

Docket:	:	<u>A.15-09-001</u>
Exhibit Number	:	<u>ORA-4</u>
Commissioner	:	<u>M. Picker</u>
ALJ	:	<u>S. Roscow</u>
Witness	:	<u>M. Kanter</u>



**OFFICE OF RATEPAYER ADVOCATES
CALIFORNIA PUBLIC UTILITIES COMMISSION**

**Report on the Results of Operations
for
Pacific Gas and Electric Company
Test Year 2017
General Rate Case**

Billings, Sales, and Other Operating Revenues

San Francisco, California
April 8, 2016

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1 **BILLINGS, SALES, and OTHER OPERATING REVENUES**

2 **I. INTRODUCTION**

3 This exhibit presents the analyses and recommendations of the Office of
4 Ratepayer Advocates (ORA) regarding Pacific Gas and Electric Company's (PG&E)
5 forecasts of electric and gas billings, sales, and other operating revenues (OOR) for
6 Test Year (TY) 2017.

7 This exhibit discusses the methodologies used by PG&E and ORA for
8 estimating electric billings, sales forecast, and OOR.

9 **II. SUMMARY OF RECOMMENDATIONS**

10 The following summarizes ORA's recommendations for electric billings and
11 sales:

- 12 • ORA's electric new connections forecast for the Test Year is
13 46,052, in contrast to PG&E's forecast of 47,214. ORA's
14 differences with PG&E are limited to residential new connects, as
15 ORA does not oppose PG&E's forecast of non-residential new
16 connects.
- 17 • ORA does not oppose PG&E's electric sales and billings forecasts
18 which were adopted in PG&E's 2015 Energy Resource Recovery
19 Account (ERRA) proceeding.
- 20 • ORA does not oppose PG&E's gas sales and billings forecasts
21 which represent the 2010 adopted BCAP forecast.
- 22 • ORA's test year forecast of OOR is \$130.688 million, compared to
23 PG&E's forecast of \$117.5 million.

24

1 Table 4-1 compares ORA's and PG&E's TY 2017 forecasts of electric sales,
 2 billings, and new customer connects:

3 **Table 4-1**
 4 **Electric Sales, Customers, and New Connections for TY 2017**

Description (a)	ORA Recommended (b)	PG&E Proposed (c)	Amount PG&E>ORA (d=c-b)	Percentage PG&E>ORA (e=d/b)
Electric Sales (GWH)	86,842	86,842 ¹	0	0%
Electric Customers	5,396,732	5,396,732 ²	0	0%
Electric Meter Connections	46,052	47,214 ³	1,163	2.52%

5 Table 4-2 compares ORA's and PG&E's TY 2017 forecasts of gas sales,
 6 billings, and new customer connects:

7 **Table 4-2**
 8 **Gas Sales, Customers, and New Connections for TY 2017**
 9 **(Based on 2010 BCAP Forecast)**

Description (a)	ORA Recommended (b)	PG&E Proposed (c)	Amount PG&E>ORA (d=c-b)	Percentage PG&E>ORA (e=d/b)
Gas Sales (MDTh)	735,102	735,102 ⁴	0	0%
Gas Customers	4,349,112	4,349,112 ⁵	0	0%
Gas Meter Connections	26,671	26,671 ⁶	0	0%

10 ¹ Ex. PG&E-12, Chapter 4, p. 4-2.

11 ² Ex. PG&E-12, Chapter 4, p. 4-3.

³ Ex. PG&E-4, WP, Chapter 17, p. 17-44.

⁴ Ex. PG&E-12, Chapter 5, p. 5-3.

⁵ Ex. PG&E-12, Chapter 5, p. 5-4.

⁶ Ex. PG&E-4 workpapers, Chapter 17, p. 17-44.

