28,940
Meter Reading - Clerical (2FC006)	\$929	\$0	\$929	\$151	\$1,079
Meter Reading - Supervision & Training (2FC007)	\$2,817	\$165	\$2,982	\$444	\$3,426
Meter Reading - Support (2FC008)	\$1,625	\$178	\$1,803	\$239	\$2,042
Sub-total Meter Reading	\$28,814	\$1,962	\$30,776	\$4,711	\$35,487
CSF Staff Shared Services Cost Center (2200-0942)	\$1,363	\$0	\$1,363	\$208	\$1,571
CSF Training Shared Services Cost Center (2200-0345)	\$1,477	(\$1,477)	\$0	\$0	\$0
CSF Project Mgr Shared Services Cost Center (2200-2145)	\$48	(\$48)	\$0	\$0	\$0
CSF Quality Assurance Shared Services Cost Center (2200-2342)	\$128	(\$128)	\$0	\$0	\$0
Total CSF and Meter Reading	\$138,026	\$11,729	\$149,755	\$23,007	\$172,762

Note: Totals may include rounding differences

2013 Historical Adjustments Detail
Shown in Thousands of 2013 Dollars

Cost Category	Adjustment Explanations
CSF - Operations 2FC001	(-\$54) - Transfer out supervision expense to CSF Supervision 2FC002 cost category to align history with forecast; (-\$1) - Exclude Compression Service Tariff activities as these costs not included in the GRC; \$878 - Transfer in operations non-labor tools expense from Gas Distribution 2GD000.005 cost category to align history with forecast; \$714 - Transfer in operations meter replacement O&M reassignment expense from Gas Distribution capital budget category 182 to align history with forecast; \$468 - Adjustment to add back AMI benefits for CSF order reductions as a result of AMI deployment; AMI benefits are recorded in the AMIBA, therefore are excluded from GRC by adding back to history; \$223 - Transfer in operations expense from operations cost category sub-workgroup 2FC001.001 to primary cost category workgroup 2FC001 in order to align the history and forecast in one cost category workgroup; \$18 - Transfer out field instructor expense (negative posting, therefore positive adjustment) to CSF Support 2FC004 cost category to align history with forecast; \$14 - Transfer in operations non-labor tools expense from CSF Supervision 2FC002 cost category to align history with forecast; and \$4 - Transfer in operations non-labor tools expense from CSF Support 2FC004 cost category to align history with forecast
CSF - Supervision 2FC002	(-\$3,169) - Transfer out district ops clerks, district ops managers, field instructors and quality assurance expenses to CSF Support 2FC004 cost category to align history with forecast; (-\$14) - Transfer out non-labor tools expense to CSF Operations cost center workgroup to align history with forecast; \$5,590 - Transfer in supervision expense from cost center sub-workgroup to primary workgroup in order to have history and forecast aligned in one workgroup; and \$54 - Transfer in supervision expense from CSF Operations cost center workgroup to align history with forecast
CSF - Dispatch 2FC003	\$695 - Transfer in CSF dispatch expense from Gas Distribution 2GD000.000 cost category to align history with forecast; and \$240 - Adjustment to add back Forecasting & Scheduling Project (FSP) benefits in order to show a more accurate 5 year average forecast; FSP benefits are added back as a forecast adjustment
CSF - Support 2FC004	(-\$3,165) - Transfer out distribution training expense to Gas Distribution 2GD004.000 cost category & shared cost center 2200-2344 to align history with forecast; (-\$83) - Transfer out budget planners expense to CS Office Ops 2OO006 cost category to align history with forecast; (-\$4) - Transfer out non-labor tools expense to CSF Operations 2FC001 cost category to align history with forecast; \$3,378 - Transfer in training related support expense from cost center sub-workgroup 2FC004.001 to primary cost category workgroup 2FC004 in order to have history and forecast aligned in one workgroup; \$3,169 - Transfer in district ops clerks, district ops managers, field instructors and quality assurance expenses from CSF Supervision 2FC002 cost category to align history with forecast; \$1,477 - Transfer in formalized training expense from shared cost center 2200-0345 as activities performed in the cost center are no longer shared; \$954 - Transfer in CSF district ops clerks expense from Gas Distribution 2GD000 cost category to align history with forecast; \$128 - Transfer in quality assurance expense from shared cost center 2200-2342 as activities performed in the cost center are no longer shared; (-\$76) - Adjustment to exclude partial year AT&T wireless fees which are included on a full year basis as a forecast adjustment; and (-\$19) - Transfer in field instructor expense (negative posting, therefore negative adjustment) from CSF Operations 2FC001 cost category to align history with forecast

2013 Historical Adjustments Detail
Shown in Thousands of 2013 Dollars

Cost Category	Adjustment Explanations
Meter Reading - Operations 2FC005	\$1,619 - Adjustment to add back AMI meter reading operations benefits; AMI benefits are recorded in the AMIBA, therefore are excluded from GRC by adding back to history
Meter Reading - Supv & Trg 2FC007	\$165 - Adjustment to add back AMI meter reading supervision benefits; AMI benefits are recorded in the AMIBA, therefore are excluded from GRC by adding back to history
Meter Reading - Support 2FC008	(-\$55) - Transfer out budget planners expense to CS Office Ops 2OO006 cost category to align history with forecast; \$233 - Adjustment to add back meter reading route analysts who are supporting AMI in order to present historical costs absent AMI
Shared Service Cost Centers 2200-0345 2200-2145 2200-2342	(-\$1,605) - Transfer out formalized training & quality assurance expense to CSF Support 2FC004 cost category as the activities performed in the cost centers are no longer shared; and (-\$48) - Transfer out technical services admin associate expense to Gas Technical Svcs cost center 2100-2402 to align history with forecast
Total	\$11,729

