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ALJ	:	<u>S. Roscow</u>
Witness	:	<u>S. Logan</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**

**Electric Distribution Capital Expenditures
Part 2 of 2**

San Francisco, California
April 8, 2016

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1 **ELECTRIC DISTRIBUTION CAPITAL EXPENDITURES**
2 **Part 2 of 2**

3 **I. INTRODUCTION**

4 This exhibit presents the analyses and recommendations of the Office of
5 Ratepayer Advocates (ORA) regarding Pacific Gas and Electric Company’s (PG&E)
6 forecasts of Electric Distribution capital expenditures for 2015 through Test Year
7 (TY) 2017.

8 Electric distribution capital expenditures include plant investment in
9 information technology infrastructure, electric meters, distribution substations,
10 overhead and underground cables and replacing/reinforcing poles. Electric
11 distribution capital includes projects to construct or modify facilities for the
12 distribution of electricity, projects to construct or modify substations to transform
13 transmission voltage to a lower distribution voltage and projects to improve system
14 reliability (including aging infrastructure issues).

15 **II. SUMMARY OF RECOMMENDATIONS**

16 The following summarizes ORA’s recommendations regarding Electric
17 Distribution capital expenditures for 2015-2017:

- 18 • Recorded 2015 capital expenditures should be utilized instead of
19 PG&E’s forecast for 2015.
- 20 • PG&E’s forecast for 2016 capital expenditures should be adopted.
- 21 • PG&E’s forecast for 2017 capital expenditures should be adopted.
- 22 • PG&E may discontinue the San Francisco Incandescent Streetlight
23 Replacement tracking account. If additional funding is requested for
24 this program in the next GRC, PG&E should submit an Internal
25 Audit of the program in its showing.
- 26 • The Major Emergency Balancing Account should be continued.
- 27 • The Smart Grid Pilot Program two-way balancing account may be
28 discontinued.

1 Table 11-1 compares ORA's and PG&E's 2015-2017 forecasts by Program
 2 Area of the Electric Distribution capital expenditures addressed in this exhibit. ORA's
 3 recommendation only differs from PG&E for 2015.

4
 5 **Table 11-1**
 6 **Pacific Gas and Electric 2017 GRC**
 7 **Electric Distribution Capital Expenditures – ORA Part 2 of 2**
 8 **2015-2017 Forecast by Program Area**
 9 **(In Thousands of Nominal Dollars)**
 10

Program Area Description	ORA Recommended			PG&E Proposed ¹		
	2015	2016	2017	2015	2016	2017
Emergency Response	\$248,482	\$244,032	\$246,801	\$227,719	\$244,032	\$246,801
Safety, Maintenance and Compliance	\$176,398	\$178,687	\$198,778	\$163,409	\$178,687	\$198,778
Operations, Automation & Support	\$104,967	\$39,442	\$79,170	\$98,106	\$39,442	\$79,170
Asset Management and Reliability	\$369,523	\$408,268	\$455,095	\$429,086	\$408,268	\$455,095
Smart Grid Pilot	\$27,325	\$8,677	\$0	\$24,871	\$8,677	\$0
Total	\$926,695	\$879,106	\$979,844	\$943,191	\$879,106	\$979,844

11 For the MWC breakdown, Table 11-2 shows PG&E's recorded capital
 12 expenditures for the 2010-14 period and PG&E's forecast capital expenditures for
 13 the 2015-19 period. Table 11-3 shows the recorded and forecast five-year averages
 14 and ORA's forecast for 2015, 2016 and 2017. The data presented in these two
 15 tables is relied upon for the discussion of the reasonableness of PG&E's forecast
 16 below.

¹ Ex. PG&E-4 WP, p. WP 1A-5.

Table 11-2
Pacific Gas and Electric Company
2017 General Rate Case
Electric Distribution - ORA Part 2 of 2
Capital Expenditures by Major Work Category (MWC)
(Thousands of Nominal Dollars)

No.	MWC	MWC Description	PG&E Recorded Capital Expenditures				PG&E Forecast Capital Expenditures				PG&E-4 Reference		
			2010	2011	2012	2013	2014	2015	2016	2017		2018	2019
1	17	Routine Emergency	111,642	115,618	136,087	119,825	135,705	135,942	138,464	142,775	147,219	151,664	Ch. 4, WP 4-13, WP 4-19
2	95	Major Emergency	58,577	72,846	35,988	33,196	32,910	52,323	52,056	53,676	55,348	57,019	Ch. 4, WP 4-15, WP 4-20
3	21	Emergency Preparedness & Resp.	-	40,145	38,401	37,878	35,621	19,500	19,554	7,950	8,500	8,500	Ch. 3, WP 3-9, Errata p.18-124
4	59	Dist Subst Emergency Replacement	499	1,152	148	267	1,230	1,052	1,833	2,271	3,387	6,925	Ch. 12, WP 12-21, WP 12-101
5	58	Dist Substation Safety & Security	69,002	93,870	91,509	124,247	94,229	103,526	114,445	131,985	105,508	102,341	Ch. 12, WP 12-20, WP 12-100
6	2A	Overhead Preventative Maintenance	17,265	31,450	49,083	64,221	53,619	39,813	46,438	45,336	45,979	48,030	Ch. 6, WP 6-28, WP 6-63
7	2B	Underground Preventative Maint.	8,037	18,460	17,336	13,627	15,699	19,018	15,970	19,186	18,472	15,314	Ch. 6, WP 6-30, WP 6-64
8	2C	Network Preventative Maintenance	(2,588)	(1,962)	(2,377)	(1,938)	6,709	(11,630)	(39,379)	(16,874)	(26,099)	(22,408)	Ch. 19, WP 19-22, Erra. p.18-225
9	05	Tools&Equip (includes Work Eff.)	7,882	22,059	37,580	43,214	45,980	37,820	39,270	43,460	46,015	48,080	Ch. 10, WP 10-11, WP 10-28
10	09	Automation & Protection	4,514	1,863	2,815	28,315	43,155	24,200	1,850	1,060	1,093	1,126	Ch. 5, WP 5-22, WP 5-35
11	63	Operations Control Center Facility	-	3,499	7,278	4,352	2,866	4,878	5,352	5,667	5,985	5,884	WP 19-22
12	23	Implement Real Estate Strategy	1	-	1,808	5,348	2,366	1,159	1,000	-	-	-	Ch. 5, p.5-20
13	2F	Build IT Apps & Infra - Chp. 5	22,668	31,571	37,432	60,601	53,511	41,679	31,349	45,857	46,897	54,416	Ch. 15, WP 15-36, WP 15-37
14	2F	Build IT Apps & Infra - Chp. 15	44,522	89,148	119,827	159,881	111,799	98,431	76,288	103,597	78,271	85,806	Ch. 8, WP 8-15, WP 8-19
15	07	Pole Replacement	8,004	70,097	63,555	82,535	43,757	46,126	43,053	49,714	51,262	52,809	Ch. 9, WP 9-5, WP 9-29
16	08	Base Reliability	26,353	49,457	45,532	55,277	32,220	67,504	87,000	85,094	71,814	71,814	Ch. 12, WP 12-17, WP 12-98
17	48	Replace Substation Equipment	95,296	85,639	74,633	67,812	61,907	61,269	81,514	84,052	88,278	88,278	Ch. 9, WP 9-6, WP 9-30
18	49	Dist. Circuit/Zone Reliability	38,695	46,773	58,882	35,788	30,920	50,398	32,867	40,097	48,344	60,716	Ch. 12, WP 12-19, WP 12-99
19	54	Dist. Transformer Replacements	37,428	55,875	73,402	70,105	83,344	110,399	127,288	93,174	96,075	100,101	Ch. 11, WP 11-6
20	56	Underground Asset Management	-	-	-	887	-	-	8,677	-	-	-	Ch. 15, WP 15-32
21	3M	Smart Grid Pilot	-	-	-	-	-	-	-	-	-	-	-
Total (000's \$)			588,424	827,563	888,871	1,005,437	890,083	943,191	879,107	979,843	945,123	981,456	

