

Docket	:	<u>A.13-11-003</u>
Exhibit Number	:	<u>ORA-7</u>
Commissioner	:	<u>Peevey</u>
ALJ	:	<u>Darling, Dudney</u>
Witness	:	<u>Morse</u>



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

**Report on the Results of Operations
for
Southern California Edison Company
General Rate Case
Test Year 2015**

Non-Nuclear Generation Costs

PUBLIC VERSION

San Francisco, California
August 4, 2014

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1 **NON-NUCLEAR GENERATION COSTS**

2 **I. INTRODUCTION**

3 This exhibit presents the analyses and recommendations of the Office of
4 Ratepayer Advocates (ORA) regarding Southern California Edison Company's (SCE
5 or Edison) forecasts of Non-Nuclear Generation Operation and Maintenance (O&M)
6 expenses for Test Year (TY) 2015, and capital expenditures for 2013 through 2015.

7 This testimony addresses SCE's request for cost recovery of the expenses
8 associated with company-owned power plants, which include the gas-fired
9 Mountainview and five Peaker plants, the coal-fired Four Corners and Mohave
10 plants, the Hydroelectric (Hydro) plants of the Northern and Eastern Divisions, and
11 the Catalina Island plant. Also addressed, are Edison's requests for expenses
12 associated with the Project Development Division (PDD) of the Power Production
13 Department, the Solar Photovoltaic Program (SPVP) and the Fuel Cell Program.

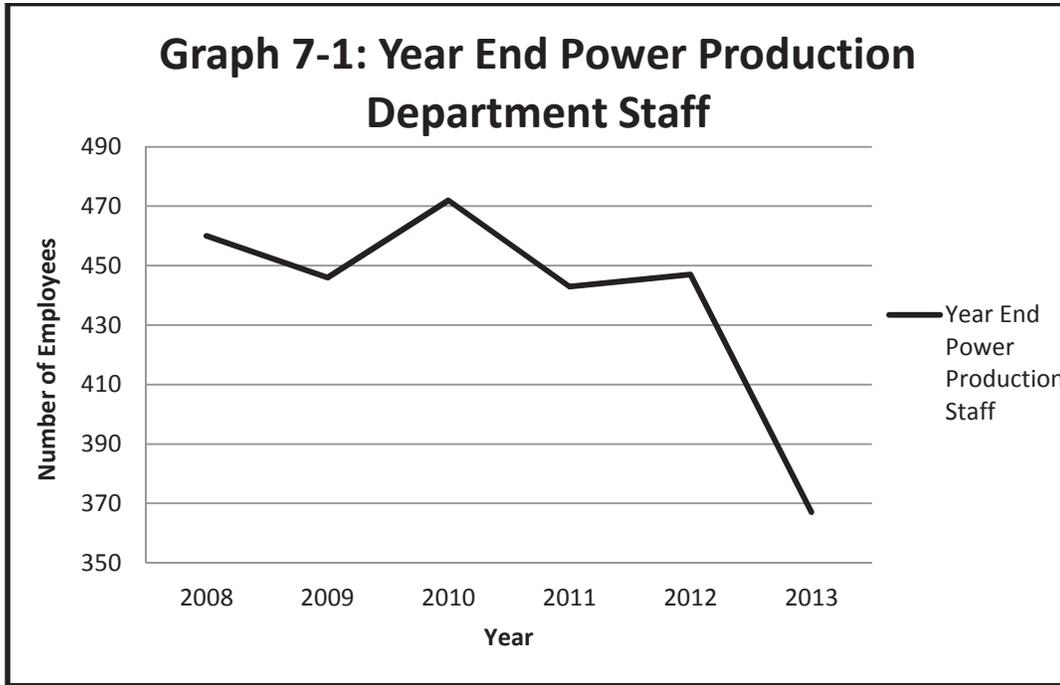
14 **II. GENERAL OBSERVATIONS**

15 SCE's Non-Nuclear Generation assets include the SCE Hydro and Peaker
16 facilities and plants, the Mountainview Generating Station, the SCE Solar
17 Photovoltaic plants, the Fuel Cell Plants and the Mohave Generating Station.¹
18 SCE's Power Production Department (PPD) operates and maintains these and other
19 assets to generate, transmit and distribute electric energy to SCE's California
20 customers.

21 PPD is responsible for the operations, maintenance and capital project
22 implementation for SCE's gas-fired, Solar and Hydro generating assets. PPD also
23 managed the decommissioning of the co-owned Mohave plant and oversees the
24 plant site's ongoing maintenance. PPD provided oversight of SCE's ownership
25 interest in the co-owned Four Corners plant.

¹ Ex.SCE-2, Vol. 5, p. 1.

1 In the course of its review of SCE's requests for its Non-Nuclear O&M
2 expense and capital expenditure forecasts, ORA noted a drastic reduction in SCE's
3 staffing which occurred in 2013. See Graph 7-1 and Table 7-1 below.²



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5 Source: SCE response to ORA data request DRA-54-PM1, Q.4, Revised.

6 Graph 7-1 includes: Hydro, Mountainview, Peaker, Solar and Power
7 Production Department (PPD) staff.

² SCE response to ORA data request DRA-54-PM1, Q.4, Revised Attachment.

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**Table 7-1
Power Production Department Year End and Average Staffing Levels³**

Power Production - Year End and Calculated Average Staffing Levels												
Department	2008		2009		2010		2011		2012		2013	
	12/31/08	Avg 07'-08'	12/31/09	Avg 08'-09'	12/31/10	Avg 09'-10'	12/31/11	Avg 10'-11'	12/31/12	Avg 11'-12'	11/30/13	Avg 12'-13'
Hydro	238	234	242	240	251	247	254	253	251	253	219	235
Mountainview	46	44	48	47	52	50	50	51	44	47	41	43
Peakers (incl McGrath and Solar)	29	26	27	28	32	30	33	33	40	37	33	37
Mohave	32	33	20	26	17	19	0	9	0	0	0	0
Four Corners	0	0	0	0	0	0	0	0	0	0	0	0
Power Production Staff	115	102	109	112	120	115	106	113	112	109	74	93
Total	460	437	446	453	472	459	443	457.5	447	445	367	407

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SCE attributes the 18% overall reduction in PPD staffing reductions to

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“[c]ertain functions that were performed by PPD Staff during 2008 through 2012 were transferred to other SCE departments in late-2012. These other departments continue to provide support services to the PPD plants, and as such, the costs associated with these services continued to record to Hydro, Mountainview, Peakers and Solar Photovoltaic Plants (SPV), and Mohave and Four Corners oversight through 2013. This transfer of work and personnel to other departments accounts for a large portion of the PPD staffing level reduction, 112 to 74, experienced between 2012 and 2013.”⁴

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SCE further explains the PPD supports certain work outside the PPD-

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managed power plants and that non-PPD employees support the PPD:⁵

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“[P]ersonnel in other SCE departments (i.e., outside of PPD) also support the operations, maintenance and capital expenditures for PPD plants.

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Therefore, portions of the labor costs for these non-PPD employees are included in the 2008-2012 recorded costs for Hydro, Mountainview,

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Peakers and SPV, and Mohave and Four Corners oversight. Likewise, to the extent certain PPD employees support other SCE work that is not for

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the PPD-managed power plants, a portion of the labor costs for these PPD employees records to other SCE accounts (i.e., to accounts other

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than the Hydro, Mountainview, Peakers and SPV, and Mohave and Four Corners oversight cost accounts). Similarly, during 2008-2013 certain PPD

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employees spent a portion of their time supporting non-SCE facilities, and that work generated other operating revenue. The labor costs for these

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employees incurred while conducting that work were appropriately

³ SCE response to ORA data request DRA-54-PM1, Q.4, Revised. Note: Average employees data is calculated as an average of beginning of year and end of year.

⁴ SCE response to ORA data request DRA-54-PM1, Q.4, Revised.

⁵ SCE response to ORA data request DRA-54-PM1, Q.4, Revised.

1 charged to that work, rather than to the O&M or capital accounts for the
2 PPD-managed SCE power plants.”⁶

3 Due to the way SCE charges time between lines of business (i.e. Hydro,
4 Mountainview, Peakers, Four Corners, Solar, Fuel Cell Generation assets and the
5 PPD) and allocates recorded expenses within the same FERC Account to those
6 lines of business, recorded expenses are not normalized to take into account those
7 charge ins and outs. Additionally, a “[p]ortion of the labor costs for these PPD
8 employees records to other SCE accounts.”⁷ This data is reflected in recorded data,
9 yet the level of expenses charged to “[o]ther SCE accounts” was not evident from
10 SCE’s TY 2015 filing.

11 ORA attempted to evaluate if and how SCE reduced the overall ongoing O&M
12 expenses of the Non-Nuclear Generation lines of business from 2012-2013. To that
13 end, ORA asked for the hours charged by supplemental employees, contractors and
14 SCE employees during that period. SCE responded in part by stating: “[i]t would
15 require a study to compute the hours charged to each generation area by these
16 contract and supplemental employees during 2010-2013.”⁸ SCE also said that it
17 “...[d]oes not believe this information to be relevant because employee ‘work hours’
18 were not directly utilized in the development of SCE’s [Non-Nuclear] capital or O&M
19 forecasts.”

20 If, in fact, SCE significantly reduced the overall ongoing O&M of the Non-
21 Nuclear Generation lines of business from 2012-2013, then using last recorded year
22 (LRY) 2012, or historical averaging as a forecast methodology would result in
23 inflated TY 2015 O&M forecasts.

24 On a similar note, SCE has been over collecting in base rates for the
25 Operations and Maintenance of the Non-Nuclear Generation assets by an average
26 of \$23.8 million from 2010-2012 or 12% yearly.⁹ The Non-Nuclear Generation
27 historical reductions in some areas do reduce SCE’s TY 2015 forecasts creating

⁶ SCE response to ORA data request DRA-54-PM1, Q.4, Revised.

⁷ SCE response to ORA data request DRA-54-PM1, Q.4, Revised.

⁸ SCE response to ORA data request DRA-106-PM1, Q.5 a-c.

⁹ See Table 7-5 below.

1 some offsetting savings for ratepayers, yet in ORA’s evaluation, SCE continues to
 2 over forecast in its GRC request for Non-Nuclear Generation O&M.

3 **III. SUMMARY OF RECOMMENDATIONS**

4 The following summarizes ORA’s recommendations associated with non-
 5 nuclear generation-related O&M expenses for TY 2015 base rates:

6 **Table 7-2**
 7 **ORA’s Recommended**
 8 **Non-Nuclear Generation O&M Expense Forecasts for TY 2015 Base Rates**
 9 **(2012 \$000)**

	Short Caption of Recommendation	2015 Monetary Impact	Exhibit Page Citation for Primary Discussion of Recommendation	Exhibit Page Citation for Primary Presentation of Monetary Impact
O&M EXPENSES 2012\$				
1	Mohave	(308)	11	13
2	Hydro	(4,245)	15	13
3	Operational Excellence	(108)	17	17
4	Mountainview Base	(1,699)	30	29
5	Mountainview CSA Annual Fees	(3,141)	32	29
6	Mountainview CSA Major Overhaul	(334)	35	29
7	Peakers Base	(170)	39	39
8	Peakers McGrath Adjustment	(568)	42	39
10	Solar	(937)	46	45
11	Fuel Cell	(143)	54	55
12	Catalina	(400)	61	61
12	Total	(12,054)	7	7

10 In addition to the above monetary reductions, ORA makes the following
 11 recommendations for O&M expense issues:

- 12 • The Commission adopt SCE’s proposal to eliminate the Mohave Balancing
 13 Account (MBA).
- 14 • The Commission adopt SCE’s proposal to eliminate the Solar Photovoltaic
 15 Program Balancing Account (SPVPBA), and allow SCE to recover reasonable
 16 construction costs and ongoing O&M expenses in base rates in 2015.

- 1 • The Commission reject SCE's request to recover the cost to cancel a solar
2 panel contract (\$10.1 million 2011\$) which SCE recorded as an O&M cost to
3 the SPVPBA in 2011.
- 4 • The Commission adopt SCE's proposal to eliminate the Fuel Cell Program
5 Memorandum Account (FCPMA) and collect ongoing O&M in base rates
6 starting in 2015.
- 7 • As part of SCE's next GRC filing, the Commission require SCE to provide,
8 as part of the five years of recorded data (in nominal and base year dollars):
 - 9 1. Yearly charges by departments that charge to multiple expense
10 and capital Sub-FERC Accounts within lines of business.
 - 11 2. An explanation and showing of changes to the allocation of
12 expenses and capital to Sub-FERC Accounts.

13 The following summarizes ORA's recommendations associated with non-nuclear
14 generation-related capital budget forecast for the period 2013-2015:

- 15 • The Commission adopt SCE's actual recorded adjusted 2013 capital
16 expenditures.
- 17 • The Commission adopt ORA's forecast for Hydro 2013-2015 capital
18 expenditures of \$196.6 million, an adjustment of \$57.5 million to SCE's 2013-
19 2015 forecast of \$254.0 million.

1 Tables 7-3 and 7-4 show SCE's request compared to ORA's
 2 recommendations for non-nuclear generation O&M expenses and capital
 3 expenditures:

4 **Table 7-3**
 5 **Non-Nuclear Generation O&M Expense Forecasts for TY 2015 Base Rates**
 6 **(2012 \$000)**

Line No.	Description (a)	ORA Recommended ¹⁰ (b)	SCE Proposed ¹¹ (c)	Amount SCE>DRA (d=c-b)	Percentage SCE>DRA (e=d/b)
1	Four Corners	\$0	\$0	\$0	NA
2	Mohave	0	308	308	100%
3	Hydro	48,871	53,224	4,353	8%
4	Mountainview	45,089	50,263	5,174	10%
5	Peakers	9,711	10,450	739	7%
6	Solar PV Program	3,361	4,298	937	22%
7	Fuel Cell Program	526	669	143	21%
8	Catalina Island	4,194	4,594	400	9%
10	Total ¹²	\$111,752	\$123,806	\$12,054	10%

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¹⁰ See Ex. ORA-7, worksheet 7-1 for forecasting methods and totals by FERC accounts (ORA and SCE).

¹¹ Four Corners: Ex. SCE-2, Vol. 6, Pt. 1, p. 28; Mohave: Ex. SCE-2, Vol. 6, Pt. 1, p. 40; Mountainview: Ex. SCE-2, Vol. 8, p. 15; Peakers: Ex. SCE-2, Vol. 9, p. 8; Hydro: Ex. SCE-2, Vol. 7, Pt. 1, p. 7; Catalina: Ex. SCE-2, Vol. 10, p. 34; Solar PV: Ex. SCE-2, Vol. 10, p. 10; Fuel Cell: Ex. SCE-2, Vol. 10, p. 30.

¹² Total does not include SCE's Project Development Division (PPD) O&M expense request for \$6.55 million for TY 2015, \$1.3 million of which SCE proposes to collect in base rates (labor). ORA addresses SCE's PPD request in Ex. ORA-21.

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**Table 7-4
Non-Nuclear Generation Base Rate Capital Expenditures for 2013-2015
(Nominal \$000)**

Line No.	Description	DRA Recommended			SCE Proposed ¹³		
		2013 ¹⁴	2014	2015	2013	2014	2015
1	Four Corners ¹⁵	\$0	\$0	\$0	\$0	\$0	\$0
3	Hydro	60,177	69,421	66,962	82,134	72,649	99,231
4	Mountainview	9,264	1,327	1,131	9,632	1,327	1,131
5	Peakers	1,191	2,954	3,043	1,074	2,954	3,043
6	Solar PV Program ¹⁶	0	0	1,035	0	0	1,035
7	Fuel Cell Program	0	0	0	711	0	0
8	Catalina Island	2,096	5,465	420	2,480	5,465	420
9	Total ¹⁷	\$72,728	\$79,167	\$71,591	\$95,320	\$82,395	\$104,860

4 The Table 7-5 below shows SCE’s recorded vs. authorized Non-Nuclear
5 Generation base rate O&M expenses from 2008-2012. All Non-Nuclear Generation
6 accounts (or years) which were subject to memorandum/balancing account or power
7 purchase agreement treatment, during the 2008-2012 timeframe, were omitted (see
8 footnotes 20-24). SCE does not explain in Exhibit SCE-2, Volumes 5-10 why
9 substantial underspending occurred. Graph 7-2 provides a graphical representation
10 of Table 7-5.

¹³ See discussion sections for citations to capital expenditure requests by category.

¹⁴ See SCE’s response to ORA data request DRA-289-PM1, Q.1, Attachment which provided actual 2013 recorded adjusted capital expenditures.

¹⁵ Four Corners was removed from SCE’s application pursuant to the Joint Scoping Memo and Ruling of Assigned Commissioner and Assigned Administrative Law Judges, issued on March 27, 2014, p. 6. Additionally, pursuant to D.12-11-051, O.P. 14, at 882: Southern California Edison Company may establish a Four Corners Memorandum Account to track expenses incurred between October 1, 2012.

¹⁶ ORA recommends the Solar Photovoltaic Program Balancing Account (SPVPBA) currently in place to track generation construction as adopted in D.09-06-049, pp. 44,45, stay in place till the end of 2014, as explained in Section IX below.

¹⁷ Totals include only base rate capital expenditures not under special treatment, Mohave, Four Corners from 2013-2015 and Fuel Cell and the Solar PV Programs from 2013-2014 are excluded.

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**Table 7-5
Non-Nuclear Generation Business Unit Base Rate 2008-2012 Authorized vs. Recorded
O&M (2012 \$000)**

Line NO.	Line of Business		Year					Total
			2008	2009 ¹⁸	2010	2011	2012	
1	Four Corners ¹⁹	Recorded	\$50,106	\$43,654	\$51,745	\$45,997	\$30,680	\$222,182
2		Authorized	40,253	46,521	46,521	46,521	32,892	212,708
3		Total	9,853	(2,867)	5,224	(524)	(2,212)	9,474
4	Hydro	Recorded	44,816	51,398	53,775	60,118	49,204	259,311
5		Authorized	42,385	57,853	57,853	57,853	61,433	277,377
6		Total	2,431	(6,455)	(4,078)	2,265	(12,229)	(18,066)
7	Mountainview ²⁰	Recorded	-	51,286	31,844	28,817	31,060	143,007
8		Authorized	-	47,161	47,161	47,161	45,346	186,829
9		Total	-	4,125	(15,317)	(18,344)	(14,286)	(43,822)
10	Peakers ²¹	Recorded	-	9,646	8,918	9,112	9,074	36,750
11		Authorized	-	10,359	10,359	10,359	12,254	43,331
12		Total	-	(713)	(1,441)	(1,247)	(3,180)	(6,581)
13	Catalina	Recorded	4,101	5,005	5,353	4,320	4,194	22,973
14		Authorized	3,430	6,409	6,409	6,409	4,913	27,570
15		Total	671	(1,404)	(1,056)	(2,089)	(719)	(4,597)
16	Grand Total ²²	Recorded	99,023	160,989	151,635	148,364	124,212	684,223
17		Authorized	86,068	168,303	168,303	168,303	156,838	747,815
18	Total Recorded Minus Authorized		\$12,955	(\$7,314)	(\$16,668)	(\$19,939)	(\$32,626)	(\$63,592)

4 Source: 2008-2012 data see SCE's response to DRA-106-PM1, Q.1, Attachment. Authorized 2008-
5 2012 data see SCE's response to DRA-106-PM1, Q.2, Attachment. (See Ex. ORA-7, workpaper 7-2).

¹⁸ The 2009 GRC D. 09-03-025 did not authorize O&M escalation factors, rather 4.25% and 4.35% percent increases in the overall revenue requirement for 2010 and 2011 (D. 09-03-025, p. 306).

