SOCALGAS

DIRECT TESTIMONY OF ROSE-MARIE PAYAN

(GAS CUSTOMER FORECAST)

October 6, 2017

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

317041

TABLE OF CONTENTS

SUMMARY

- Active customers are forecasted to increase from 5.7 million in 2016 to 5.82 million in 2019.

- Customer growth is forecasted to be 0.6%, 0.54%, 0.74%, and 0.79% in 2016, 2017, 2018, and 2019, respectively.

<center>**SOCALGAS DIRECT TESTIMONY OF ROSE-MARIE PAYAN**</center>
<center>**(GAS CUSTOMER FORECAST)**</center>

I.   INTRODUCTION

A.   Summary of Proposals

My testimony presents Southern California Gas Company's (SoCalGas) customer and new meter forecast for Test Year (TY) 2019. SoCalGas seeks adoption of this forecast.

B.   Organization of Testimony

Section II of my testimony discusses the forecast. Section III discusses the forecast methodology. My testimony provides a forecast for active meters, which in turn is assumed to translate into the total number of customers for financial planning purposes. As such, new meters and new customers are used interchangeably herein. Further, this testimony does not discuss gas volumes, as SoCalGas uses the current adopted throughput forecast as its gas sales assumption, as adopted by the California Public Utilities Commission (CPUC) in Decision (D.) 14-06-007, the Triennial Cost Allocation Proceeding (TCAP) 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 2019. For this purpose, total customers are defined as total active meters. Needs related to new meter installations are discussed in the Gas Distribution testimony of Gina Orozco-Mejia (Exhibit SCG-04). Cost estimates for customer service field operations resulting from forecasted gas customer growth are discussed in the Customer Services Field & Meter Reading testimony of Gwen Marelli (Exhibit SCG-18).

II.   RECORDED DATA AND FORECAST OF CUSTOMERS AND NEW METERS

Year-average total active customers are forecasted to increase from 5.7 million in 2016 to 5.82 million in 2019. This represents a total three-year increase of 119,376 customers, and a compound annual growth rate of 0.69 percent. Table RMP-1 shows annual customers' recorded data from 2012 through 2016 and forecasted data from 2017 through 2019. Active customers are forecasted to grow by a net 30,897 from 2016 to 2017. The definitions, process, and methodology by which this forecast was derived is described in Section III.

Table RMP-1
Southern California Gas Company
Average Annual Total Active Meters

Year	Active Meters	Annual % change
2012	5,576,355	0.49%
2013	5,606,113	0.53%
2014	5,639,161	0.59%
2015	5,667,128	0.50%
2016	5,700,917	0.60%
2017	5,731,814	0.54%
2018	5,774,426	0.74%
2019	5,820,293	0.79%

III.   FORECAST METHODOLOGY

A.   General Description

The total customer count consists of forecasts by customer class: three sectors of residential, total commercial and total industrial. For the residential market segment, SoCalGas uses housing-starts as the basis for its forecast because a housing start has more likelihood of completion than a housing permit and once complete, the housing start is likely to lead to a new gas meter hookup. Recorded and forecasted housing-start assumptions underlying the residential customer forecast came from IHS Global Insight's February 2017 Regional Forecast (the aggregate of the twelve counties in which SoCalGas serves customers).[1] The employment assumptions underlying the non-residential customer forecast are based on recorded data from the California Employment Development Department[2] (the aggregate of the twelve counties in which SoCalGas serves customers). For the forecast, percentage growth rates for the aggregated largest six counties that SoCalGas serves were taken from Global Insight's February 2017 Regional Forecast. Recorded employment data were then projected into the forecast period by applying Global Insight's forecasted percentage growth rates to the latest year of corresponding recorded data at the time the forecast was made. Employment assumptions are utilized as the basis for the non-residential forecast because the business cycle drives production in commercial and industrial sectors. When economic activity contracts businesses exit and active meters

---

[1] IHS Global Insight is an internationally recognized econometric forecasting firm. The firm's forecasts have been used in many regulatory proceedings, including SoCalGas' TY 2016 GRC.
[2] http://www.labormarketinfo.edd.ca.gov/data/employment-by-industry.html.