1 Table 4-3 presents PG&E's TY 2017 request for OOR and ORA's
2 recommendation.

3 **Table 4-3**
4 **Other Operating Revenues for TY 2017**
5 **(In Thousands of Dollars)**

Description (a)	ORA Recommended (b)	PG&E Proposed ⁷ (c)	Amount PG&E>ORA (d=c-b)	Percentage PG&E>ORA (e=d/b)
Total Generation	\$5,970	\$3,508	\$-2,462	-41.23%
Electric Distribution	\$96,626	\$96,307	-319	-0.33%
Gas Distribution	\$28,091	\$17,722	-10,369	--36.91%
Total	\$130,688	\$117,538	\$-13,150	-10.06%

6

7 **III. ELECTRIC BILLINGS AND SALES**

8 PG&E's electric sales and billings forecasts used in this application are those
9 adopted in PG&E's 2015 ERRR proceeding. The sales forecast incorporates
10 PG&E's sales to residential, commercial, industrial, public authority, agriculture,
11 street lighting, railway, interdepartmental, and resale customers.

12 The adopted 2015 ERRR electric sales and billings forecasts are presented
13 below in Tables 4-4 and 4-5.

⁷ PG&E response to ORA data request GRC-2017-Phi_DR_ORA_225_Q01Atch01.

Table 4-4
PG&E Sales⁸
(GWH)

Line No.	Customer Category	Recorded	Forecast
		2014	2017
1	Residential	29,823	30,630
2	Commercial	32,612	32,996
3	Industrial	15,608	15,271
4	Public Authority	20	20
5	Agriculture	7,576	6,851
6	Street Lighting	398	413
7	Railway	360	360
8	Interdepartmental	306	300
9	Resale	—	—
10	Total PG&E Sales	86,703	86,842

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Table 4-5
Average Number Of Monthly Billings⁹

Line No.	Customer Category	Recorded	Forecast
		2014	2017
1	Residential	4,679,341	4,733,526
2	Commercial	538,263	542,346
3	Industrial	1,289	1,267
4	Public Authority	15	15
5	Agriculture	86,819	85,700
6	Street Lighting	33,800	33,876
7	Railway	1	1
8	Resale	—	1
9	Total PG&E Billings	5,339,528	5,396,732

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3 ORA does not oppose PG&E's electric sales and billing forecast.

⁸ Ex. PG&E-12, Chapter 4, p. 4-2.

⁹ Ex. PG&E-12, Chapter 4, p. 4-3.

1 **IV. ELECTRIC NEW CUSTOMER CONNECTIONS**

2 ORA reviewed the econometric models PG&E used to forecast electric new
 3 customer connections. ORA does not oppose PG&E’s electric non-residential new
 4 customer connections forecasts, but has different residential new customer
 5 connections forecasts. Table 4-6 presents a comparison of ORA’s Test Year electric
 6 residential new customer connections forecasts with PG&E’s.

7 **Table 4-6**
 8 **Electric New Meter Connections for Billings by Customer Class for TY 2017**

Description (a)	ORA Recommended (b)	PG&E Proposed ¹⁰ (b)	Amount PG&E>ORA (d=c-b)	Percentage PG&E>ORA (e=d/b)
Residential New Meter Connections	31,412	32,575	1,163	3.70%
Non Residential New Meter Connections	14,640	14,640	0	0%
Total Electric New Meter Connections	46,052	47,214	1,163	2.52%

9 PG&E’s residential new meter forecast was based on a model derived from
 10 historical quarterly data for the years 2006 to 2014. PG&E regressed the dependent
 11 variable ResE (residential new connections) on the independent variable RPERM4
 12 (residential units permitted lagged four quarters) and EMP5 (payroll employment
 13 growth lagged five quarters). After verifying the results from PG&E’s electric new
 14 connections models, ORA modified PG&E’s model to get its own forecast. ORA
 15 regressed the dependent variable ResE (residential new connections) on the
 16 independent variable RPERM4 (residential units permitted lagged four quarters).
 17 ORA did not use PG&E’s five quarter lagged payroll employment growth in its model

¹⁰ Ex. PG&E-4 workpapers, Chapter 17, p. 17-44.

1 because (a) it added no perceptible benefit to the model and (b) it seems strange to
 2 lag a variable that intuitively should have seasonal effects by five quarters.