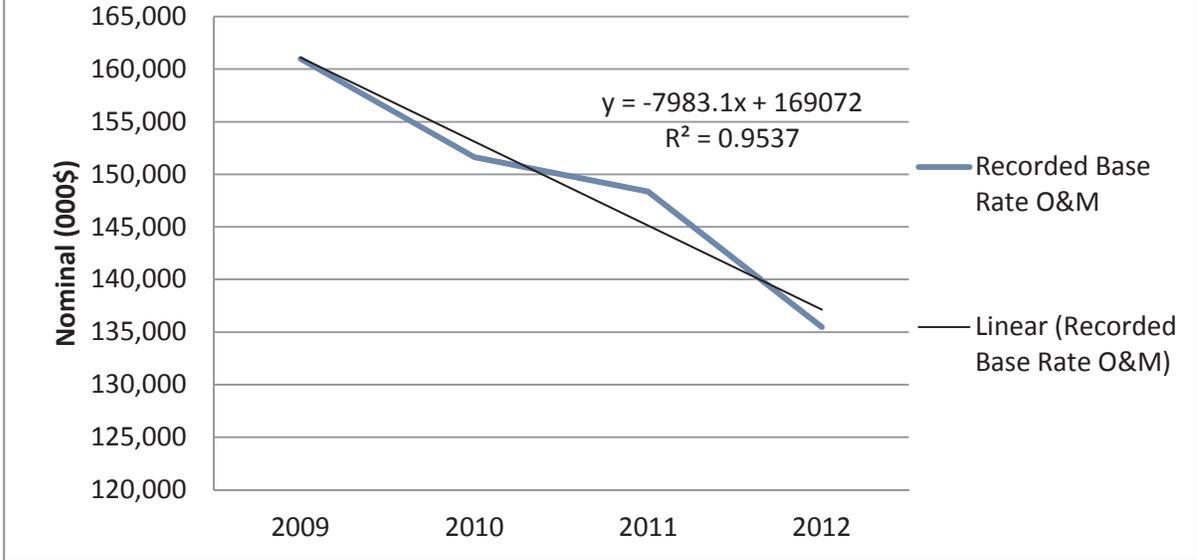
¹⁹ D.12-11-051 authorized 9 months of O&M for 2012. Beginning Oct 2012 O&M expenses were recorded in the Four Corners Memorandum Account (FCMA). ORA subtracted O&M expenses recorded in 2012 recorded in the FCMA from the 2012 total identified in SCE's response to DRA-218-PM1, Q. 7, Attachment, to represent total recorded verses authorized in base rates.

²⁰ Mountainview O&M expenses were subject to a Purchase Power Agreement (PPA) during 2008.

²¹ O&M expenses for Peakers were recorded in the Peakers Memorandum Account during 2008.

²² Mohave O&M expenses have been subject to balancing account treatment since 2006. Solar PV O&M expenses have been subject to balancing/memorandum account treatment since 2009, no costs were recorded in 2008. Fuel cell O&M expenses have been subject to memorandum account treatment since 2010; however expenses were not recorded until 2012.

Graph 7-2: Recorded Base Rate O&M Expenses Non-Nuclear Generation



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2 **IV. DISCUSSION / ANALYSIS OF COAL GENERATION COSTS**

3 Section IV describes and analyzes SCE’s coal generation assets, TY 2015
 4 O&M expense request and the 2013-2015 capital expenditure forecasts. The
 5 Mohave plant is partially owned by SCE and is currently being decommissioned. The
 6 decommissioning project was completed during this General Rate Case (GRC)
 7 cycle. SCE is the operator of the Mohave plant, and has a 56 percent ownership
 8 stake. SCE sold its interest in the Four Corners Generating Station effective
 9 December 30, 2013.

10 **A. Overview of SCE’s Request**

11 SCE requests TY 2015 O&M expenses of \$0.3 million,²³ capital expenditures
 12 of \$0.6 million²⁴ in 2013, closure of the Mohave Balancing Account (MBA)²⁵ and
 13 recovery of Mohave decommissioning costs which ORA addresses in Exhibit ORA-

²³ Ex. SCE-2, Vol. 6, Pt. 1, p. 40.

²⁴ Ex. SCE-2, Vol. 6, Pt. 2, p. 49.

²⁵ Ex. SCE-2, Vol. 5, p. 6.

1 23. All Mohave related costs record in the MBA up to the end of 2014. “[T]he costs
2 that record to the Mohave Balancing Account (MBA) are reviewed in SCE’s Energy
3 Resource Recovery Account (ERRA) Annual Review Phase proceedings.”²⁶ ORA
4 will address recovery of reasonable costs in SCE’s annual ERRA proceeding.

5 SCE successfully sold its interests in the Four Corners Generating Station to
6 Arizona Public Service Company with the sale closing December 30, 2013. SCE no
7 longer requires the Four Corners-related revenue requirement. Pursuant to the Joint
8 Scoping Memo and Ruling of Assigned Commissioner Peevey and Assigned
9 Administrative Law Judges Darling and Dudney, SCE removed costs related to Four
10 Corners.²⁷ SCE provided Parties with a new Results of Operations (RO) model on
11 February 4, 2014 which according to SCE effectively removed Four Corners costs
12 from SCE’s proposed GRC revenue requirement. The removal of Four Corners
13 reduces SCE’s 2015 revenue requirement by \$79 million.²⁸

14 Initially SCE provided testimony for two scenarios in this general rate case: a
15 “sale case” and a “decommission case.” Later, SCE confirmed that it had sold its
16 stake in Four Corners on December 31, 2013, as approved by the Commission in
17 Decision (D.) 12-03-034.

18 **B. Mohave O&M**

19 SCE requests TY 2015 O&M expenses of \$308,000 (SCE share) utilizing an
20 itemized forecast. SCE also proposes to close the Mohave Balancing Account
21 (MBA) and recover O&M expenses in base rates for the 2015-2017 GRC cycle.²⁹
22 The MBA mandates that Mohave O&M funds shall not be redirected to other
23 spending categories protecting ratepayers from any impudent funds shifting, while
24 the coal plant is being decommissioned.

²⁶ Ex. SCE-2, Vol. 6, Pt. 2, p. 50.

²⁷ Joint Scoping Memo, A. 13-11-003, March 27, 2014.

²⁸ A.13-11-003, Southern California Edison Company’s Pre Hearing Conference Statement, February 5, 2014.

²⁹ Ex. SCE-2, Vol. 5, p. 6.

1 In response to ORA discovery, SCE stated “[o]n December, 20, 2013, SCE
2 filed a letter with the Energy Division of the CPUC stating the company's intentions
3 to sell its ownership interest in the Mohave site, not including the Mohave
4 Switchyard and the Mohave-to-Eldorado and Mohave-to-Lugo 500kV transmission
5 lines.”³⁰ Given SCE’s intentions and that the Mohave Switchyard and transmission
6 lines are not generation assets, ORA recommends the MBA be closed and SCE
7 collect zero O&M expenses in generation FERC accounts in TY 2015.

8 **C. Mohave Capital Expenditures**

9 SCE forecasts \$0.6 million in capital expenditures for its share of the
10 decommissioning project at Mohave for 2013.³¹ “[T]he costs that record to the
11 Mohave Balancing Account (MBA) are reviewed in SCE's Energy Resource
12 Recovery Account (ERRA) Annual Review Phase proceedings.”³²

13 The MBA, discussed above, also applies to the capital expenditures. ORA
14 recommends the closure of the MBA starting in 2015.

15 **V. DISCUSSION / ANALYSIS OF HYDRO GENERATION COSTS**

16 Section V describes and analyzes SCE’s Hydroelectric (Hydro) assets, TY
17 2015 O&M expense request and the 2013-2015 capital expenditure forecast. SCE’s
18 Hydro facilities are predominantly in the Big Creek (or Northern) system, and total
19 1,014 MW. The Eastern Region system totals 161 MW.

20 **A. Overview of SCE’s Request**

21 SCE proposes TY 2015 O&M expenses of \$53.2 million, which is, in general,
22 based on 2012 recorded expense of labor and a five-year average of the 2008
23 through 2012 recorded expense for non-labor and fees.³³ SCE’s Hydro capital
24 expenditure forecasts for years 2013, 2014 and 2015, are \$82.1 million, \$72.6

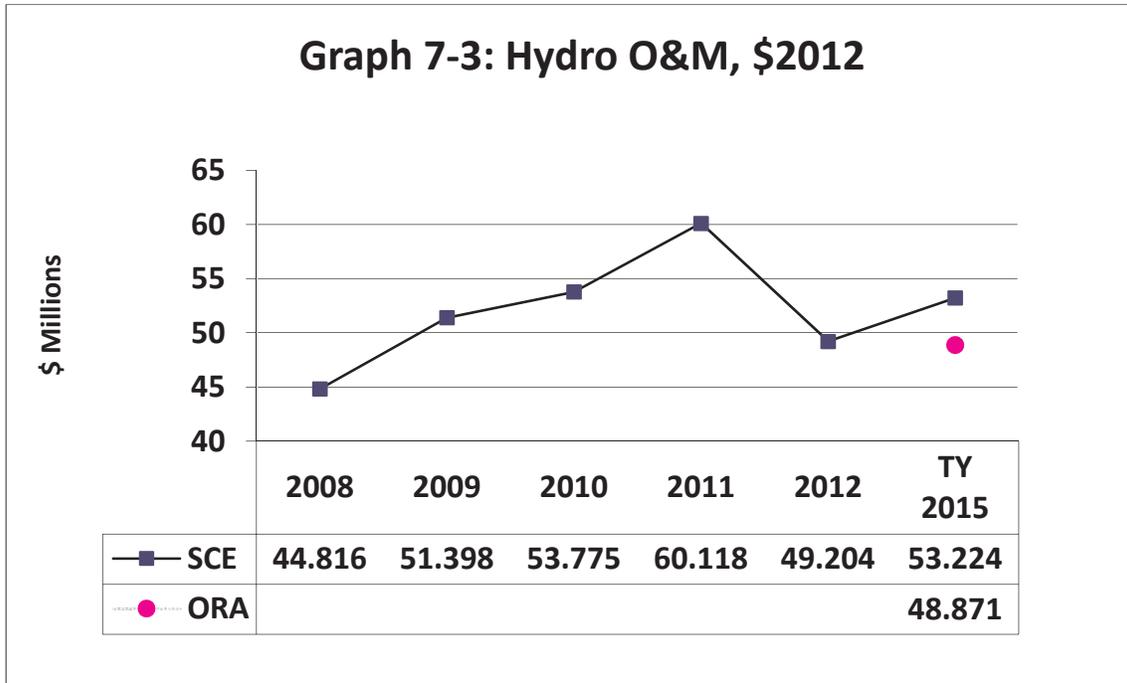
³⁰ SCE’s response to ORA data request DRA-41-PM1, Q.1, Supplemental.

³¹ Ex. SCE-2, Vol. 7, Pt. 2, p. 49.

³² Ex. SCE-2, Vol. 6, Pt. 2, p. 50.

³³ Ex. SCE-2, Vol. 7, Pt. 1, p. 7.

1 million and \$99.2 million, respectively.³⁴ Capital projects are generally forecast on a
 2 project by project basis. Graph 7-3 and Tables 7-6 and 7-7 below show SCE's
 3 historical and TY 2015 O&M costs, along with ORA's recommendation.



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**Table 7-6
 Hydro Forecasting Methods and Results by SCE Aggregated FERC Account SCE vs.
 ORA
 (2012 \$000)**

FERC Act.	Description	Recorded 2012	SCE Forecast 2015	% Increase 2012-2015	\$ Increase 2012-2015	SCE Forecasting Method	ORA Forecasting Method	ORA Forecast 2015	SCE - ORA
536	Total Water For Power	\$ 6,020	\$ 5,971	-1%	\$ (49)	A5	LRY	\$ 6,020	\$ (49)
539	Labor	\$ 19,195	\$ 19,109	0%	\$ (86)	LRY - Op Ex Adjust.	LRY - Op Ex Adjust.	\$ 19,010	\$ 99
	Non-Labor	11,504	12,079	5%	\$ 575	A5 - Op Ex Adjust.	LRY - Op Ex Adjust.	11,356	723
	Total Misc. Hydraulic Power Gen	\$ 30,699	\$ 31,188	2%	\$ 489			\$ 30,366	\$ 822
545	Labor	\$ 9,436	\$ 9,436	0%	\$ -	LRY	LRY	\$ 9,436	\$ -
	Non-Labor	3,049	6,629	117%	\$ 3,580	A5	LRY	3,049	3,580
	Total Misc. Hydraulic Plant	\$ 12,485	\$ 16,065	29%	\$ 3,580			\$ 12,485	\$ 3,580
	Total Hydro	\$ 49,204	\$ 53,224.00	8%	\$ 4,020			\$ 48,871	\$ 4,353

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³⁴ Ex. SCE-2, Vol. 7 Pt. 2, p. 2.

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**Table 7-7
Hydro Recorded O&M Expenses 2008-2012 by FERC Account and SCE vs. ORA 2015
Forecasts
(2012 \$000)³⁵**

Line No.	Hydro Recorded/Adjusted and Forecast Expense By FERC Account												
	FERC ACCT		Recorded/Adjusted					SCE Forecast			ORA Forecast 2015	SCE Estimate Method	ORA Estimate Method
2008			2009	2010	2011	2012	2013	2014	2015				
1	535	Labor	2,263	3,454	4,569	4,489	5,271	5,271	5,271	5,271	5,271	Last Recorded Year	Last Recorded Year
2	Operation Supervision and Engineering	Non-Labor	2,357	2,493	2,601	2,269	1,716	2,287	2,287	2,287	1,716	Five Year Average	Last Recorded Year
3		Other	0	0	0	0	0	0	0	0	0	N/A	N/A
4		Total		4,620	5,947	7,170	6,758	6,987	7,558	7,558	7,558	6,987	
5	536	Labor	0	0	0	0	0	0	0	0	0	N/A	N/A
6	Water for Power	Non-Labor	3,660	4,055	4,376	3,338	4,857	4,057	4,057	4,057	4,857	Five Year Average	Last Recorded Year
7		Other	0	0	0	0	0	0	0	0	0	N/A	N/A
8		Total		3,660	4,055	4,376	3,338	4,857	4,057	4,057	4,057	4,857	
9	537	Labor	1,559	1,617	2,219	1,667	1,653	1,653	1,653	1,653	1,653	Last Recorded Year	Last Recorded Year
10	Hydraulic Expenses	Non-Labor	1,092	1,097	1,242	2,515	650	1,319	1,319	1,319	650	Five Year Average	Last Recorded Year
11		Other	0	0	0	0	0	0	0	0	0	N/A	N/A
12		Total		2,651	2,714	3,461	4,182	2,303	2,972	2,972	2,972	2,303	
13	538	Labor	2,775	2,512	2,759	2,977	2,778	2,778	2,778	2,778	2,778	Last Recorded Year	Last Recorded Year
14	Electric Expenses	Non-Labor	437	273	307	338	161	303	303	303	161	Five Year Average	Last Recorded Year
15		Other	0	0	0	0	0	0	0	0	0	N/A	N/A
16		Total		3,212	2,785	3,066	3,315	2,939	3,081	3,081	3,081	2,939	
17	539	Labor	7,640	8,730	10,483	11,041	9,493	9,423	9,407	9,407	9,308	Last Recorded Year	Last Recorded Year
18	Miscellaneous Hydraulic Power Generation Expenses	Non-Labor	6,536	7,921	8,260	9,850	8,977	8,235	8,169	8,169	8,829	Five Year Average	Last Recorded Year - Op. Excellence
19		Other	0	0	0	0	0	0	0	0	0	N/A	N/A
20		Total		14,176	16,651	18,743	20,891	18,470	17,658	17,577	17,577	18,137	
21	540	Labor	0	0	0	0	0	0	0	0	0	N/A	N/A
22	Rent Expenses	Non-Labor	1,145	2,931	630	3,699	1,163	1,914	1,914	1,914	1,163	Five Year Average	Last Recorded Year
23		Other	0	0	0	0	0	0	0	0	0	N/A	N/A
24		Total		1,145	2,931	630	3,699	1,163	1,914	1,914	1,914	1,163	
25	541	Labor	1,544	1,811	1,986	2,632	2,735	2,735	2,735	2,735	2,735	Last Recorded Year	Last Recorded Year
26	Maintenance Supervision and Engineering	Non-Labor	332	337	742	662	264	467	467	467	264	Five Year Average	Last Recorded Year
27		Other	0	0	0	0	0	0	0	0	0	N/A	N/A
28		Total		1,876	2,148	2,728	3,294	2,999	3,202	3,202	3,202	2,999	
29	542	Labor	630	474	432	499	539	539	539	539	539	Last Recorded Year	Last Recorded Year
30	Maintenance of Structures	Non-Labor	769	848	1,511	1,988	470	1,117	1,117	1,117	470	Five Year Average	Last Recorded Year
31		Other	0	0	0	0	0	0	0	0	0	N/A	N/A
32		Total		1,399	1,322	1,943	2,487	1,009	1,656	1,656	1,656	1,009	
33	543	Labor	1,056	1,019	1,211	1,584	1,683	1,683	1,683	1,683	1,683	Last Recorded Year	Last Recorded Year
34	Maintenance of Reservoirs, Dams and Waterways	Non-Labor	1,717	2,088	2,023	2,452	1,137	1,883	1,883	1,883	1,137	Five Year Average	Last Recorded Year
35		Other	0	0	0	0	0	0	0	0	0	N/A	N/A
36		Total		2,773	3,107	3,234	4,036	2,820	3,566	3,566	3,566	2,820	
37	544	Labor	2,573	3,266	2,846	3,222	3,391	3,391	3,391	3,391	3,391	Last Recorded Year	Last Recorded Year
38	Maintenance of Electrical Plant	Non-Labor	2,497	1,357	1,361	1,806	894	1,583	1,583	1,583	894	Five Year Average	Last Recorded Year
39		Other	0	0	0	0	0	0	0	0	0	N/A	N/A
40		Total		5,070	4,623	4,207	5,028	4,285	4,974	4,974	4,974	4,285	
41	545	Labor	2,326	2,382	2,582	1,761	1,088	1,088	1,088	1,088	1,088	Last Recorded Year	Last Recorded Year
42	Maintenance of Miscellaneous Hydraulic Plant	Non-Labor	1,909	2,734	1,636	1,330	284	1,579	1,579	1,579	284	Five Year Average	Last Recorded Year
43		Other	0	0	0	0	0	0	0	0	0	N/A	N/A
44		Total		4,235	5,116	4,218	3,091	1,372	2,667	2,667	2,667	1,372	
45	Total Operations & Maintenance	Labor	22,366	25,265	29,087	29,872	28,631	28,561	28,545	28,545	28,446		
46		Non-Labor	22,451	26,134	24,689	30,247	20,573	24,745	24,679	24,679	20,425		
47		Other	0	0	0	0	0	0	0	0	0		
48		Total		44,817	51,399	53,776	60,119	49,204	53,306	53,225	53,225	48,871	

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³⁵ For recorded adjusted data and SCE forecasts see SCE's response to ORA data request DRA-Verbal-008-PM1, Q.2c, Attachment. For ORA 2015 forecast including SCE forecasts see Ex. ORA-7, workpaper 7-3.