1	become inactive. However, when business activity is expanding, new commercial and industrial
2	meters are connected in our service territory.
3	SoCalGas uses econometric and statistical techniques to develop quarterly-data forecasts
4	of residential, commercial, and industrial customers based on the data discussed above. The
5	econometric models are linear. Once a fitted relationship is established, a comparison is made
6	between the historical data and the predicted values for the most recent observed historical
7	period. As a final step, the model forecasts are calibrated to match up with the last recorded
8	actuals so the forecast and the historical trend are consistent. Detailed equations, methods, and
9	data are shown in my workpapers in Exhibit SCG-39-WP.
10	**B.** **Residential**
11	Connected residential single-family and multi-family customers are a function of lagged
12	authorized housing starts. A small third sector of the residential class – master meter customers
13	(including sub-metered customers) – is forecasted to decline at a constant annual rate, consistent
14	with its decline in recent recorded years as some existing master meters are gradually converted
15	to individual meters.
16	**C.** **Non-Residential**
17	The industrial class is defined as mining or manufacturing customers – those in North
18	American Industry Classification System (NAICS) sectors 210 to 213 and 311 to 339.
19	Businesses classified in this market segment include, but are not limited to, areas such as
20	chemical, food processing, mining, textile manufacturing and transportation. Active industrial
21	customers are forecasted based on industrial employment and are forecasted to decline gradually
22	over the forecast horizon. This is consistent with the decline in recent recorded years.
23	The commercial class is defined as all other non-residential customers – with the
24	exception of less than 300 customers in the natural gas vehicle (NGV) fueling, electric
25	generation, and wholesale sectors. Businesses classified in this market segment include, but are
26	not limited to, areas such as Construction, health, laundry, lodging, office, restaurants and retail.
27	Connected commercial customers are forecasted based on commercial employment (defined as
28	total non-farm employment except mining and manufacturing) and are predicted to modestly
29	increase by 714 meters from 2016 to 2019.
30	Once the number of connected meters is forecasted for each customer class, it is split into
31	active and inactive meters, where inactive meters are those with no billed gas use during a billing

1 period. Inactive meters are forecasted by applying a factor to each customer class of forecasted

2 connected meters. The factor used to splice out inactive customers for the forecast period is

3 based on a three-year average period of the inactive meters' share in total connected meters for

4 each of four individual and separate quarters in the time series. The intention is to capture

5 seasonal and multi-year historical patterns of inactive meters for that particular customer class

6 and that particular quarter. The number of active meters is equal to the number of connected

7 meters less the number of inactive meters. For billing purposes, an account is considered

8 "active" if it has a customer who has assumed responsibility for charges that we may apply to the

9 account for the current period. Table RMP-2 shows each customer class with its historical 2016

10 active meters, and the percentage of its connected meters that are active.

Table RMP-2
Southern California Gas Company
Average 2016 Active versus Connected Meters Historical Values

Customer Class	Millions	As a % of Connected
Residential single-family	3.67	98.2%
Residential multi-family	1.79	95.6%
Residential master meter	0.04	98.2%
Commercial	0.19	76.0%
Industrial	0.02	65.3%
TOTAL	5.70	96.4 %

15   Table RMP-3 shows average annual active meters by customer class for the historical

16 year 2016, plus the three-year forecast for 2017 through 2019.

TABLE RMP-3
Southern California Gas Company
Average Annual Active Meters by Customer Cl

Gas Customers	2016	2017	2018	2019	Total % Change 2016 to 2019
Residential single-family	3,666,098	3,686,385	3,710,509	3,736,774	70,676 1.93%
Residential multi-family	1,788,972	1,799,6371	1,818,3571	1,838,199	49,227 2.8%
Residential master meter	40,333	40,090	39,828	39,567	-766 -1.9%-
Commercial	188,465	188,947	188,072	189,178	714 .38%
Industrial	17,050	16,756	16,661	16,575	-475 -2.8%
TOTAL	5,700,917	5,731,814	5,774,426	5,820,293	119,376 2.1%

IV. CONCLUSION

SoCalGas' customer forecast model projects growth in total active meters to increase from 5.7 million in 2016 to 5.82 million in 2019. Based on the foregoing, SoCalGas requests the CPUC adopt this forecast.

This concludes my prepared direct testimony.

V. WITNESS QUALIFICATIONS

My name is Rose-Marie Payan. My business address is 555 West Fifth Street, Los Angeles, California, 90013. I am employed by Sempra Energy Utilities. Since 2005, I have been employed as a forecasting advisor and as a principle economic regulatory advisor in the Gas Regulatory Affairs Department for SoCalGas and SDG&E.

My academic and professional qualifications are as follows: I earned an undergraduate degree in Economics from the University of California, Davis in 1990, where I was also a Regents' Scholar. In 1993, I received my Master of Arts Degree in Economics from the University of California, Santa Barbara. My employment outside of SoCalGas has been in the area of Economics. I held the positions of: Analyst at Micronomics, Consultant at Navigant Consulting; Economics Lecturer at California Polytechnic Institute, San Luis Obispo; and Adjunct Lecturer at California State University, Channel Islands, Diablo Valley College, Glendale Community College and California State University, Los Angeles. I have taught courses on econometrics, money and banking, macroeconomics and microeconomics.

I have previously testified before the CPUC.

LIST OF ACRONYMS

ACRONYM	DEFINITION
CPUC	California Public Utilities Commission
NAICS	North American Industry Classification System
NGV	Natural Gas Vehicle
SoCalGas	Southern California Gas Company
TCAP	Triennial Cost Allocation Proceeding
TY	Test Year