

October 30, 2014

The Honorable Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

**Re: California Independent System Operator Corporation
Docket Nos. ER08-1178-000 and EL08-88-000
July 2014 Exceptional Dispatch Report (Chart 2 Data)**

Dear Secretary Bose:

Pursuant to the orders issued in the above-referenced dockets on September 2, 2009 and May 4, 2010, the California Independent System Operator Corporation (CAISO) submits the attached report. The report provides Exceptional Dispatch information that the Commission directed be included in "Chart 2," which is set forth in Appendix A to the September 2, 2009 order, as modified by the May 4, 2010 order.

The attached report provides Chart 2 data for the month of July 2014. The report also includes the price impact analysis for July 2014 required by paragraph 44 of the September 2, 2009 order, as well as the degree of mitigation analysis required by CAISO tariff section 34.9.4 for July 2014.

Respectfully submitted,

By: /s/ Sidney M. Davies

Roger E. Collanton
General Counsel
Sidney M. Davies
Assistant General Counsel
California Independent System
Operator Corporation
250 Outcropping Way
Folsom, CA 95630
Tel: (916) 608-7144
Fax: (916) 608-7222
sdavies@caiso.com



Exceptional Dispatch Report

Table 2: July 2014

TABLE OF CONTENTS

Introduction	3
The Nature of Exceptional Dispatch.....	3
Appendix A: Explanation by Example	15
Example 1: Exceptional Dispatch Instructions Prior to DAM	15
Example 2: Incremental Exceptional Dispatch Instructions in RTM.....	16
Appendix B: Price Impact Analysis	19
Appendix C: Exceptional Dispatch Bid Mitigation Analysis	24

LIST OF TABLES AND FIGURES

Table 1: Exceptional Dispatches in July 2014.....	7
Table 2: Instructions Prior to Day-Ahead Market	15
Table 3: FERC Summary of Instructions Prior to DAM	15
Table 4: Incremental Exceptional Dispatch Instructions in RTM	16
Table 5: FERC Summary of ED Instructions in RTM	17
Table 6: Decremental Exceptional Dispatch Instructions in RTM	18
Table 7: FERC Summary of Decremental ED Instructions in RTM.....	18
Table 8: Price Impact Analysis Information for Pricing Node A in PG&E LAP	20
Table 9: Price Impact Analysis Information for Pricing Node B in SCE LAP	21

Introduction

This report is filed pursuant to FERC's September 2, 2009, and May 4, 2010, orders in ER08-1178. These orders require two monthly Exceptional Dispatch reports—one issued on the 15th of each month and one issued on the 30th of each month. This report provides data on the frequency, reasons and costs for Exceptional Dispatches issued in July 2014. On December 19, 2013, the ISO implemented a new exceptional dispatch tool. This tool improves the ISO's ability to automate the production of the report and provides more granularity and consistency concerning the reasons for the exceptional dispatch.

In addition, this report contains a price impact analysis as prescribed by FERC in its September 2, 2009 order. The price impact analysis for the month of July is presented in Appendix B. This report also includes the degree of mitigation analysis for July 2014 required by section 34.9.4 of the ISO tariff. As it has previously explained, the ISO indicated that it would start including the degree of mitigation analysis beginning with the month of August 2009 when the more limited Exceptional Dispatch bid mitigation took effect. This analysis will compare those Exceptional Dispatches subject to bid mitigation (i.e. Exceptional Dispatches to address noncompetitive constraints and Delta Dispatch), and determine the cost difference between the Exceptional Dispatch bid mitigation settlement rules and what the settlement amount would have been had the Exceptional Dispatches not been subject to bid mitigation. The Exceptional Dispatch bid mitigation analysis for July is presented in Appendix C.

The Nature of Exceptional Dispatch

The ISO can issue exceptional dispatch instructions for a resource as a pre-day-ahead unit commitment, a post day-ahead unit commitment or a real-time exceptional dispatch. A pre-day-ahead unit commitment is an exceptional dispatch instruction committing a resource at or above its physical minimum (Pmin) operating level in the day-ahead market. A post-day-ahead unit commitment is an exceptional dispatch instruction committing a resource at or above its (Pmin) operating level in the real-time market. A real-time exceptional dispatch instructs a resource to operate at or above its physical minimum operating point. For the purposes of this report, a real-time exceptional dispatch above the resource's day-ahead award is considered an incremental exceptional dispatch instruction and a real-time exceptional dispatch below the day-ahead award is considered a decremental dispatch instruction. The ISO issues exceptional dispatch instructions primarily to manage transmission constraints that are not modeled in the market software. In addition to constraints, the ISO also issues exceptional dispatch instructions relating to reliability requirements and, on occasion, software failures. Reliability requirements are calculated for both local area and the system wide needs, and are classified into various requirements including local generation, transmission management, non-modeled transmission outages, ramping and inertia emergency assistance.

Whenever the ISO issues an exceptional dispatch instruction, these instructions are logged by the operators into the scheduling and logging system (SLIC), including an associated reason for each exceptional dispatch instruction.

Most of the generation procedures are internal to the ISO and not available publicly on the ISO website; however, all of the transmission procedures are available on the ISO website.¹

The following additional reason for exceptional dispatch instructions in July 2014 was not related to specific generation or transmission operating procedures: Software Limitation, when an exceptional dispatch instruction was used to bridge schedules across days for resources with a minimum down time of 24 hours, as the ISO software does not handle multi day commitment. For instance, a resource has a day-ahead schedule from 0600 till 2300, and then is shut down in 2400. If this resource had a minimum down time of 24 hours and it is required the following day, then the ISO issues an exceptional dispatch to commit this resource in 2400 so that it can be dispatched economically in the following day. Software limitation reason was also used for exceptional dispatches to manually issue shut down instructions to a resource because of a temporary Automatic Dispatch System (“ADS”) failure, or similar issues. There were a few other reasons used to explain exceptional dispatch instructions in July, which are self explanatory.

As mentioned earlier, the data shown in Table 1 is based on a template specified in the September 2009 order.² This table contains all the information published in Table 1 of the first report for July. In addition, it contains volume (MWh) and cost information. Each entry in Table 1 is a summary of exceptional dispatches classified by (1) the reason for the exceptional dispatch; (2) the location of the resource by Participating Transmission Owner (PTO) service area; (3) the Local Reliability Area (LRA) where applicable; (4) the market in which the exceptional dispatch occurred (day-ahead vs. real-time); and (5) the date of the exceptional dispatch. For each classification the following information is provided: (1) Megawatts (MW); (2) Commitment; (3) Inc or Dec; (4) Hours; (5) Begin Time; (6) End Time; (7) Total Volume (MWh); (8) Min Load Cost; (9) Start Up Cost; (10) CC6470; (11) ED Volume (MWh INC/DEC); (12) CC6470 INC; (13) CC6470 DEC; (14) CC6482; (15) CC6488; and (16) CC6620. Each column is defined as follows:

- The MW column shows the range of exceptional dispatch instruction in MW for the classification.

¹ A list of all of the ISO's Operating Procedures and all the publicly available Operating Procedures are available at the following link:

<http://www.caiso.com/thegrid/operations/opsdoc/index.html>

² The data in Table 1 is principally SLIC information supplemented with data from the Market Quality System (MQS) and Settlements database. The volume and cost information is based on t+51B Recalculation Statements.

- The Commitment column specifies if there was a unit commitment for the classification.
- The INC/DEC/NA column specifies if there was an incremental dispatch (INC), a decremental dispatch (DEC), or only a unit commitment (NA). The Begin Time and End Time columns show the start and end time of exceptional dispatch for the classification respectively.
- The Hours column is the time difference between begin time and end time rounded up to the next hour.
- The total volume column shows the total MWh dispatch quantity dispatched for that classification. This quantity includes the minimum load quantity, the imbalance energy quantity, and the exceptional dispatch quantity.
- The Min-Load Cost column shows eligible minimum load cost for the classification.
- The Start-Up Cost column shows the eligible start up cost for the classification. Please note that the ISO does not explicitly pay resources for its start up and minimum load costs; however, it ensures that resources are compensated adequately through its bid cost recovery process.³
- The CC6470 column shows the total imbalance energy costs for the classification. This cost contains the portion of exceptional dispatch instruction that was settled as optimal energy by virtue of its bid price being less than the LMP in that specific settlement interval.
- The ED Volume MWh (MWh INC/DEC) column shows the incremental or the decremental portion of the real-time exceptional dispatch MWh for the classification. The CC6470-INC shows that portion of incremental exceptional dispatch instruction which is settled at the resource specific LMP.
- The CC6470-DEC column shows that portion of decremental exceptional dispatch instruction which is settled at the resource specific LMP. Both these charge codes are portion of the real-time instructed imbalance energy charge code (6470).⁴
- The CC6482 column shows the real-time excess cost for the classification.⁵
- The CC6488 column shows the real-time exceptional dispatch uplift settlement for the classification.⁶ The CC6620 shows the bid cost recovery payment for the classification. This cost is shown for all pre-day-ahead unit commitments only.