1 **B. Hydro Generation O&M Expenses**

2 SCE proposes TY 2015 Hydro O&M expenses of \$53.2 million, equal to an
3 8% increase over 2012 expenses. SCE uses last recorded year (LRY) 2012 to
4 forecast labor, and a five-year average to forecast non-labor TY 2015 O&M
5 expenses. ORA recommends TY 2015 Hydro O&M expenses of \$48.9 million
6 (including the Operational Excellence adjustment addressed in Exhibit ORA-19),
7 using LRY 2012 to forecast both labor and non-labor expenses, an adjustment of
8 \$4.3 million to SCE’s forecast based on its analysis explained below.

9 A benchmarking study prepared by Personnel Administration (PA) Consulting
10 of SCE’s Hydro costs identified SCE’s O&M expenses from 2009-2011 as amongst
11 the highest in all three years, relative to other utility Hydro systems. In July 2012, PA
12 Consulting produced a final report that evaluated SCE’s Hydro O&M and capital
13 expenditures from 2009-2011. PA Consulting developed, through regression
14 analysis on a large sample of generators representing all sizes, the Weighted
15 Maintenance Object (WMO), an asset driven weighting factor that takes into account
16 operations’ total cost intensity.³⁶ For each power plant object (unit, station type,
17 dams, gates, valves, tunnels, transmission, etc.) the model calculates the number of
18 O&M WMO-points and Refurbishment WMO-points, depending on the cost intensity
19 of the object and its configuration.³⁷ Total WMO is the sum of O&M WMO and
20 refurbishment WMO.

21 PA Consulting determined SCE’s total cost per WMO was the highest for both
22 2010 and 2011 in the benchmarking study.³⁸ The study also identified SCE’s
23 refurbishment, O&M and labor expenses as the highest or among the highest in all
24 three years (2009-2011) when benchmarked against other utility Hydro systems.³⁹
25 The study does point out that SCE has more valves, stations above ground, and

³⁶ See SCE’s response to ORA data request DRA-54-PM1, Q.1, Attachment, p. 8.
³⁷ See SCE’s response to ORA data request DRA-54-PM1, Q.1, Attachment, p. 10.
³⁸ See SCE’s response to ORA data request DRA-54-PM1, Q.1, Attachment, p. 28.
³⁹ See SCE’s response to ORA data request DRA-54-PM1, Q.1, Attachment, p. 26.

1 Run of River units than its peers.⁴⁰ SCE was able to reduce O&M expenses by more
2 than 18% or \$10.9 million from 2011 to 2012,⁴¹ after implementing PA Consulting
3 performance improvement initiatives.⁴²

4 SCE uses a five-year average to forecast non-labor expenses. For FERC
5 Accounts 539 and 545, SCE's 2015 forecast is approximately \$4.1 million more than
6 its 2012 recorded costs. SCE's testimony states: "[w]ork accelerated in 2011 due to
7 very low rainfall, resulting in lower expenses in 2012. The 2012 base year is
8 therefore not a sufficient forecast to support operations activities during the 2015
9 Test Year."⁴³ This does not explain why a five-year average for FERC Accounts 539
10 and 545 is a better fit than 2012. Similarly, SCE justifies using a five-year average
11 for FERC Account 536 because "[t]he recorded costs shown reflect inherent
12 variations from year to year due to the uncertainty of the FERC fees, which are
13 directly affected by the precipitation at the Hydro facilities and represent the majority
14 of the costs recorded in FERC 536."⁴⁴ However, the difference between using a five-
15 year average and LRY in FERC 536 is \$50,000 or less than 1% of the TY 2015
16 Hydro O&M total.⁴⁵

17 Actual recorded 2012 O&M expenses were \$12.2 million, or 25% less than
18 SCE's 2012 authorized.⁴⁶ SCE's testimony did not discuss the \$12.2 million
19 underspent in 2012, nor if or how it was reallocated. If TY 2015 O&M expenses are
20 based on historical averages, ratepayers will again be drastically overfunding Hydro
21 O&M.

22 Due to SCE's abnormally high (when benchmarked to other utility Hydro
23 systems) O&M expenses for 2009-2011, SCE's lack of support for its position of
24 using a five-year average for non-labor, and SCE's 2012 recorded expenses being

⁴⁰ See SCE's response to ORA data request DRA-54-PM1, Q.1, Attachment, p. 30.

⁴¹ Ex. SCE-2, Vol. 7, Pt. 1, Table III-2, p. 26.

⁴² See SCE's response to ORA data request DRA-54-PM1, Q.1, Attachment, pp. 75-77.

⁴³ Ex. SCE-2, Vol. 7, Pt. 1, p. 20, p. 25.

⁴⁴ Ex. SCE-2, Vol. 7, Pt. 1, p. 13.

⁴⁵ See SCE's response to ORA data request DRA-Verbal-008-PM1, Q.1c, Revised Attachment.

⁴⁶ See SCE's response to ORA data request DRA-106-PM1, Q.2, Attachment.

1 25% less than authorized, ORA recommends the Commission rely on the last
2 recorded year (2012) to forecast TY 2015 labor and non-labor Hydro O&M
3 expenses.

4 **C. Operational Excellence**

5 SCE also includes an Operational Excellence adjustment of \$86,000 in labor
6 and \$139,000 in non-labor⁴⁷ forecast in FERC Account 539. Included in ORA's
7 Hydro forecasts are TY 2015 Operational Excellence adjustments of \$185,000 in
8 labor and \$148,000 in non-labor. ORA provides supporting testimony in Exhibit
9 ORA-19.

10 **D. Hydro Generation Capital Expenditures**

11 SCE's Hydro capital expenditure forecasts for 2013, 2014 and 2015 are \$81.7
12 million, \$72.5 million and \$99.2 million, respectively. ORA recommends capital
13 expenditures for 2013, 2014 and 2015 of \$60.2 million, \$69.4 million, and \$67.0
14 million, for reasons provided below.⁴⁸

15 **1. Adjustment for 2013 SCE Forecast Versus Actual** 16 **Recorded**

17 ORA recommends utilizing actual recorded adjusted capital expenditures of
18 \$60.2 million rather than SCE's 2013 forecast of \$81.7 million. In 2013 SCE spent
19 \$21.5 million less than forecast.⁴⁹ As stated by the Commission "[i]n general we
20 prefer to use actual costs when available."⁵⁰ Although the Commission did in the
21 above instance reallocate funds from the recorded year (2010) to 2011, nearly all
22 those funds were attributable to one project.⁵¹

⁴⁷ Ex. SCE-2, Vol. 7, Pt. 1, workpapers, p. 44.

⁴⁸ See Appendix A for a summary of ORA's adjustments and Ex. ORA-7, workpapers 7-4 and 7-5 for additional detail.

⁴⁹ SCE's response to ORA data request DRA-289-PM1, Q.1, Attachment.

⁵⁰ D.12-11-051, p. 59.

⁵¹ Tulare Fire Damage Flume Replacement.

1 SCE’s workpapers listed its forecast of Hydro capital projects it planned for
2 the years 2013 through 2017.⁵² With reference to those workpapers, ORA asked
3 SCE to identify if the “[p]roject is on a different schedule than listed on workpapers
4 pp. 6-8 (SCE-02, Vol. 07, Pt. 2 which lists all Hydro capital projects SCE seeks
5 funding for from 2013-2017) (if applicable provide the latest schedule for forecasted
6 capital expenditures).”⁵³

7 In response, SCE did not provide “[t]he latest schedule for forecasted capital
8 expenditures”,⁵⁴ but instead identified the following six projects stating, “[a]s of March
9 25, 2014, all Hydro GRC forecasted projects (with the exception of the following six)
10 are on schedule to be completed by their projected in-service date as compared to
11 the forecasted in-service date shown in workpapers”:⁵⁵

- 12 • Mammoth Pool HB Valve Replacement (~10% of forecast spent in 2013)
- 13 • Huntington Lake Dam Geomembrane Liner (Complete)
- 14 • Big Creek 3 – Replace Domestic Water Service (\$50,000 project \$13,000
15 spent)
- 16 • Kern River 1 – Rebuild Tunnel; Phase 5 (No forecast 2013-2015)
- 17 • Florence Lake Replace Min, Pool Weir Gate & Release (Complete)
- 18 • Mammoth Pool Fishwater Generator Replacement (no longer being
19 pursued)

20 Other than the six projects above, SCE’s response implies the remaining 244
21 projects⁵⁶ are on schedule. The actual recorded 2013 spending suggests that many
22 projects will be completed at a fraction of SCE’s forecast. As addressed in
23 subsection V.D.4 below, ORA recommends shifting the schedule of several projects,

⁵² Ex. SCE-2, Vol. 7, Part 2, workpapers, pp. 6-8.

⁵³ SCE response to ORA data request DRA-220-PM1, Q.3z.

⁵⁴ ORA data request DRA-220-PM1, Q.3z.

⁵⁵ SCE response to ORA data request DRA-220-PM1, Q.3z.

⁵⁶ Ex. SCE-2, Vol. 7, Pt. 2, workpapers pp. 6-8. Note: Some projects in Ex. SCE-02, Vol. 7, Pt. 2, use the same WBS Element which accounts for difference in number of projects listed on workpapers pp. 6-8. See SCE’s response to ORA data request DRA-271-PM1, Q.4 for greater detail.

1 including the Mammoth Pool HB Valve Replacement, because doing so is supported
2 by the 2013 recorded data, which ORA proposes be used instead of SCE’s forecast.
3 ORA does not recommend adjustments to the remaining four projects (not including
4 the Mammoth Pool Fishwater Generator Replacement) that SCE identified as the
5 impact on the 2013-2015 forecast is minimal.

6 **2. Adjustment for Completed Hydro Projects**

7 ORA requested SCE to “[i]dentify each Hydro capital project that is complete,
8 as of 4/3/2014. For those projects with costs in 2014 provide the total 2014 capital
9 expenditures.”⁵⁷ SCE identified 27 completed projects.⁵⁸ ORA recommends adjusting
10 SCE’s forecast to reflect the completed projects. The adjustments for completed
11 projects total \$2.7 million and \$4.0 million in 2014 and 2015 respectively.

12 Summarized below are the completed projects with the greatest impact on 2014 and
13 2015 forecasts. SCE also completed (as of 4/3/2014) two projects with forecasts in
14 2016 and 2017 of \$1.7 million and \$6.5 million.⁵⁹ The completed projects which have
15 the greatest impact on 2014 and 2015 forecasts and the Bishop 6 – Project Replace
16 Flowline/Install AVM are summarized below.⁶⁰

17 The Bishop - Communication Fiber project is complete.⁶¹ SCE forecast capital
18 expenditures of \$0.4 million, \$0.5 million and \$2.5 million in 2013, 2014 and 2015.⁶²
19 SCE spent a total of \$37,000 in 2013 to complete the project.⁶³ ORA recommends
20 removing \$0.5 million and \$2.5 million from SCE’s 2014 and 2015 forecasts, as the
21 project is complete.

⁵⁷ SCE response to ORA data request DRA-271-PM1, Q.5.

⁵⁸ SCE response to ORA data request DRA-271-PM1, Q.5.

⁵⁹ SCE’s response to ORA data request DRA-271-PM1, Q.5, Attachment.

⁶⁰ See Appendix A and Ex. ORA-7, workpapers 7-4 and 7-5 for additional detail.

⁶¹ SCE’s response to ORA data request DRA-271-PM1, Q.5, Attachment.

⁶² Ex. SCE-2, Vol. 7, Pt. 2, p. 34.

⁶³ SCE’s response to ORA data request DRA-271-PM1, Q.4, Attachment.

1 The Camp 62 Replace Valve Actuator project is complete.⁶⁴ SCE spent a total
2 of \$2,000 in 2013 to complete the project.⁶⁵ SCE forecast \$165,000 in 2014 to
3 complete the project.⁶⁶ Since the project is complete, ORA recommends removing
4 \$165,000 from SCE's 2014 forecast.

5 The Kaweah 1 - Flowline Rehabilitation project is complete.⁶⁷ SCE forecast
6 capital expenditures of \$1.8 million, \$1.5 million \$1.5 million in 2013, 2014 and
7 2015.⁶⁸ SCE spent a total of \$4.5 million in 2013 and 2014 to complete the project.⁶⁹
8 SCE also forecast capital expenditures of \$1.5 million in 2016 and 2017 for a total
9 project forecast of \$7.8 million or 40% more than the actual amount spent. Although
10 ORA is not addressing 2016 and 2017 forecasts in this testimony, the discrepancy
11 between the forecast cost/timeline and actual cost/timeline is substantial. ORA
12 recommends removing the total 2015 forecast (\$1.5 million) and the difference
13 between the 2014 recorded and 2014 forecast (\$1.2 million).⁷⁰ The 2013 recorded
14 capital expenditures of \$4.1 million are included in ORA's 2013 forecast.

15 Kern River 3 - Flowline Road Work project is complete.⁷¹ SCE forecast capital
16 expenditures of \$2.5 million and \$0.75 million in 2013 and 2014, respectively.⁷² SCE
17 spent a total of \$2.0 million in 2013⁷³ and \$16,000 in 2014 to complete the project.⁷⁴
18 Since the project is complete, ORA recommends removing the difference between
19 SCE's 2014 recorded capital expenditures of \$16,000 and forecast of \$750,000
20 (total \$734,000 adjustment).

⁶⁴ SCE's response to ORA data request DRA-271-PM1, Q.5, Attachment.

⁶⁵ SCE's response to ORA data request DRA-271-PM1, Q.4, Attachment.

⁶⁶ Ex. SCE-2, Vol. 7, Pt. 2, p. 51.

⁶⁷ SCE's response to ORA data request DRA-271-PM1, Q.5, Attachment.

⁶⁸ Ex. SCE-2, Vol. 7, Pt. 2, p. 59.

⁶⁹ SCE's response to ORA data request DRA-271-PM1, Q.4, Attachment.

⁷⁰ SCE's response to ORA data request DRA-271-PM1, Q.4, Attachment.

⁷¹ SCE's response to ORA data request DRA-271-PM1, Q.5, Attachment.

⁷² Ex. SCE-2, Vol. 7, Pt. 2, p. 68.

⁷³ SCE's response to ORA data request DRA-271-PM1, Q.4, Attachment.

⁷⁴ SCE's response to ORA data request DRA-271-PM1, Q.5, Attachment.

1 The Kern River - Automation Upgrade project is complete. SCE forecast
2 capital expenditures of \$2.2 million and \$2.0 million in 2013 and 2014 respectively.⁷⁵
3 SCE spent total of \$1.2 million in 2013 and negative \$31,000 in 2014 to complete
4 the project.⁷⁶ Since the project is complete, ORA recommends reducing SCE's 2014
5 capital expenditures by the recorded negative \$31,000 and forecast of \$2.0 million
6 (total \$2.0 million adjustment).

7 The Mammoth Pool Unit 1 Rewind & Field Poles project is complete. SCE
8 forecast \$2.0 million in 2013 to complete the project.⁷⁷ SCE spent \$2.6 million and
9 \$1.7 million in 2013 and 2014, respectively.⁷⁸ ORA recommends utilizing SCE's
10 actual 2014 recorded expenditures to complete the project, increasing ORA's 2014
11 forecast by \$1.7 million.

12 The Big Creek 1 Construct Administration/Dispatch Office project is
13 complete.⁷⁹ SCE forecast \$8.0 million in 2013 for the project.⁸⁰ SCE spent \$5.9
14 million and \$0.1 million in 2013 and 2014, respectively.⁸¹ ORA recommends utilizing
15 SCE's actual 2014 recorded expenditures to complete the project, increasing ORA's
16 2014 forecast by \$0.1 million.

17 The Bishop 6 - Replace Flowline/Install AVM project is complete.⁸² SCE spent
18 a total of \$15,000 in 2013 to complete the project.⁸³ Although SCE did not forecast
19 capital expenditures in the 2013-2015 timeframe, SCE forecast \$0.15 million and
20 \$5.0 million in 2016 and 2017, respectively.⁸⁴ The expenditures for the project are
21 included in ORA's 2013 recommendation as expenditures are included in 2013

⁷⁵ Ex. SCE-2, Vol. 7, Pt. 2, p. 27.

⁷⁶ SCE's response to ORA data request DRA-271-PM1, Q.5, Attachment.

⁷⁷ Ex. SCE-2, Vol. 7, Pt. 2, p. 41.

⁷⁸ SCE's response to ORA data request DRA-271-PM1, Q.5, Attachment.

⁷⁹ SCE's response to ORA data request DRA-271-PM1, Q.5, Attachment.

⁸⁰ Ex. SCE-2, Vol. 7, Pt. 2, p. 69.

⁸¹ SCE's response to ORA data request DRA-271-PM1, Q.5, Attachment.

⁸² SCE's response to ORA data request DRA-271-PM1, Q.5, Attachment.

⁸³ SCE's response to ORA data request DRA-271-PM1, Q.4, Attachment.

⁸⁴ Ex. SCE-2, Vol. 7, Pt. 2, p. 59.

1 recorded data. ORA makes no adjustments to 2014 or 2015 to address SCE's
2 substantial overestimate.

3 **3. Adjustment for Project No Longer Pursued**

4 SCE originally forecast capital expenditures of \$1.0 million, \$1.5 million and
5 \$9.0 million for years 2013, 2014, and 2015, respectively for the Mammoth Pool
6 Fishwater Generator Replacement project. In response to ORA discovery, SCE
7 stated, "[S]CE will be removing this project from our GRC forecast. SCE had
8 forecast capital expenditures of \$29.3 million for the Mammoth Pool (MP) Fishwater
9 Generator Replacement project, and had forecast an in-service date of December 1,
10 2017."⁸⁵ ORA recommends removing the forecast capital expenditures for the
11 Mammoth Pool Fishwater Generator Replacement, adjusting SCE's Hydro forecast
12 by \$1.5 million and \$9.0 million in 2014 and 2015.⁸⁶

13 **4. Adjustment for Projects Off Schedule**

14 ORA recommends making adjustments for projects which are off the
15 schedule proposed in SCE's testimony.⁸⁷ ORA requested "[a]ctual 2013 capital
16 expenditures by project listed on SCE-2, Vol. 7, pt. 2, workpapers, p. 6-8,"⁸⁸ which
17 indicated 12 projects with forecasts in 2013 that had no recorded capital in 2013.⁸⁹
18 Of the 12 projects identified in SCE's response to DRA-271-PM1 Q.4, none were
19 identified as off the schedule contained in Exhibit SCE-2, Vol. 7, Pt. 2, workpapers 6-
20 8 in SCE's response to DRA-220-PM1 Q.3, (z). SCE's responses to DRA-220-PM1
21 Q.3 (z), and DRA-271-PM1 Q.4 contradict each other. To reconcile these
22 contradictions, ORA recommends shifting the schedule of the 12 projects one year
23 later, consistent with SCE's actual 2013 capital spending. ORA's recommendation

⁸⁵ SCE's response to ORA data request DRA-115-PM1, Q.7.

⁸⁶ See Appendix A and Ex. ORA-7, workpapers 7-4 and 7-5 for additional detail.

⁸⁷ Ex. SCE-2, Vol. 7, Pt. 2.

⁸⁸ SCE's response to ORA data request DRA-271-PM1, Q.4.

⁸⁹ SCE's response to ORA data request DRA-271-PM1, Q.4 Attachment.

1 results in the addition of \$3.9 million in 2014 and a reduction of \$12.8 million in 2015,
2 to SCE's forecast.⁹⁰

3 **5. Adjustment for Excessive Contingency**

4 SCE says "the typical contingency embedded in each project cost forecast
5 during the final engineering phase is in the range of 10% to 15%."⁹¹ ORA requested
6 information on the contingency built into forecast Hydro projects greater than \$5.0
7 million. SCE's response identified larger Hydro projects forecast in SCE's TY 2015
8 testimony included contingencies up to 30%.⁹² Neither SCE's testimony nor its
9 workpapers support SCE's contingency forecasts.