APPENDIX C

Illustrative Examples of CSF Work Order Volume Forecasts by Individual Order Type

Example 1

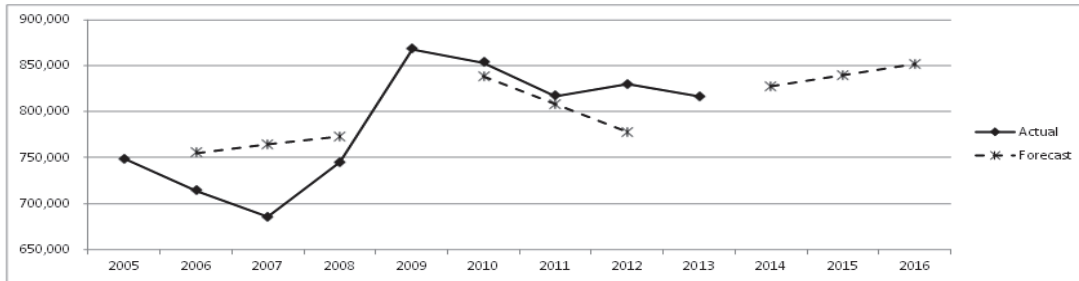
Change of Account - Turn On (Not Entered)

Source: Customer Work
 Order Group: Change of Account
 Order Type: Turn On (Not Entered)

Description: This is change of account activity. This work is performed to establish a new customer's account. No appliance work is performed. The meter is read, the meter is inspected, and gas flow is observed to ensure it is not above normal usage. This order type is impacted by Advanced Meter.

Historical Averages	
5-Yr Avg	836,818
4-Yr Avg	829,036
3-Yr Avg	820,873

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	748,968	713,816	685,037	744,493	867,948	853,524	817,040	829,470	816,110			
Forecast		755,158	763,847	772,536		837,865	807,781	777,698		827,797	839,483	851,170



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

Volumes fluctuate from year to year and are impacted by external factors, such as the state of the economy and customer turnover, which are outside the company's control. Excluded 2009 since order volumes were significantly higher than normal due to economic conditions in the real estate market.

Example 2

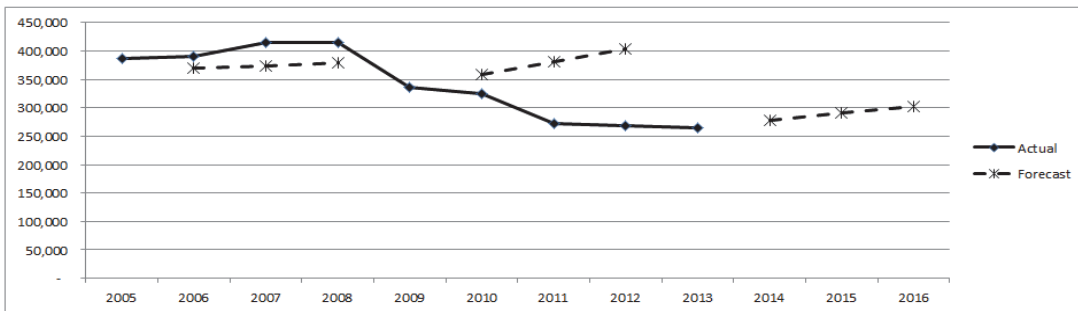
Credit/Collections - Collect/Close (2nd Call)

Source: Customer Work
 Order Group: Credit/Collections
 Order Type: Collect/Close (2nd Call)

Description: This is an attempt to collect on an unpaid customer balance. If customer is unable to pay, the gas service is hard closed (close valve and secure with a locking device) when possible. A 1st Call order has already been completed if required.

Historical Averages	
5-Yr Avg	293,514
4-Yr Avg	282,904
3-Yr Avg	269,018

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	386,730	390,882	414,096	414,568	335,953	324,563	273,003	268,332	265,719			
Forecast		369,064	374,231	379,470		358,216	380,479	402,743		277,964	290,208	302,453



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

Volumes fluctuate from year to year and are impacted by external factors, such as the state of the economy and customer's ability to pay their bills, which are outside the company's control.