³ For further details regarding the Bid Cost Recovery process please refer to section 11.8 of the ISO tariff.

⁴ For further details please refer to the BPM configuration Guide: Real-Time Instructed Imbalance Energy Settlement published on the ISO's website.

⁵ For further details please refer to the BPM configuration Guide: Real Time Excess Cost for Instructed Energy Settlement published on the ISO's website.

⁶ For further details please refer to the BPM configuration Guide: Real Time Exceptional Dispatch Uplift Settlement published on the ISO's website.

Charge codes 6470, 6470 INC, 6470 DEC, 6482 and 6488 are shown in Table 1 because all these charge codes pertain to real-time exceptional dispatch MWH quantities. The classification of data is further explained by way of example in Attachment A.

Table 1: Exceptional Dispatches in July 2014

**California Independent System Operator Corporation
Exceptional Dispatch Report
October 30, 2014**

Chart 2: Table of Exceptional Dispatches for Period 01/July/2014 - 31/July/2014

Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time	Total MWH	Min Load Cost	Start Up Cost	CC6470	ED MWH (INC/DEC)	CC6470 INC	CC6470 DEC	CC6482	CC6488	CC6620
1	RT	Bridging Schedules	SCE	LA Basin	26-Jul-14	10	Yes	INC	2	22:00	23:59	-6.71	\$1,508	\$0	\$343	0	\$0	\$0	\$0	\$0	\$0
2	RT	Contingency Dispatch	SCE	Big Creek-Ventura	19-Jul-14	238	Yes	INC	1	21:05	21:59	20.35	\$0	\$0	(\$1,300)	0	\$0	\$0	\$0	\$0	\$0
3	RT	Contingency Dispatch	SCE	LA Basin	19-Jul-14	906	No	INC	1	21:00	21:59	17.63	\$0	\$0	(\$1,128)	0	\$0	\$0	\$0	\$0	\$0
4	RT	Contingency Dispatch	SDG&E	San Diego-IV	19-Jul-14	33	No	INC	1	21:15	21:59	12.46	\$0	\$0	(\$798)	0	\$0	\$0	\$0	\$0	\$0
5	RT	Fast Start Unit Management	PG&E	Fresno	7-Jul-14	50	No	INC	9	13:40	21:59	14.81	\$0	\$0	(\$769)	3	(\$165)	\$0	\$0	\$0	\$0
6	RT	Fast Start Unit Management	PG&E	Fresno	21-Jul-14	40- 90	No	INC	9	15:20	23:59	-41.13	\$8,449	\$376	\$2,604	0	\$0	\$0	\$0	\$0	\$0
7	RT	Fast Start Unit Management	PG&E	Fresno	22-Jul-14	40- 50	No	INC	17	1:15	17:59	0.00	\$0	\$0	\$0	0	\$0	\$0	\$0	\$0	\$0
8	RT	Fast Start Unit Management	PG&E	Fresno	27-Jul-14	20- 60	No	INC	7	4:40	10:59	8.04	\$8,317	\$100	(\$658)	0	\$0	\$0	\$0	\$0	\$0
9	RT	Fast Start Unit Management	PG&E	Fresno	28-Jul-14	20- 50	No	INC	6	18:25	23:59	-20.77	(\$922)	\$0	\$679	0	\$0	\$0	\$0	\$0	\$0
10	RT	Fast Start Unit Management	SCE	Big Creek-Ventura	18-Jul-14	0	No	INC	1	17:35	18:14	1.49	\$4,596	\$0	(\$90)	0	\$0	\$0	\$0	\$0	\$0
11	RT	Fast Start Unit Management	SCE	LA Basin	18-Jul-14	48	No	INC	2	17:30	18:39	-2.75	\$2,248	\$0	\$97	0	\$0	\$0	\$0	\$0	\$0
12	RT	Fast Start Unit Management	SCE	LA Basin	18-Jul-14	48	No	INC	2	17:00	18:39	7.46	\$1,499	\$0	(\$361)	0	\$0	\$0	\$0	\$0	\$0
13	RT	Fast Start Unit Management	SDG&E	San Diego-IV	18-Jul-14	0	No	INC	1	17:35	18:34	-3.44	\$4,647	\$0	\$132	0	\$0	\$0	\$0	\$0	\$0
14	RT	Fast Start Unit Management	SDG&E	San Diego-IV	23-Jul-14	25	No	INC	7	13:30	19:59	-29.77	\$13,332	\$633	\$1,865	0	(\$2)	\$0	\$0	\$0	\$0
15	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10-Jul-14	40- 50	No	INC	12	10:00	21:59	0.00	\$3,395	\$0	\$0	0	\$0	\$0	\$0	\$0	\$0
16	RT	Incomplete or Inaccurate Transmission	PG&E	Kern	4-Jul-14	141	No	INC	1	10:00	10:59	0.00	\$0	\$0	\$0	0	\$0	\$0	\$0	\$0	\$0
17	RT	Incomplete or Inaccurate Transmission	PG&E	N/A	10-Jul-14	190- 750	No	INC	5	14:46	18:59	-53.89	(\$14,762)	\$0	\$2,291	(25)	\$0	\$1,062	\$0	(\$1,062)	\$0
18	RT	Incomplete or Inaccurate Transmission	PG&E	N/A	29-Jul-14	300	No	INC	6	11:20	16:59	-93.45	\$0	\$0	(\$6,173)	(80)	\$0	(\$5,799)	\$0	(\$900)	\$0
19	RT	Incomplete or Inaccurate Transmission	PG&E	Sierra	4-Jul-14	37	No	INC	14	10:00	23:59	-0.07	\$0	\$0	\$17	0	\$0	\$0	\$0	\$0	\$0
20	RT	Intertie Emergency Assistance	Intertie	N/A	21-Jul-14	120	No	INC	1	21:38	21:59	0.00	\$0	\$0	\$0	0	\$0	\$0	\$0	\$0	\$0
21	RT	Intertie Emergency Assistance	Intertie	N/A	28-Jul-14	200	No	INC	1	16:00	16:59	0.00	\$0	\$0	\$0	0	\$0	\$0	\$0	\$0	\$0