10 The Commission has addressed contingency in each of SCE's last two GRC
11 decisions⁹³ and has allocated a range of contingency, from zero⁹⁴ for non-electric
12 facilities, to 40% based on the Association for the Advancement of Cost Engineering
13 (AACE) guidelines.⁹⁵ In this case, with large scale Hydro projects ORA recommends
14 the Commission adjust SCE's 2014 and 2015 forecasts to reflect no more than 10%
15 contingencies for each Hydro project over \$5.0 million, as SCE has not justified
16 higher contingencies. In its last GRC, SCE stated "[i]t is both reasonable based on
17 experience, and industry practice, for construction projects to include a 10%
18 contingency factor."⁹⁶ ORA's adjustment does not address SCE's Hydro capital
19 projects with less than \$5.0 million forecast in capital expenditures from 2013-2017,
20 which may be in excess of 10%. The projects that ORA recommends be reduced to
21 reflect a 10% contingency are summarized below.

⁹⁰ See Appendix A and Ex. ORA-7, workpapers 7-4 and 7-5 for additional detail.

⁹¹ SCE's response to ORA data request DRA-106-PM1, Q.22 a-c.

⁹² SCE's response to ORA data request DRA-220-PM1, Q.3 a-z, Attachment.

⁹³ D. 09-03-025, D. 12-11-051.

⁹⁴ D. 09-03-025, p. 247; D. 12-11-051, p. 568.

⁹⁵ D. 12-11-051, pp. 36-37.

⁹⁶ D. 12-11-051, p. 568.

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**Table 7-8
Contingency Adjustment Hydro Capital Projects
(Nominal \$000)**

Lee Vining Substation	450	4,000	4,450
Gem Lake Dam - Reface Down Stream Side	60	860	920
Waugh Dam - Seismic Upgrade/Pressure Grout	70	70	140
Rush Creek - Rebuild Tram Track and Replace Tram Car	500	10	510
Kern River 3 - Rebuild Tunnel	810	75	885
Agnew Dam - Resurface Dam/Seismic Upgrade	1038	0	1,038
Total ORA Contingency Adjustment	2,928	5,015	7,943

4 SCE’s Lee Vining Substation forecast included 30% contingency. ORA
5 recommends reducing SCE’s 2014 and 2015 forecasts by 20% to reflect a 10%
6 contingency, resulting in reductions of \$0.45 million and \$4.0 million in 2014 and
7 2015, respectively.

8 SCE’s Gem Lake Dam - Reface Down Stream Side forecast included a 30%
9 contingency. ORA recommends reducing SCE’s 2014 and 2015 forecasts by 20% to
10 reflect a 10% contingency, resulting in reductions of \$0.06 million and \$0.86 million
11 in 2014 and 2015, respectively.

12 SCE’s Waugh Dam - Seismic Upgrade/Pressure Grout forecast included a
13 30% contingency. ORA recommends reducing SCE’s 2014 and 2015 forecasts by
14 20% to reflect a 10% contingency, resulting in reductions of \$0.075 million and
15 \$0.075 million in 2014 and 2015, respectively.

16 SCE’s Rush Creek - Rebuild Tram Track and Replace Tram Car forecast
17 included a 20% contingency. ORA recommends reducing SCE’s 2014 and 2015

1 forecasts by 10% to reflect a 10% contingency, resulting in reductions of \$0.5 million
2 and \$0.01 million in 2014 and 2015, respectively.

3 SCE's Kern River 3 - Rebuild Tunnel forecast included a 25% contingency.
4 ORA recommends reducing SCE's 2014 and 2015 forecasts by 15% to reflect a
5 10% contingency, resulting in reductions of \$0.810 million and \$0.075 million in 2014
6 and 2015, respectively.

7 SCE's Agnew Dam - Resurface Dam/Seismic forecast included a 25%
8 contingency. ORA recommends reducing SCE's 2014 and 2015 forecasts by 15% to
9 reflect a 10% contingency, resulting in reductions of \$1.0 million in 2014.

10 **6. Adjustment for San Gorgonio Decommissioning**

11 SCE's San Gorgonio decommissioning capital expenditure forecasts for years
12 2013, 2014 and 2015 are \$0.376 million, \$0.500 million and \$2.0 million,
13 respectively. ORA recommends \$0.2 million, \$0.5 million and \$0.5 million in 2013,
14 2014 and 2015. For 2013 ORA recommends using actual recorded 2013
15 expenditures of \$0.2 million.⁹⁷ ORA's recommendation provides a base level of
16 funding consistent with historical spending. SCE was authorized \$7.0 million for the
17 project in the 2009 GRC decision and was further authorized \$1.0 million in the 2012
18 GRC for 2010-2012 activities. SCE spent a total of \$1.894 million from 2008-2013.⁹⁸
19 Additionally, SCE provides no support for its 2015 GRC forecast other than the
20 same exact language used in its 2012 GRC application.⁹⁹ In response to ORA
21 discovery seeking support for SCE's forecast, SCE stated "[S]an Gorgonio Canyon -
22 Decommissioning: This estimate was developed based on expert
23 experience/judgment of field personnel and a local contractor familiar with demolition
24 work of this nature."¹⁰⁰ Due to the previously approved funding, SCE's failure to
25 update the status of the decommissioning project, and the lack of justification for

⁹⁷ See SCE's response to ORA data request DRA-289-PM1, Q.1, Attachment.

⁹⁸ SCE's response to ORA data request DRA-106-PM1, Q.24.

⁹⁹ See A.10-11-015, Ex. SCE-2, Vol. 7, Pt. 2, pp. 118-119 (2012 GRC), and Ex. SCE-2, Vol. 7, Pt. 2, p. 78 (2015 GRC).

¹⁰⁰ SCE's response to ORA data request DRA-10-PM1, Q.5.

1 additional funding, ORA recommends a total of \$1.2 million for the 2013-2015 GRC
2 cycle, providing a base level of ratepayer funding.

3 **VI. DISCUSSION / ANALYSIS OF MOUNTAINVIEW GENERATION**
4 **COSTS**

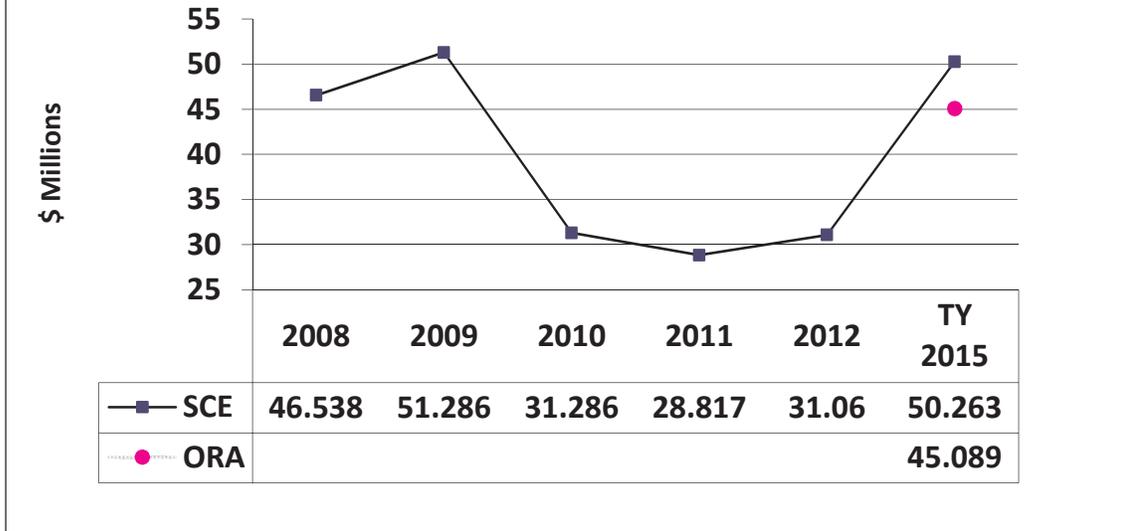
5 Section VI describes and analyzes SCE's Mountainview Generation Facility,
6 TY 2015 O&M expense request, and the 2013-2015 capital expenditure forecast.
7 Mountainview Power Plant (Mountainview) located in Redlands, California, began
8 commercial operation in January 2006, with a nominal output of 1,050 MW,
9 consisting of two modern combined-cycle operating units (3 & 4) with four natural
10 gas fired turbines feeding two steam turbines.

11 **A. Overview of SCE's Request**

12 SCE requests TY 2015 O&M expenses of \$50.3 million, a 72 percent
13 increase over 2012 recorded expenses, and capital expenditures of \$9.6 million,
14 \$1.3 million and \$1.1 million for 2013, 2014 and 2015, respectively.

15 The following Graph 7-4 and Tables 7-9 to 7-10 summarize SCE's historical
16 Mountainview O&M expenses, TY 2015 forecast and ORA's recommendations.

Graph 7-4: Mountainview O&M, \$2012



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**Table 7-9
Mountainview Forecasting Methods and Results by SCE Aggregated FERC Account
SCE vs. ORA
(\$000 2012)**

FERC Act.	Description	Recorded 2012	SCE Forecast 2015	% Increase 2012-2015	\$ Increase 2012-2015	SCE Forecasting Method	ORA Forecasting Method	ORA Forecast 2015	SCE - ORA
549	Labor	\$ 3,790	\$ 3,790	0%	\$ -	LRY	LRY	\$ 3,790	\$ -
	Non-Labor	4,491	4,491	0%	-	LRY	LRY	4,491	0
	Total Operations Expense	\$ 8,281	\$ 8,281	0%	\$ -			\$ 8,281	\$ -
554	Labor	\$ 3,718	\$ 3,945	6%	\$ 227	LRY + HGPI Overhaul ↑	LRY + HGPI Overhaul ↑	\$ 3,945	\$ -
	Non-Labor	6,652	9,852	48%	3,200	A 2008, 2010- 2011 + HGPI	LRY + HGPI Overhaul	8,153	1,699
	Other	12,409	28,185	127%	15,776	IF	IF	24,710	3,475
	Total Maint. Mis. Power Gen	\$ 22,779	\$ 41,982	84%	\$ 19,203			\$ 36,808	\$ 5,174
	Total Mountainview	\$ 31,060	\$ 50,263	62%	\$ 19,203			\$ 45,089	\$ 5,174

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**Table 7-10
Mountainview Recorded O&M Expenses 2008-2012 by FERC Account and SCE vs.
ORA TY 2015 Forecasts
(2012 \$000)¹⁰¹**

Line No.	<i>Mountainview Recorded/Adjusted and Forecast Expense By FERC Account</i>													
	FERC ACCT		Recorded/Adjusted					SCE Forecast			ORA Forecast	SCE Estimate	ORA Estimate	
2008			2009	2010	2011	2012	2013	2014	2015	2015	Method	Method		
1	FERC ACCT													
2	546	Labor	1,591	1,601	2,057	2,012	2,267	2,267	2,267	2,267	2,267	Last Recorded Year	Last Recorded Year	
3	Operation Supervision	Non-Labor	1,131	629	497	523	438	438	438	438	438	Last Recorded Year	Last Recorded Year	
4	and Engineering	Other	0	0	0	0	0	0	0	0	0	N/A	N/A	
5		Total	2,722	2,230	2,554	2,535	2,705	2,705	2,705	2,705	2,705			
6	548	Labor	228	281	284	252	245	245	245	245	245	Last Recorded Year	Last Recorded Year	
7	Generation Expenses	Non-Labor	4,878	4,089	3,239	2,906	3,077	3,077	3,077	3,077	3,077	Last Recorded Year	Last Recorded Year	
8		Other	0	0	0	0	0	0	0	0	0	N/A	N/A	
9		Total	5,106	4,370	3,523	3,158	3,322	3,322	3,322	3,322	3,322			
10	549	Labor	1,408	1,755	1,315	1,243	1,278	1,278	1,278	1,278	1,278	Last Recorded Year	Last Recorded Year	
11	Miscellaneous Other Power	Non-Labor	2,456	1,756	1,000	1,053	976	976	976	976	976	Last Recorded Year	Last Recorded Year	
12	Other Generation Expenses	Other	0	0	0	0	0	0	0	0	0	N/A	N/A	
13		Total	3,864	3,511	2,315	2,296	2,254	2,254	2,254	2,254	2,254			
14	550	Labor	0	0	0	0	0	0	0	0	0	Last Recorded Year	Last Recorded Year	
15	Rents	Non-Labor	2	1	0	0	0	0	0	0	0	Last Recorded Year	Last Recorded Year	
16		Other	0	0	0	0	0	0	0	0	0	N/A	N/A	
17		Total	2	1	0	0	0	0	0	0	0			
18	551	Labor	366	386	390	342	319	319	319	319	319	Last Recorded Year	Last Recorded Year	
19	Maintenance Supervision	Non-Labor	656	588	405	434	286	445	423	423	286	Itemized Forecast	Last Recorded Year	
20	and Engineering	Other	0	0	0	0	0	0	0	0	0	N/A	N/A	
21		Total	1,022	974	795	776	605	764	742	742	605			
22	552	Labor	30	458	545	411	376	376	376	376	376	Last Recorded Year	Last Recorded Year	
23	Maintenance of Structures	Non-Labor	761	982	2,474	671	180	1,022	965	965	180	Itemized Forecast	Last Recorded Year	
24		Other	0	0	0	0	0	0	0	0	0	N/A	N/A	
25		Total	791	1,440	3,019	1,082	556	1,398	1,341	1,341	556			
26	553	Labor	2,494	2,934	2,331	2,424	2,463	2,463	2,463	2,463	2,463	Last Recorded Year	Last Recorded Year	
27	Maintenance of Generating	Non-Labor	4,298	9,657	5,497	5,455	3,769	24,147	4,551	6,052	5,270	Itemized Forecast	Last Recorded Year + Adjustment	
28	and Electric Plant	Other	22,648	23,991	10,528	8,328	12,409	13,427	15,152	28,185	24,710	Itemized Forecast	Itemized Forecast	
29		Total	29,440	36,582	18,356	16,207	18,641	40,037	22,166	36,700	32,443			
30	554	Labor	465	550	520	550	560	560	560	787	787	Last Recorded Year + Adjustment	Last Recorded Year + Adjustment	
31	Maintenance of Miscellaneous	Non-Labor	3,126	1,628	762	2,213	2,417	2,333	2,412	2,412	2,417	Itemized Forecast	Last Recorded Year	
32	Other Power Generation Plant	Other	0	0	0	0	0	0	0	0	0	N/A	N/A	
33		Total	3,591	2,178	1,282	2,763	2,977	2,893	2,972	3,199	3,204			
34	Total Operations &	Labor	6,582	7,965	7,442	7,234	7,508	7,508	7,508	7,735	7,735			
35	Maintenance	Non-Labor	17,308	19,330	13,874	13,255	11,143	32,438	12,842	14,343	12,644			
36		Other	22,648	23,991	10,528	8,328	12,409	13,427	15,152	28,185	24,710			
37		Total	46,538	51,286	31,844	28,817	31,060	53,373	35,502	50,263	45,089			

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¹⁰¹ For recorded adjusted data and SCE forecasts see SCE's response to ORA data request DRA-Verbal-008-PM1, Q.2e, Attachment. For ORA 2015 Forecast including SCE forecasts see Ex. ORA-7, workpaper 7-6.

B. O&M Expenses: Mountainview FERC 546, 548-554

SCE’s TY 2015 O&M expense for Mountainview consists of four cost components;¹⁰² ORA recommends different forecasts for three of these components. Table 7-11 below summarizes SCE’s requests and ORA’s recommendations.

**Table 7-11
Cost Components Mountainview TY 2015 O&M Forecast
(\$000 2012)**

Cost Component	ORA	SCE	SCE-ORA
Base Forecast ¹⁰³ (labor & non-labor)	\$18.651	\$20.350 ¹⁰⁴	\$1.699
Non-CSA ¹⁰⁵ 2016 Overhaul Adjustment (labor & non-labor)	1.729	1.729 ¹⁰⁶	0
CSA Annual Fees (other)	XXXX	XXXX ^{107 108}	XXXX
CSA Major Outage Fees (other)	XXXX	XXXX ^{109 110}	XXXX
Total	\$45.089	\$50.263	\$5.174

¹⁰² Ex. SCE-2, Vol. 8, p. 16.

¹⁰³ See Appendix B – Mountainview Base O&M Forecasts and ORA-7, workpaper 7-7 for calculations.

¹⁰⁴ SCE response to ORA data request DRA-115-PM1, Q.6, Attachment.

¹⁰⁵ Contract Service Agreement.

¹⁰⁶ SCE response to ORA data request DRA-115-PM1, Q.6, Attachment.

¹⁰⁷ See Ex. SCE-2, Vol. 8C, workpaper 2, line 10, SCE asserts confidential information.

¹⁰⁸ See Ex. SCE-2, Vol. 8C, workpaper 2, line 14 and see ORA-7C, workpaper 7-7 for calculations, SCE asserts confidential information.

¹⁰⁹ See Ex. SCE-2, Vol. 8C, workpaper 2, line 22, SCE asserts confidential information.

¹¹⁰ See Ex. ORA-7, workpaper 7-8C for calculations, SCE asserts confidential information.

1 **1. Base Labor and Non-Labor Forecast**

2 The first O&M expense cost component includes the annually reoccurring
3 labor and non-labor or “base” O&M expenses. ORA recommends an adjustment of
4 \$1.7 million to SCE’s non-labor forecast and makes no adjustments to SCE’s base
5 O&M labor forecast of \$7.5 million.¹¹¹

6 SCE forecasts base O&M non-labor for the TY 2015 of \$12.842 million,
7 utilizing a mix of LRY (2012) (operations) and four-year averaging (maintenance).
8 ORA recommends using LRY (2012) for non-labor accounts, a TY 2015 base
9 forecast of \$11.143 million, consisting of \$7.5 million labor and \$11.1 million non-
10 labor.

11 To forecast base labor and non-labor O&M, SCE consolidated generation and
12 operation supervision FERC Accounts 546-550 into FERC Account 549, using LRY
13 to forecast labor and non-labor. For maintenance FERC Accounts 551-554
14 (consolidated into FERC Account 554) SCE uses a four-year average of non-
15 overhaul years (2008, 2010-2012) to forecast non-labor and LRY (2012) for labor.¹¹²

16 SCE’s non-labor maintenance account four-year averaging method is based
17 on: (1) “[I]n 2012 relatively few breakdowns were incurred, and relatively less
18 maintenance was performed as compared to prior years while awaiting the extended
19 outages for the planned 2013 MI overhauls,” and (2) “[r]ecorded non-labor costs in
20 this account have fluctuated during the 2008 through 2012 so an average is an
21 appropriate base forecast.”¹¹³ While 2009 was an overhaul year not reflective of
22 “base” operations (which SCE excludes from its forecast); in 2008, Mountainview
23 O&M and capital expenditures were not recorded in base rates, but rather through a
24 Power Purchase Agreement (PPA).¹¹⁴ From 2010 to 2012, all non-overhaul years,
25 non-labor expenses year-over-year have trended down. The recorded non-labor
26 data suggests SCE has become more familiar with efficiently operating

¹¹¹ Ex. SCE-2, Vol. 8, p. 15.

¹¹² Ex. SCE-2, Vol. 8, p. 18.