Table 11-3
5-Year Averages & ORA Forecast

No.	MWC	MWC Description	2010-14		2015-19		For. Avg./ Rec.Avg.	TY 2017/ For. Avg.	ORA Forecast		% Diff.	PG&E > ORA
			Rec. Avg.	For. Avg.	2015	2016			2017	2018		
1	17	Routine Emergency	123,775	143,213	116%	100%	145,786	138,464	142,775	-9,844	-7.2%	0
2	95	Major Emergency	46,699	54,084	116%	99%	59,563	52,056	53,676	-7,240	-13.8%	0
3	21	Emergency Preparedness & Resp.	0	11,448	n/a	69%	9,041	12,392	7,950	10,859	54.6%	0
4	59	Dist Subst Emergency Replacement	38,535	38,367	100%	111%	34,092	41,120	42,400	-14,537	-74.3%	0
5	58	Dist Substation Safety & Security	659	3,094	469%	73%	3,222	1,833	2,271	-2,170	-206.2%	0
6	2A	Overhead Preventative Maintenance	94,571	111,561	118%	118%	109,976	114,445	131,985	-6,450	-6.2%	0
7	2B	Underground Preventative Maintenance	43,128	45,119	105%	100%	43,506	46,438	45,336	-3,693	-9.3%	0
8	2C	Network Preventative Maintenance	14,632	17,592	120%	109%	19,694	15,970	19,186	-676	-3.6%	0
9	05	Tools&Equip (includes Work Efficiency)	-431	-23,278	5398%	72%	4,617	(39,379)	(16,874)	-16,247	139.7%	0
10	09	Automation & Protection	31,319	42,929	137%	101%	44,281	39,270	43,460	-6,461	-17.1%	0
11	63	Operations Control Center Facility	16,133	5,866	36%	18%	20,591	1,850	1,060	3,609	14.9%	0
12	23	Implement Real Estate Strategy	3,560	5,553	156%	102%	2,175	5,352	5,667	2,703	55.4%	0
13	2F	Build IT Apps & Infrastructure - Chp. 5	4,157	432	23%	0%	-52	1,000	1,211	-2316.5%	-2316.5%	0
14	2F	Build IT Apps & Infrastructure - Chp. 15	41,157	44,040	107%	104%	33,355	31,349	45,857	8,323	20.0%	0
15	07	Pole Replacement	105,036	88,478	84%	117%	103,053	76,288	103,597	-4,623	-4.7%	0
16	08	Base Reliability	53,590	48,593	91%	102%	29,661	43,053	49,714	16,465	35.7%	0
17	48	Replace Substation Equipment	41,768	74,647	179%	117%	49,184	67,504	87,000	12,641	20.4%	0
18	49	Distribution Circuit/Zone Reliability	75,383	75,044	100%	108%	50,149	81,514	81,514	11,758	19.0%	0
19	54	Distribution Transformer Replacements	42,212	46,484	110%	86%	46,571	32,867	40,097	3,827	7.6%	0
20	56	Underground Asset Management	64,031	105,407	165%	88%	90,905	127,288	93,174	19,494	17.7%	0
21	3M	Smart Grid Pilot	2,416	6,710	278%	0%	27,325	8,677	-	-2,455	-9.9%	0
Total (000's \$)			840,076	945,744	113%	104%	926,695	879,107	979,843	16,496	1.8%	0

1 **III. BACKGROUND**

2 PG&E’s electric distribution system serves approximately 5.4 million
3 customers.² Its service territory stretches from Eureka to Bakersfield (north to
4 south) and from the Sierras to the Pacific Coast (east to west). To provide electric
5 service to this large geographic area, PG&E maintains approximately 2.48 million
6 poles,³ over 770 distribution substations,⁴ and 140,000 miles of overhead and
7 underground distribution lines.⁵

8 This exhibit specifically addresses PG&E’s forecasts associated with the
9 following Program Areas: Emergency Response; Safety, Maintenance and
10 Compliance; Operations, Automation and Support, and Asset Management and
11 Reliability and the Smart Grid Pilot. All other Electric Distribution capital expenditure
12 forecasts are addressed in Exhibit (Ex.) ORA-10 (Electric Distribution Capital
13 Expenditures, Part 1 of 2).⁶

14 The Program Areas described above are sub-categorized into Major Work
15 Categories (MWC). The MWC’s are the primary descriptor for PG&E’s budgeting,
16 forecasting and reporting, as well as organizing the work activities and projects
17 associated with electric distribution capital expenditures. The Program Areas and
18 MWC’s covered by this exhibit are shown in Table 11-4 below.

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² Ex. PG&E-4, p. 5-4.

³ Ex. PG&E-4, p. 8-4.

⁴ Ex. PG&E-4, p. 5-4.

⁵ Ex. PG&E-4, p. 5-4.

⁶ Ex. ORA-10 covers the Customer Connection, Demand Growth, and Franchise Obligations Program Area, which is sub-categorized into five Major Work Categories (MWC), as well as the MWC 2F activities presented in Ex. PG&E-4, Ch. 13.

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**Table 11-4
Pacific Gas and Electric 2017 GRC
Electric Distribution Capital Expenditures – ORA Part 2 of 2
Program Areas and Major Work Categories**

Program Area Description	Major Work Category (MWC) Description	MWC No.	PG&E-4 Chap.
Emergency Response	Routine Emergency	17	4
	Major Emergency	95	4
	Emergency Preparedness and Response	21	3
	Distribution Substation Emergency Replacement	59	12
Safety, Maintenance & Compliance	Distribution Substation Safety and Security	58	12
	Overhead Preventative Maintenance	2A	6
	Underground Preventative Maintenance	2B	6
	Network Preventative Maintenance	2C	6
Operations, Automation & Support	Tools & Equipment (includes Work Efficiency)	05	19
	Automation & Protection	09	10
	Operations Control Center Facility	63	5
	Implement Real Estate Strategy	23	19
	Build IT Applications & Infrastructure	2F	5,15
Asset Management and Reliability	Pole Replacement	07	8
	Base Reliability	08	9
	Replace Substation Equipment	48	12
	Distribution Circuit/Zone Reliability	49	9
	Distribution Transformer Replacements	54	12
	Underground Asset Replacement	56	11
Smart Grid Pilot	Smart Grid Pilot	3M	15

7

8 This exhibit presents the electric distribution information at both the Program
9 Area level and the MWC level. ORA’s review and analysis was conducted at the
10 MWC level, including review of the various programs and projects which are forecast
11 within each MWC.