Department of Market Quality and Renewable Integration – California ISO

Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time	Total MWH	Min Load Cost	Start Up Cost	CC6470	ED MWH (INC/DEC)	CC6470 INC	CC6470 DEC	CC6482	CC6488	CC6620
22	RT	Load Forecast Uncertainty	PG&E	Kern	26-Jul-14	141	No	INC	1	10:00	10:59	0.00	\$0	\$0	\$0	0	\$0	\$0	\$0	\$0	\$0
23	RT	Load Forecast Uncertainty	PG&E	N/A	28-Jul-14	52	No	INC	10	14:00	23:59	19.41	\$19,268	\$129,208	(\$988)	0	\$0	\$0	\$0	\$0	\$0
24	RT	Load Forecast Uncertainty	PG&E	N/A	30-Jul-14	52	No	INC	2	22:00	23:59	76.46	\$17,109	\$0	(\$8,153)	0	\$0	\$0	\$0	\$0	\$0
25	RT	Load Forecast Uncertainty	PG&E	Sierra	26-Jul-14	42	Yes	INC	1	10:00	10:59	1.77	\$0	\$0	(\$62)	0	\$0	\$0	\$0	\$0	\$0
26	RT	Load Forecast Uncertainty	SCE	Big Creek-Ventura	28-Jul-14	50	No	INC	14	10:00	23:59	37.93	\$73,615	\$100,069	(\$1,674)	0	\$0	\$0	\$0	\$0	\$0
27	RT	Load Forecast Uncertainty	SCE	LA Basin	7-Jul-14	25- 70	Yes	INC	23	1:00	23:59	-26.84	\$21,915	\$11,291	\$1,236	0	\$0	\$0	\$0	\$0	\$0
28	RT	Load Forecast Uncertainty	SCE	LA Basin	8-Jul-14	10	Yes	INC	15	9:00	23:59	-237.51	\$24,525	\$0	\$13,286	0	\$0	\$0	\$0	\$0	\$0
29	RT	Load Forecast Uncertainty	SCE	LA Basin	11-Jul-14	10	No	INC	1	15:00	15:29	0.00	\$0	\$0	\$0	0	\$0	\$0	\$0	\$0	\$0
30	RT	Load Forecast Uncertainty	SCE	LA Basin	13-Jul-14	25	No	INC	17	7:00	23:59	-244.83	\$23,970	\$0	\$10,640	0	\$0	\$0	\$0	\$0	\$0
31	RT	Load Forecast Uncertainty	SCE	LA Basin	15-Jul-14	10	Yes	INC	23	1:00	23:59	-77.91	\$38,077	\$0	\$3,934	0	\$0	\$0	\$0	\$0	\$0
32	RT	Load Forecast Uncertainty	SCE	LA Basin	28-Jul-14	50	No	INC	17	7:00	23:59	256.83	\$29,963	\$0	(\$24,308)	0	\$0	\$0	\$0	\$0	\$0
33	RT	Load Forecast Uncertainty	SCE	LA Basin	30-Jul-14	50	No	INC	1	17:05	17:59	-151.02	\$4,794	\$0	\$8,538	0	\$0	\$0	\$0	\$0	\$0
34	RT	Load Forecast Uncertainty	SCE	N/A	7-Jul-14	80	Yes	INC	16	8:00	23:59	-3.14	\$70,200	\$0	\$57	0	\$0	\$0	\$0	\$0	\$0
35	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	7-Jul-14	40	No	INC	15	9:00	23:59	8.87	\$31,905	\$0	(\$601)	0	\$0	\$0	\$0	\$0	\$0
36	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	27-Jul-14	20	No	INC	22	2:00	23:59	-289.85	\$78,532	\$0	\$17,963	0	\$0	\$0	\$0	\$0	\$0
37	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	28-Jul-14	20- 136	No	INC	17	7:00	23:59	-308.58	\$72,897	\$9,119	\$29,726	0	\$0	\$0	\$0	\$0	\$0
38	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	29-Jul-14	20	No	INC	3	21:00	23:59	-0.07	\$6,235	\$0	\$5	0	\$0	\$0	\$0	\$0	\$0
39	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	31-Jul-14	20	Yes	INC	1	23:00	23:59	6.22	\$0	\$0	(\$244)	0	\$0	\$0	\$0	\$0	\$0
40	RT	Market Disruption	Intertie	N/A	28-Jul-14	150- 290	No	INC	2	16:00	17:59	16.25	\$0	\$0	\$2,224	0	\$0	\$0	\$0	\$0	\$0
41	RT	Market Disruption	PG&E	Bay Area	25-Jul-14	490- 680	No	INC	2	13:23	14:59	0.00	\$0	\$0	\$0	0	\$0	\$0	\$0	\$0	\$0
42	RT	Market Disruption	PG&E	Fresno	28-Jul-14	95	No	INC	2	15:03	16:14	-1.93	\$0	\$0	\$84	0	\$0	\$0	\$0	\$0	\$0
43	RT	Market Disruption	PG&E	N/A	25-Jul-14	500	No	INC	2	13:25	14:59	-6.91	\$0	\$0	\$212	0	\$0	\$0	\$0	\$0	\$0
44	RT	Market Disruption	PG&E	N/A	28-Jul-14	450	No	INC	1	15:10	15:29	0.00	\$0	\$0	\$0	0	\$0	\$0	\$0	\$0	\$0
45	RT	Market Disruption	PG&E	Sierra	28-Jul-14	96- 144	No	INC	2	15:18	16:24	-6.16	\$0	\$0	\$395	0	\$0	\$0	\$0	\$0	\$0
46	RT	Market Disruption	SCE	LA Basin	25-Jul-14	500	No	INC	2	13:14	14:59	-34.49	\$0	\$0	\$1,714	50	(\$2,474)	\$0	(\$78)	\$0	\$0
47	RT	Market Disruption	SCE	LA Basin	28-Jul-14	600	No	INC	2	15:17	16:29	0.06	\$0	\$0	(\$3)	0	\$0	\$0	\$0	\$0	\$0
48	RT	Market Disruption	SDG&E	San Diego-IV	25-Jul-14	630	No	INC	2	13:32	14:59	124.42	\$8,409	\$0	(\$7,152)	41	(\$2,021)	\$0	(\$379)	\$0	\$0
49	RT	MSG Plant Startup	PG&E	Fresno	25-Jul-14	2	No	INC	1	14:40	15:29	0.00	\$0	\$0	\$0	0	\$0	\$0	\$0	\$0	\$0
50	RT	Operating Procedure Number and Constraint	PG&E	Fresno	1-Jul-14	92- 250	No	INC	12	10:10	21:59	5.23	\$0	\$0	(\$548)	0	\$0	\$0	\$0	\$0	\$0

Department of Market Quality and Renewable Integration – California ISO

Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time	Total MWH	Min Load Cost	Start Up Cost	CC6470	ED MWH (INC/DEC)	CC6470 INC	CC6470 DEC	CC6482	CC6488	CC6620
51	RT	Operating Procedure Number and Constraint	PG&E	Fresno	2-Jul-14	92	No	INC	11	10:33	20:59	26.09	\$8,631	\$161	(\$1,810)	1	(\$48)	\$0	\$0	\$0	\$0
52	RT	Operating Procedure Number and Constraint	PG&E	Fresno	3-Jul-14	50- 133	No	INC	8	7:35	14:59	-137.32	\$22,917	\$361	\$6,589	0	\$0	\$0	\$0	\$0	\$0
53	RT	Operating Procedure Number and Constraint	PG&E	Fresno	4-Jul-14	40	No	INC	14	10:45	23:59	-10.05	\$21,649	\$793	\$495	0	\$0	\$0	\$0	\$0	\$0
54	RT	Operating Procedure Number and Constraint	PG&E	Fresno	5-Jul-14	20	No	INC	1	15:30	15:59	11.07	\$0	\$51	(\$650)	0	\$0	\$0	\$0	\$0	\$0
55	RT	Operating Procedure Number and Constraint	PG&E	Fresno	6-Jul-14	46- 48	No	INC	7	13:20	19:59	40.37	\$0	\$0	(\$3,981)	5	(\$380)	\$0	\$0	\$0	\$0
56	RT	Operating Procedure Number and Constraint	PG&E	Fresno	10-Jul-14	46- 92	No	INC	2	2:00	3:29	3.00	\$0	\$0	(\$27)	0	\$0	\$0	\$0	\$0	\$0
57	RT	Operating Procedure Number and Constraint	PG&E	Fresno	11-Jul-14	70	No	INC	1	0:05	0:59	41.64	\$0	\$0	(\$2,872)	0	\$0	\$0	\$0	\$0	\$0
58	RT	Operating Procedure Number and Constraint	PG&E	Fresno	12-Jul-14	30- 60	No	INC	15	8:00	22:59	-54.96	\$14,024	\$0	\$2,843	0	\$0	\$0	\$0	\$0	\$0
59	RT	Operating Procedure Number and Constraint	PG&E	Fresno	14-Jul-14	60- 80	No	INC	13	9:55	22:29	-33.86	\$11,821	\$651	\$1,487	0	\$0	\$0	\$0	\$0	\$0
60	RT	Operating Procedure Number and Constraint	PG&E	Fresno	16-Jul-14	80	No	INC	13	11:30	23:59	9.58	\$13,565	\$543	(\$267)	10	(\$531)	\$0	\$0	\$0	\$0
61	RT	Operating Procedure Number and Constraint	PG&E	Fresno	17-Jul-14	40	No	INC	10	12:45	21:59	-51.40	\$10,109	\$0	\$2,545	(2)	\$0	\$124	\$0	\$0	\$0
62	RT	Operating Procedure Number and Constraint	PG&E	Fresno	18-Jul-14	45- 245	No	INC	5	19:30	23:59	8.65	\$2,025	\$0	\$114	5	(\$432)	\$0	\$0	\$0	\$0
63	RT	Operating Procedure Number and Constraint	PG&E	Fresno	19-Jul-14	20- 46	No	INC	19	4:25	22:59	7.83	\$1,539	\$0	(\$1,026)	0	\$0	\$0	\$0	\$0	\$0
64	RT	Operating Procedure Number and Constraint	PG&E	Fresno	20-Jul-14	40- 84	No	INC	10	14:35	23:59	3.81	\$11,090	\$0	(\$1,756)	0	\$0	\$0	\$0	\$0	\$0
65	RT	Operating Procedure Number and Constraint	PG&E	Fresno	22-Jul-14	40	No	INC	20	4:45	23:59	-17.28	\$1,970	\$0	\$842	0	\$0	\$0	\$0	\$0	\$0
66	RT	Operating Procedure Number and Constraint	PG&E	Fresno	24-Jul-14	20	No	INC	6	1:40	6:59	2.76	\$6,880	\$314	(\$84)	0	\$0	\$0	\$0	\$0	\$0
67	RT	Operating Procedure Number and Constraint	PG&E	Fresno	25-Jul-14	20	No	INC	5	5:35	9:59	0.00	\$3,804	\$0	(\$8)	0	\$0	\$0	\$0	\$0	\$0
68	RT	Operating Procedure Number and Constraint	PG&E	Fresno	26-Jul-14	52- 70	No	INC	8	15:40	22:44	0.80	\$0	\$0	(\$613)	0	\$0	\$0	\$0	\$0	\$0
69	RT	Operating Procedure Number and Constraint	PG&E	Fresno	28-Jul-14	20- 50	No	INC	8	6:15	13:59	-11.68	\$2,817	\$402	\$563	0	\$0	\$0	\$0	\$0	\$0
70	RT	Operating Procedure Number and Constraint	PG&E	Fresno	31-Jul-14	60- 80	No	INC	15	9:00	23:59	1.82	\$6,470	\$0	(\$98)	0	\$0	\$0	\$0	\$0	\$0
71	RT	Operating Procedure Number and Constraint	PG&E	Humboldt	1-Jul-14	15	No	INC	1	23:30	23:59	0.00	\$0	\$0	\$0	0	\$0	\$0	\$0	\$0	\$0