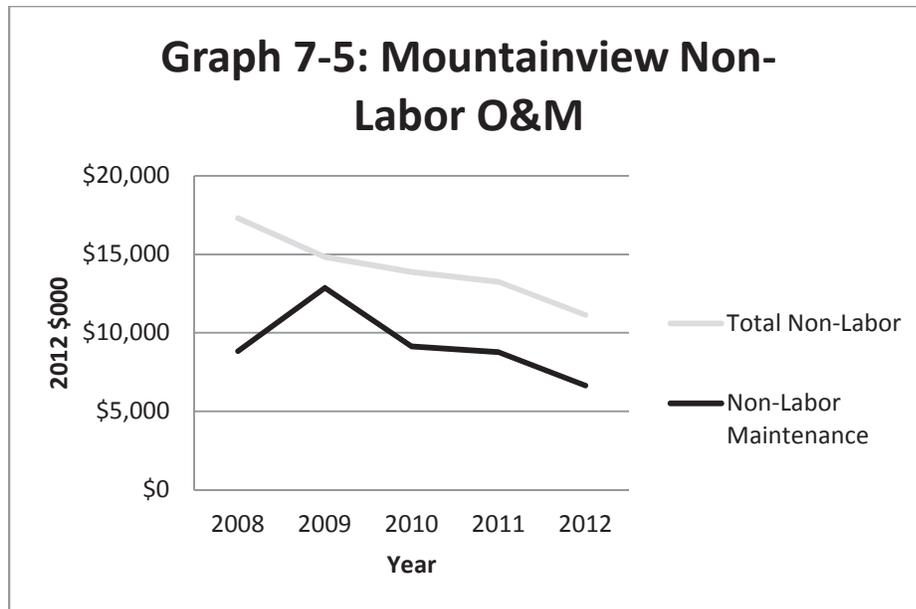
¹¹³ Ex. SCE-2, Vol. 8, p. 28.

¹¹⁴ D.09-03-025, O.P. 21.

1 Mountainview. Although the current trend is likely to continue, utilizing LRY to
2 forecast non-labor provides SCE sufficient ratepayer funding in the event that more
3 breakdowns occur in the TY 2015 than in the base year 2012.

4 Due to the consistent trend, ORA recommends using LRY (2012) for non-
5 labor O&M expenses for both maintenance and operations accounts, which results
6 in a base non-labor forecast of \$11.1 million, an adjustment of \$1.7 million to SCE's
7 forecast.

8 The table below presents total non-labor and total non-labor maintenance
9 (FERC Accounts 551-554).



10

11 ORA's use of the LRY (2012) for labor and non-labor in all Mountainview
12 FERC Accounts results in a total TY 2015 base O&M expense forecast of \$18.651
13 million, comprising \$7.735 million labor and \$11.143 million non-labor.¹¹⁵

¹¹⁵ Ex. ORA-7, workpaper 7-9.

1 **2. Non-CSA 2016 Overhaul Adjustment Labor and**
2 **Non-Labor**

3 For the second component, SCE adds to its base labor and non-labor
4 forecast two upward adjustments, \$0.227 million to labor and \$1.501 million to non-
5 labor. SCE's TY 2015 adjustment addresses the increased O&M maintenance
6 expenses associated with the forecast 2016 Hot Gas Path Inspection (HGPI) not
7 funded by the Contract Service Agreement (CSA) with GE. SCE's forecast
8 adjustment is calculated from the difference of 2009 base labor and non-labor, and
9 the average of 2008 and 2010-2012 base labor and non-labor, annualizing the
10 increase over the rate case cycle.¹¹⁶ ORA makes no adjustments to this forecast.

11 **3. CSA Annual Fees Other Expenses**

12 The third component of SCE's TY 2015 O&M forecast is for Contract Service
13 Agreement (CSA) Fees. SCE forecasts XXXX million in CSA Annual Fees
14 annualized over the rate case cycle 2015-2017, for forecast 2016 HGPI overhauls.¹¹⁷
15 ORA recommends XXXXmillion for CSA Annual Fees based on its analysis
16 explained below.

17 The CSA Annual Fee consists of a Fixed Fee, a Variable Fee and a
18 Performance Fee paid to General Electric (GE). Generally, SCE forecasts the 2015
19 through 2017 costs of these three fees by: (1) escalating the 2008 through 2012
20 recorded costs to 2012 dollars, (2) averaging five-year recorded costs, (3) applying
21 forecast CSA escalation for 2013-2017, and (4) annualizing the payments over the
22 2015-2017 rate case cycle.¹¹⁸ The Variable Fee portion also includes the added
23 costs for the Tier 1 to Tier 2 pricing increase forecast to occur in 2014. Table 7-12
24 below summarizes the types of annual CSA fees paid to GE, and SCE's forecasting
25 method compared to ORA's (differences are underlined).

¹¹⁶ Ex. SCE-2, Vol. 8, pp. 27-28, and calculations DRA-115-PM1, Q.6, Attachment.

¹¹⁷ Ex. SCE-2, Vol. 8C, p. 29, SCE asserts confidential information.

¹¹⁸ Ex. SCE-2, Vol. 8C, p. 29, SCE asserts confidential information.

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Table 7-12
Annual Fees Paid to General Electric
(\$000 2012)

Annual Fees Paid to General Electric (GE)			
XXXXXX	XXXXXXXX¹¹⁹	XXXXXXXX¹²⁰	XXXXXXXX¹²¹
XXXXXX	XXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXX XXXXXX	XXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXX
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4 ORA utilizes SCE’s method for the Fixed and Performance Fees, but ORA
5 uses an actual recorded CSA Annual Escalation Factor for 2013,¹²² which affects the
6 Total Escalation Factor (TEF).¹²³ To forecast the remaining 2014-2017 CSA Annual
7 Escalation Factor, ORA averaged 2009-2013 recorded factors, while SCE averaged

¹¹⁹ Ex. SCE-2, Vol. 8C, workpapers, pp. 31-33, SCE asserts confidential information.

¹²⁰ Ex. SCE-2, Vol. 8, p. 29.

¹²¹ Ex. ORA-7, workpaper 7-8 for calculations.

¹²² Ex. SCE-2, Vol. 8C, workpaper, pp 1-2, Line 3, SCE asserts confidential information.

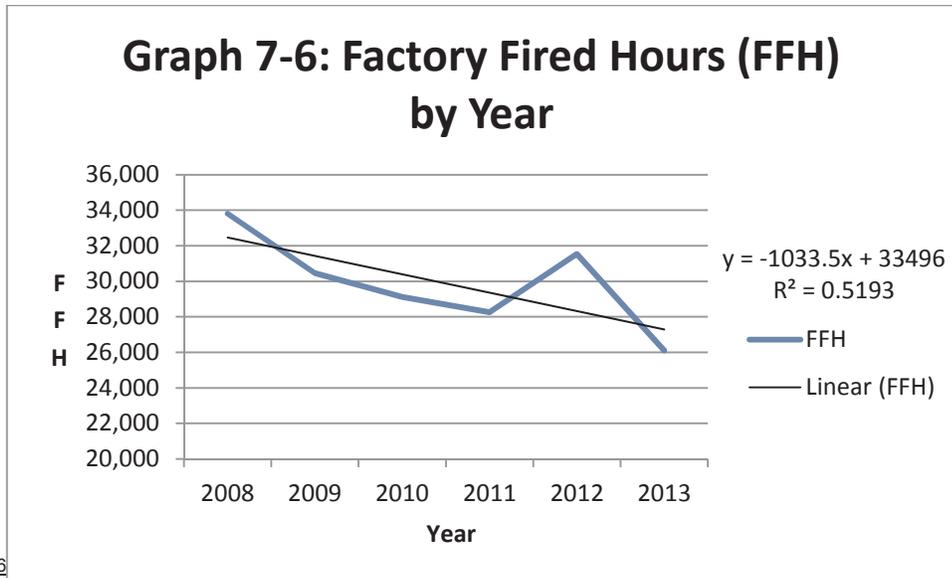
¹²³ Ex. ORA-7, workpaper 7-8C for calculations, SCE asserts confidential information.

1 2008-2012 factors. ORA's method results in a Fixed Fee Forecast of XXXXX million
2 and a Performance Fee forecast of XXXX million adjustments to SCE's forecast of
3 XXXXX and XXXXX respectively.

4 ORA's recommendation for the Variable Fee consists of using the actual
5 recorded Factory Fired Hours (FFH), 2009-2011, for each unit rather than SCE's
6 method of averaging recorded yearly payments. 2008 is not used due to
7 Mountainview being subject to a PPA rather than O&M recorded in base rates, nor is
8 2013 used due to the Major Overhaul. Additionally, yearly recorded FFH have
9 trended down from 2008-2013. Recorded yearly payments (SCE's method) are not
10 based on the actual FFH, but rather on SCE's forecast FFH. Payments to General
11 Electric are adjusted the next quarter reconciling differences between forecast and
12 actual FFH.¹²⁴ ORA's forecasting method utilized actual FFH for each of the four
13 combustion turbines, by year, and then applied Tier 2 rates yearly payments (Tier 2
14 rates are forecast by SCE to lapse in 2014) for 2008-2012. ORA then took the 2008-
15 2012 average and applied actual 2013 escalation rates, finally annualizing 2015-
16 2017 to reach a TY 2015 forecast of XXXXX million, which is a XXXXX million
17 adjustment to SCE's forecast.¹²⁵ Graph 7-6 shows Factory Fired Hours by year.

¹²⁴ Ex. SCE-2, Vol. 8C, workpapers, pp. 31-33, SCE asserts confidential information.

¹²⁵ See Ex. ORA-7, workpaper 7-7 for calculations.



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4. CSA Major Overhaul Fees

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The fourth component of SCE's TY 2015 O&M forecast is the Contract Service Agreement (CSA) Fees. SCE forecasts XXXXX million in Major Outage Fees, annualized over the rate case cycle 2015-2017, for forecast 2016 HGPI overhauls. ORA recommends XXXXX million for Major Outage Fees, annualized over the rate case cycle 2015-2017, for forecast 2016 HGPI overhauls based on the analysis explained below.

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ORA applied actual 2013 escalation rates and then used the average of 2009-2013 recorded escalation rates to forecast 2014-2017 rates, while SCE used 2008-2012 recorded escalation rates to forecast 2013-2017 rates.

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C. Mountainview Capital Expenditures

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SCE's Mountainview capital expenditure forecasts for 2013, 2014 and 2015 are \$9.6 million, \$1.3 million and \$1.1 million, respectively.¹²⁷ ORA recommends \$9.3 million for 2013, SCE's actual recorded capital expenditures for 2013 of \$9.3 million,¹²⁸ an adjustment of \$0.3 million. ORA makes no adjustments to SCE's

¹²⁶ SCE response to ORA data request DRA-279-PM1, Q.1, Attachment.

¹²⁷ Ex. SCE-2, Vol. 8, p. 37.

¹²⁸ See SCE's response to ORA data request DRA-289-PM1, Q.1, Attachment.

1 2014 or 2015 forecast capital expenditures of, \$1.3 million and \$1.1 million
2 respectively.

3 **VII. DISCUSSION / ANALYSIS OF PEAKER GENERATION**

4 SCE owns and operates five gas-fired power plants (Peakers) providing an
5 aggregate of 245 MWs. The peaking units are of recent vintage and have been
6 installed pursuant to the Commission's 2006 Resolution.¹²⁹ The simple-cycle, quick
7 start units are intended for peak load operations to support system reliability. The
8 first four Peakers, Barre, Center, Grapeland, and Mira Loma, began commercial
9 operation in August 2006. Due to permitting delays, McGrath began commercial
10 operation in November 2012.¹³⁰

11 **A. Overview of SCE's Request**

12 SCE requests \$10.5 million in O&M expenses for TY 2015, an increase of 15
13 percent over 2012.¹³¹ SCE requests capital expenditures for 2013, 2014 and 2015 of
14 \$1.1 million, \$3.0 million and \$3.0 million, respectively.¹³² SCE's Peaker O&M and
15 capital requests are presented in Exhibit SCE-2, Vol. 9.

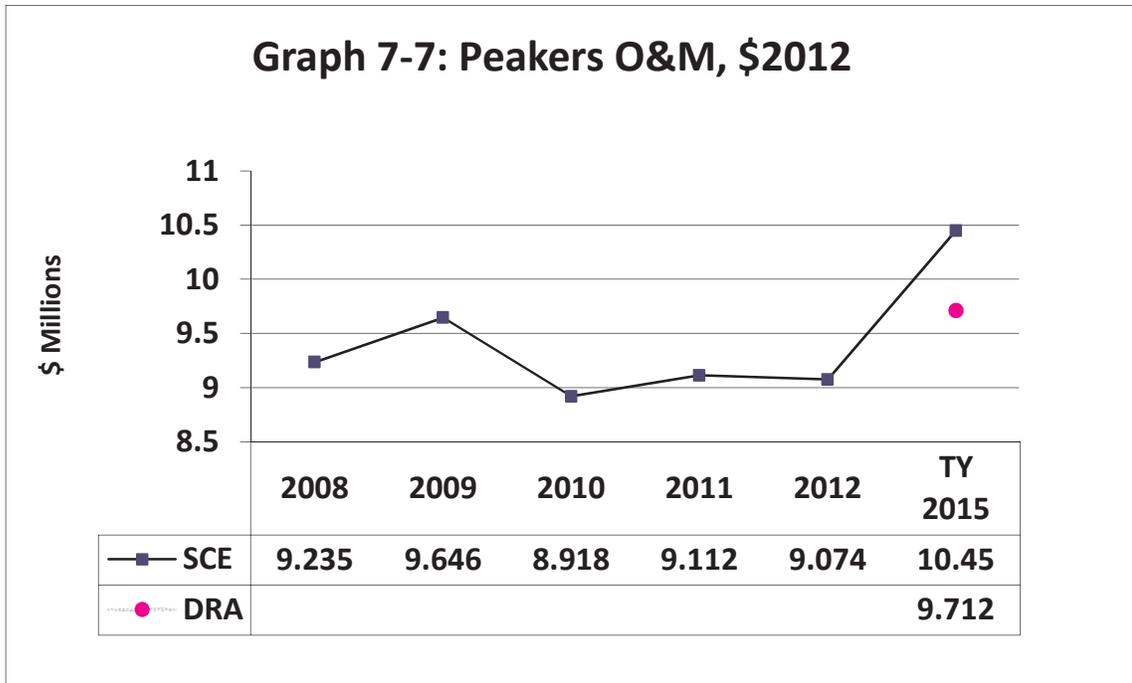
16 The following Graph 7-7 and Tables 7-13 and 7-14 summarize SCE's
17 historical Peaker O&M expenses, TY 2015 forecast and ORA's recommendation.

¹²⁹ Resolution E-4031, November 9, 2006.

¹³⁰ Ex. SCE-2, Vol. 9, p. 3.

¹³¹ Ex. SCE-2, Vol. 9, p. 1.

¹³² Ex. SCE-2, Vol. 9, p. 17.



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**Table 7-13
Peakers Forecasting Methods and Results by SCE Aggregated FERC Account SCE
vs. ORA
(2012 \$000)**

FERC Act.	Description	Recorded 2012	SCE Forecast 2015	% Increase 2012-2015	\$ Increase 2012-2015	SCE Forecasting Method	ORA Forecasting Method	ORA Forecast 2015	SCE - ORA
549	Labor	\$ 3,598	\$ 3,689	3%	\$ 91	McGrath ↑ (\$91)	McGrath ↑ (\$236)	\$ 3,834	\$ (145)
	Non-Labor	2,248	2,701	20%	\$ 453	LRY + McGrath ↑ (\$453)	LRY + McGrath ↑ (\$154)	\$ 2,402	\$ 299
	Total Misc. Other Power Gen	\$ 5,846	\$ 6,390	9%	\$ 544			\$ 6,236	\$ 154
554	Labor	\$ 1,267	\$ 1,644	30%	\$ 377	A4 + McGrath ↑ (\$207)	LRY + McGrath ↑ (\$118)	\$ 1,385	\$ 259
	Non-Labor	1,961	2,416	23%	\$ 455	LRY + McGrath ↑ (\$455)	LRY + McGrath ↑ (\$129)	\$ 2,090	\$ 326
	Total Misc. Other Power Gen	\$ 3,228	\$ 4,060	26%	\$ 832			\$ 3,475	\$ 585
	Total Peakers	\$ 9,074	\$ 10,450.00	15%	\$ 1,376			\$ 9,711	\$ 739

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Table 7-14
Peaker Recorded O&M Expenses 2008-2012 by FERC Account and SCE vs. ORA TY
2015 Forecasts
(2012 \$000)¹³³

Line No.	Peakers Recorded/Adjusted and Forecast Expense By FERC Account (Constant 2012 \$000)												
	FERC ACCT		Recorded/Adjusted					SCE Forecast			ORA Forecast 2015	SCE Forecasting Method	ORA Forecasting Method
			2008	2009	2010	2011	2012	2013	2014	2015			
1													
2	FERC ACCT												
3	546	Labor	804	858	1,340	1,389	1,608	1,608	1,608	1,608	1,608	Last Recorded Year	Last Recorded Year
4	Operation Supervision	Non-Labor	284	642	700	490	337	337	337	337	337	Last Recorded Year	Last Recorded Year
5	and Engineering	Other	0	0	0	0	0	0	0	0	0	N/A	N/A
6		Total	1,088	1,500	2,040	1,879	1,945	1,945	1,945	1,945	1,945		
7	548	Labor	988	995	1,040	1,164	1,102	1,102	1,102	1,102	1,102	Last Recorded Year	Last Recorded Year
8	Generation Expenses	Non-Labor	1,335	229	479	409	990	990	990	990	990	Last Recorded Year	Last Recorded Year
9		Other	0	0	0	0	0	0	0	0	0	N/A	N/A
10		Total	2,323	1,224	1,519	1,573	2,092	2,092	2,092	2,092	2,092		
11	549	Labor	801	956	984	967	886	977	977	977	1,122	Last Recorded Year + Adjustment	Last Recorded Year + Adjustment
12	Miscellaneous Other Power	Non-Labor	1,610	1,365	802	1,049	887	1,340	1,340	1,340	1,041	Last Recorded Year + Adjustment	Last Recorded Year + Adjustment
13	Other Generation Expenses	Other	0	0	0	0	0	0	0	0	0	N/A	N/A
14		Total	2,411	2,321	1,786	2,016	1,773	2,317	2,317	2,317	2,163		
15	550	Labor	0	0	0	0	2	2	2	2	2	Last Recorded Year	Last Recorded Year
16	Rents	Non-Labor	336	171	160	195	34	34	34	34	34	Last Recorded Year	Last Recorded Year
17		Other	0	0	0	0	0	0	0	0	0	N/A	N/A
18		Total	336	171	160	195	36	36	36	36	36		
19	551	Labor	193	239	273	326	396	309	309	309	396	Four Year Average	Last Recorded Year
20	Maintenance Supervision	Non-Labor	70	1,078	478	734	261	261	261	261	261	Last Recorded Year	Last Recorded Year
21	and Engineering	Other	0	0	0	0	0	0	0	0	0	N/A	N/A
22		Total	263	1,317	751	1,060	657	570	570	570	657		
23	552	Labor	0	0	0	0	1	0	0	0	1	N/A	N/A
24	Maintenance of Structures	Non-Labor	0	0	15	26	35	35	35	35	35	Last Recorded Year	Last Recorded Year
25		Other	0	0	0	0	0	0	0	0	0	N/A	N/A
26		Total	0	0	15	26	36	35	35	35	36		
27	553	Labor	1,075	1,108	1,005	942	652	927	927	927	652	Four Year Average	Last Recorded Year
28	Maintenance of Generating	Non-Labor	693	1,474	1,210	633	1,176	1,176	1,176	1,176	1,176	Last Recorded Year	Last Recorded Year
29	and Electric Plant	Other	0	0	0	0	0	0	0	0	0	N/A	N/A
30		Total	1,768	2,582	2,215	1,575	1,828	2,103	2,103	2,103	1,828		
31	554	Labor	127	117	170	298	218	408	408	408	336	Four Year Average + Adjustment	Last Recorded Year + Adjustment
32	Maintenance of Miscellaneous	Non-Labor	919	414	262	490	489	944	944	944	618	Last Recorded Year + Adjustment	Last Recorded Year + Adjustment
33	Other Power Generation Plant	Other	0	0	0	0	0	0	0	0	0	N/A	N/A
34		Total	1,046	531	432	788	707	1,352	1,352	1,352	954		
35	Total Operations &	Labor	3,988	4,273	4,812	5,086	4,865	5,333	5,333	5,333	5,219		
36	Maintenance	Non-Labor	5,247	5,373	4,106	4,026	4,209	5,117	5,117	5,117	4,492		
37		Other	0	0	0	0	0	0	0	0	0		
38		Total	9,235	9,646	8,918	9,112	9,074	10,450	10,450	10,450	9,711		

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¹³³ For recorded adjusted data and SCE forecasts see SCE's response to ORA data request DRA-Verbal-008-PM1, Q.2f, Attachment. For ORA 2015 and SCE forecasts see Ex. ORA 7, workpaper 7- (continued on next page)

1 **B. O&M Expenses: FERC 546, 548-554**

2 SCE proposes O&M expenses of \$10.4 million in TY 2015 to operate its five
3 Peakers.¹³⁴ SCE’s TY 2015 forecast consists of \$9.2 million in base O&M expenses
4 based on historical averaging, and LRY. SCE also forecasts an upward adjustment
5 over base year 2012 O&M of \$1.2 million for annualized McGrath O&M expenses.¹³⁵
6 ORA recommends TY 2015 O&M expenses of \$9.7 million, consisting of base O&M
7 expenses of \$9.1 million utilizing LRY (\$170,000 reduction to SCE’s request) and an
8 upward adjustment of \$638,000 for the addition of McGrath (a \$568,000 reduction to
9 SCE’s request).