3 **V. GAS BILLINGS AND SALES**

4 The 2010 adopted BCAP forecast for PG&E’s gas sales and billings forecasts
 5 are presented in Tables 4-7 and 4-8.

6 **Table 4-7**
 7 **Gas Sales Forecast¹¹**
 8 **(Thousands of Decatherms)**

	<u>2014 Recorded</u>	<u>BCAP Forecast</u>
1 <u>Core</u>		
2 Residential	164,138	201,320
3 Commercial (a)	77,704	86,690
4 Natural Gas Vehicles (a)	2,688	2,022
5 Total Core	244,530	290,032
6 <u>Non-Core</u>		
7 Industrial	199,844	170,916
8 Cogeneration	70,645	73,240
9 Electric Generation	268,958	196,670
10 Natural Gas Vehicles	403	523
11 Total Non-Core	539,850	441,349
12 Wholesale	3,220	3,721
13 Total Sales	787,600	735,102

(a) A small number of interdepartmental customers are included in this category.

Note: The adopted BCAP forecast represents the BCAP test period, which runs from July 2010 through June 2012.

¹¹Ex. PG&E-12, Chapter 5, p. 5-3.

Table 4-8
Gas Average Monthly Billings Forecast¹²
(Billings)

	2014 Recorded	BCAP Forecast
1 <u>Core</u>		
2 Residential	4,173,723	4,111,229
3 Commercial (a)	227,125	232,291
4 Natural Gas Vehicles (a)	3,679	4,568
5 Total Core	4,404,526	4,348,088
6 <u>Non-Core</u>		
7 Industrial	800	790
8 Cogeneration	198	166
9 Electric Generation	69	66
10 Natural Gas Vehicles	3	2
11 Total Non-Core	872	1,024
12 Total Billings	4,405,398	4,349,112

(a) A small number of interdepartmental customers are included in this category.

Note: The adopted BCAP forecast represents the BCAP test period, which runs from July 2010 through June 2012.

1 ORA does not oppose PG&E’s gas billing and sales forecasts.

2 **VI. OTHER OPERATING REVENUES**

3 PG&E forecasts \$117.6 million of OOR for 2017. PG&E derived its forecast
4 on an item-by- item basis, first establishing base estimates from 2014 recorded
5 revenues. Then, to forecast test year OORs, PG&E adjusted the base year estimate
6 to reflect changes that are expected to affect the forecast.

7 ORA recommends \$130.688 million as its forecast of OOR for TY 2017. Table
8 4-9 presents a comparison of PG&E’s OOR request with ORA’s recommendation.

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¹² Ex. PG&E-12, Chapter 5, p. 5-4.

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**Table 4-9
Other Operating Revenues for TY 2017
(in Thousands of Dollars)**

	FERC Account		ORA Recommends	PG&E Proposes¹³	Amount PG&E>ORA	Percentage PG&E>ORA
1	450	Forfeited Discounts - Electric	\$ 6,954	\$ 6,635	-\$319	-4.59%
2	451	Miscellaneous Service Revenues	2,964	2,964	0	0%
3	451	Revenue Protection	1,578	1,578	0	0%
4	451	CFM	4,330	4,330	0	0%
5	454	Rent On Electric Property	26,253	26,253	0	0%
6	456	CIAC Tax Gross-Up	37,546	37,546	0	0%
7	456	Other Electric Revenue	2,591	2,591	0	0%
8	456	Reimbursed Revenues	14,410	14,410	0	0%
9	487	Forfeited Discounts - Gas	\$ 87	\$ 87	0	0%
10	488	Miscellaneous Service Revenues	3,571	1,159	-2,412	-67.54%
11	488	CFM	3,543	3,543	0	0%
12	489	Transport of Gas for Others	390	368	-22	-5.64%
13	493	Rent On Gas Property	1,896	963	-933	-49.20%
14	495	CIAC Tax Gross-Up	8,441	8,441	0	0%
15	495	Other Gas Revenue	7,588	585	-7,003	-92.29%
16	495	Reimbursed Revenues	2,575	2,575	0	0%
17	454	Fossil Rents	\$ 124	\$ 62	-62	-50.12%
18	453	Sales of Water and Water for Power	\$ 3,038	\$ 1,892	-1,146	-37.73%
19	454	Hydro Rents	889	823	-66	-7.38%
20	456	Recreation Facilities	1,350	187	-1,163	-86.17%
21	456	Timber Sales	250	250	0	0%
22	456	Reimbursed Revenue	-	-	0	0%
23	454	Nuclear Rents	\$ 319	\$ 295	-24	-7.62%
24	456	Reimbursed Revenue	0	0	0	0%
25		Total GRC OOR	\$ 130,688	\$ 117,538	-\$13,150	-10.06%

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¹³ PG&E response to ORA data request GRC-2017-Phi_DR_ORA_225_Q01Atch01.