1 Table 11-5 compares PG&E's 2014 authorized capital expenditures to its
 2 2017 request, by MWC.

3 **Table 11-5**
 4 **Pacific Gas and Electric 2017 GRC**
 5 **Electric Distribution Capital – ORA Part 2 of 2**
 6 **Major Work Categories – Authorized and Requested**
 7 **(Nominal \$ Millions)**
 8

MWC No.	Major Work Category (MWC) Description ⁷	2014 Auth. \$ ⁸	2017 Req. \$
17	<u>Routine Emergency</u> - Includes facility replacements in response to overhead or underground outages that occur during normal conditions.	118.9	142.8
95	<u>Major Emergency</u> - Includes facility replacements performed during emergency conditions when a division Operational Emergency Center (OEC) has been activated. Beginning in 2014, these costs are included in the two-way Major Emergency balancing account authorized by Decision (D.)14-08-032.	49.0	53.7
21	<u>Emergency Preparedness and Response</u> – Includes costs to build critical infrastructure required for response to catastrophic emergencies. This includes costs for basecamps, facility upgrades, communications and data infrastructure improvements and also natural disaster models.	19.9 ⁹	8.0
59	<u>Distribution Substation Emergency Replacement</u> - Includes replacements for substation equipment that fails or is forced out of service as well as an emergency supply of transformers and other equipment to replace failed equipment.	40.8	42.4
58	<u>Distribution Substation Safety and Security</u> - Encompasses miscellaneous, unforeseen, short lead time and emergency environmental work (e.g., removal of an old asbestos panel in a control room that requires special handling).	3.1	2.3
2A	<u>Overhead Preventive Maintenance</u> – Includes replacing deteriorated overhead facilities on a planned basis where it is not cost-effective to repair those facilities. This work is similar to the work performed in (expense) MWC KA, but includes replacing equipment, rather than	101.2	132.0

⁷ The MWC descriptions are from the relevant chapters of Ex. PG&E-4.

⁸ PG&E Response to ORA's Master Data Request, Chapter 25, MDR25-Q01Atch01.

⁹ \$19.9 million is comprised of \$13 million originally in MWC 23 and \$6.9 million originally in MWC 2F. See D.14-08-032, pp. 552-554.

	repair and maintenance. Typical equipment replacements include corroded transformers, deteriorated cross-arms, inoperative line switches, and other overhead distribution facilities. Equipment is replaced in kind in most cases; however, upgrades are required where the equipment must meet current operating conditions, technology and safety standards. Work also includes replacing PG&E owned non-decorative HPSV streetlights with LED streetlights.		
2B	<u>Underground Preventive Maintenance</u> – Includes replacing deteriorated underground facilities on a planned basis where it is not cost-effective to repair those facilities. This work is similar to the work performed in (expense) MWC KB, but includes replacing equipment, rather than repair and maintenance. Typical equipment replacements include corroded transformers, inoperative switches, damaged underground enclosures and other underground distribution facilities. Equipment is replaced in kind in most cases; however, upgrades are required where the equipment must meet current operating conditions, technology and safety standards.	35.4	45.3
2C	<u>Network Preventive Maintenance</u> – Includes replacing deteriorated network facilities on a planned basis where it is not cost-effective to repair those facilities. This work is similar to the work performed in (expense) MWC KC, but includes replacing equipment, rather than repair and maintenance. Typical equipment replacements include corroded transformers, inoperative switches, and other network distribution facilities. Equipment is replaced in kind in most cases; however, upgrades are required where the equipment must meet current operating conditions, technology and safety standards.	19.5	19.2
05	<u>Tools and Equipment (includes Work Efficiency)</u> – Includes the costs of tools and equipment as regular expenditures are necessary to replace damaged, worn out or obsolete tools and to provide specialized tools to perform testing and other functions. Recorded costs in MWC 05 also include the balance of any overdrawn materials credits which arise when material is purchased for a project but goes unused. This MWC also includes an offset for capital-related efficiency improvements, which is calculated in two components: (1) unit cost efficiency measurement, and (2) non-unitized project efficiency measurement.	-40.6	-16.9
09	<u>Automation and Protection</u> – Covers investments in field automation and protection devices including installing or replacing substation RTUs; installing or replacing SCADA peripherals; installing or replacing automated line equipment; replacing obsolete protection equipment, primarily relays, in distribution substations; replacing	56.9	43.5

	automation or protection equipment due to unanticipated failure; and continuing the Fire Risk Management initiative that allows remote operation of recloser relays on certain circuit breakers and line reclosers to reduce the likelihood of wildland and urban fires.		
63	<u>Operations Control Center Facility</u> - Covers implementation of the Distribution Control Center Project, which involves consolidating 13 individual DCCs into three DCCs.	33.7	1.1
23	<u>Implement Real Estate Strategy</u> – Across all of PG&E, this MWC is used to capture the costs for new buildings and yards, including the purchase of land and the purchase and installation of furniture, office equipment, and Information Technology Infrastructure, as well as the costs to improve building environmental sustainability, to implement workplace strategy, and to optimize the real estate portfolio. In Exhibit PG&E-4, MWC 23 only captures the cost of improvements and upgrades to existing Electric Distribution facilities and buildings.	0.0	5.7
2F	<u>Build Applications and Infrastructure</u> – Includes the costs to design, develop and enhance applications, systems and infrastructure technology solutions.	56.1	45.9
07	<u>Pole Replacement</u> —Includes the replacement of poles, 99 percent of which are wood, to support safety and reliability of the electric distribution system.	69.2	103.6
08	<u>Base Reliability</u> – Includes replacing obsolete switches; rebuilding and reframing overhead distribution lines (including the installation of tree insulated wire); and performing other reliability and system protection improvement work such as replacing annealed overhead conductors. Base reliability work is intended to maintain the current level of electric distribution system reliability.	61.6	49.7
48	<u>Replace Substation Equipment</u> - Includes all major and minor substation equipment replacements not included in MWC 54 (Transformer Program). Specific subprograms include: <ul style="list-style-type: none"> • Ancillary Substation Equipment Replacement • Ground Grid Replacement • Circuit Breaker Replacement Program • Switch Replacement • Battery Replacement • Civil Structures Replacements • Switchgear Replacement • Regulator Replacement • Yard Improvement Replacement • Diagnostic Installation Program • Arc Flash Reduction Replacement • Animal Abatement • Transformer Bushings 	65.7	87.0