10 **1. Base Peaker Labor and Non-Labor**

11 ORA’s first recommendation is an adjustment to SCE’s base forecast. SCE’s
12 base forecast utilizes last recorded year (LRY) for non-labor and a mix of LRY and
13 four-year averaging (2009-2012) for labor.¹³⁶ The table below summarizes possible
14 forecasting methods, which do not include averaging for non-labor as SCE stated
15 “[n]on-labor costs recorded to this (non-labor) account increased significantly in 2009
16 due primarily to increased contract costs related to facilities upgrades, mechanical
17 services, and improvements to the Peaker information systems.”¹³⁷

(continued from previous page)

10.

¹³⁴ Ex. SCE-2, Vol. 9 at 1.

¹³⁵ Ex. SCE-2, Vol. 9 at 10, workpaper 44a.

¹³⁶ SCE’s response to ORA data request DRA-Verbal-008-PM1, Q.2f, Attachment.

¹³⁷ Ex. SCE-2, Vol. 9 at p. 16.

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Table 7-15
Base Peaker O&M Expense Forecasting Methods
(\$000 2012)

Forecasting Method	Labor	Non-Labor	Total
Labor: 5-Year Ave. Non-Labor: LRY	\$4,605	\$4,209	\$8,814
Labor: 4-Year Ave. Non-Labor: LRY	4,759	4,209	8,968
Labor: LRY Non-Labor: LRY (ORA Method)	4,865	4,209	9,074
Labor: 3-Year Ave. Non-Labor: LRY	4,921	4,209	9,130
Labor: 2-Year Ave. Non-Labor: LRY	4,976	4,209	9,185
Labor: Combo 4-Year Ave. and LRY Non-Labor: LRY (SCE Method) ¹³⁸	5,035	4,209	9,244

4 ORA agrees with SCE's use of LRY (2012) for non-labor due to non-labor
5 expenses being relatively flat for the last three years. As the above table illustrates,
6 SCE's method of using a combination of LRY and four-year averages for labor,
7 results in an inflated base forecast. SCE's base forecasting method is also higher
8 than straight five, four, three and two year averages of total O&M expenses.

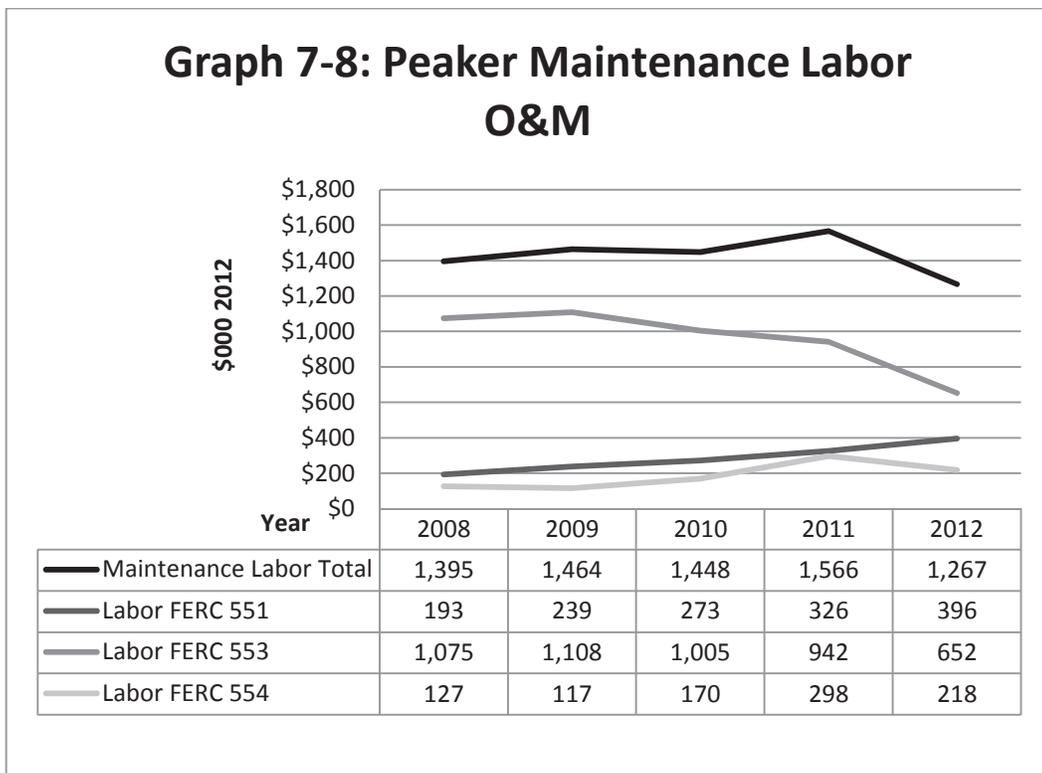
¹³⁸ SCE's response to ORA data request DRA-Verbal-008-PM1, Q.2f, Attachment.

1 For forecasting purposes, SCE combined FERC Accounts 551-554, creating
 2 yearly totals to support an averaging method for labor maintenance accounts.¹³⁹

3 SCE states:

4 “[R]ecorded labor costs in this account have fluctuated from year-to-year
 5 for 2008-2012, so an average is an appropriate base forecast. We
 6 eliminate 2008 from the average because that year did not employ the
 7 level of personnel required for maintenance, therefore we use a 4-year
 8 average 2009-2012 for forecasting the 2015 Test Year base forecast.”¹⁴⁰

9
 10 When FERC Accounts are isolated, SCE’s combination of FERC Accounts
 11 551, 553 and 554 for maintenance labor O&M is not supported. As Graph 7-8 below
 12 shows, only FERC Account 554 supports SCE’s forecasting method. Applying SCE’s
 13 2009-2012 average method to FERC Account 554 results in a TY 2015 forecast of
 14 \$17,000 less than last recorded year.



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¹³⁹ Ex. SCE-2, Vol. 9, p. 14.

¹⁴⁰ Ex. SCE-2, Vol. 9 at p. 16.

¹⁴¹ SCE’s response to ORA data request DRA-Verbal-008-PM1, Q.2f, Attachment.

1 Although 2012 is the lowest recorded (2008-2012) for aggregated labor
2 maintenance FERC Accounts, overall Peaker expenses for the last three years have
3 been stable. The difference between total 2012 recorded Peaker expenses and a
4 three year average (2010-2012) is less than 0.5%. ORA's recommendation using
5 LRY for both labor and non-labor, results in a base forecast of \$9.1 million, an
6 adjustment of \$170,000 to SCE's TY 2015 O&M forecast. Table 7-16 shows base
7 Peaker expense forecasting methods.

8 **2. McGrath Adjustment**

9 ORA's second recommendation is an adjustment to SCE's method of
10 annualizing direct O&M for McGrath, which began commercial operation in
11 November 2012. SCE annualizes the three months (October to December 2012) of
12 recorded direct O&M for McGrath (\$401,934), increasing SCE's TY 2015 forecast by
13 \$1.2 million over 2012 recorded.¹⁴² SCE's method assumes direct O&M expenses for
14 McGrath in TY 2015 of \$1.6 million (2012\$).¹⁴³ ORA recommends utilizing the
15 average 2012 direct O&M expenses for Peakers Barre, Center, Grapeland, and Mira
16 Loma of \$1.0 million¹⁴⁴ to forecast TY 2015 McGrath O&M expenses. ORA's method
17 results in an upward adjustment of \$638,000 to account for a full year of McGrath
18 O&M expenses in the TY 2015, an adjustment to SCE's forecast of \$568,000.

19 O&M expenses for only three months of initial operations at McGrath,
20 recorded in 2012, appear non-representative of future costs in TY 2015 when
21 compared to the other Peakers. SCE stated in its TY 2012 GRC rebuttal: "[b]ecause
22 of economies of scale, the fifth unit (i.e., McGrath) actually represents well less than
23 one-fifth (i.e., less than 20%) of total fleet O&M expense...SCE's assumption that
24 McGrath only represents 12% of total Peaker fleet costs demonstrates SCE's plan to
25 minimize to the extent practical the impact of the McGrath Peaker addition on total

¹⁴² Ex. SCE-2, Vol. 9, workpaper 44a.

¹⁴³ Ex. SCE-2, Vol. 9, pp. 9-10 and workpaper 44a.

¹⁴⁴ SCE's response to ORA data request DRA-67-PM1, Q.4, Attachment.

1 costs.¹⁴⁵ Now, using SCE's TY 2015 base forecast, the adjustment to annualize
2 McGrath, represents 18% of total Peaker fleet costs, while ORA's forecast to
3 annualize McGrath, based on the average of the direct O&M to the other four
4 Peakers (Barre, Center, Grapeland, and Mira Loma), equals 11.5% of total Peaker
5 fleet costs.¹⁴⁶ SCE's testimony does not show that the three months of initial
6 McGrath O&M expenses are representative of TY 2015 activities.

7 SCE has underspent in the last three years (2010-2012) by an average of
8 \$2.0 million, or an average of 18% below Commission authorized Peaker O&M.¹⁴⁷
9 ORA's total TY 2015 O&M expense forecast for all five SCE owned and operated
10 Peaker power plants is \$9.7 million, which is a \$0.7 million adjustment to SCE's
11 forecast.

12 **C. Peaker Capital Expenditures**

13 SCE forecasts Peaker capital expenditures for 2013, 2014 and 2015 of \$1.1
14 million, \$3.0 million and \$3.0 million, respectively.¹⁴⁸ ORA recommends utilizing
15 actual recorded adjusted 2013 capital expenditures of \$1.2 million. ORA does not
16 dispute SCE's 2014 and 2015 capital expenditure forecasts for Peakers.

17 **VIII. DISCUSSION / ANALYSIS OF THE PROJECT DEVELOPMENT** 18 **DIVISION**

19 Adopted by the Commission in SCE's TY 2006 GRC, the Project
20 Development Division Memorandum Account (PDDMA) is intended for generation
21 support activities.

22 **A. Overview of SCE's Request**

23 SCE requests recovery of associated labor of the Project Development
24 Division now referred to as Generation Planning (GP), in base rates in 2015 and

¹⁴⁵ A.10-11-015, Ex. 17, p. 8.

¹⁴⁶ Ex. ORA-7, workpaper 7-11.

¹⁴⁷ See Table 7-5 above.

¹⁴⁸ Ex. SCE-2, Vol.9, p. 17, Figure V-6.

1 continuing the balancing account treatment for non-labor PDD activities. SCE's TY
2 2015 forecast is \$1.3 million for labor and \$5.0 million in non-labor.¹⁴⁹ ORA further
3 addresses SCE's PPD activities in Exhibit ORA-21.¹⁵⁰

4 **IX. DISCUSSION / ANALYSIS OF THE SOLAR PHOTOVOLTAIC**
5 **PROGRAM**

6 In 2009, the Commission authorized a five year Solar Photovoltaic Program
7 (SPVP) for SCE to develop 250 MW of solar photovoltaic (PV) utility owned
8 generation (UOG),¹⁵¹ the decision was later amended in 2012,¹⁵² and again in 2013
9 reducing the UOG portion of the program to no more than 91 MW (DC).¹⁵³

10 **A. Overview of SCE's Request**

11 SCE's TY 2015 request for the Solar Photovoltaic (PV) O&M activities totals
12 \$4.298 million.¹⁵⁴ SCE requests 2013, 2014 and 2015 capital expenditures of \$31.5,
13 \$0.4 and \$1.0 million,¹⁵⁵ respectively. SCE also proposes to close the Solar
14 Photovoltaic Program Balancing Account (SPVPBA) and fully recover capital
15 expenditures and O&M expenses recorded in the SPVBA for the project construction
16 period, including ongoing O&M and capital expenditures in base rates starting
17 January 1, 2015. Graph 7-9 compares SCE's O&M request with ORA's
18 recommendation. Table 7-16 shows SCE and ORA's O&M cost forecasting
19 methods.

¹⁴⁹ Ex. SCE-9, pp. 58-61.

¹⁵⁰ Ex. ORA-21, pp. 11-13.

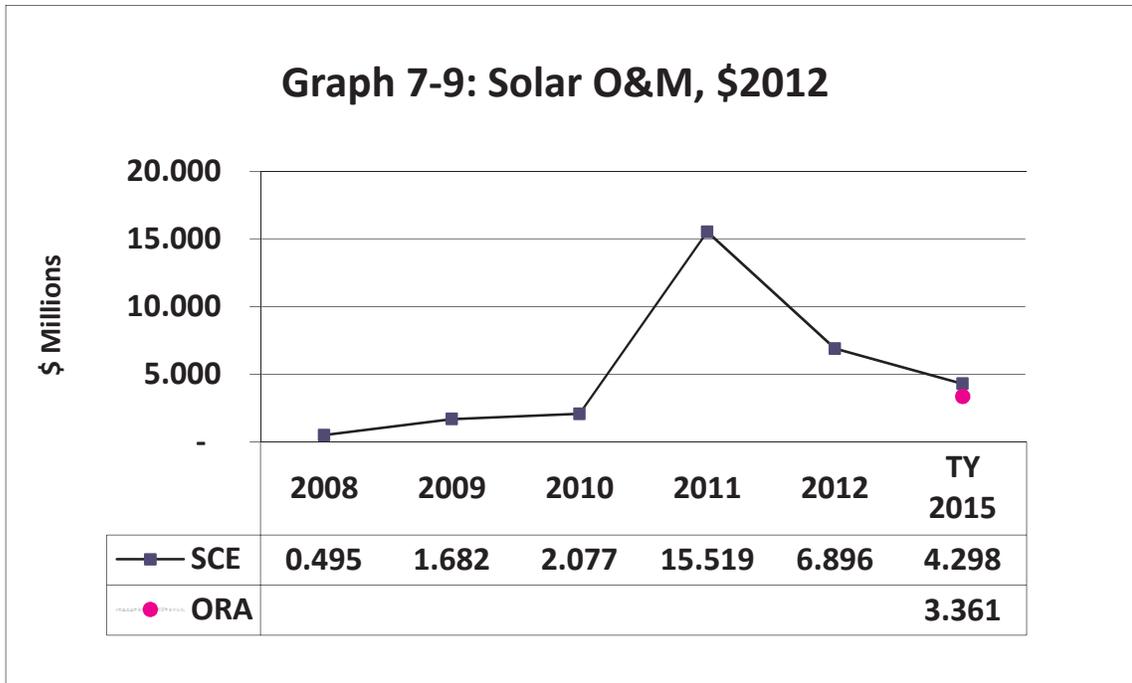
¹⁵¹ D.09-06-049, pp. 44, 45.

¹⁵² D.12-02-035.

¹⁵³ D.13-05-033, pp. 1-2.

¹⁵⁴ Ex. SCE-2, Vol. 10, p. 10.

¹⁵⁵ Ex. SCE-2, Vol. 10, p. 7.



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**Table 7-16
Solar Forecasting Methods and Results by FERC Account SCE vs. ORA
(2012 \$000)**

FERC Act.	Description	Recorded 2012	SCE Forecast 2015	% Increase 2012-2015	\$ Increase 2012-2015	SCE Forecasting Method	ORA Forecasting Method	ORA Forecast 2015	SCE - ORA
549	Labor	\$ 1,731	\$ 555	-68%	\$ (1,176)	Cost Per MW	Cost Per MW	\$ 320	\$ 235
	Non-Labor	3,038	1,659	-45%	\$ (1,379)	Cost Per MW	Cost Per MW	957	702
	Total Misc. Other Power Gen	\$ 4,769	\$ 2,214	-54%	\$ (2,555)			\$ 1,277	\$ 937
550	Labor	\$ -	\$ -		\$ -	Cost per MW	Cost per MW		
	Non-Labor	4,127	2,084	-50%	\$ (2,043)	Cost per MW	Cost per MW	\$ 2,084	\$ -
	Total Misc. Other Power Gen	\$ 2,127	\$ 2,084	-2%	\$ (43)			\$ 2,084	
	Total Solar	\$ 6,896	\$ 4,298.00	-38%	\$ (2,598)			\$ 3,361	\$ 937

5

1 **B. SPVP Program O&M Expenses**

2 SCE’s TY 2015 request of \$4.298 million for Solar Photovoltaic (PV) O&M
3 includes \$2.214 million¹⁵⁶ for the Solar PV Program labor and non-labor expense,
4 and \$2.084 million for the Solar PV lease expense.¹⁵⁷ ORA recommends \$1.277
5 million for TY 2015 SPVP O&M activities and accepts SCE’s forecast for roof lease
6 expenses of \$2.084 million, for a total TY 2015 forecast of \$3.361 million. An
7 adjustment of \$0.937 million to SCE’s forecast.

8 SCE states it “...[d]eveloped its 2015 expense forecast primarily based on the
9 previously planned cost per MW for the SPVP development.”¹⁵⁸ SCE’s forecast is
10 partially based on historical expenses, as SCE states: “[e]xcept for leases, there is
11 not sufficient O&M history on the SPVP sites to utilize a forecasting method based
12 only on recorded data, therefore the O&M forecast relies more on budgeted
13 forecasts that are based in recorded history.”¹⁵⁹

14 ORA did request historical O&M, asking SCE to:

15 “[P]rovide base (only labor and non-labor maintenance excluding any
16 costs associated with the construction and implementation of the SPVP
17 program) O&M expenses, yearly 2009-2013, by year delineated by labor,
18 non-labor and other (in nominal and base year 2012\$).”¹⁶⁰

19 SCE responded:

20 “[E]xpense components that were solely due to (or higher because of)
21 activities for the construction and implementation of the SPVP program
22 were not separately tracked from all other expenses incurred to operate

¹⁵⁶ Ex. SCE-2, Vol. 10, p. 15.

¹⁵⁷ Ex. SCE-2, Vol. 10, p. 17.