1 Table 4-10 below shows adjusted recorded 2014 and 2015 OOR data, along
 2 with PG&E's 2015-2017 forecasts.

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Table 4-10
Other Operating Revenues¹⁴
2014 and 2015 Adjusted Recorded, 2015-2017 PG&E Forecast

FERC		2014 Recorded	2015 Recorded	2015 Forecast	2016 Forecast	2017 Forecast
450	Forfeited Discounts	\$6,635	\$6,954	\$6,635	\$6,635	\$6,635
451	Miscellaneous Service Revenues	2,964	2,614	2,964	2,964	2,964
451	Revenue Protection	1,823	1,373	-	1,479	1,578
451	CFM	4,781	3,987	4,090	4,208	4,330
454	Rent On Electric Property	39,233	41,770	28,684	24,081	26,253
456	CIAC Tax Gross-Up	35,130	36,600	36,600	35,083	37,546
456	Other Revenue	2,624	3,371	2,464	2,543	2,591
456	Reimbursed Revenues	25,439	27,908	1,600	17,733	14,410
487	Forfeited Discounts	87	44	87	87	87
488	Miscellaneous Service Revenues	1,159	3,571	1,159	1,159	1,159
488	CFM	2,014	2,019	3,346	3,443	3,543
489	Transport of Gas for Others	368	390	368	368	368
493	Rent On Gas Property	963	1,896	963	963	963
495	CIAC Tax Gross-Up	6,474	7,129	7,129	7,704	8,441
495	Other Gas Revenues	5,262	7,588	585	585	585
495	Reimbursed Revenues	3708	4101	8914	2568	2,575
456	Total Fossil	62	124	62	62	62
453	Sales of Water and Water for Power	1,892	3,038	1,892	1,892	1,892
454	Rents	823	889	823	823	823
456	Recreation Facilities	187	1,350	187	187	187
456	Timber Sales	375	31	100	250	250
456	Reimbursed Revenues	1,814	2,167	-	-	-
454	Nuclear Rents	295	319	295	295	295
456	Reimbursed Revenues	720	423	0	0	0
	Total GRC OOR	\$144,832	\$159,657	\$108,948	\$115,113	\$117,538

¹⁴ PG&E response to ORA data request GRC-2017-Phi_DR_ORA_225_Q01Atch01.

1 PG&E derived its forecast on an item-by-item basis, first establishing base
2 estimates from 2014 recorded revenues. PG&E states “OORs are derived for each
3 item by first establishing a base estimate using recorded 2014 revenues, adjusted to
4 reflect events that are not anticipated to occur in 2017. To forecast the test year,
5 PG&E further adjusts the base year estimate to reflect changes in activity levels or
6 other events that are expected to affect the forecast.”¹⁵

7 However, many of PG&E’s Test Year OOR forecasts are either identical or
8 very close to its 2015 forecasts. If PG&E adjusted its base years estimates “to reflect
9 changes in activity levels or other events that are expected to affect the forecast” for
10 2017, then PG&E should also have adjusted its base years estimates to reflect
11 changes in activity levels or other events that are expected to affect the forecast” for
12 2015. Furthermore, it is reasonable to assume that PG&E was in a better position to
13 evaluate what was expected to happen in 2015 than what was expected to happen
14 in 2017. Thus, it is reasonable to use the adjusted recorded 2015 OOR values as a
15 criterion for evaluating PG&E’s Test Year estimates. PG&E’s 2015 recorded OOR,
16 totaling \$159.657 million, is significantly higher than PG&E’s 2015 forecast of
17 \$108.948 million, a difference of \$50.71 million.