Example 3

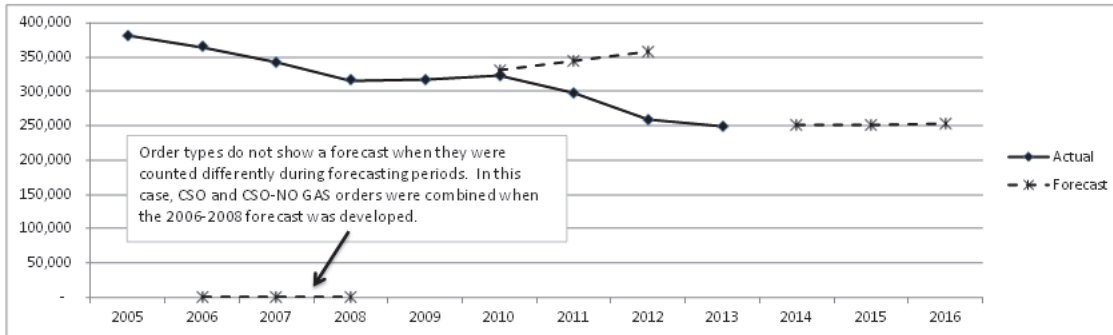
CSO

Source Customer Work
 Order Group CSO
 Order Type CSO

Description: This is an order type where the customer requests that a gas appliance be checked (e.g., inoperative water heater).

Historical Averages	
5-Yr Avg	288,834
4-Yr Avg	281,653
3-Yr Avg	267,931

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	380,358	364,356	342,585	315,930	317,561	322,817	297,480	257,830	248,483			
Forecast		-	-	-		330,724	343,886	357,049		250,016	251,550	253,083



Forecasting Method: Base Year (Orders to Active Meters)

Forecast method recognizes a declining trend. Factors outside the company's control, such as weather and associated requests to check customers' space heating equipment, may impact order volumes in the future.

Example 4

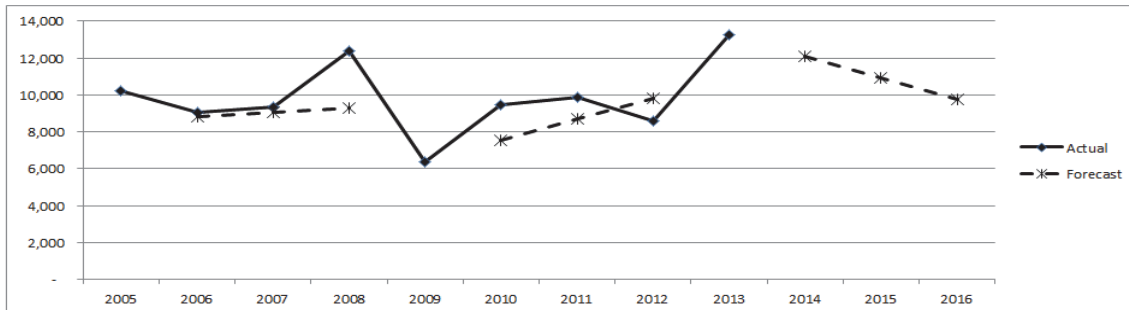
HBI - Not Entered

Source Customer Work
 Order Group HBI
 Order Type Not Entered

Description: This is where the customer has requested a service visit to review the cause of a high bill. The explanation for the increased bill is determined without entering the home.

Historical Averages	
5-Yr Avg	9,508
4-Yr Avg	10,286
3-Yr Avg	10,561

Order Counts												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Actual	10,238	9,065	9,335	12,380	6,398	9,462	9,853	8,594	13,235			
Forecast		8,835	9,071	9,308		7,544	8,690	9,835		12,082	10,929	9,776



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

Volumes fluctuate from year to year and are driven by external factors, such as weather (consumption), commodity prices and economic conditions, which are outside the company's control.

APPENDIX D

**Pest Control Operators of California Forecasted Growth
In Fumigation Work**

The Pest Control Operators of California (PCOC) is a non-profit trade association that has served the business and educational needs of pest control operators for over 60 years. PCOC keeps its members up-to-date on new materials, procedures, laws and precautions. PCOC also works closely with the state’s Structural Pest Control Board and Department of Pesticide Regulation.

PCOC provided forecasted 2014 fumigation activity based on historical data and current trends in the marketplace. PCOC provided SoCalGas with the following historical information regarding the number of fumigations in Los Angeles, Orange County and San Diego:

Year	LA	OR	SD
2012	29,626	14,046	17,394
2013	31,748	15,163	18,282
	2,122	1,117	888
% of Increase	7%	8%	5%

Average	7%
---------	----

PCOC provided SoCalGas with the following projected increases in fumigation activity for 2014:

Year	LA	OR	SD
2014	5%	7%	5%

Seventy-nine percent of fumigation orders performed by SCG are within Los Angeles and Orange counties. Therefore, SoCalGas assumed a combined average of 6% growth in fumigation orders.

APPENDIX E
Report Prepared by INRIX, Inc. Regarding Traffic Congestion
in Southern California³⁸