49	<u>Distribution Circuit/Zone Reliability</u> – Includes overhead fuses; underground protective devices; new LR's and converting existing reclosers from manual to remote operation (i.e., making them SCADA operable); fault indicators; and expenditures to resolve high-impact reliability issues. This program also includes installation of FLISR systems, and the targeted circuit initiative which addresses the least reliable circuits and typically involves a mixture of installing new fuses, reclosers, fault indicators and animal and bird guards, re-framing poles to increase phase separation, repairing or replacing existing equipment, and completing previously identified maintenance tags.	88.0	81.5
54	<u>Distribution Substation Transformer Replacements</u> - Includes maintaining or improving substation reliability by replacing transformers that have the highest risk of failure. This MWC also includes maintaining an adequate supply of emergency transformer stock, mobile transformers, and breakers for emergency response.	64.5	40.1
56	<u>Underground Asset Replacement</u> - Includes the non-emergency related replacement, testing and rejuvenation of distribution cable, network systems, and replacement of TGRAM/TGRAL and LBOR switches	100.8	93.2
3M	<u>Smart Grid Pilot</u> – Includes Smart Grid Pilot Deployment Projects approved by D.13-03-032 (A.11-11-017). The three projects are as follows: Smart Grid Sensor Pilot Project, Smart Grid Voltage and Reactive Power Optimization (VolWAR) Pilot Project, and Smart Grid Detect and Locate Distribution Line Outages and Faulted Circuit Conditions Project.	11.2	0.0
Totals (Nominal \$ Millions)		955	980

1 **IV. PG&E's GRC FORECASTS**

2 This section discusses PG&E's capital expenditure forecasts for 2015, 2016
3 and 2017, for the areas addressed in this testimony.

4 **A. Overview of PG&E's Forecasts**

5 Table 11-2 shows PG&E's capital expenditure forecast for 2015, 2016 and
6 2017 in columns (f), (g), and (h). For comparison purposes, PG&E's forecasts for
7 2018 and 2019 are also in Table 11-2. The same table shows PG&E's recorded
8 capital costs for the previous five years in columns (a) through (e). Table 11-3

1 shows the five year average (2010-14) of recorded costs in column (a) and the five
2 year average (2015-2019) of forecast expenditures in column (b).

3 PG&E's forecasts generally reflect the historical costs, with one major
4 exception. The 2010 recorded costs are \$588 million, while the 2011 costs are \$828
5 million, representing a 40 percent increase. This increase is explained by the
6 approval of the Cornerstone Improvement Project in Decision (D.) 10-06-048 (A.08-
7 05-023). The Commission approved significant new capital investment in PG&E's
8 electric distribution system in the Cornerstone proceeding. By the base year of this
9 GRC, 2014, the incremental cost of the Cornerstone projects are fully reflected in the
10 PG&E capital expenditure data.

11 Table 11-3, column (c), shows that the ratio of the five year forecast average
12 to the five year recorded costs average is 113 percent. Column (d) shows that the
13 Test Year 2017 forecast total relative to the five year forecast average is 104
14 percent. Forecast year 2015 represents a 6 percent increase over recorded year
15 2014, while forecast year 2016 reflects a 7 percent decrease from 2015, according
16 to PG&E's forecast. These figures indicate that the forecast is within the boundaries
17 of historical spending, as further discussed in the following section.

18 At the MWC level, most of the categories exhibit a spending and forecasting
19 pattern similar to the total budget. One category, MWC 21, Emergency
20 Preparedness and Response, was newly adopted in the 2014 GRC, but ended up
21 not having any recorded costs in 2014. The 2015 MWC 21 forecast is \$20 million,
22 which is about 38 percent of the 2015 total annual increase for all MWCs. Several
23 categories, such as MWC 17, MWC 95, and MWC 2A, show steady forecast levels
24 through the forecast period, including 2018-2019. Certain categories, including MWC
25 07, MWC 2F, and MWC 54, show a dip in the 2016 budget from 2015, followed by
26 an increase in 2017 to the levels of spending on par with the years preceding 2015.

27 **B. ORA's Analysis of PG&E's Forecasts**

28 This section describes ORA's analysis of PG&E's Electric Distribution capital
29 expenditure forecasts covered by this exhibit. ORA discusses 2014 recorded
30 expenditures compared to authorized, 2015 recorded expenditures compared to
31 forecast, and PG&E's development of its forecasts for 2016 and Test Year 2017.

1 For comparison purposes, PG&E’s forecasts of 2018 and 2019 capital expenditures
2 are also discussed, although ORA makes no recommendation regarding those years
3 in this exhibit.

4 **1. 2014 Authorized and Recorded Expenditures**

5 The most recent PG&E General Rate Case (GRC) approved the Electric
6 Distribution capital MWC’s which are addressed in this exhibit. Several of the
7 categories were controversial and resulted in the Commission adopting reductions to
8 PG&E’s requested funding.¹⁰ Review of the 2014 authorized amounts and
9 comparison to the 2014 recorded amounts is the starting point for ORA’s analysis in
10 this GRC.

11 In response to ORA’s Master Data Request (MDR), PG&E provided a
12 comparison of GRC–authorized capital expenditures to actual capital expenditures.
13 The following table presents that data.
14

¹⁰ See D.14-08-032, pp. 134-264.

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Table 11-6
Pacific Gas and Electric 2017 GRC
Electric Distribution Capital Expenditures – ORA Part 2 of 2
2014 Recorded and Authorized by MWC Comparison

MWC	Capital Expenditures (\$000's Nominal)			
	2014 Recorded ¹¹	2014 Authorized ¹²	Rec. > Author.	% Diff.
17	135,705	118,898	16,807	12%
95	32,910	49,040	-16,130	-49%
21 ¹³	0	19,900	-19,900	n/a
59	35,621	40,797	-5,176	-15%
58	1,230	3,110	-1,880	-153%
2A	94,229	101,171	-6,942	-7%
2B	53,619	35,411	18,208	34%
2C	15,699	19,510	-3,811	-24%
05	6,709	(40,641)	47,350	706%
09	45,890	56,863	-10,973	-24%
63	43,155	33,672	9,483	22%
23	2,670	0	2,670	100%
2F ¹⁴	2,356	n/a	n/a	n/a
2F	53,511	56,100	-2,589	-5%
07	111,799	69,215	42,584	38%
08	43,757	61,603	-17,846	-41%
48	32,220	65,676	-33,456	-104%
49	53,535	87,994	-34,459	-64%
54	30,920	64,515	-33,595	-109%
56	83,344	100,780	-17,436	-21%
3M	11,193	11,193	0	0%
	\$890,083	\$954,807	-\$64,735	-7.3%

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¹¹ Table 11-3 column (e) above.

¹² MDR25-Q01Atch01.