Department of Market Quality and Renewable Integration – California ISO

Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time	Total MWH	Min Load Cost	Start Up Cost	CC6470	ED MWH (INC/DEC)	CC6470 INC	CC6470 DEC	CC6482	CC6488	CC6620
72	RT	Operating Procedure Number and Constraint	PG&E	Humboldt	1-Jul-14	30- 60	No	INC	24	0:00	23:59	14.34	(\$663)	\$0	\$113	0	\$0	\$0	\$0	\$0	\$0
73	RT	Operating Procedure Number and Constraint	PG&E	Humboldt	2-Jul-14	30	No	INC	1	0:00	0:59	3.18	\$0	\$0	(\$103)	0	\$0	\$0	\$0	\$0	\$0
74	RT	Operating Procedure Number and Constraint	PG&E	Humboldt	3-Jul-14	15- 45	No	INC	16	5:20	20:24	15.45	(\$1,614)	\$0	(\$1,112)	6	(\$358)	\$0	\$0	\$0	\$0
75	RT	Operating Procedure Number and Constraint	PG&E	Humboldt	30-Jul-14	30	No	INC	1	9:40	10:14	-0.09	\$0	\$0	\$3	0	\$0	\$0	\$0	\$0	\$0
76	RT	Operating Procedure Number and Constraint	PG&E	Sierra	1-Jul-14	40	Yes	INC	1	20:20	20:59	-3.31	\$0	\$0	\$192	0	\$0	\$0	\$0	\$0	\$0
77	RT	Operating Procedure Number and Constraint	PG&E	Stockton	3-Jul-14	20- 50	No	INC	2	18:30	20:14	-1.05	\$0	\$0	\$80	0	\$0	\$0	\$0	\$0	\$0
78	RT	Operating Procedure Number and Constraint	PG&E	Stockton	6-Jul-14	40- 50	No	INC	2	19:45	21:29	6.98	\$0	\$0	(\$346)	6	(\$311)	\$0	\$0	\$0	\$0
79	RT	Operating Procedure Number and Constraint	SCE	Big Creek-Ventura	1-Jul-14	240- 350	No	INC	12	10:35	21:59	26.17	\$0	\$0	(\$1,589)	0	\$0	\$0	\$0	\$0	\$0
80	RT	Operating Procedure Number and Constraint	SCE	Big Creek-Ventura	2-Jul-14	295- 296	No	INC	9	12:20	20:59	19.92	\$0	\$0	(\$1,400)	8	(\$409)	\$0	\$0	(\$256)	\$0
81	RT	Operating Procedure Number and Constraint	SCE	Big Creek-Ventura	3-Jul-14	296	No	INC	11	12:00	22:14	-37.14	\$0	\$0	\$1,838	3	(\$163)	\$0	\$0	\$0	\$0
82	RT	Operating Procedure Number and Constraint	SCE	Big Creek-Ventura	4-Jul-14	300	No	INC	12	12:05	23:59	-26.65	\$0	\$0	\$1,458	0	\$0	\$0	\$0	\$0	\$0
83	RT	Operating Procedure Number and Constraint	SCE	Big Creek-Ventura	5-Jul-14	175- 300	No	INC	22	2:05	23:59	0.58	\$0	\$0	(\$21)	0	\$0	\$0	\$0	\$0	\$0
84	RT	Operating Procedure Number and Constraint	SCE	Big Creek-Ventura	6-Jul-14	150- 300	No	INC	19	4:25	23:14	0.00	\$0	\$0	\$0	0	\$0	\$0	\$0	\$0	\$0
85	RT	Operating Procedure Number and Constraint	SCE	Big Creek-Ventura	7-Jul-14	175- 250	No	INC	21	3:15	23:59	-29.34	\$0	\$0	\$1,097	0	\$0	\$0	\$0	\$0	\$0
86	RT	Operating Procedure Number and Constraint	SCE	Big Creek-Ventura	8-Jul-14	285- 580	No	INC	2	18:25	20:14	-10.25	\$0	\$0	\$4,882	0	\$0	\$0	\$0	\$0	\$0
87	RT	Operating Procedure Number and Constraint	SCE	Big Creek-Ventura	11-Jul-14	200- 317	No	INC	7	12:45	18:59	27.25	\$0	\$0	(\$2,555)	27	(\$2,555)	\$0	\$0	\$0	\$0
88	RT	Operating Procedure Number and Constraint	SCE	Big Creek-Ventura	13-Jul-14	316	No	INC	4	17:00	20:59	98.61	\$0	\$0	(\$10,594)	94	(\$10,347)	\$0	\$0	\$0	\$0
89	RT	Operating Procedure Number and Constraint	SCE	Big Creek-Ventura	14-Jul-14	250	No	INC	2	12:40	13:44	19.67	\$0	\$0	(\$2,171)	20	(\$2,171)	\$0	\$0	\$0	\$0
90	RT	Operating Procedure Number and Constraint	SCE	Big Creek-Ventura	16-Jul-14	200- 317	No	INC	10	10:05	19:59	0.00	\$0	\$0	(\$0)	0	\$0	\$0	\$0	\$0	\$0
91	RT	Operating Procedure Number and Constraint	SCE	Big Creek-Ventura	17-Jul-14	200- 550	No	INC	4	19:30	22:59	-10.50	\$0	\$0	\$432	0	\$0	\$0	\$0	\$0	\$0
92	RT	Operating Procedure Number and Constraint	SCE	LA Basin	16-Jul-14	130	No	INC	8	12:15	19:59	156.78	(\$1,875)	\$0	(\$5,973)	0	\$0	\$0	\$0	\$0	\$0

Department of Market Quality and Renewable Integration – California ISO

Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time	Total MWH	Min Load Cost	Start Up Cost	CC6470	ED MWH (INC/DEC)	CC6470 INC	CC6470 DEC	CC6482	CC6488	CC6620
93	RT	Operating Procedure Number and Constraint	SDG&E	San Diego-IV	23-Jul-14	68	No	INC	2	12:05	13:59	0.00	\$0	\$0	\$0	0	\$0	\$0	\$0	\$0	\$0
94	RT	Operating Procedure Number and Constraint	SDG&E	San Diego-IV	24-Jul-14	68	No	INC	1	11:00	11:59	-0.09	\$0	\$0	\$15	0	\$0	\$0	\$0	\$0	\$0
95	RT	Operating Procedure Number and Constraint	SDG&E	San Diego-IV	31-Jul-14	15	No	INC	6	10:30	15:59	-20.70	\$10,082	\$376	\$1,314	0	\$0	\$0	\$0	\$0	\$0
96	RT	Other Reliability Requirement	Intertie	N/A	18-Jul-14	0	No	INC	1	16:15	16:19	0.00	\$0	\$0	\$0	0	\$0	\$0	\$0	\$0	\$0
97	RT	Other Reliability Requirement	PG&E	Fresno	11-Jul-14	30- 84	No	INC	7	15:20	21:59	0.00	\$0	\$0	\$0	0	\$0	\$0	\$0	\$0	\$0
98	RT	Other Reliability Requirement	PG&E	Fresno	18-Jul-14	35	No	INC	2	1:25	2:34	-15.71	\$263	\$0	\$905	2	(\$336)	\$0	\$0	\$0	\$0
99	RT	Other Reliability Requirement	PG&E	Fresno	18-Jul-14	15- 20	No	INC	10	2:35	11:59	-16.52	\$1,313	\$0	\$2,140	0	\$0	\$0	\$0	\$0	\$0
100	RT	Other Reliability Requirement	PG&E	Fresno	21-Jul-14	48	No	INC	7	16:30	22:59	14.91	\$2,925	\$0	(\$1,738)	18	(\$1,956)	\$0	\$0	\$0	\$0
101	RT	Other Reliability Requirement	PG&E	Humboldt	1-Jul-14	30	No	INC	4	1:00	4:44	76.97	\$0	\$0	(\$3,716)	1	(\$62)	\$0	\$0	\$0	\$0
102	RT	Other Reliability Requirement	PG&E	Humboldt	25-Jul-14	30	No	INC	9	14:50	22:59	-18.69	\$2,325	\$0	\$755	0	\$0	\$0	\$0	\$0	\$0
103	RT	Other Reliability Requirement	PG&E	N/A	19-Jul-14	141	No	INC	17	7:00	23:59	930.64	\$112,723	\$0	(\$66,701)	0	\$0	\$0	\$0	\$0	\$0
104	RT	Other Reliability Requirement	PG&E	N/A	31-Jul-14	94- 600	No	INC	14	8:00	21:59	-5.13	\$11,267	\$0	\$199	0	\$0	\$0	\$0	\$0	\$0
105	RT	Other Reliability Requirement	PG&E	NCNB	22-Jul-14	111	No	INC	7	5:50	12:39	-17.00	\$0	\$0	(\$201)	(12)	\$0	(\$375)	\$0	\$0	\$0
106	RT	Other Reliability Requirement	PG&E	NCNB	23-Jul-14	187	No	INC	10	3:00	12:59	-6.88	\$0	\$0	(\$211)	(7)	\$0	(\$209)	\$0	\$0	\$0
107	RT	Other Reliability Requirement	PG&E	Stockton	14-Jul-14	140- 200	No	INC	8	14:42	21:59	1.37	\$0	\$0	(\$64)	0	\$0	\$0	\$0	\$0	\$0
108	RT	Other Reliability Requirement	PG&E	Stockton	25-Jul-14	22	No	INC	5	18:32	23:11	1.67	\$6,257	\$0	\$80	0	\$0	\$0	\$0	\$0	\$0
109	RT	Other Reliability Requirement	PG&E	Stockton	28-Jul-14	22	No	INC	6	16:43	21:59	-0.92	\$5,006	\$0	\$38	0	\$0	\$0	\$0	\$0	\$0
110	RT	Other Reliability Requirement	SCE	Big Creek-Ventura	15-Jul-14	520- 780	No	INC	3	11:16	13:59	-10.01	\$0	\$0	\$479	0	\$0	\$0	\$0	\$0	\$0
111	RT	Other Reliability Requirement	SCE	LA Basin	19-Jul-14	20	No	INC	12	12:00	23:59	957.64	\$48,625	\$0	(\$54,542)	0	\$0	\$0	\$0	\$0	\$0
112	RT	Other Reliability Requirement	SDG&E	San Diego-IV	30-Jul-14	68	No	INC	7	12:30	18:59	90.69	\$1,244	\$0	(\$6,702)	0	\$0	\$0	\$0	\$0	\$0
113	RT	Other Reliability Requirement	SDG&E	San Diego-IV	31-Jul-14	155	No	INC	8	8:00	15:59	-38.49	\$17,886	\$6,601	\$854	0	\$0	\$0	\$0	\$0	\$0