Metro Area	Measure of Congestion (percentages represent comparison to 2012)	Unit	Year 2013
Greater Los Angeles including L.A., Ventura and Orange Counties	% extra time to make a trip in L.A. metro area due to traffic vs free flow conditions	%	31%
	Amount of hours wasted annually in traffic on average	Hours	64
	% Change in traffic congestion vs. prior year	%	8%
Stockton, CA	% extra time to make a trip in L.A. metro area due to traffic vs free flow conditions	%	2.6%
	Amount of hours wasted annually in traffic on average	Hours	5
	% Change in traffic congestion vs. prior year	%	-1%
Modesto, CA	% extra time to make a trip in L.A. metro area due to traffic vs free flow conditions	%	1.5%
	Amount of hours wasted annually in traffic on average	Hours	3
	% Change in traffic congestion vs. prior year	%	-48%
Oxnard, CA	% extra time to make a trip in L.A. metro area due to traffic vs free flow conditions	%	7.5%
	Amount of hours wasted annually in traffic on average	Hours	13
	% Change in traffic congestion vs. prior year	%	7%
Riverside, CA	% extra time to make a trip in L.A. metro area due to traffic vs free flow conditions	%	6.5%
	Amount of hours wasted annually in traffic on average	Hours	14
	% Change in traffic congestion vs. prior year	%	23%
Bakersfield, CA	% extra time to make a trip in L.A. metro area due to traffic vs free flow conditions	%	1%
	Amount of hours wasted annually in traffic on average	Hours	2
	% Change in traffic congestion vs. prior year	%	-58%
San Diego, CA	% extra time to make a trip in L.A. metro area due to traffic vs free flow conditions	%	13%
	Amount of hours wasted annually in traffic on average	Hours	24
	% Change in traffic congestion vs. prior year	%	10%

³⁸ 57% of SoCalGas' CSF work orders fall within the "Greater Los Angeles" area as it is defined by INRIX, Inc.

APPENDIX F

SoCalGas Response Time Performance for All A1 and A2 Orders

All A1 Orders - Annual					All A2 Orders - Annual				
Year	A1 Orders	Missed Window	% Missed	Average Response Time	Year	A2 Orders	Missed Window	% Missed	Average Response Time
2011	101,998	8,648	8.5	22.4	2011	225,585	9,035	4.01	99.2
2012	99,227	7,773	7.9	22.2	2012	209,678	6,868	3.28	95.6
2013	102,294	8,519	8.3	22.6	2013	237,930	10,730	4.51	102.9
2014 (YTD May)	41,821	3,482	8.3	22.3	2014 (YTD May)	102,610	4,663	4.54	102.1
All A1 Orders - Monthly					All A2 Orders - Monthly				
Jan 2011	11,817	1,302	11	23.6	Jan 2011	25,241	1,963	7.78	115.3
Feb 2011	9,209	1,008	11	23.6	Feb 2011	19,325	965	4.99	104.7
Mar 2011	8,747	731	8.4	22.2	Mar 2011	19,014	536	2.82	94.2
Apr 2011	6,800	513	7.6	21.7	Apr 2011	16,331	294	1.80	87.3
May 2011	6,484	418	6.5	21.3	May 2011	15,677	255	1.63	85.6
June 2011	6,204	418	6.8	21.3	June 2011	15,791	272	1.72	86.2
July 2011	5,989	412	6.9	21.9	July 2011	14,031	219	1.56	83.3
Aug 2011	6,875	499	7.3	21.6	Aug 2011	16,540	315	1.90	86.3
Sept 2011	6,614	503	7.6	21.9	Sept 2011	16,144	434	2.69	92.1
Oct 2011	8,778	780	8.9	23.2	Oct 2011	19,984	835	4.18	103.3
Nov 2011	11,690	989	8.5	22.4	Nov 2011	22,893	1,465	6.40	114.8
Dec 2011	12,791	1,075	8.4	22.5	Dec 2011	24,614	1,482	6.02	111.4
Jan 2012	10,646	780	7.3	21.9	Jan 2012	20,579	680	3.30	93.4
Feb 2012	9,301	718	7.7	22.4	Feb 2012	18,897	576	3.05	93.8
Mar 2012	9,386	612	6.5	21.3	Mar 2012	18,882	507	2.69	92.6
Apr 2012	7,480	493	6.6	21.1	Apr 2012	15,674	353	2.25	90.4
May 2012	6,605	404	6.1	21	May 2012	15,302	242	1.58	85.5
June 2012	6,334	493	7.8	22.5	June 2012	14,724	321	2.18	87.6
July 2012	5,973	383	6.4	21.2	July 2012	13,559	243	1.79	84.6
Aug 2012	6,464	478	7.4	22.3	Aug 2012	14,503	272	1.88	87.4
Sept 2012	6,566	663	10.1	23.9	Sept 2012	14,413	383	2.66	89.9
Oct 2012	8,600	883	10.3	23.4	Oct 2012	19,603	642	3.28	100.4
Nov 2012	10,806	859	8	22.4	Nov 2012	22,374	1,310	5.86	113.0
Dec 2012	11,066	1,007	9.1	23	Dec 2012	21,168	1,339	6.33	112.1
Jan 2013	12,661	1,091	8.6	22.4	Jan 2013	22,890	1,483	6.48	114.2
Feb 2013	8,791	766	8.7	22.4	Feb 2013	17,116	692	4.04	103.7
Mar 2013	8,135	784	9.7	25.3	Mar 2013	17,510	716	4.09	99.8
Apr 2013	6,683	476	7.2	21.4	Apr 2013	16,585	465	2.80	93.4
May 2013	6,587	552	8.4	22.1	May 2013	16,809	377	2.24	89.5
June 2013	6,082	481	7.9	21.7	June 2013	15,965	350	2.19	90.7
July 2013	6,590	475	7.2	21.4	July 2013	17,443	439	2.52	91.5
Aug 2013	6,638	491	7.4	21.7	Aug 2013	18,936	566	2.99	94.6
Sept 2013	6,780	609	9	22.8	Sept 2013	18,659	616	3.30	96.7
Oct 2013	9,783	971	10	24.6	Oct 2013	24,989	1,475	5.90	110.4
Nov 2013	10,362	767	7.4	21.8	Nov 2013	23,942	1,365	5.70	111.1
Dec 2013	13,202	1,056	8	22.4	Dec 2013	27,086	2,186	8.07	119.3
Jan 2014	10,079	756	7.5	22	Jan 2014	23,410	1,136	4.85	102.2
Feb 2014	8,118	679	8.4	22.1	Feb 2014	18,460	783	4.24	101.3
Mar 2014	8,886	897	10.1	23.4	Mar 2014	21,360	1,323	6.19	107.9
Apr 2014	7,811	640	8.2	22.1	Apr 2014	20,846	893	4.28	102.6
May 2014	6,927	510	7.4	21.7	May 2014	18,534	528	2.85	95.4