¹³ Per footnote 9 above, these MWC 21 activities were originally authorized for MWC 23 and MWC 2F.

¹⁴ MWC 2F from Ex. PG&E-4 Chaps. 5 and 15 are combined in this table's Authorized column.

1 The 2014 data shows that the total recorded was about seven percent lower
2 than the authorized capital spending. (Note that MWC 3M, the Smart Grid Pilot
3 Program, shows spending equal to authorized because it has a two-way balancing
4 account mechanism.) Four of the larger categories, MWC's 17, 59, 2A, and 2F, are
5 within 15 percent when comparing recorded versus authorized for 2014. Looking at
6 the areas of major underspending in terms of magnitude, MWC's 08, 48, 49, 54, and
7 56, are the most significant, ranging from about 20 to 100 percent below authorized.
8 However, the authorized budgets for those MWC's are significant to begin with, and
9 so the actual MWC activities are still robust.

10 The bottom line regarding the 2014 authorized and recorded data, particularly
11 the recorded data, is that it serves as a reasonable foundation for the 2015-2017
12 forecast years. Certain underspending, such as in MWC 21, Emergency
13 Preparedness and Response, was due to strategic planning processes conducted
14 during 2014 which resulted in capital spending being delayed until 2015.¹⁵ For the
15 overspent programs, MWC 07, Pole Replacement, was the most significant, over
16 \$40 million, or almost 40 percent of spending above the authorized spending. This is
17 due to the "spikes" in the annual program spending, which averages about \$100
18 million per year, yet can vary as much as 50 percent on a year-to-year basis.¹⁶

19 Based on the analysis above, ORA concludes that the recorded 2014
20 spending serves as a good base year to forecast into the future years for this GRC
21 cycle. The fact that the recorded spending was 7 percent lower than authorized
22 spending supports the use of the recorded data. A similar relationship is seen in the
23 2015 data, discussed below.

24 **2. PG&E's 2015 Forecast and 2015 Recorded**

25 Table 11-2 column (f) shows PG&E's 2015 forecast; Table 11-3 column (e),
26 ORA's Forecast, is the recorded capital spending for 2015 for the MWCs covered by
27 this testimony. This data is presented below.

¹⁵ Ex. PG&E-4 WP, p.WP 3-28.

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**Table 11-7
Pacific Gas and Electric 2017 GRC
Electric Distribution Capital Expenditures – ORA Part 2 of 2
PG&E 2015 Forecast and 2015 Recorded by MWC**

Capital Expenditures (\$000's Nominal)				
MWC	2015 PG&E Forecast¹⁷	2015 Recorded Adjusted¹⁸	Forecast > Recorded	% Diff.
17	\$135,942	\$145,786	-\$9,844	-7.2%
95	\$52,323	\$59,563	-\$7,240	-13.8%
21 ¹⁹	\$19,900	\$9,041	\$10,859	54.6%
59	\$19,554	\$34,092	-\$14,537	-74.3%
58	\$1,052	\$3,222	-\$2,170	206.2%
2A	\$103,526	\$109,976	-\$6,450	-6.2%
2B	\$39,813	\$43,506	-\$3,693	-9.3%
2C	\$19,018	\$19,694	-\$676	-3.6%
05	-\$11,630	\$4,617	-\$16,247	139.7%
09	\$37,820	\$44,281	-\$6,461	-17.1%
63	\$24,200	\$20,591	\$3,609	14.9%
23	\$4,878	\$2,175	\$2,703	55.4%
2F	\$1,159	-\$52	-\$1,211	-2316%
2F	\$41,679	\$33,355	\$8,323	20.0%
07	\$98,431	\$103,053	-\$4,623	-4.7%
08	\$46,126	\$29,661	\$16,465	35.7%
48	\$61,825	\$49,184	\$12,641	20.4%
49	\$61,907	\$50,149	\$11,758	19.0%
54	\$50,398	\$46,571	\$3,827	7.6%
56	\$110,399	\$90,905	\$19,494	17.7%
3M	\$24,871	\$27,325	-\$2,455	-9.9%
	\$943,191	\$926,695	\$16,496	1.8%

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(continued from previous page)

¹⁶ Table 11-2, line 16.

¹⁷ Table 11-3 column (f) above.

¹⁸ PG&E Response to ORA Oral Data Request Attachment GRC-2017-
Phi_DR_ORA_Oral025-Q01Atch01

¹⁹ Per footnote 9 above, MWC 21 activities were originally authorized for MWC 23 and MWC 2F.

1 Overall, the 2015 recorded capital expenditures are 1.8 percent lower than
2 PG&E's forecast. The biggest dollar difference is MWC 56, Underground Asset
3 Management, at nearly \$20 million lower than forecast, which is less than a 20
4 percent difference. The largest recorded overspending is MWC 05, Tools and
5 Equipment, but this category has the Work Efficiency estimates embedded in the
6 forecast, so the comparison to the recorded data is not apples-to-apples. Several
7 categories, such as MWC 17, MWC 2A, MWC 2B, MWC 2C, and MWC 54, are all
8 within 10 percent of the forecast when compared to the actual recorded costs. The
9 closeness of the 2015 recorded expenditures to PG&E's forecast serves two
10 purposes from ORA's perspective, for the capital expenditures addressed in this
11 exhibit. One, the recorded costs should be utilized for the 2015 capital expenditure
12 forecast in this GRC. Two, as long as PG&E's forecasts for 2016 and 2107 are
13 consistent with the 2015 forecast, ORA can accept those forecasts as credible. The
14 consistency of the 2016 and 2017 forecasts is discussed below.

15 **3. PG&E's 2016 and 2017 Forecast**

16 In Table 11-2 above, columns (g) and (h) show the 2016 and 2017 forecasts
17 for capital expenditures for the MWCs addressed in this testimony. Based on
18 PG&E's 2015 forecast, the company expected an overall decrease of about 7
19 percent. The 2016 PG&E forecast compared to *actual* 2015 costs represents a 6
20 percent decrease. The similarity of the difference provides support for PG&E's
21 overall 2016 forecast.

22 Looking at the MWC level, most of the major categories show that 2016 and
23 2017 reflect the historical spending. Two of the MMCs contribute significantly to the
24 overall decrease in 2016 from 2015 – MWC 05, and MWC 07. In the case of MWC
25 05, Tools and Equipment, the budget includes the Work Efficiency (negative) impact.
26 The difference between 2015 and 2016 was originally forecast to be about \$20
27 million,²⁰ contributing a \$20 million decrease to the overall 2016 forecasted budget.
28 As noted earlier, MWC 07, Pole Asset Management, tends to have \$20 million

²⁰ Ex. PG&E-4, p.19-23.

1 increases or decreases in certain program years, depending on the pole
2 replacement schedules and the targeted locations. For Pole Asset Management,
3 2016, is a “down” year for the program’s budget.