Department of Market Quality and Renewable Integration – California ISO

Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time	Total MWH	Min Load Cost	Start Up Cost	CC6470	ED MWH (INC/DEC)	CC6470 INC	CC6470 DEC	CC6482	CC6488	CC6620
114	RT	Over Generation	SCE	LA Basin	29-Jul-14	550	No	INC	1	15:16	15:29	0.00	\$0	\$0	(\$0)	0	\$0	\$0	\$0	\$0	\$0
115	RT	Planned Transmission Outage and Constraint	PG&E	Bay Area	22-Jul-14	30	No	INC	7	9:00	15:19	13.32	\$0	\$0	(\$561)	6	(\$268)	\$0	\$0	(\$12,978)	\$0
116	RT	Planned Transmission Outage and Constraint	PG&E	Fresno	3-Jul-14	50	No	INC	1	7:10	7:59	-2.14	\$859	\$14	\$135	0	\$0	\$0	\$0	\$0	\$0
117	RT	Planned Transmission Outage and Constraint	PG&E	Fresno	6-Jul-14	20- 48	No	INC	3	0:25	2:29	3.71	\$0	\$0	(\$294)	0	\$0	\$0	\$0	\$0	\$0
118	RT	Planned Transmission Outage and Constraint	PG&E	Humboldt	1-Jul-14	15	No	INC	3	21:10	23:29	1.28	\$0	\$0	(\$49)	0	(\$2)	\$0	\$0	\$0	\$0
119	RT	Planned Transmission Outage and Constraint	PG&E	Humboldt	1-Jul-14	15- 60	No	INC	19	5:05	23:59	-0.34	\$0	\$0	\$14	0	\$0	\$0	\$0	\$0	\$0
120	RT	Planned Transmission Outage and Constraint	PG&E	Humboldt	2-Jul-14	30- 174	No	INC	23	1:00	23:59	2.39	\$0	\$0	(\$104)	0	\$0	\$0	\$0	\$0	\$0
121	RT	Planned Transmission Outage and Constraint	PG&E	Humboldt	3-Jul-14	15- 120	No	INC	19	0:10	19:09	0.00	\$0	\$0	\$0	0	\$0	\$0	\$0	\$0	\$0
122	RT	Planned Transmission Outage and Constraint	PG&E	Humboldt	7-Jul-14	15	No	INC	1	8:20	8:59	0.00	\$0	\$0	\$0	0	\$0	\$0	\$0	\$0	\$0
123	RT	Planned Transmission Outage and Constraint	PG&E	Humboldt	13-Jul-14	30	No	INC	4	17:55	20:59	-5.14	\$0	\$0	\$228	(5)	\$0	\$210	\$0	(\$45)	\$0
124	RT	Planned Transmission Outage and Constraint	PG&E	Humboldt	14-Jul-14	60- 72	No	INC	4	16:36	19:59	-1.50	(\$321)	\$0	\$58	0	\$0	\$0	\$0	\$0	\$0
125	RT	Planned Transmission Outage and Constraint	PG&E	Humboldt	15-Jul-14	30- 280	No	INC	10	12:39	21:59	-0.47	(\$172)	\$0	(\$2)	(1)	\$0	\$32	\$0	(\$1)	\$0
126	RT	Planned Transmission Outage and Constraint	PG&E	Humboldt	26-Jul-14	38	No	INC	5	16:48	20:59	-6.10	(\$231)	\$0	(\$101)	(1)	\$0	\$31	\$0	(\$71)	\$0
127	RT	Planned Transmission Outage and Constraint	PG&E	Humboldt	27-Jul-14	40	No	INC	4	17:15	20:59	23.29	(\$306)	\$0	(\$1,371)	0	\$0	\$0	\$0	(\$207)	\$0
128	RT	Planned Transmission Outage and Constraint	PG&E	Humboldt	28-Jul-14	15- 45	No	INC	3	12:25	14:39	4.28	\$0	\$0	(\$239)	1	(\$74)	\$0	\$0	\$0	\$0
129	RT	Planned Transmission Outage and Constraint	PG&E	N/A	14-Jul-14	300	No	INC	1	16:25	16:59	13.08	\$0	\$0	(\$561)	0	\$0	\$0	\$0	\$0	\$0
130	RT	Planned Transmission Outage and Constraint	PG&E	N/A	30-Jul-14	175- 611	No	INC	11	13:15	23:59	5.10	\$0	\$0	\$308	0	\$0	\$0	\$0	\$0	\$0
131	RT	Planned Transmission Outage and Constraint	PG&E	NCNB	15-Jul-14	75- 351	No	INC	8	5:25	12:59	5.82	\$0	\$0	(\$57)	(0)	\$0	(\$11)	\$0	\$0	\$0
132	RT	Planned Transmission Outage and Constraint	PG&E	NCNB	16-Jul-14	165	No	INC	5	9:15	13:59	-32.67	\$0	\$0	\$856	(33)	\$0	\$877	\$0	(\$1,854)	\$0
133	RT	Planned Transmission Outage and Constraint	PG&E	Stockton	26-Jul-14	45	No	INC	1	19:25	19:59	-0.25	\$0	\$0	\$44	0	\$0	\$0	\$0	\$0	\$0
134	RT	Planned Transmission Outage and Constraint	SCE	Big Creek-Ventura	2-Jul-14	290- 295	No	INC	1	11:55	12:44	28.92	\$0	\$0	(\$1,897)	8	(\$409)	\$0	\$0	(\$256)	\$0