APPENDIX G

SoCalGas Response to ORA Informal DR-05, Question 4

**ORA INFORMAL-SDG&E/SOCALSGAS-DR-05, Question 4
Copies of Relevant Testimony Sections from Other Sempra Utility Witness
Exhibits that Customer Services Witnesses Reference**

SoCalGas

Supporting the Request of Sara Franke

Customer Services Field and Meter Reading

Note: Frank Ayala is the new witness for "Gas Distribution" and has adopted the testimony of Gina Orozco-Mejia. The testimony and workpaper page numbers will change from GOM-(page#) to FBA-(page#).

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

SDG&E and SoCalGas

Question 4

Copies of Relevant Testimony Sections from Other Sempra Utility Witness
Exhibits that Customer Services Witnesses Reference

Provided to ORA witness Tamera Godfrey

**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**

4. Please provide copies of relevant testimony sections from other Sempra Utility Witness exhibits that Customer Services references in their own Exhibits (eg. Sara Franke's reference to Gina Orozco-Mejia's OpQual training frequency change)

SDG&E-SoCalGas Response:

SoCalGas and SDG&E Customer Service witnesses provided copies of the following testimony sections from other Sempra Utility Witness exhibits that Customer Services references in their own Exhibits to ORA witness Tamara Godfrey during their meeting in San Francisco on Wednesday, August 20, 2014.

Referenced in SoCalGas Ex. SCG-10 (Customer Services Field and Meter Reading) -

- SoCalGas Ex. SCG-04 (Gas Distribution) sponsored by witness Gina Orozco-Mejia
 - a. Section II.D.2.a. Operator Qualification Program; pages GOM-57 to GOM-59
 - b. Section IV.M.2. Regulators; pages GOM-127 to GOM-129

Referenced in SoCalGas Ex. SCG-10 (Customer Services Field and Meter Reading) and Ex. SCG-11 (Customer Service Office Operations) –

- SoCalGas Ex. SCG-30 (Customers) sponsored by witness Rose-Marie Payan
 - a. Section II.A. 2016 Forecast of SoCalGas Customers and New Meters; pages RMP-1 to RMP-2

Referenced in SoCalGas Ex. SCG-13 (Customer Service Technologies, Policies and Solutions) –

- SoCalGas Ex. SCG-07 (Gas Engineering) sponsored by witness Raymond K. Stanford
 - a. Section II.E. Research, Development, and Demonstration; pages RKS-24 to RKS-28

Referenced in SDG&E Ex. SDG&E-13 (Customer Services Field) –

- SDG&E Ex. SDG&E-04 (Gas Distribution) sponsored by witness Gina Orozco-Mejia
 - a. Section II.D.1.b.i. Expansion of the Operator Qualification Program; pages GOM-53 to GOM-54

Referenced in SDG&E Ex. SDG&E-13 (Customer Services Field) and Ex. SDG&E-14 (Customer Service Office Operations, Information, and Technologies) –

- SDG&E Ex. SDG&E-31 (Electric Customers and Sales) sponsored by witness Kenneth E. Schiermeyer
 - a. Section I. Forecast of 2016 Electric Customers; page KES-1
- SDG&E Ex. SDG&E-32 (Customers) sponsored by witness Rose-Marie Payan
 - a. Section II.A. 2016 Forecast of SDG&E Customers and New Meters; pages RMP-1 to RMP-2

Company: Southern California Gas Company (U 904 G)
Proceeding: 2016 General Rate Case
Application: A.14-11-XXX (NOI)
NOI Exhibit: SCG-04

SOCALGAS
DIRECT TESTIMONY OF GINA OROZCO-MEJIA
(GAS DISTRIBUTION)

July 2014

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**



A  Sempra Energy utility®

NOI Doc #289281

1 team also explores new channels for training, such as online training and multi-media
2 training aids.

3 These functions support the safety and reliability of SoCalGas' system by providing the
4 proper level of operations leadership, field management, operations support, and field technical
5 skills training.