4 For PG&E’s 2017 forecast, the overall budget will reach a level similar to
5 2013 recorded (less than 1 percent difference), but will represent an increase of
6 almost 14 percent over 2016 forecast spending. An initial analysis of the 2017
7 forecast is to check where it fits in relation to each of the other forecast years in this
8 GRC. As shown in Table 11-3 column (d) the ratio of the 2017 forecast budget to the
9 five-year average budget of 2015-2019 is 104 percent. This is a reasonable pattern
10 for capital expenditure budgeting.

11 At the MWC level for 2017, most categories reflect historical spending, as
12 previously discussed. One of the factors contributing to the increased budget is the
13 lower impact of Work Efficiency in MWC 05, about \$23 million compared to 2016.
14 Also, MWC 2F, Build IT Applications and Infrastructure, reflects a nearly 50 percent
15 increase from 2016, and MWC 07, Pole Asset Management, has about a 25 percent
16 increase compared to 2016. However, each 2017 forecast for these MWCs are more
17 in line with their historical spending than are the 2016 figures.

18 PG&E’s supporting testimony, workpapers and responses to data requests
19 were reviewed and analyzed at the MWC level for completeness and consistency.
20 Given PG&E’s supporting information, in conjunction with the overall trends in the
21 MWCs reviewed in this testimony, ORA concludes that PG&E’s forecasts for 2016
22 and 2017 should be accepted.

23 **V. ISSUES FROM PG&E’s 2014 GRC**

24 This section discusses certain issues documented in the 2014 GRC and
25 ORA’s analysis of those issues in the context of the 2017 GRC.

26 **A. Build IT Applications & Infrastructure Support - MWC 2F**

27 In Decision (D.) 14-08-032 adopting PG&E’s 2014 GRC, several issues were
28 discussed as a result of ORA and other intervenors recommending reductions to
29 PG&E’s request for capital expenditures for MWC 2F, Build Applications &

1 Infrastructure. The issues were addressed project area by project area, and are too
2 numerous to detail here.²¹ However, it is important to note the common reason that
3 the Commission adopted certain reductions to their request: PG&E's lack of a
4 cost/benefit analysis, lack of justification for a contingency and overall lack of
5 support for the funding level. These are serious issues, and prompted ORA to pay
6 particular attention to the support provided by PG&E in this GRC for MWC 2F.

7 The project areas in question are presented in Ex. PG&E-4, Chapter 15,
8 *Electric Distribution Technology*. Here, PG&E discusses each project area, and a
9 summary is provided in Table 15-1 of Ex. PG&E-4. More importantly, the
10 workpapers supporting Chapter 15 provide the details and justification of each
11 project area. The following table is based on PG&E's Table 15-1, and indicates
12 whether there was an issue in the 2014 GRC, and the right hand column contains
13 the citation for PG&E's project support in this GRC.

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²¹ See D.14-08-032, pp. 134-155.

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**Table 11-8
Pacific Gas and Electric 2017 GRC
Electric Distribution Capital Expenditures – ORA Part 2 of 2
MWC 2F Project Support**

Technology Areas and Projects²²	2014 GRC Issue? D.14-08-032 p. #	2017 Support PG&E-4 Workpapers
Electric Distribution Grid Operations		
Advanced Applications for Distribution Control Center	Yes, p.153	WP 15-42
Supervisory Control and Data Acquisition (SCADA) Platform Upgrade and Distribution Management System (DMS) Integration	No	WP 15-46
Distribution Grid Operations Situational Intelligence	No	WP 15-52
Advanced SmartMeter™ – Control Center Tool Integration	No	WP 15-56
Outage Reporting and Analysis System Replacement (2015 Project)(a)	Yes, p.150	WP 15-60
Outage Reporting and Analysis System Upgrade and Enhancement	No	WP 15-64
Data Historian for Electric Distribution	Yes, p.146	WP 15-67
Electric Distribution Asset Management		
System Tool for Asset Risk (STAR)	No	WP 15-72
Condition-Based Maintenance (CBM) for Substation Upgrades and Enhancements	No	WP 15-77
Electric Distribution Asset Management and Geographic Information System (ED AM/GIS)	Yes, p.135	WP 15-80
ED AM/GIS Upgrades and Enhancements	No	WP 15-85
Electric Distribution Design and Work Management		
Estimating Work Management (EWM) Enhancements Phases 1-3	Yes, p.154	WP 15-88
Graphic Work Design (GWD) Tools	Yes, p.151	WP 15-93
Customer Service Delivery Tools (Customer Connections Online (CCO) Tools)	Yes, p.148	WP 15-96
Other Design and Work Management Projects	No	WP 15-101
Electric Distribution Work and Resource Management		
Electric Distribution Workforce Mobilization Program	Yes, p.139	WP 15-115
Electronic Time Reporting – Scheduling Integration With Time Keeping Systems	Yes, p.145	WP 15-125
Work Scheduling and Dispatch System Upgrades and Enhancements	No	WP 15-120

²² Technology Areas and Projects from Ex. PG&E-4 Table 15-1, p.15-3.

1 One of the projects listed in the table is the *Electric Distribution Asset*
2 *Management and Geographic Information System (ED AM/GIS)* project, which was
3 approved, albeit at a reduced funding level due in part to a “lack of cost/benefit
4 analysis.”²³ In the current GRC, PG&E’s workpapers document the project
5 description, project justification, and importantly, the cost savings assumptions,
6 which are estimated at \$4.1 million per year over 10 years.²⁴

7 Similarly, the *Electric Distribution Workforce Mobilization Program* was
8 approved in the last GRC at reduced funding compared to PG&E’s request.²⁵ In the
9 present GRC, PG&E provides an extensive listing of qualitative program benefits,
10 including public and workforce safety, and reliability benefits.²⁶ The workpapers
11 also provide an updated “Mobilization Roll-Out” schedule which appears realistic,
12 and should “align with a new mobile enterprise workforce mobilization strategy that
13 will be applied globally across PG&E departments and work groups.”²⁷

14 Based on these examples, and the overall completeness of the
15 documentation in the workpapers, ORA is satisfied that, in this GRC, PG&E has
16 provided the proper support for the electric distribution MWC 2F project areas
17 addressed in this exhibit.

18 **B. San Francisco Incandescent Street Lighting Replacement** 19 **Program - MWC 2A (MAT 2AG)**²⁸

20 The San Francisco Incandescent Street Lighting Replacement Program (now
21 termed the Regulated Output Program) was an issue in the 2014 GRC.²⁹ The

²³ D.14-08-032, p.136.

²⁴ Ex. PG&E-4- WP, pp. WP 15-80 to WP 15-82.

²⁵ D.14-08-032, p. 141.

²⁶ Ex. PG&E-4- WP, pp. WP 15-117 to WP 15-118.

²⁷ Ex. PG&E-4- WP, p. WP 15-116.

²⁸ Major Activity Type MAT) 2AG is a project activity within MWC 2A, Overhead Preventative Maintenance.

²⁹ See D.14-08-032, pp. 172-174.