¹⁵⁸ Ex. SCE-2, Vol. 10, p. 16.

¹⁵⁹ Ex. SCE-2, Vol. 10 p. 9, emphasis added.

¹⁶⁰ Data request DRA-202-PM1, Q.3.

1 and maintain the SPV plants as the plants came on-line. Therefore, SCE
2 is unable to provide this data.”¹⁶¹

3 This response indicates that SCE’s “recorded” historical expenses include not
4 just O&M expenses, but also expenses attributable to SPVP construction. As stated
5 in SCE’s application “[h]istorical O&M data from 2009-2012 includes expenses in
6 excess of that required for the 2015 Test Years due to expenses that relate to new
7 site construction through 2013.”¹⁶² Including, at least in part, past construction costs
8 in the TY 2015 estimate of O&M expenses inflates SCE’s forecast.

9 ORA’s O&M expense recommendation is based on a calculated dollar per
10 MW (DC), derived from SCE’s contract with US Most, which monitored, operated,
11 and maintained SCE’s solar sites from 2009-2013. At the end of 2012, SCE had
12 84.65 MW (DC) online,¹⁶³ which provides the first input for ORA’s recommendation.
13 The second input, is the total recorded cost of the contract with US Most in 2013,
14 \$1.182 million (2012\$).¹⁶⁴ The third input is SCE’s total 91.42 MW (DC) solar
15 generation.¹⁶⁵

16 Equation 1:

$$\frac{\$1,182,720 \text{ (2013 contract cost in 2012 \$)}}{84.65 \text{ (MW DC year end 2012)}} =$$

17 \$13,972 per MW(DC)

18 Equation 2:

$$\$13,972 * 91.42 \text{ (total MW DC)} = \$1,277,310 \text{ ORA forecast}$$

19 ORA’s forecast of \$13,972 per MW (DC) is higher than the actual contract
20 cost with US Most, as it does not account for the additional 6.77 MW (DC)
21 generation built in 2013, which US Most monitored, operated, and maintained for

¹⁶¹ SCE’s response to ORA data request DRA-202-PM1, Q.3 emphasis added.

¹⁶² Ex. SCE-2, Vol. 10, p. 13.

¹⁶³ SCE’s response to ORA data request DRA-202-PM1, Q.4a, Supplemental-2 Attachment.

¹⁶⁴ SCE’s response to ORA data request DRA-202-PM1, Q.4a, Supplemental-2 Attachment.

¹⁶⁵ Ex. SCE-2, Vol. 10, p. 3, Table I-1.

1 some part of the year. Given the cost of the contract with US Most, SCE's forecast of
2 \$24,330 per MW (DC) is excessive. By adopting ORA's recommendation, the
3 Commission will hold SCE accountable for monitoring, operating and maintaining the
4 SPVP system at or below the cost of the contract with US Most in TY 2015.

5 **C. SPVP Capital Expenditures**

6 SCE forecasts capital expenditures for 2013, 2014 and 2015 of \$31.5 million,
7 \$0.4 million and \$1.0 million, respectively.¹⁶⁶ ORA recommends 2013, 2014 and
8 2015 capital expenditures of \$26.6 million, \$0.4 million and \$1.0 million, respectively.
9 ORA utilized actual recorded 2013 capital expenditures. According to SCE, "[C]apital
10 expenditures in 2013 reflect the capital required to complete the construction of the
11 SPVP final solar site, Redlands distribution center (RDC) 10."¹⁶⁷ All construction
12 costs are subject to the reasonableness review addressed below. ORA does not
13 dispute SCE's 2014 and 2015 capital expenditure forecasts for SPVP.

14 **D. SPVP Program Balancing Account**

15 SCE requests authority to eliminate the Solar Photovoltaic Program Balancing
16 Account (SPVPBA) which recovers ongoing SCE owned PV O&M expenses and
17 capital expenditures in base rates. ORA accepts SCE's proposal to eliminate the
18 SPVPBA at the end of 2014 as SCE has completed the construction of the 91 MW
19 (DC) of utility owned generation as directed by the Commission.¹⁶⁸ ORA makes
20 recommendations regarding the reasonableness of costs recorded to the SPVPBA
21 below.

¹⁶⁶ Ex. SCE-2, Vol. 10, p. 7.

¹⁶⁷ Ex. SCE-2, Vol. 10, workpapers, p. 90.

¹⁶⁸ D.13-05-033, p. 16.

1 **X. SPVP REASONABLENESS REVIEW**

2 In D.09-06-049, the Commission found that “[r]eview of all SPVP costs should
3 be conducted in SCE’s GRC proceeding...”¹⁶⁹ The original Solar PV Program
4 authorized \$41.31 million (2008\$) in O&M and \$962.5 million (2008\$) in direct
5 capital expenditures during the 2008 through 2014 program period,¹⁷⁰ with the
6 program expected to last five years.¹⁷¹ In D.12-02-035, the Commission revised
7 D.09-06-049 upon SCE’s request, reducing the UOG¹⁷² from 250 MW to no more
8 than 125 MW. In doing so, the Commission also reduced SCE’s O&M and capital
9 expenditures reasonableness by half.¹⁷³ In 2013, the Commission further reduced
10 SCE’s UOG to no more than 91 MW, reducing reasonable cost estimates to \$15.036
11 million (2008\$) for O&M expenses and \$350.35 million (2008\$) plus 10%
12 contingency in direct capital expenditures.¹⁷⁴

13 According to SCE testimony, SCE interprets D.09-06-049 to approve all O&M
14 expenses: only direct capital costs are subject to the reasonableness review. SCE
15 states that, “[p]ursuant to D.09-06-049, only direct capital costs in excess of the
16 annual \$3.85/W threshold will be subject to reasonableness review.”¹⁷⁵ SCE provides
17 no citation to D.09-06-049 to support the statement.

18 Limiting the reasonableness review to direct capital costs is what SCE asked
19 for in its original application,¹⁷⁶ but ORA has found nothing in the decision that
20 explicitly adopts that limitation. Decision 09-06-049 states that “... we will review
21 SCE’s operation of SPVP, including SCE’s maintenance practices and performance
22 of the facilities) in its ERRA proceeding, and review all program costs (including
23 O&M costs) in SCE’s GRC. We direct that SCE’s lease costs and SCE’s annual

¹⁶⁹ D.09-06-049, Finding of Fact 9, p. 57.

¹⁷⁰ D.09-06-049, (mimeo), p. 44.

¹⁷¹ D.09-06-049, (mimeo), pp. 7-8.

¹⁷² Utility Owned Generation.

¹⁷³ D.12-02-035, p. 27.

¹⁷⁴ D.13-05-033, p. 16.

¹⁷⁵ Ex. SCE-10, Vol. 1, p. 32.

¹⁷⁶ D.09-06-049, p. 7.

1 O&M costs be subject to reasonableness review in SCE’s GRC.”¹⁷⁷ Subsequent
2 modifications in Decisions 12-02-035 and 13-05-033 have not changed that. Both
3 SCE’s O&M expenses and capital expenditures are subject a reasonableness
4 review in this GRC.

5 **A. SCE’s Request and ORA Recommendations**

6 SCE requests recovery of all reasonable and prudent capital expenditures
7 and O&M expenses for the construction and maintenance from 2008 through 2014
8 of the SPVP program and to eliminate the SPVPBA.¹⁷⁸ SCE “[e]xpects to continue to
9 be allowed to recover all reasonable and prudent O&M expenses recorded to the
10 SPVP balancing account.”¹⁷⁹ ORA recommends recovery of capital expenditures up
11 to \$3.85/MW (DC) and O&M expenses with the exception of the \$10.1 million fee
12 paid to terminate a solar contract for undelivered solar panels.¹⁸⁰

13 **B. Reasonableness of O&M Expenses**

14 SCE has exceeded the reasonableness threshold determined by the
15 Commission for O&M expenses of \$15.036 million (2008\$),¹⁸¹ mostly attributable to
16 one major expense. SCE incurred a \$10.1 million (2011\$) expense to break a
17 contract with SunPower for undelivered solar photovoltaic (PV) arrays. SCE says it
18 “... terminated the Agreement, with respect to the unordered portion of the Supply,
19 because it was no longer economical to customers to continue with this portion of
20 the Agreement. The Agreement committed SCE to purchase panels at a unit price of
21 over \$2/Wp. Market prices for SunPower panels had dropped to below \$2/Wp.
22 Forecasted costs were expected to be \$1/Wp or below by 2014.”¹⁸² SCE’s response
23 relating to the contract and the termination of the contract raises several issues.

¹⁷⁷ D.09-07-049, p. 45.

¹⁷⁸ Ex. SCE-2, p. 18.

¹⁷⁹ SCE’s response to ORA data request DRA-202-PM1, Q.12c.

¹⁸⁰ D. 09-06-049 approved cost reasonableness in 2008 dollars, but did not provide specific direction on escalation or de-escalation of costs.

¹⁸¹ D.13-05-033, p. 16.

¹⁸² SCE’s response to ORA data request DRA-291-PM1, Q.2b.

1 SCE’s GRC testimony stated “[e]xpenses for the Project and Program O&M
 2 recorded in the SPVPBA from 2008-2012 totaled \$22.8 million. These costs are
 3 lower than the projected amount identified in D. 13-05-033 for a 91 MW DC
 4 program.”¹⁸³ Later, in response to ORA discovery, SCE identified that its testimony
 5 was incorrect and that O&M expenses were in fact higher than the reasonableness
 6 level identified in D.13-05-033 and that the actual recorded O&M was \$26.0 million
 7 rather than \$22.8 million.¹⁸⁴ SCE’s associated workpaper did not identify what year
 8 dollars values were being represented.¹⁸⁵

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Table 7-17
SPVP O&M Expenses¹⁸⁶

Year	O&M recorded – Excluding Lease (Nominal \$)	Operating Lease Recorded (Nominal \$)	Non- Operating Lease (Nominal \$)	Total O&M (Nominal \$)	Total O&M (2008 \$) ¹⁸⁷
2008	\$450,712	\$0		\$450,712	\$450,712
2009	1,452,857	126,311		1,579,168	1,561,419
2010	1,822,317	122,472		1,944,789	1,902,101
2011	14,385,463 ¹⁸⁸	681,745	55,161	15,122,369	14,483,972
2012	4,712,263	1,877,386	250,000	6,839,649	6,451,453
2013 ¹⁸⁹	N/A	N/A	N/A	7,531,000	6,871,209
Grand Total	\$22,823,611	\$2,807,915	\$305,161	\$33,467,687	\$31,720,866

¹⁸³ Ex. SCE-2, Vol. 10, p. 26, emphasis added.

¹⁸⁴ SCE’s response to ORA data request DRA-202-PM1, Q.12a.

¹⁸⁵ Ex. SCE-2, Vol. 10, workpapers, p. 124.

¹⁸⁶ Ex. SCE-2, Vol. 10, workpapers, p. 124.

¹⁸⁷ ORA applied JPGDP escalation factors presented in Ex. SCE-2, Vol. 10, workpapers, p. 125, to convert nominal dollars to 2008 dollars.

¹⁸⁸ Includes \$10.1 million contract termination fee, which is equal to \$9,672,063 in 2008 dollars with escalation factors presented in Ex. SCE-2, Vol. 10, workpapers, p. 125.

¹⁸⁹ 2013 data from SCE’s response to ORA data request DRA-309-PM1, Q.4.

1 In response to ORA discovery regarding SPVP O&M expenses, SCE stated
2 “[e]xpense components that were solely due to (or higher because of) activities for
3 the construction and implementation of the SPVP program were not separately
4 tracked from all other expenses incurred to operate and maintain the SPV plants as
5 the plants came on-line. Therefore, SCE is unable to provide this data.”¹⁹⁰ SCE later
6 amended the above response, identifying a onetime cost recorded to SPVPBA O&M
7 expenses of \$10.1 million. “[N]otwithstanding the above, there is one large cost item
8 that was incurred during 2009-2013 that can be identified as being solely related to
9 the construction and implementation of the SPVP program. SCE incurred a \$10.1
10 million termination fee, which recorded in 2011 to expense, to reduce the contracted
11 amount of solar panels to be provided by a panel supplier for the program.”¹⁹¹ The
12 disclosure of the termination fee of the panel supplier was not identified in SCE’s
13 testimony.

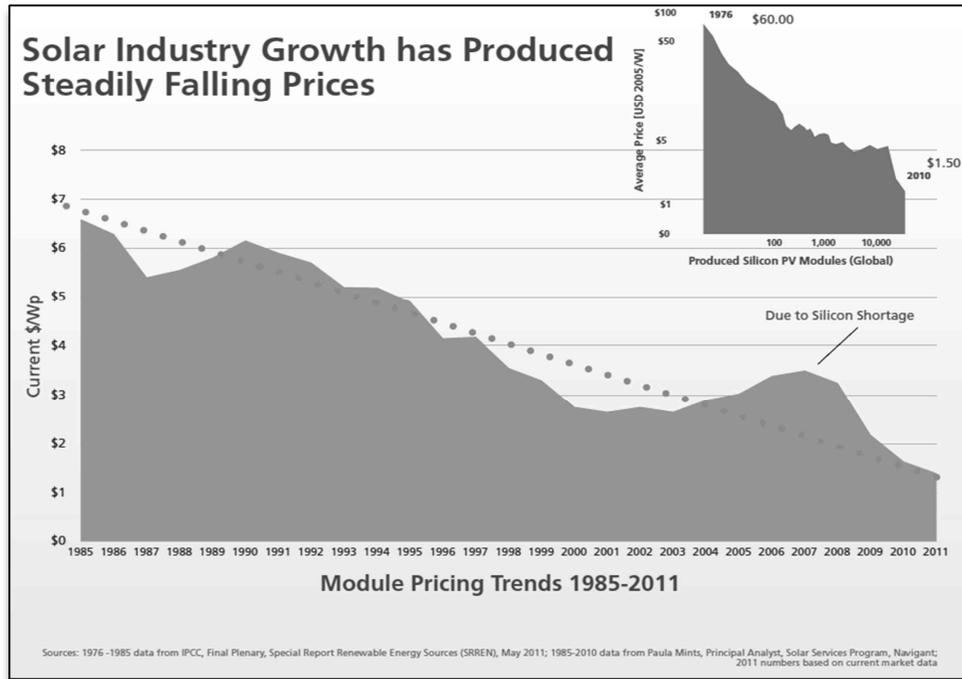
14 SCE signed the contract to supply solar modules in the first quarter of 2010, a
15 time when solar module prices were on a steep decline (see Graph 7-10 below).

¹⁹⁰ SCE Response to ORA data request DRA-202-PM1, Q.3.

¹⁹¹ SCE’s response to ORA data request DRA-202-PM1, Q.3, Supplemental.

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Graph 7-10
Solar Module Prices 1985-2011 \$/Wp (Watt Peak Power)¹⁹²



3

4 SCE's commitment to purchase a large volume of modules at a unit price
5 over \$2/Wp was not a prudent use of ratepayer funds, due to declining trends of
6 solar panel prices, and possible barriers to building 250 MW (DC) of utility owned
7 generation. SCE's choice to lock in a price of around \$2/Wp mitigated the possibility
8 of SCE exceeding the \$3.85/W capital expenditure reasonableness threshold
9 determined by the Commission. However, this prevented SCE's ratepayers from
10 realizing savings with reductions in solar module pricing. The result to SCE
11 ratepayers, as SCE seeks recovery of all capital and O&M expenses, is that; (1)
12 SCE ratepayers paid higher than market prices from 2011-2012 for solar modules
13 delivered through this contract, and (2) SCE is asking its ratepayers pay \$10.1
14 million (2011\$) for the terminated contract.

¹⁹² Romm, Joe. "Solar Power Much Cheaper to Produce Than Most Analysts Realize, Study Finds." Nation of Change, May 5, 2014. Web. Accessed, May 5, 2014. <<http://www.nationofchange.org/solar-power-much-cheaper-produce-most-analysts-realize-study-finds-1323623695>>.

1 ORA does not believe SCE’s business decisions regarding the contract with
2 SunPower to procure solar modules using ratepayer funds were prudent. SCE’s
3 decisions mitigated the possibility of SCE exceeding the capital expenditure
4 reasonableness review threshold. ORA recommends the Commission deny SCE
5 recovery of the cost to terminate the contract to procure solar modules, a reduction
6 of recovery for the SPVP program of \$10.1 million incurred by SCE in 2011. ORA’s
7 recommendation adjusts the recovery of SCE’s recorded 2011 O&M expenses.

8 **C. Reasonableness of Capital Expenditures**

9 The SPVP capital expenditures are less than the reasonable threshold
10 determined by the Commission in D.09-06-049 and subsequently affirmed in D.12-
11 02-035 and D.13-05-033 of \$3.85/W. Based solely on that criteria, ORA concludes
12 that these capital expenditures are reasonable. Table 7-18 presents SPVP recorded
13 capital expenditures.

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Table 7-18
SPVP Recorded Capital Expenditures
(\$000 2008)¹⁹³

	2008 \$¹⁹⁴	Nominal \$	MW Completed	Total Per Watt 2008 \$	Year
2008	\$11,162,901	\$11,162,901	2.45	\$4.74	Year 0
2009	9,233,445	9,315,688	1.26	8.47	
2010	118,857,219	121,525,252	27.04	4.46	Year 1
2011	154,679,215	161,523,768	41.19	4.09	Year 2
2012	30,299,695	32,196,409	12.77	2.72	Year 3
2013¹⁹⁵	23,756,732	25,586,000	6.77	3.51	Year 4
Total	\$347,989,206	\$361,310,018	91.48	\$3.80	

4 **XI. DISCUSSION / ANALYSIS OF THE FUEL CELL PROGRAM**

5 **A. Overview of SCE's Request**

6 SCE requests authorization to eliminate the current memorandum account
7 treatment of the Fuel Cell Program located at the University of California, Santa
8 Barbara (UCSB) and at California State University, San Bernardino (CSUSB), and
9 recover associated ongoing O&M expenses and capital expenditures in base rates
10 starting in 2015. SCE requests TY 2015 O&M expenses of \$0.669 million¹⁹⁶ and
11 capital expenditures of \$0.711 million in 2013.¹⁹⁷

12 **B. Fuel Cell Technology Program O&M Expenses**

13 ORA accepts SCE's request for authority to eliminate the Fuel Cell Program
14 Memorandum Account (FCPMA) and recover associated O&M expenses and capital
15 expenditures in base rates starting in 2015, as O&M will consist of only ongoing

¹⁹³ D. 09-06-049, approved reasonableness levels in 2008 dollars.

¹⁹⁴ Ex. SCE-2, Vol. 10, workpapers, p. 123.

¹⁹⁵ SCE response to ORA data request DRA-202-PM1, Q.11, Attachment. With JPGDP escalation rates applied from Ex. SCE-2, Vol. 10, workpapers, p. 125.

¹⁹⁶ Ex. SCE-2, Vol. 10, p. 30.

¹⁹⁷ Ex. SCE-2, Vol. 10, p. 29.

1 O&M expenses. ORA recommends \$0.544 million for the TY 2015 O&M expenses
2 based on two adjustments to SCE's itemized forecast, totaling a reduction of \$0.143
3 million to SCE's TY 2015 forecast of \$0.669 million.

4 The first adjustment is based on SCE's Long Term Service Agreement
5 (LTSA) for the Operations and Maintenance expenses of the 1.4 MW fuel cell plant
6 at Cal State University San Bernardino (CSUSB). SCE forecasts the cost of the
7 LTSA in the TY 2015 to be XXXXXX,¹⁹⁸ while ORA recommends XXXXX based on
8 the analysis below.