Department of Market Quality and Renewable Integration – California ISO

Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time	Total MWH	Min Load Cost	Start Up Cost	CC6470	ED MWH (INC/DEC)	CC6470 INC	CC6470 DEC	CC6482	CC6488	CC6620
135	RT	Planned Transmission Outage and Constraint	SDG&E	San Diego-IV	16-Jul-14	30	No	INC	4	14:18	17:59	4.72	\$0	\$0	\$1,600	(2)	\$0	\$0	\$0	(\$27)	\$0
136	RT	Planned Transmission Outage and Constraint	SDG&E	San Diego-IV	17-Jul-14	30	No	INC	12	8:50	19:59	4.96	\$0	\$0	\$13	0	\$0	\$0	\$0	\$0	\$0
137	RT	Planned Transmission Outage and Constraint	SDG&E	San Diego-IV	25-Jul-14	20	No	INC	10	7:00	16:59	748.26	\$45,318	\$0	(\$43,378)	273	(\$12,693)	\$0	(\$4,580)	\$0	\$0
138	RT	Planned Transmission Outage and Constraint	SDG&E	San Diego-IV	29-Jul-14	63- 68	No	INC	8	7:35	14:59	-0.06	\$0	\$0	\$11	0	\$0	\$0	\$0	\$0	\$0
139	RT	Pump Management	PG&E	Fresno	18-Jul-14	-316	No	INC	2	6:15	7:19	-223.83	\$0	\$0	\$6,271	0	\$0	\$0	\$0	\$0	\$0
140	RT	Pump Management	PG&E	Fresno	27-Jul-14	-320	No	INC	2	8:05	9:29	0.00	\$0	\$0	\$0	0	\$0	\$0	\$0	\$0	\$0
141	RT	Shutdown	PG&E	Fresno	19-Jul-14	0	No	INC	1	1:10	1:39	-10.13	\$0	\$0	\$739	0	\$0	\$0	\$0	\$0	\$0
142	RT	Shutdown	SCE	Big Creek-Ventura	19-Jul-14	0	No	INC	1	23:45	23:59	0.76	\$4,596	\$0	(\$41)	0	\$0	\$0	\$0	\$0	\$0
143	RT	Shutdown	SCE	LA Basin	17-Jul-14	0	No	INC	1	19:50	20:44	-7.82	\$3,553	\$179	(\$0)	(8)	\$0	\$0	\$0	\$0	\$0
144	RT	Software Limitation	PG&E	Bay Area	30-Jul-14	0	No	INC	2	17:45	18:49	-0.74	\$10,648	\$0	\$39	0	\$0	\$0	\$0	\$0	\$0
145	RT	Software Limitation	PG&E	Fresno	27-Jul-14	-320	No	INC	1	5:35	5:59	-26.67	\$0	\$0	\$1,002	0	\$0	\$0	\$0	\$0	\$0
146	RT	Software Limitation	PG&E	Humboldt	1-Jul-14	15	No	INC	1	5:15	5:19	-0.34	\$0	\$0	\$14	0	\$0	\$0	\$0	\$0	\$0
147	RT	Software Limitation	PG&E	N/A	4-Jul-14	0	No	INC	1	7:00	7:59	0.00	\$0	\$0	\$0	0	\$0	\$0	\$0	\$0	\$0
148	RT	Software Limitation	SCE	LA Basin	12-Jul-14	10	Yes	INC	20	4:00	23:59	-39.26	\$32,885	\$15,422	\$3,066	0	\$0	\$0	\$0	\$0	\$0
149	RT	Start-Up Instructions	PG&E	Bay Area	23-Jul-14	0	No	INC	1	1:15	1:44	37.50	\$0	\$0	(\$1,207)	0	\$0	\$0	\$0	\$0	\$0
150	RT	Start-Up Instructions	PG&E	Bay Area	30-Jul-14	0	No	INC	2	17:45	18:49	-0.74	\$10,593	\$0	\$39	0	\$0	\$0	\$0	\$0	\$0
151	RT	Start-Up Instructions	PG&E	Fresno	18-Jul-14	20- 35	No	INC	5	1:45	6:44	-16.15	\$113	\$0	\$884	2	(\$336)	\$0	\$0	\$0	\$0
152	RT	Start-Up Instructions	PG&E	Fresno	19-Jul-14	0	No	INC	5	11:40	16:29	-14.01	(\$750)	\$0	\$1,155	(14)	\$0	\$909	\$0	\$0	\$0
153	RT	Start-Up Instructions	PG&E	Fresno	25-Jul-14	0	No	INC	3	15:00	17:54	1.20	\$0	\$0	(\$52)	0	\$0	\$0	\$0	\$0	\$0
154	RT	Start-Up Instructions	PG&E	Fresno	26-Jul-14	83- 150	No	INC	3	12:30	14:59	0.00	\$0	\$0	\$0	0	\$0	\$0	\$0	\$0	\$0
155	RT	Start-Up Instructions	PG&E	Fresno	30-Jul-14	20	No	INC	19	5:10	23:59	7.91	\$14,176	\$0	(\$1,699)	0	\$0	\$0	\$0	\$0	\$0
156	RT	Start-Up Instructions	PG&E	Fresno	31-Jul-14	20	No	INC	1	0:00	0:04	-2.16	\$1,571	\$0	\$104	0	\$0	\$0	\$0	\$0	\$0
157	RT	Start-Up Instructions	PG&E	Humboldt	30-Jul-14	15	No	INC	11	9:55	20:39	59.38	\$1,161	\$0	(\$2,821)	10	(\$399)	\$0	\$0	\$0	\$0
158	RT	Start-Up Instructions	PG&E	Kern	19-Jul-14	0	No	INC	13	10:00	22:59	-1.96	\$0	\$0	\$195	0	\$0	\$0	\$0	\$0	\$0
159	RT	Start-Up Instructions	PG&E	Sierra	15-Jul-14	0	No	INC	3	21:30	0:29	1515.1	\$10,416	\$0	\$59,807	(207)	\$0	\$0	\$0	\$0	\$0
160	RT	Start-Up Instructions	PG&E	Sierra	16-Jul-14	20	No	INC	3	22:00	0:14	24.16	\$794	\$282	(\$2,015)	0	\$0	\$0	\$0	\$0	\$0
161	RT	Start-Up Instructions	SCE	Big Creek-Ventura	18-Jul-14	0	No	INC	6	18:05	23:59	-0.85	\$2,298	\$0	(\$41)	(2)	\$0	\$0	\$0	\$0	\$0
162	RT	Start-Up Instructions	SCE	Big Creek-Ventura	20-Jul-14	0	No	INC	1	0:00	0:14	0.00	\$0	\$0	\$0	0	\$0	\$0	\$0	\$0	\$0
163	RT	Start-Up Instructions	SCE	Big Creek-Ventura	30-Jul-14	50	No	INC	2	22:17	23:59	-75.99	\$9,858	\$0	\$6,680	0	\$0	\$0	\$0	\$0	\$0

Department of Market Quality and Renewable Integration – California ISO

Num ber	Mark et Type	Reason	Location	Local Reliability Area	Trade Date	MW	Com mitme nt	INC_ DEC	Hou rs	Begin Time	End Time	Total MWH	Min Load Cost	Start Up Cost	CC6470	ED MWH (INC/DEC)	CC6470 INC	CC6470 DEC	CC6482	CC6488	CC6620
164	RT	Start-Up Instructions	SCE	LA Basin	8-Jul-14	0	No	INC	1	17:30	18:24	-22.37	\$3,731	\$0	\$0	(22)	\$0	\$0	\$0	\$0	\$0
165	RT	Start-Up Instructions	SCE	LA Basin	19-Jul-14	0	No	INC	1	23:35	0:04	15.34	\$4,632	\$0	(\$759)	0	\$0	\$0	\$0	\$0	\$0
166	RT	Start-Up Instructions	SCE	LA Basin	20-Jul-14	0	No	INC	1	0:00	0:54	0.00	\$0	\$0	\$0	0	\$0	\$0	\$0	\$0	\$0
167	RT	Start-Up Instructions	SDG&E	San Diego- IV	18-Jul-14	0	No	INC	2	22:30	23:59	-113.07	\$0	\$0	\$2,419	(58)	\$0	\$0	\$0	\$0	\$0
168	RT	Start-Up Instructions	SDG&E	San Diego- IV	28-Jul-14	14- 414	No	INC	11	9:15	19:59	50.74	\$21,624	\$1,036	(\$9,213)	0	\$0	\$0	\$0	\$0	\$0
169	RT	Unit Testing	PG&E	Bay Area	10-Jul-14	200- 299	No	INC	13	9:25	21:59	57.16	\$2,462	\$965	(\$2,118)	0	\$0	\$0	\$0	\$0	\$0
170	RT	Unit Testing	PG&E	Bay Area	15-Jul-14	92	No	INC	2	13:05	14:59	23.25	\$1,635	\$580	(\$1,114)	0	\$0	\$0	\$0	\$0	\$0
171	RT	Unit Testing	PG&E	Bay Area	17-Jul-14	175	No	INC	1	23:10	23:59	0.00	\$0	\$0	\$0	0	\$0	\$0	\$0	\$0	\$0
172	RT	Unit Testing	PG&E	Bay Area	18-Jul-14	175	No	INC	17	7:00	23:59	0.00	\$0	\$0	\$0	0	\$0	\$0	\$0	\$0	\$0
173	RT	Unit Testing	PG&E	Bay Area	30-Jul-14	382	No	INC	2	15:25	16:59	68.45	\$0	\$0	(\$3,061)	18	(\$831)	\$0	\$0	\$0	\$0
174	RT	Unit Testing	SCE	Big Creek- Ventura	11-Jul-14	150- 215	No	INC	4	12:25	15:59	2.23	\$0	\$0	(\$77)	0	\$0	\$0	\$0	\$0	\$0
175	RT	Unit Testing	SCE	LA Basin	7-Jul-14	175	No	INC	2	12:25	13:59	-24.60	\$0	\$0	\$953	0	\$0	\$0	\$0	\$0	\$0
176	RT	Unit Testing	SCE	N/A	30-Jul-14	475	No	INC	11	11:00	21:08	109.54	\$6,866	\$0	(\$4,294)	64	(\$2,486)	\$0	\$0	\$0	\$0
177	RT	Voltage Support	PG&E	N/A	17-Jul-14	141	No	INC	4	6:00	9:59	0.00	\$21,471	\$0	\$0	0	\$0	\$0	\$0	\$0	\$0

Appendix A: Explanation by Example

All examples listed below are based on fictitious data. Many simplified assumptions are made to explain settlement charge codes, and not all assumptions are explicitly stated in these examples. For instance settlement charge codes are calculated based on metered quantities, whereas, in these examples the dispatch quantities are assumed to be equal to metered quantities. These assumptions have been made to simplify the understanding of settlements calculations.