1 program's objective is to replace all of the out-of-date PG&E-owned streetlights in
2 San Francisco with up-to-date lighting (such as LEDs) and associated electrical
3 equipment such as transformers and cables.³⁰ ORA took issue with PG&E's
4 proposed funding level due to lack of historical spending even though the program
5 was approved in the 2011 GRC.³¹ The City and County of San Francisco (CCSF)
6 was concerned that approved funding could be diverted by PG&E to other programs
7 and thereby delay the completion of the project.³² PG&E's forecast in the 2014
8 GRC anticipated project completion in 2014, with capital spending of \$7.24 million in
9 2014, and total project spending of \$22.1 million.

10 The Commission approved PG&E's plan and funding level, but with a
11 reporting requirement.³³ Sharing CCSF's concern about diverting approved funds,
12 the Commission required PG&E to establish the San Francisco Incandescent Street
13 Light Replacement Account (SFSRA).³⁴ The account is to "track the difference
14 between capital expenditures incurred and the adopted forecasted capital cost
15 amount of \$7.24 million."³⁵ The purpose for tracking this program's spending is to
16 make "appropriate reductions in the authorized revenue requirement in the next
17 GRC."³⁶

18 PG&E reports that its spending on this program beginning in 2014 totals
19 \$10.13 million, i.e., above \$7.24 million.³⁷ Based on this spending, PG&E has
20 satisfied the purpose and intent of the SFSRA. However, ORA is concerned that the

³⁰ Ex. PG&E-4, pp. 6-29 – 6-30 & WP 6-46.

³¹ Ex. 76, A.12-11-009, pp. 22-23.

³² D.14-08-032, p. 173.

³³ D.14-08-032, pp. 173-174.

³⁴ PG&E Electric Preliminary Statement Part GN.

³⁵ PG&E Electric Preliminary Statement Part GN, paragraph 1.

³⁶ D.14-08-032, p. 174.

³⁷ 2014 spending was \$4.65 million (Ex. PG&E-4 WPs, p. WP 6-46); 2015 spending was \$5.48 million (PG&E Response to ORA Oral Data Request Attachment GRC-2017-Phi_DR_ORA_Oral025-Q01Atch01).

1 current total program budget, now \$40 million, and the updated program completion
2 date, now in 2018, may indicate serious problems in completing this program in a
3 timely and cost efficient manner.³⁸ If PG&E seeks further funding in its next GRC
4 (presumably a TY 2020 GRC), that would mean that the original plan is over five
5 years late and at least 100 percent over budget. See Section VIII.C., below, for a
6 discussion of future reporting requirements for this program if PG&E seeks funding
7 the next GRC.

8 **C. Pole Replacement Program - MWC 07**

9 In the 2014 GRC for the Pole Replacement Program, the Commission
10 adopted PG&E's recorded expenditures for 2012, ORA's forecast expenditures for
11 2013, and PG&E's (agreed to by ORA) forecast expenditures for 2014. The forecast
12 year in dispute between ORA and PG&E was 2013, and the difference between the
13 two recommendations was \$84 million.³⁹ The adopted forecast expenditures
14 averaged \$89 million per year for 2012-14. The Test Year 2014 adopted forecast
15 was \$70 million.⁴⁰

16 In Table 11-3 line 15, column (a) above shows that the 2010-14 annual
17 average expenditure is \$105 million, or \$16 million higher than 2012-14 annual
18 average adopted amounts. Table 11-3 column (e) line 15 also shows a similar
19 expenditure in 2015 for this program at \$103 million recorded. All in all, the actual
20 Pole Replacement Program spending is well above the authorized level of spending
21 in the most recent GRC cycle.

22 Looking at PG&E's forecasts for 2016 and 2017 in columns (g) and (h) of
23 Table 11-3, they average \$91 million per year, virtually identical to the authorized
24 average for 2012-14. Given the observable close relationships between the actual,
25 authorized, and forecast capital expenditures in the Pole Replace Program, ORA

³⁸ Ex. PG&E-4- WP, p. WP 6-46.

³⁹ D.14-08-032, pp. 191-198.

⁴⁰ D.14-08-032, p. 192.

1 recommends that PG&E's 2016 and 2017 forecasts be adopted. ORA's 2015
2 recommended budget, based on recorded expenditures, should also be adopted.

3 **VI. NEW PROGRAM IN 2017 GRC**

4 This section discusses a new Electric Distribution capital expenditure program
5 for the 2017 GRC. It is not intended to be a comprehensive discussion of all new
6 programs.

7 **A. Emergency Preparedness and Response - MWC 21**

8 PG&E states:

9 *In 2013, PG&E created the companywide EP&R (Emergency*
10 *Preparedness and Response) Department to prepare for*
11 *catastrophic emergency events that affect gas and electric service.*
12 *The department also commenced a cross-LOB (line-of-business)*
13 *initiative to improve PG&E's emergency response capabilities*
14 *through a multi-year program called the Emergency Management*
15 *Advancement Program (EMAP). EMAP's charter is to identify gaps*
16 *and necessary enhancements in preparedness and response plans*
17 *to emergencies and catastrophic events across the Company.*⁴¹

18 As noted earlier, certain initial activities that were approved in the 2014 GRC
19 are now incorporated into PG&E's Emergency Preparedness & Response
20 Department discussed above under MWC 21. Those initial activities included the
21 planning and construction of the Alternate Emergency Operations Center (AEOC)
22 and the associated IT Applications & Infrastructure. Additional activities planned for
23 the 2015-2019 period are: (1) upgrades and expansions of the Regional Emergency
24 Centers (REC) and the Operations Emergency Centers (OEC); (2) upgrade to
25 pge.com (for emergency applications); and (3) develop and deploy the Earthquake
26 Damage Modeling Project.⁴²

⁴¹ Ex. PG&E-4, p.1-8. See Ex. PG&E-4 WP p. WP3-29 for the complete EMAP.

⁴² Ex. PG&E-4 WP, pp. WP 3-15 to 3-28.

1 ORA reviewed all of the planned activities and investigated the assumptions
2 and this program’s budget items for completeness. ORA does not oppose PG&E
3 forecasts for MWC 21 for 2016 and 2017; they should be approved. ORA’s forecast
4 for 2015, based on the recorded costs, should also be approved.

5 **VII. PG&E INTERNAL AUDITS**

6 As part of its review, ORA requested and received selected reports from
7 PG&E’s Internal Audit Department which addressed specific issues affecting Electric
8 Distribution.⁴³ The Internal Audits are useful documents to review as they provide
9 certain information which may not be included in the primary utility showing. The
10 audits reviewed did not lead to any additional discovery or investigation for the
11 purposes of this proceeding. The following table provides a high level summary of
12 the audits reviewed.
13

⁴³ Data Request ORA-PG&E-055-SJL. Note that the Internal Audits selected and reviewed were not intended to be limited to the Electric Distribution MWCs addressed in this exhibit.