9 In SCE's response to ORA discovery SCE stated: XXXXXXXXXXXXXXXXXXXX
10 XXX¹⁹⁹ SCE's forecast for LTSA
11 payments is calculated based on XXXX availability.²⁰⁰ In one data response, SCE
12 states: XXX
13 XXXXXX²⁰¹ In another response, SCE says the rate is based on XXXXXXXXXXXX
14 XXX.²⁰²

15 SCE's forecast for the TY 2015 LTSA payment for the O&M of the CSUSB
16 Fuel Cell Plant is based on:

XXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXX²⁰³

¹⁹⁸ SCE response to ORA data request DRA-217-PM1, Q.1, Attachment. SCE asserts confidential information.

¹⁹⁹ SCE response to ORA request DRA-36-PM1, Q.3. SCE asserts confidential information.

²⁰⁰ SCE response to ORA request DRA-217-PM1, Q.1, Attachment. SCE asserts confidential information.

²⁰¹ SCE response to ORA request DRA-217-PM1, Q.1, Attachment. SCE asserts confidential information.

²⁰² SCE response to ORA request DRA-36-PM1, Q.3, Attachment 1 of 8, p. 13. SCE asserts confidential information.

²⁰³ SCE response to data request DRA-217-PM1, Q.1, Attachment. SCE asserts confidential information.

1 However, the LTSA identifies that: XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
2 XX
3 XX
4 XX XXXXXXXXXXXX
5 XXXXXXXXXXXXXXXXXXXXXXXX XX
6 XX
7 XX
8 XXXXXXXX XX
9 XXXXXXXXXXXXXXXXXXXXXXXX²⁰⁴

10 ORA’s recommended forecast for the TY 2015 LTSA payment for the O&M of
11 the CSUSB Fuel Cell Plant, consistent with the LTSA is based on:²⁰⁵

XXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXX

12 In addition to the recommended forecast above, ORA identified two other
13 plant performance issues in the LTSA which could affect the overall output of the
14 plant in the TY 2015.

15 Regarding power plant performance the LTSA states:
16 XX
17 XX
18 XX
19 XX
20 XX
21 XX
22 XX

²⁰⁴ SCE response to ORA data request DRA-36-PM1, Q.3, Attachment 1 of 8, p. 13. SCE asserts confidential information.

²⁰⁵ SCE response to ORA data request DRA-36-PM1, Q.3, Attachment 1 of 8, p. 13. SCE asserts confidential information.

1 XXX
2 XXX²⁰⁶

3 Additionally, the LTSA states:

4 XXX
5 XXX
6 XXX²⁰⁷

7 ORA makes no further adjustments to SCE’s O&M for the CSUSB Fuel Cell
8 Plant, but recommends the Commission consider the above provisions in the LTSA
9 which could affect the overall output of the power plant, in determining an
10 appropriate forecast for SCE’s Fuel Cell program in the TY 2015.

11 The second adjustment to SCE’s TY 2015 Fuel Cell O&M forecast is for SCE
12 labor. ORA recommends half an FTE at the rate proposed by SCE or \$56,750 in TY
13 2015 for half an FTE, rather than SCE’s forecast of a full FTE at the rate of
14 \$112,500²⁰⁸ based on the analysis below.

15 The confidential LTSA General Scope states:

16 XXX
17 XXX
18 XXX
19 XXX
20 XXX
21 XXX
22 XXX
23 XXX
24 XXX
25 XXX

²⁰⁶ SCE response to ORA data request DRA-36-PM1, Q.3, Attachment 1 of 8, pp. 5-6. SCE asserts confidential information.

²⁰⁷ SCE response to ORA data request DRA-36-PM1, Q.3, Attachment 1 of 8, p. 5. SCE asserts confidential information.

²⁰⁸ Ex. SCE-2, Vol. 10, p. 31.

1 **C. Fuel Cell Technology Program Capital Expenditures**

2 SCE requests capital expenditures of \$0.7 million in 2013; SCE spent \$0 in
3 2013.²¹⁵ The capital expenditures in 2013 were for construction of the Fuel Cell
4 program and are subject to review in SCE’s ERRA proceeding. “[B]ecause SCE’s
5 request in this application relates to approval of 2015 test year costs, the
6 reasonableness of 2012-2014 O&M and capital costs recorded in the FCPMA will
7 continue to be recorded in SCE’s ERRA proceeding.”²¹⁶ Therefore ORA makes no
8 recommendations in this proceeding regarding the 2013 or 2014 capital forecasts.
9 SCE forecasts zero capital expenditures in 2015, with SCE requesting base rate
10 recovery starting in 2015, which ORA does not oppose.

11 **XII. DISCUSSION / ANALYSIS OF CATALINA COSTS**

12 **A. Overview of SCE’s Request**

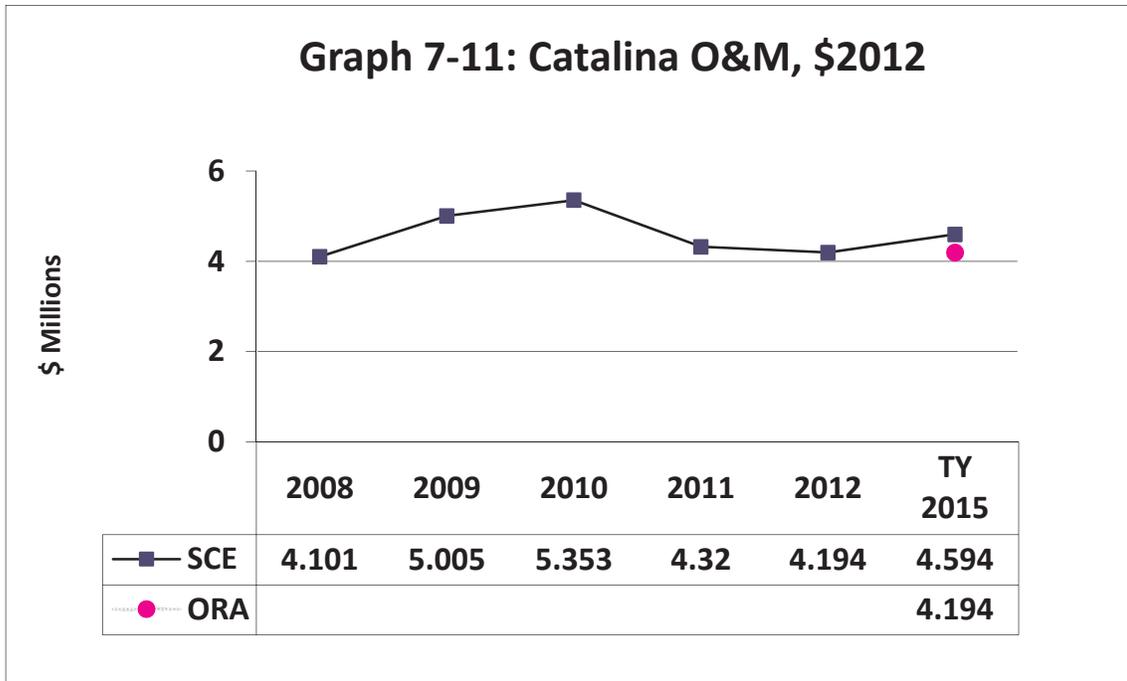
13 SCE provides electricity for Catalina Island customers with a system of diesel
14 generators and micro turbines totaling 9.4 MW. Edison requests \$4.594 million for
15 TY 2015 O&M,²¹⁷ and \$2.480 million, \$5.465 million, \$0.420 million in capital
16 expenditures for 2013, 2014 and 2015, respectively.²¹⁸ Graph 7-11 compares SCE’s
17 O&M request with ORA’s recommendation. Table 7-19 compares SCE’s and ORA’s
18 forecasting methods, and Table 7-20 compares recorded and forecast O&M.

²¹⁵ SCE’s response to ORA data request DRA-289-PM1, Q.1, Attachment.

²¹⁶ Ex. SCE-2, Vol. 10, p. 29.

²¹⁷ Ex. SCE-2, Vol. 10, p. 34.

²¹⁸ Ex. SCE-2, Vol. 10, p. 39.



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Table 7-19

**Catalina Forecasting Methods and Results by FERC Account SCE vs. ORA
(2012 \$000)²¹⁹**

FERC Act.	Description			% Increase 2012-2015	\$ Increase 2012-2015	SCE Forecasting Method	ORA Forecasting Method	ORA Forecast	SCE - ORA
		2012	2015						
549.14	Labor	\$ 2,230	\$ 1,915	-14%	\$ (315)	A5	LRY	\$ 2,230	\$ (315)
	Non-Labor	1,964	2,679	36%	\$ 715	A5	LRY	1,964	715
	Total Catalina	\$ 4,194	\$ 4,595	10%	\$ 401			\$ 4,194	\$ 400

5

6
7
8

Table 7-20

**Catalina Forecasting Methods and Results by FERC Account SCE vs. ORA
(2012 \$000)²²⁰**

FERC ACCT		Recorded/Adjusted					SCE Forecast			ORA Forecast	SCE Estimate Method	ORA Estimate Method
		2008	2009	2010	2011	2012	2013	2014	2015	2015		
549.140	Labor	1,744	1,584	1,984	2,034	2,230	1,915	1,915	1,915	2,230	Five Year Average	Last Recorded Year
Catalina Generation	Non-Labor	2,357	3,421	3,369	2,286	1,964	2,679	2,679	2,679	1,964	Five Year Average	Last Recorded Year
O&M Expense	Other	0	0	0	0	0	0	0	0	0	N/A	N/A
	Total	4,101	5,005	5,353	4,320	4,194	4,595	4,594	4,594	4,194		

9

²¹⁹ Ex. SCE-2, Vol. 10, p. 34.

²²⁰ Ex. SCE-2, Vol. 10, p. 34.

1 **B. Catalina O&M Expenses**

2 SCE proposes \$4.594 million for TY 2015 O&M expenses utilizing five-year
3 averages of both labor and non-labor.²²¹ ORA recommends using LRY (2012) for
4 both labor and non-labor for TY 2015 O&M expenses, resulting in a forecast of
5 \$4.194 million which is \$0.4 million lower than SCE’s forecast.

6 Over the 2010-2012 timeframe, SCE has underspent an average of \$1.3
7 million dollars, or 21% below the average authorized O&M expense of \$5.9 million.
8 Catalina labor has increased over the last four years reaching a high of \$2.2 million
9 in 2012, while non-labor has decreased over the last four years reaching a low of
10 \$2.0 million in 2012.²²² Additionally, over that last three years (2010-2012) total
11 Catalina O&M expenses have declined.

12 SCE is finalizing the Pebbly Beach Generating Station (PBGS) Generation
13 Automation Project and SCE expects to complete the project in 2014, at a cost of
14 \$9.9 million.²²³ SCE maintains that the project is driven by reliability and has not
15 quantified any O&M benefits. However, SCE stated in its 2009 GRC testimony: “[t]he
16 Operator has to physically start the engine at the unit, return to the control room to
17 monitor the startup, and then return to the unit if a problem arises. The electric
18 generation SCADA system will improve this very labor-intensive process.”²²⁴ In this
19 GRC, SCE says that, “[S]CE has not identified any O&M cost benefits/avoidances
20 related to the implementation of this project.”²²⁵ Identifying that “[t]he project’s main
21 drivers are reliability and power quality improvements, which are critical factors in a
22 micro grid environment such as Catalina.”²²⁶ ORA opposes SCE’s forecast increase
23 in the TY 2015 O&M over 2012 recorded expenses.

²²¹ Ex. SCE-2, Vol. 10, p. 34.

²²² Ex. SCE-2, Vol. 10, p. 34.

²²³ Ex. SCE-2, Vol. 10, p. 36.

²²⁴ SCE’s response to ORA data request DRA-35-PM1, Q.3, Attachment 1, p. 41.

²²⁵ SCE’s response to ORA data request DRA-106-PM1, Q.17.

²²⁶ SCE’s response to ORA data request DRA-106-PM1, Q.17.

1 **C. Catalina Capital Expenditures**

2 SCE forecasts \$2.5 million, \$5.5 million and \$0.4 million in capital
3 expenditures for 2013, 2014 and 2015, respectively.²²⁷ ORA recommends utilizing
4 recorded 2013 capital expenditures of \$1.0 million,²²⁸ an adjustment to SCE's
5 forecast of \$1.5 million. ORA does not dispute SCE's 2014 and 2015 capital
6 expenditure forecasts for Catalina.

²²⁷ Ex. SCE-2, Vol. 10, p. 39.

²²⁸ See SCE's response to ORA data request DRA-289-PM1, Q.1, Attachment.

APPENDIX A – Hydro Adjustments Nominal \$000

Line No.	1. Adjustment for 2013 SCE Forecast Verses Actual Recorded	2013	2014	2015	Total
1	2013 Recorded data, see SCE's response to DRA-271-PM1 Q. 01, Attachment	21,509			21,509
2	2. Adjustment for Completed Hydro Projects	2013	2014	2015	Total
3	The Bishop - Communication Fiber		500	2,500	3,000
4	Camp 62 Replace Valve Actuator		165		165
5	The Kaweah 1 - Flowline Rehabilitation		1,193	1,500	2,693
6	Kern River 3 - Flowline Road Work		734		734
7	Kern River - Automation		2,031		2,031
8	Mammoth Pool Unit 1 Rewind and Field Poles		(1,729)		(1,729)
9	Big Creek 1 Construct		(103)		(103)
10	Borel - Install Solid State Units Exciters Units 1 & 3		(76)		(76)
11	Kern River 1 Unit 2 Turbine Refurbish		(11)		(11)
12	Borel Forebay Install		(3)		(3)
13	Big Creek 3 Replace 12 KV Substation		(1)		(1)
14	Ontario 1 Replace Circuit		4		4
15	Poole - Replace Unit		5		5
16	Total Adjustment Completed Hydro Projects		2,709	4,000	6,709
17	3. Adjustment for Project No Longer Pursued	2013	2014	2015	Total
18	Mammoth Pool Fishwater Generator Replacement		1,500	9,000	10,500
19	4. Adjustment for Projects off Schedule	2013	2014	2015	Total
20	Mill Creek 3 Unit 3 - Turbine Replacement		370	(400)	(30)
21	Santa Ana River 1 Turbine Refurbishments		50	800	850
22	Eastern Hydro - Misc. Generator Coils & Rewind		435		
23	Big Creek 8- Pressure Piping		(150)	(450)	(600)
24	Tioga Dam - Install Geomembrane		1,050	(1,100)	(50)
25	Agnew Dam - Resurface Dam/Seismic Upgrade		(4,542)	4,800	258
26	Florence Dam Geomembrane Liner		(913)	1,000	87
27	Vermilion Dam Monitoring & Drain Improvement		(451)	(299)	(750)
28	Santa Ana River 1 - Flume Recoating/Retar		(50)	950	900
29	Lytle Creek Flowline - Siphon 4-5-6 Replacement		480	-	480
30	Northern Hydro Dams Seismic Improvements		1,610	(300)	
31	Northern Hydro Dam Structure Improvement		(230)	-	(230)
32	Poole - Replace Powerhouse Roof		(50)	150	100
33	Northern Hydro Misc. Structures & Grounds Projects		(2,020)	1,200	(820)
34	Mammoth Pool HB Valve Replacement		500	6,403	6,903
35	Total Adjustments for Projects off Schedule		(3,911)	12,754	8,843
36	5. Project Over \$5 million with more than 10% contingency built into	2013	2014	2015	Total
37	Lee Vining Substation		450	4,000	4,450
38	Gem Lake Dam - Reface Down Stream Side		60	860	920
39	Waugh Dam - Seismic Upgrade/Pressure Grout		70	70	140
40	Huntington Lake Dam 1 Replace Power & Controls		0	0	0
41	Rush Creek - Rebuild Tram Track and Replace Tram Car		500	10	510
42	East End - Automation Upgrade		0	0	0
43	Kaweah 1 - Flowline Rehabilitation		0	0	0
44	Kern River 3 - Rebuild Tunnel		810	75	885
45	San Geronio Canyon - Decommissioning		0	0	0
46	Kaweah - Automation Upgrade		0	0	0
47	Agnew Dam - Resurface Dam/Seismic Upgrade		1038	0	1,038
48	Bishop 6 - Replace Flowline/Install AVM		0	0	0
49	Total Contingency Adjustment		2,928	5,015	7,943
50	6. Decommissioning	2013	2014	2015	Total
51	Mill Creek 2 - Decommissioning		0	1,500	1,500
52	7. Total Forecasts	2013	2014	2015	Total
52	SCE Forecast	82,134	72,649	99,231	254,014
53					
54	ORA Forecast	60,177	69,421	66,962	196,560
55	Total ORA Adjustments 2013-2015	21,957	3,226	32,269	57,452

APPENDIX B – Mountainview Base O&M Forecasts

Line No.	TOTAL					BASE COMPONENT					BASE COMPONENT FORECASTS				NON-CSA 2016 OVERHAUL ADJUSTMENT				
	(\$2012 \$000)					(\$2012 \$000)					(\$2012 \$000)				(\$2012 \$000)				
	Recorded/Adjusted					Recorded/Adjusted					FORECAST				(A)	(B)	(A) - (B)	One-Third	
	2008	2009	2010	2011	2012	2008	2009	2010	2011	2012	Basis	SCE Forecast	Basis	ORA Forecast	2009	2008,10,11,12	Overhaul	Overhaul	
	None	HGPI	None	None	None	None	HGPI	None	None	None					Recorded	Average	Adder	Adder	
1																			
2																			
3																			
4																			
5	Overhaul	None	HGPI	None	None	None	HGPI	None	None	None									
6																			
7	Operations																		
8	Labor	3,227	3,637	3,656	3,507	3,790	3,227	3,637	3,656	3,507	3,790	LRY	3,790	LRY	3,790	Not Applicable			
9	Non-Labor	8,467	6,475	4,736	4,482	4,491	8,467	6,475	4,736	4,482	4,491	LRY	4,491	LRY	4,491	Not Applicable			
10	Other	0	0	0	0	0	0	0	0	0	Not Applicable	0	Not Applicable	0	Not Applicable				
11	Sub-Total	11,694	10,112	8,392	7,989	8,281	11,694	10,112	8,392	7,989	8,281		8,281		8,281				
12																			
13	Maintenance																		
14	Labor	3,355	4,328	3,786	3,727	3,718	3,355	3,718	3,786	3,727	3,718	LRY	3,718	LRY	3,718	4,328	3,647	682	227
15	Non-Labor	8,841	12,855	9,138	8,773	6,652	8,841	8,351	9,138	8,773	6,652	2008,10,11,12 Ave	8,351	LRY	6,652	12,855	8,351	4,504	1,501
16	Other	22,648	23,991	10,528	8,328	12,409	0	0	0	0	0	Not Applicable		Not Applicable	0	Not Applicable			
17	Sub-Total	34,844	41,174	23,452	20,828	22,779	12,196	12,069	12,924	12,500	10,370		12,069		10,370				1,729
18																			
19	TOTAL																		
20	Labor	6,582	7,965	7,442	7,234	7,508	6,582	7,355	7,442	7,234	7,508		7,508		7,508				
21	Non-Labor	17,308	19,330	13,874	13,255	11,143	17,308	14,826	13,874	13,255	11,143				11,143				
22	Other	22,648	23,991	10,528	8,328	12,409	0	0	0	0	0				0				
23	TOTAL	46,538	51,286	31,844	28,817	31,060	23,890	22,181	21,316	20,489	18,651		20,350		18,651				
24																			
25																			
26																			
27																			
28	Labor																		
29	Non-Labor																		
30	Other																		

Note: Adapted from SCE response to ORA data request DRA-115-PM1 Q. 06, attachment.