Example 1: Exceptional Dispatch Instructions Prior to DAM

In this fictitious example, the ISO issued an exceptional dispatch instruction for resource A to be committed at its Pmin of 50 MW from hours ending 5 through 10 for a generation procedure 7630. Similarly, the ISO issued additional instructions to resources B and C for the same reason as shown in Table 2. Generally, exceptional dispatches prior to the day-ahead market are commitments to minimum load. In this case, the dispatch levels are all at minimum load. Table 2 below also shows the commitment costs and the total volume (MWh) of exceptional dispatch instruction for each resource. The minimum load costs and start up costs shown in Table 2 are the eligible minimum load and start up costs which are different from the bid-in minimum load and start up costs⁷. Only those quantities which are relevant to pre-day-ahead unit commitments are shown in this table.

Table 2: Instructions Prior to Day-Ahead Market

Date	Market	Resource	Location	Local Reliability Area (LRA)	Begin Time	End Time	Dispatch level (MW)	Reason	Total Volume (MWh)	Min-Load Cost	Start- Up Cost	CC6620 (BCR)
01-Jul-09	DA	A	SCE	LA BASIN	05:00	10:00	50	7630	300	\$5000	\$0	0
01-Jul-09	DA	B	SCE	LA BASIN	08:00	20:00	30	7630	390	\$6000	\$500	\$4000
01-Jul-09	DA	C	SCE	LA BASIN	09:00	23:00	20	7630	300	\$400	\$1000	\$1000

This data is summarized as shown in Table 3, which is the prescribed format specified in the FERC order on September 2, 2009. This summary classifies the data by reason, resource location, local reliability area, and trade date. The MW column in Table 3 is the range of MW; in this case the minimum instruction MW is 20 MW for resource C which occurs from hours ending 21 through 23. The maximum instruction occurs in hour ending 10. In this hour resource A is committed at 50 MW, resource B is committed at 30 MW and resource C is committed at 20 MW. This adds up to 100 MW. Thus the MW column shows the minimum and maximum of the overlaps of all the exceptional dispatch instructions. The Commitment column shows whether a resource was committed between the begin time and end time. Commitments are broken out separately from energy dispatches. In the day-ahead, however the exceptional dispatches are nearly always just commitments, as in this example. The Begin Time column shows hour ending 5 as this was the hour ending for first dispatch of the day, and the End Time column shows hour ending 23, as this was the hour with last dispatch. It is also possible that there might be some hours between the begin time and the end time where there might not be exceptional dispatch instructions for the given reason, meaning that the range between the begin time and end time can include null hours with no dispatch. The total volume (MWh) is the sum of MWh quantity for each resource, which adds up to 990 MWh. Similarly, all cost information is sum of individual resource costs. It is possible that some resources bid-in zero start-up cost; as seen in this example, resource A bid in zero for its start up cost. Since the ISO does not explicitly pay a resource for bid-in minimum load costs and start-up costs; these costs are recovered through the charge code CC6620 (Bid Cost Recovery), this table shows the summary of CC6620 for the classification. In this case, it is the sum of CC6620 for all three resources which adds up to \$5000. This column shows the impact of exceptional dispatch on bid cost recovery for all pre-day-ahead exceptional dispatch commitments.

Table 3: FERC Summary of Instructions Prior to DAM

Number	Market Type	Reason	Location	Local Reliability Area (LRA)	Trade Date	MW	Commitment	INC/DEC	Hour	Begin Time	End Time	Total Volume (MWh)	Min-Load Cost	Start-Up Cost	CC6620
1	DA	7630	SCE	LA Basin	1-Jul-09	20-100	Yes	N/A	19	05:00	23:00	990	\$11,400	\$1,500	\$5000

⁷ Please refer to the BPM configuration Guide: Bid Cost Recovery Settlements published on the ISO's website for details about eligible minimum load and start up costs.

Example 2: Incremental Exceptional Dispatch Instructions in RTM

In this fictitious example, the ISO issued an exceptional dispatch instruction to resource A to be committed at its Pmin of 30 MW from hours 6:00 through 11:00 after completion of the day-ahead market for the transmission procedure 7110. This resource did not have a day-ahead award in those hours. The ISO issued another exceptional dispatch instruction to resource B, to be dispatched at 40 MW from hours 7:00 through 9:00 in real-time for the transmission procedure 7110. This resource had a day-ahead schedule of 20 MW from the day-ahead market, which implies that this exceptional dispatch instruction was an incremental instruction and the exceptional dispatch MW was 20 MW. Similarly, the details of exceptional dispatch (ED) instruction for resource C are shown in Table 4. This table also shows volume (MWh) and various real-time charge codes associated with the exceptional dispatch instructions. The total MWh column for each resource shows the sum of all types of imbalance energy quantities for this resource between the begin time and end time which includes both the exceptional dispatch energy quantities and optimal energy quantities.

Resource A was committed at its Pmin so its total volume (MWh) is equal to its Pmin times the number of hours, which is calculated as 30 MW times 6 hours and is equal to 180 MWh. The resource Minimum load costs and the start up costs are its eligible commitment costs for that period. LMP at this resource is \$10/MWh for hours, so the charge code CC6470 is calculated at (180 MWh *\$10/MWh) and is equal to 1800. Since this resource is not dispatched above its Pmin, it has a zero volume (MWh) of exceptional dispatch. As a result, all charge codes associated with the exceptional dispatch increment or decrement quantities are zero.

Resource B is dispatched 20 MW above its day-ahead schedule, so its total volume (MWh) is calculated as 20 MW times 3 hours which is equal to 60 MWh. Since the resource was committed in the Day-Ahead Market, there are no minimum load quantity and start up costs associated with this resource. The resource had a bid price of \$100/MWh and the LMP at that resource was \$10/MWh. All of 60 MWh is considered as exceptional dispatch incremental quantity which is shown in ED Volume (MWH INC/DEC) column. The charge code CC6470 INC is calculated as 60 MWh * resource LMP (\$10/MWh) which is equal to \$600. Since the only imbalance energy in this timeframe was the exceptional dispatch volume, the charge code CC6470 is equal to CC6470 INC. The charge code CC6488 is calculated as MWH quantity *(bid price – LMP), which is equal to \$5400 (60 MWh *(\$10/MWh-\$100/MWh)). Similarly, volumes and real-time charge codes are calculated for resource C.

Table 4: Incremental Exceptional Dispatch Instructions in RTM

Date	Market	Resource	Location	Local Reliability Area (LRA)	Begin Time	End Time	Dispatch level (MW)	Day-Ahead Award (MW)	Commitment	INC/DEC	ED (MW)	Reason	Total MWH	Min Load Cost	Start Up Cost	CC6470	ED MWH (INC/DEC)	CC6470 INC	CC6470 DEC	CC6482	CC6488
1-Jul-09	RT	A	PG&E	Humboldt	6:00	11:00	30	0	Yes	INC	30	7110	180	1000	50	1800	0	0	0	0	0
1-Jul-09	RT	B	PG&E	Humboldt	7:00	9:00	40	20	No	INC	20	7110	60	0	0	600	60	600	0	0	5400
1-Jul-09	RT	C	PG&E	Humboldt	12:00	15:00	50	50	No	INC	0	7110	0	0	0	0	0	0	0	0	0
1-Jul-09	RT	C	PG&E	Humboldt	16:00	20:00	50	40	No	INC	10	7110	50	0	0	300	20	300	0	0	200

This data is summarized as shown in Table 5 and is classified by reason, resource location, local reliability area, and trade date. The MW column in Table 5 is the range of MW; in this case the minimum instruction MW is 0 MW for resource C which occurs from hours ending 13 through 15. The maximum instruction occurs in hours ending 8 & 9, as during these two hours both resources A and B have an ED MW of 30MW and 20MW, respectively. This adds up to 50 MW. Thus the MW column shows the minimum and maximum of the overlaps of all the exceptional dispatch instructions. The Commitment column shows whether a resource was committed between the begin time and end time. This column shows a commitment if there was a single commitment in the entire interval of exceptional dispatch. The Begin Time column shows the time of the first dispatch of the day. This is a time not a range. Similarly, the End Time column shows a time and not a range. Exceptional dispatches occurred between these two times. Since there was a commitment between the begin time and end time then the Commitment column displays yes for the summary. Similarly, the INC/DEC column shows an INC as there was an incremental dispatch between the begin time and end time. As mentioned in the previous example it is possible that there might be some hours between the begin time and end time where there were no exceptional dispatch instructions for the given reason. Both volume and cost information columns are simply the summation for all the respective columns for resource A, B and C. For instance the Total volume (MWh) column is calculated as summation of 180,60,0 and 50 which are the individual volumes (MWh) for resources A, B and C for time periods shown in Table 4 on the previous page.