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**Table 11-9
Pacific Gas and Electric 2017 GRC
Electric Distribution Capital Expenditures – ORA Part 2 of 2
PG&E Internal Audits Reviewed**

No.	Date	File #	Addressee	Subject	Audit Conclusion ⁴⁴
1	01/21/2015	15-001	Sr. Director – Electric System Planning and Reliability	SAIDI 2014 Outage Calculation ⁴⁵	Calculations Verified
2	07/25/2014	14-040	Vice President, Asset Management	Network Transformer Maintenance	Controls Adequate
3	02/14/2013	13-016	Vice President, Asset Management	Wood Pole Asset Management	Controls Improving, Needs Strengthening
4	07/16/2013	13-036	Sr. Director, Substations	Substation Maintenance	Controls Not Adequate
5	10/23/2013	13-060	Sr. Director, Substations	Critical Operating Equipment - Substations	Controls Need Strengthening
6	10/25/2013	13-061	Sr. Director, Electric Distribution System Ops.	Critical Operating Equipment – Distribution	Controls Adequate

6 Audit No.’s 3, 4 and 5 in the table above discussed various management and
7 control issues. A Management Action Plan was put in place for each issue raised by
8 the audits. The ultimate resolution of those issues is beyond the scope of this
9 testimony. A recommendation for a future audit is discussed in the following section.

⁴⁴ The PG&E Internal Audit Reports are not confidential. PG&E Data Response ORA-PG&E-055, Q01.

⁴⁵ SAIDI: System Average Interruption Duration Index.

1 **VIII. BALANCING ACCOUNTS, PILOT PROGRAMS, AND**
2 **REPORTING REQUIREMENTS**

3 This section discusses balancing accounts, pilot programs, and
4 recommendation reporting requirements.

5 **A. Major Emergency Balancing Account**

6 The Major Emergency Balancing Account (MEBA) was established in the last
7 GRC.⁴⁶ For the purpose of this testimony, the MEBA applies to MWC 95. In this
8 GRC, PG&E states:

9 *PG&E proposes to continue the two-way balancing account for its*
10 *capital revenue requirements and expenses incurred for major*
11 *emergencies. This account was approved in the 2014 GRC*
12 *decision and is defined in PG&E's Electric Preliminary Statement*
13 *Part GJ. As described in the Purpose section of that preliminary*
14 *statement, the Major Emergency Balancing Account (MEBA) tracks*
15 *the recovery of actual expenses and capital revenue requirements*
16 *resulting from responding to major emergencies and catastrophic*
17 *events not eligible for recovery through the Catastrophic Event*
18 *Memorandum Account (CEMA). The Revision Date section of the*
19 *preliminary statement states the disposition of the balances in this*
20 *account will be distributed annually through the AET (Annual*
21 *Electric True-Up) advice filing through the DRAM (Distribution*
22 *Revenue Adjustment Mechanism), or as otherwise authorized by*
23 *the California Public Utilities Commission (CPUC or Commission).*

24
25 *As described in Exhibit (PG&E-4), Chapter 4, the Commission*
26 *approved a two-way balancing account for major emergency costs*
27 *that do not qualify for CEMA cost recovery. In approving the*
28 *balancing account, the Commission found it a reasonable way to*
29 *address PG&E's inability to accurately forecast extraordinary*
30 *incremental costs related to major events. Based on the reasoning*
31 *set forth in the 2014 GRC decision, PG&E requests that the MEBA*
32 *be continued.*⁴⁷

33 ORA accepts PG&E's request to continue the MEBA.

⁴⁶ D.14-08-032, p. 212.

⁴⁷ Ex. PG&E-12, p. 9-5.

1 **B. Smart Grid Pilot**

2 The Commission approved the Electric Distribution Smart Grid Pilot
3 Deployment projects in D.13-03-032 (A.11-11-017). The three capital projects are:
4 (1) Smart Grid Sensor Pilot Project, (2) Smart Grid Voltage and Reactive Power
5 Optimization (VolWAR) Pilot Project, and (3) Smart Grid Detect and Locate
6 Distribution Line Outages and Faulted Circuit Conditions Project.⁴⁸ These pilot
7 projects are scheduled to be complete by 2016.⁴⁹ Based on historical spending,
8 and the pilot program goals, ORA accepts PG&E's forecast.⁵⁰ The spending for
9 these projects is currently subject to a two-way balancing account. PG&E proposes
10 to close the Smart Grid Deployment Project Balancing Account at the end of 2016.⁵¹
11 ORA does not oppose this proposal based on the expectation of pilot completion
12 during 2016.

13 **C. San Francisco Street Lighting Reporting**

14 As discussed in Section V.B., above, the Commission required PG&E to track
15 the capital expenditures approved for the San Francisco Incandescent Street Light
16 Replacement Program (now termed the Regulated Output Program) in a
17 memorandum account, and that the conditions for such tracking are now satisfied.
18 However, the Commission should be aware that there is now an extended
19 implementation period and significant budget increases for this program since the
20 last GRC. ORA supports completion of the project, but is concerned that further
21 funding requests may be forthcoming in future GRCs. Therefore, ORA recommends
22 that PG&E be required to submit an Internal Audit, of the type discussed in Section
23 VII., in the next GRC if additional capital expenditures are requested. If the next
24 GRC is for a 2020 test year, the application would be filed in 2018, the same year
25 the program is forecast to be completed by PG&E. If an Internal Audit showing is

⁴⁸ Ex. PG&E-4 WP, pp. WP 15-128 to WP 15-131.

⁴⁹ Table 11-3 column (g) above.

⁵⁰ Table 11-3 line 21 above.

⁵¹ Ex. PG&E-12, pp. 9-11 to 9-12.

1 necessary, that is, more funding is requested, the timing of the audit may be chosen
2 by PG&E. It may be conducted in either 2017 or 2018, as long as it is submitted with
3 the GRC filing.

4 **IX. WITNESS QUALIFICATIONS**

5 My name is Scott J. Logan. My business address is 505 Van Ness Avenue,
6 San Francisco, California. I am employed by the California Public Utilities
7 Commission as a Public Utilities Regulatory Analyst V in the Office of Ratepayer
8 Advocates Energy Cost of Service and Natural Gas Branch.

9 I received a Bachelor of Arts degree in Economics from San Francisco State
10 University in 1985. Since joining the Commission in 1986, I have worked on
11 electricity and energy matters for ORA, including energy efficiency, resource
12 planning, long-term procurement and planning (LTPP), transmission planning and
13 Certificate of Public Convenience and Necessity (CPCN) proceedings for major
14 transmission projects. I have testified in numerous Commission proceedings. Most
15 recently, I have testified in the San Onofre Nuclear Generating Station (SONGS)
16 Investigation, the Southern California Edison Company 2015 General Rate Case
17 (GRC), and the Pacific Gas and Electric Company 2014 GRC. I also produced
18 written testimony in the San Diego Gas & Electric 2016 GRC.

19 This completes my prepared testimony.