6 **2. Forecast Method**

7 In projecting the future expense requirements for these functions, SoCalGas reviewed the
8 2009 through 2013 historical spending for this workgroup. In general, operations leadership,
9 field management, operations support, and personnel training increase as levels of work and
10 workforce increase; as new programs, processes and technologies are implemented; and as
11 regulatory or compliance requirements change. The review of the historical costs in this work
12 category shows a generally consistent upward trend. As a foundational forecast, SoCalGas used
13 the 2013 adjusted recorded expense, which represents the base level of leadership, management,
14 support, training personnel, and associated non-labor necessary to maintain current operations.
15 Added to this base are incremental work elements not reflected in the base forecast that are
16 necessary to adequately fund Operations Management and Training activities in TY2016. These
17 work elements are described below.

18 The total incremental funding for these incremental increases is \$5,693,000 over the 2013
19 adjusted recorded base in TY2016.

20 **a. Operator Qualification Program**

21 Safety is fundamental to employee training and qualification. Maintaining a skilled,
22 qualified and dedicated workforce is critical to SoCalGas' success. It is through the efforts of
23 these employees that SoCalGas is able to continue to deliver safe and reliable service to its
24 customers and maintain the integrity of its pipeline infrastructure. SoCalGas is expanding its
25 Operator Qualification program to better align with industry leading practices and
26 recommendations by CPUC auditors, as well as comply with SB 705, which requires pipeline
27 operators to establish a safety plan that is "consistent with leading practices in the gas industry
28 and with federal pipeline safety statutes."²⁵ This includes adding new qualification elements or
29 tasks, developing qualification materials, establishing an electronic record-keeping process, and

²⁵ Cal. Pub. Util. Code § 961(c).

1 conducting training and qualification of impacted employees. The following three items
2 describe these incremental activities.

3 i. Operator Qualification Program Enhancement in Training
4 Services - Technical Specialists, Training Instructors,
5 Administrators

6 In response to recommendations by Commission staff during a region operations audit
7 conducted in February, 2013,²⁶ SoCalGas agreed to expand its Operator Qualification program to
8 implement six additional welding and fusion elements or tasks for steel and plastic.
9 Furthermore, as a result of feedback from the CPUC auditors at SDG&E's CPUC operations
10 audit on July 16, 2013,²⁷ SoCalGas will add eight elements for employees who perform pressure
11 control operations. Because SoCalGas and SDG&E implement one consistent Operator
12 Qualification program, program enhancements are implemented across both companies. In
13 addition, the Operator Qualification program will be expanded to better align with industry
14 leading practices, which generally follow the American Society of Mechanical Engineers
15 (ASME) B31Q standard.²⁸ Feedback from CPUC auditors during recent audits has indicated
16 that they also follow these leading practices to audit Operator Qualification programs. Thus,
17 SoCalGas will be increasing its overall number of Operator Qualification covered tasks from 55
18 to 125. Impacted employees will be required to demonstrate proficiency in each new covered
19 task and the qualification process will need to be observed and documented by a qualified
20 observer. The intervals in which employees will be re-evaluated will vary, depending on the
21 task. Under the current program all tasks have a re-evaluation requirement of five years. Under
22 the expanded program, however, re-evaluation will occur every three years for many of the
23 Operator Qualification elements. Implementation of the new Operator Qualification program
24 will require two Technical Specialists for program development, four Training Instructors to
25 conduct employee training and qualification, one subject matter expert to assist in the
26 development of program materials, and two Operator Qualification program administrators. The
27 implementation of the revised Operator Qualification program will start in year 2015 and be
28 completed in 2017. Additional details can be found in supplemental workpaper SCG-GOM-

²⁶ SoCalGas Operations Audit by CPUC Safety and Enforcement Division (February 18-22, 2013).

²⁷ SDG&E Operations Audit by CPUC Safety and Enforcement Division (July 16, 2013).

²⁸ ASME B31Q Edition 10 (September 30, 2010).

1 O&M-SUP-006, located under Operations Management & Training in Exhibit SCG-04-WP.
2 The funding needed to address this incremental requirement is \$1,080,000 over the forecast base
3 for TY2016.

4 ii. Operator Qualification Program Enhancement in Training
5 Services - Operations Training Administrator Clerks

6 As employees are trained and qualified on the new Operator Qualification elements,
7 Training Services will be required to process and review more than one million additional
8 documents per year. Training Services will need five incremental Administrative Control Clerks
9 to process these records and to verify that all operators performing covered tasks are qualified.
10 Additional details can be found in supplemental workpaper SCG-GOM-O&M-SUP-006, located
11 under Operations Management & Training in Exhibit SCG-04-WP. Individual documentation is
12 needed for each Operator Qualification covered task for both initial and subsequent qualification.

13 Currently there are 55 covered tasks, and each covered tasks consists of a written test and
14 a performance test (110 tests total). The program will be expanding from 55 tasks to 125 tasks.
15 Therefore, in the new program, there will be 250 tests. These tests are used to qualify the
16 approximately 3,000 employees, in 35 job classifications that form part of SoCalGas' Operator
17 Qualification program. The Operator Qualification rule requires that the individual's knowledge,
18 skills, and abilities are demonstrated or tested for each task. The training and testing materials
19 are developed in compliance with the applicable Company Gas Standards associated with each
20 covered task.

21 The Operator Qualification Clerks will assist in verifying that all employees requiring
22 operator qualifications receive the proper initial training and re-qualifications as needed. They
23 will also add new employees in the operator qualification tracking system and will provide
24 employee operator qualification status reports to field supervision. The funding needed to
25 address this incremental requirement is \$349,000 over the forecast base for TY2016.