18 In fact, PG&E used the recorded adjusted 2014 OOR value as its 2015-2017
19 forecast for eleven OOR categories: 450-Electric Forfeited Discounts, 451-
20 Miscellaneous Service Revenues, 487-Gas Forfeited Discounts, 488-Gas
21 Miscellaneous Service Revenues, 489-Transport of Gas for Others, 493-Rent on
22 Gas Property, 454-Fossil Rents, 453-Sales of Water and Water for Power, 454-
23 Hydro Rents, 456-Hydro Recreation, and 454-Nuclear Rents. This situation is not a
24 numerical coincidence. PG&E explicitly acknowledges in its testimony that it used
25 the recorded adjusted 2014 OOR value as its 2015-2017 forecast in these eleven
26 categories. For instance, with respect to FERC 453-Sales of Water and Water for
27 Power, PG&E states “Given the uncertainty of these factors and the difficulty of
28 anticipating the acre-footage withdrawals of a future year recorded 2014 data was

¹⁵ Ex. PG&E-10, p. 17-2, lines 18-22.

1 used to develop the base forecast.”¹⁶ Given these uncertainties, PG&E should
2 update its estimates based on more recent 2015 data. In any case, ORA has used
3 the recorded adjusted 2015 values as its Test Year forecast for nine of these
4 accounts, excluding 451-Misc. Service Revenues, 487-Forfeited Discounts-Gas.

5 ORA reviewed PG&E’s testimony, workpapers and recorded adjusted 2014
6 and 2015 OOR data. Based on that review, referring to rows 2-9, 11, 14, 16, 21, 22
7 and 24 in Table 4-9, ORA does not oppose PG&E’s forecasts for those rows.

8 ORA used the adjusted recorded 2015 value as its Test Year forecast for
9 495-Other Gas Revenues (Table 4-9, row 15). PG&E’s 2015-2017 forecasts for this
10 account are all equal to \$585,000. Again, this cannot be a numerical coincidence,
11 but PG&E’s exposition in Ex. PG&E-10, page 17-8, lines 9-14, gives no clue as to
12 what circumstances prompted this result. Furthermore the forecast 2015 value of
13 \$585,000 is quite far from the 2015 adjusted recorded value of \$7.588 million.

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¹⁶ Ex. PG&E-10, page 17-6, lines 23-25.

1 **VII. WITNESS QUALIFICATIONS**

2 My name is Marek Kanter. My business address is 505 Van Ness Avenue,
3 San Francisco, California. I am employed by the California Public Utilities
4 Commission as a Public Utilities Regulatory Analyst III in the Office of Ratepayer
5 Advocates Energy Cost of Service and Natural Gas Branch.

6 I received a Bachelor of Sciences Degree from Rice University (Phi Beta
7 Kappa). I received a Doctor of Philosophy degree in Mathematics from the University
8 of California at Berkeley. I have taught mathematics and statistics at the university
9 level from 1970 to 1985, holding the rank of full professor since 1976. I have
10 published research papers in mathematics, probability, statistics, and physics. My
11 last academic position was at the University of Toronto, at the level of full professor
12 with tenure. I have worked as a statistical analyst at Pacific Gas and Electric
13 Company in San Francisco, from 1981 to 2000, overlapping with my position at the
14 University of Toronto.

15 Since joining the Commission in 2001, I have analyzed Pacific Bell operations
16 support systems (OSS) data and reviewed Pacific Bell and Verizon submissions re:
17 OSS performance. I performed the sample design, implementation, and analysis for
18 the Pacific Bell and Verizon quality of service 2002 survey reports and for the Pacific
19 Bell and Verizon 2003 local competition survey reports. I participated in the Phase
20 2B New Regulatory Framework proceedings for Pacific Bell and Verizon as the
21 witness for the quality of service survey results. I have prepared testimony in
22 General Rate Case proceedings for Pacific Gas and Electric Company, San Diego
23 Gas & Electric Company, Southern California Gas Company, Southern California
24 Edison Company, Southern California Water Company, Apple Valley Ranchos
25 Water Company, and Sierra Pacific Electric Company. I participated in SCE's 2009
26 and 2015 rate cases as the sales, customers, and other operating revenues witness.

27 This completes my prepared testimony.