26 iii. SAP Enhancement for Operator Qualifications

27 As discussed in the previous section, the expanded Operator Qualification program will
28 significantly increase the number of employee qualification records. In addition to the five
29 clerks described previously, a new electronic process will be required to process this large
30 amount of records. Additional details can be found in supplemental workpaper SCG-GOM-
31 O&M-SUP-006, located under Operations Management & Training in Exhibit SCG-04-WP.
32 One of the alternatives to this electronic option is to expand the current manual data entry

GOM-59

NOI Doc #289281

Company: Southern California Gas Company (U 904 G)
Proceeding: 2016 General Rate Case
Application: A.14-11-XXX (NOI)
NOI Exhibit: SCG-04

SOCALGAS

DIRECT TESTIMONY OF GINA OROZCO-MEJIA

(GAS DISTRIBUTION)

July 2014

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**



NOI Doc #289281

1 **2. Regulators**

2 The expenditures included in the Regulators capital work category are for the purchase of
3 new installation and replacement regulator materials and technical evaluations. Associated
4 installation expenses are covered in other applicable work categories (e.g., New Business,
5 Measurement and Regulation). The capital forecast for the Regulators work category is
6 summarized in Table GOM-36 below.

7 **TABLE GOM-36**
8 **Southern California Gas Company**
9 **Regulators**

GAS DISTRIBUTION				
Shown in Thousands of 2013 Dollars				
M. Measurement & Regulation Devices	2013 Adjusted-Recorded	Estimated 2014	Estimated 2015	Estimated 2016
2. Regulators	6,826	8,537	8,712	10,337

10 **a. Description of Costs and Underlying Activities**

11 Gas regulators are used by SoCalGas to reduce the pressure of gas entering the
12 distribution system from high-pressure pipelines to provide the lower pressures used on the
13 distribution pipeline network and further reduce pressure at the customer's meter set. As such,
14 they are the principal protective devices to secure employee and public safety and to protect
15 physical assets in alignment with CPUC/DOT regulations. They also support accurate billing for
16 most customers, where delivery pressure is employed to compute corrected gas volumes
17 delivered to customers.

18 While new installations are driven by new meter set activities and new regulator stations;
19 replacements are driven by customer or Company-identified problems, condition, and
20 obsolescence of this equipment. The installation of regulators at commercial and industrial sites
21 is normally performed by the Distribution Measurement and Regulation Department, whereas the
22 installation of regulators at residential and small commercial sites is normally performed by the
23 Distribution Field Operations and Customer Service Departments.

24 These forecasted capital expenditures support the Company's goal to provide safe and
25 reliable service at reasonable cost.

GOM-127

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b. Forecast Method

In an effort to secure meters and regulators at a reasonable cost, SoCalGas conducted a competitive bidding process for gas metering and regulating equipment. Due to the quantity of equipment purchased for SoCalGas' business needs, a contract was negotiated through December 31, 2015. The methodology used to calculate the required funding for regulator purchases was based on a weighted average of the regulator contract prices multiplied by the new business installation and replacement requirements. To determine the number of regulators needed, SoCalGas used as a basis the historical five-year (2009 through 2013) ratio between purchased meters to purchased regulators. Multiplying the regulator-to-meter ratio with the projected number of forecasted meter purchases yielded the projected number of regulator purchases for each of the forecast years. The labor expenditure was then calculated by taking the projected number of regulators multiplied by the historical 2013 average labor cost per regulator.

In addition to this routine work, SoCalGas plans to replace approximately 10,030 regulators in curb meter sets, in year 2016, as part of a proactive replacement effort. This effort will replace an incremental number of regulators susceptible to corrosion or that have exceeded their life expectancy of approximately 30 years, with more resilient cast iron regulators. These tougher new regulators will support SoCalGas' commitment to proactively take action to mitigate leakage, thus reducing associated public safety risks. This incremental regulator purchase expenditure is included in the 2016 forecast. See supplemental workpaper SCG-GOM-CAP-SUP-010 in Exhibit SCG-04-CWP for calculation details.

The associated labor expenses for installation of these curb regulators are covered in the prepared direct testimony of Sara Franke, Exhibit SCG-10. These regulators will be replaced as part of curb meter replacements. Curb meter and regulator replacements generally embody a more complex and time-consuming process than above-ground regulators, as employees working on these facilities must remove curb lids, work below ground level, remove water, dirt or debris that may have accumulated in or around the curb box, normally replace more parts and fittings due to higher corrosion incidence, and generally require reconstruction of the MSA more frequently when visiting the site.

In summary, the capital funding required for the Regulators work category is forecasted to be \$8,537,000, \$8,712,000, and \$10,337,000 in the years 2014, 2015, and 2016, respectively.

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c. Cost Drivers

The underlying cost drivers for this capital work category relate to the purchase of sufficient regulators to meet projected new business installations and regulator replacements at existing MSAs. Although contractual unit prices for the regulators stay relatively fixed during the contract period, there are small fluctuations in price due to varying shipping and handling costs. Regulators purchased for new business meters sets are in response to installation at new customer premises, including residential, commercial and industrial sites. Regulator purchased for replacements are in response to Company or customer-identified problems, such as technical defects, condition, age, or obsolescence, or on a pre-determined replacement cycle based on regulator capacity, type, or regulator class performance.

3. Gas Energy Measurement Systems

The capital expenditures included in the Gas Energy Measurement Systems (GEMS) work category are for the purchase of GEMS devices, other associated material, warehouse handling, technical evaluations, quality assurance, and costs for the initial installation of the GEMS devices. The capital forecast for the Gas Energy Measurement Systems work category is summarized in Table GOM-37 below.

**TABLE GOM-37
Southern California Gas Company
Gas Energy Measurement Systems**

GAS DISTRIBUTION				
Shown in Thousands of 2013 Dollars				
M. Measurement & Regulation Devices	2013 Adjusted-Recorded	Estimated 2014	Estimated 2015	Estimated 2016
3. Gas Energy Measurement Systems	1,145	1,367	1,443	1,508

a. Description of Costs and Underlying Activities

In accordance with General Order 58-A, and to enable accurate accounting and billing, GEMS instruments are used by SoCalGas as electronic pressure and temperature correctors to compute and accumulate corrected volume from the mechanical output of positive displacement and turbine gas meters. They also have the ability to provide gas volume corrections based on real-time temperature measurement, provide audit trail capabilities, and some models provide remote communication capabilities. These devices are configured to fit the requirements of each GEMS field site.

GOM-129


NOI Doc #289281

Company: Southern California Gas Company (U 904 G)
Proceeding: 2016 General Rate Case
Application: A.14-11-XXX (NOI)
NOI Exhibit: SCG-30

SOCALGAS
DIRECT TESTIMONY OF ROSE-MARIE PAYAN
(CUSTOMERS)
July 2014

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**



A  Sempra Energy utility®

NOI Doc #288815

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**SOCALGAS DIRECT TESTIMONY OF ROSE-MARIE PAYAN
CUSTOMERS**

I. INTRODUCTION

A. Summary of Proposals

My testimony presents Southern California Gas Company's (SoCalGas') customer and new meter forecast for Test Year (TY) 2016.

B. Organization of Testimony

Section I discusses the forecast. Section II discusses the forecast methodology. This testimony does not discuss gas volumes, as SoCalGas is using the current adopted throughput forecast as its gas sales assumption, as adopted in the California Public Utilities Commission (CPUC) Decision 14-06-007, the Triennial Cost Allocation Proceeding Phase II Settlement Agreement.

C. Support To/From Other Witnesses

The customer forecast is used primarily to determine financial needs for certain customer services and new meter installations in TY 2016. For this purpose, total customers are defined as total active meters. Needs related to new meter installations are discussed in the testimony of witness Ms. Gina Orozco-Mejia in Exhibit SCG-04. Cost estimates for customer service field operations resulting from forecasted gas customer growth are discussed in the testimony of witness Ms. Sara A. Franke in Exhibit SCG-10.

II. RECORDED DATA AND OVERVIEW

A. 2016 Forecast of SoCalGas Customers and New Meters

Year-average total active customers are forecasted to increase from 5.606 million in 2013 to 5.710 million in 2016. This represents a total three-year increase of 103,791 customers, and a compound annual growth rate of 0.61 percent. Table SCG-RMP-1 shows annual customers' recorded data from 2009 through 2013 and forecasted data from 2014 through 2016. Active customers are forecasted to grow by a net 25,227 from 2013 to 2014.

1

TABLE 1

TABLE SCG-RMP-1 SoCalGas Average Annual Total Active Meters		
Year	Active Meters	Annual % change
2009	5,480,314	0.2%
2010	5,616,668	0.7%
2011	5,549,177	0.6%
2012	5,576,355	0.5%
2013	5,606,113	0.5%
2014	5,631,340	0.5%
2015	5,667,131	0.6%
2016	5,709,903	0.8%

2 **III. FORECAST METHODOLOGY**

3 **A. General Description**

4 The total customer count comprises forecasts by customer class: three sectors of
5 residential, total commercial, and total industrial. Recorded and forecasted housing-start
6 assumptions underlying the residential customer forecast came from IHS Global Insight's
7 February 2014 Regional forecast (the aggregate of the twelve counties in which SoCalGas serves
8 customers).¹ The employment assumptions underlying the non-residential customer forecast are
9 based on recorded data from the California Employment Development Department (the
10 aggregate of the twelve counties in which SoCalGas serves customers). For the forecast,
11 percentage growth rates for the aggregated largest six counties that SoCalGas serves were taken
12 from Global Insight's February 2014 Regional forecast. Recorded employment data were then
13 projected into the forecast period by applying Global Insight's forecasted percentage growth
14 rates to the latest year of corresponding recorded data at the time the forecast was made.

15 SoCalGas uses econometric and statistical techniques to develop quarterly-data forecasts
16 of residential, commercial and industrial customers. Detailed equations, methods and data are
17 shown in the workpapers corresponding to this exhibit.

18 **1. Residential**

19 Connected residential single-family and multi-family customers are a function of lagged
20 authorized housing starts. A small third sector of the residential class – master meter customers

¹ IHS Global Insight is an internationally recognized econometric forecasting firm. The firm's forecasts have been used in many regulatory proceedings.

RMP-2

NOI Doc #288815