Table 5: FERC Summary of ED Instructions in RTM

Number	Market Type	Reason	Location	Local Reliability Area (LRA)	Trade Date	MW	Commitment	INC/DEC	Hour	Begin Time	End Time	Total MWH	Min Load Cost	Start Up Cost	CC6470	ED MWH (INC/DEC)	CC6470 INC	CC6470 DEC	CC6482	CC6488
1	RT	7110	PG&E	Humboldt	1-Jul-09	0-50	Yes	INC	15	6:00	20:00	290	1000	50	1700	140	1500	0	0	11000

Please note that it is possible that the ISO would dispatch a particular resource for instance at 10 MW from hours ending 1 through 4, and all or part of its energy might settle as optimal energy. This situation occurs when the LMP at the resource pricing node is above the resource bid price. This cost will only be captured in charge code 6470. It is also possible that ISO issues an exceptional dispatch for the resource to operate at a minimum of 10 MW which is its Pmin; however the market application might dispatch this resource above Pmin because the resource is economical. When this occurs, the charge code CC6470 and the total MWh quantity might overstate the actual exceptional dispatch MWh quantities. So, to best estimate the cost and volume (MWh) of exceptional dispatch it is appropriate to consider only the following columns: ED MWh (INC/DEC), CC6470 INC, CC6470 DEC, CC6482, CC6488.

Example 3: Decremental Exceptional Dispatch Instructions in RTM

This example highlights decremental exceptional dispatch instructions in the real-time market. In this fictitious example the ISO issued an exceptional dispatch instruction to resource A to be committed at its Pmin of 20 MW from hours ending 15 through 20 after completion of the day-ahead market for the transmission procedure 7430. The ISO issued additional exceptional dispatch instructions for resources B and C; details of those instructions are shown in Table 6. This table also includes volume (MWh) and cost information.

Resource A is committed in real-time at its Pmin, its total volume (MWh) is 20MW *6 hours which is equal to 120 MWh. This resource has a zero MW of incremental dispatch in all hours, so all other relevant cost and volume columns result in zeros. Resource B has a decremental MW of 20 MW in 3 hours, which results in 60 MWh of decremental volume. Since this resource is not committed in real-time, both the minimum load cost and start up costs are zero. This resource had a bid price of \$50/MWh and LMP at the resource pricing node is \$10/ MWh. Based on this information CC6470-Dec is calculated as 60 MWh *\$10/MWh which is equal to \$600. Since this resource has its ED volume (MWh) equal to its Total volume, CC6470 is equal to CC6470- DEC. The CC6488 is calculated as (60 MWh * (\$50/MWh - \$10/MWh)) which is equal to \$2400. Resource C had a bid price of \$10/MWh and the LMP at its pricing node is \$50/MWh. Based on this information, volume and cost information is calculated for resource C.

Table 6: Decremental Exceptional Dispatch Instructions in RTM

Date	Market Type	Resource	Location	Local Reliability Area (LRA)	Begin Time	End Time	Dispatch level (MW)	Day-Ahead Award (MW)	Commitment	INC/DEC	ED (MW)	Reason	Total MWH	Min Load Cost	Start Up Cost	CC6470	ED MWH (INC/DEC)	CC6470 INC	CC6470 DEC	CC6482	CC6488
1-Jul-09	RT	A	PG&E	Fresno	15:00	20:00	20	0	Yes	INC	20	7430	120	\$ 120	\$ 100	\$ -	0	\$ -	\$ -	\$ -	\$ -
1-Jul-09	RT	B	PG&E	Fresno	7:00	9:00	40	60	No	DEC	20	7430	(60)	\$ -	\$ -	\$ 600	-60	\$ -	\$ 600	\$ -	\$2,400
1-Jul-09	RT	C	PG&E	Fresno	10:00	14:00	40	50	No	DEC	10	7430	(50)	\$ -	\$ -	\$ 500	-50	\$ -	\$ 500	\$ -	\$2,000

This data is summarized according to FERC convention as shown in Table 7. This summary classifies the data by reason, resource location, local reliability area, and trade date. Please note that incs and decs are broken out separately. The inc entry is self-explanatory and similar to the previous example. Regarding the dec entry the MW column is the range of MW; in this case the minimum dec instruction is 10 MW (actually -10MW as it is a dec) for resource C which occurs from hours ending 10 through 14. The maximum instruction occurs from hours ending 7 through 9, when resource B was issued a dec instruction of 20 MW. Thus the MW column shows the minimum and maximum of the overlaps of all the exceptional dispatch instructions. The Commitment column shows whether a resource was committed between the begin time and end time. The volume and cost information are summarized by INC and DEC classification.

Table 7: FERC Summary of Decremental ED Instructions in RTM

Number	Market Type	Reason	Location	Local Reliability Area (LRA)	Trade Date	MW	Commitment	INC/DEC	Hour	Begin Time	End Time	Total MWH	Min Load Cost	Start Up Cost	CC6470	ED MWH (INC/DEC)	CC6470 INC	CC6470 DEC	CC6482	CC6488
1	RT	7430	PG&E	Fresno	1-Jul-09	20	Yes	INC	6	15:00	20:00	120	\$ 120	\$ 100	\$ -	0	\$ -	\$ -	\$ -	\$ -
2	RT	7430	PG&E	Fresno	1-Jul-09	10-20	Yes	DEC	8	7:00	14:00	(110)	\$ -	\$ -	\$ (1,100)	\$ (110)	\$ -	\$ (1,100)	\$ -	\$ (4,400)

Appendix B: Price Impact Analysis

In the September 2, 2009 FERC order, FERC requested the ISO to perform price impact analysis on two distinct pricing nodes for the entire reporting period. The order also mentioned that the ISO must pick two pricing nodes for the entire reporting period that are most impacted by the exceptional dispatch instructions, and the two pricing nodes must belong to two different load aggregation points (LAPs).

Based on this requirement the ISO implemented a methodology to perform price impact analysis. First, the ISO identified a heavily impacted pricing node from each of the Pacific Gas & Electric (PG&E) LAP and Southern California Edison (SCE) LAP. These two pricing nodes had the maximum amount of exceptional dispatch volume (MWh) in their respective LAP. Point A is in PG&E LAP and point B is in SCE LAP. Please note these two points correspond to an actual pricing node in the ISO system. Only one resource was connected to each of these pricing nodes. For each resource the following input parameters were obtained to perform the analysis:

Exceptional dispatch information: constrained level, constraint type, start of exceptional dispatch instruction and end of exceptional dispatch instruction.
 Real-Time LMPs for each of the five minute intervals for the month.
 Real-Time hourly bid set for each trade hour.
 Day-Ahead award for the resources.

The exceptional dispatch intervals have a begin time and an end time which can span as small as one minute to as large as 24 hours. Since the market application dispatches resources on five-minute basis, the exceptional dispatch instructions for each of these resources were broken down into five-minute intervals. If the begin time or end time for an instruction was in the middle of the five-minute interval, that instruction was rounded up to the next five-minute interval. These five-minute intervals were then coupled with resource five-minute LMPs calculated by the real-time market application. Also, the hourly bid information and the hourly day-ahead schedule were put together to create a dataset that had all the necessary information to perform price impact analysis.

An exceptional dispatch instruction can be generally classified as a start up instruction, an instruction to be dispatched at or above the constrained level, an instruction to be dispatched at or below a constrained level, an instruction to be dispatched at a fixed constrained level, or a shut down instruction. In general, the Locational Marginal Price (LMP) is set by a resource which can provide the next incremental MW of energy. Based on this definition of LMP and the classification of exceptional dispatches based on constraint type, a resource is allowed to set the LMP in only those intervals in which the resource is eligible to move either up or down from its constrained level. Hence, in those intervals in which the resource was constrained up at its P_{max} or, in other words, the resource was exceptionally dispatched to its P_{max} and forced to generate at that level, the resource was considered ineligible to set the price as it had no room to move up. Similarly, if the resource was constrained down at its P_{min}, then the resource was not eligible to set the price. All those intervals in which the resource was ineligible to set the price were dropped from the dataset under consideration. From this dataset of only eligible intervals, for both pricing nodes A and B, LMPs were calculated for all intervals based on the resource dispatch level and the its bid set. The calculated LMP is equal to that bid price corresponding to the constrained MW segment.

Table 8 shows the price impact analysis information for node A, which is located in the PG&E area. This table shows all the five minute intervals in which the resource at PNode A was issued an exceptional dispatch instruction. Out of the 8,064 five-minute intervals in July, this resource was issued exceptional dispatch instructions in 15 five-minute intervals. This resource was eligible to set the LMP in all 15 intervals. Out of the 15 intervals, resource calculated LMP was larger than the market LMP in 9 intervals. In the 9 intervals, the average increase in five minute LMP was \$32.92/MWh. Out of the 15 intervals, resource calculated LMP was less than the market LMP in 6 intervals. In the 6 intervals, the average decrease in five minute LMP was \$69.56/MWh. This implies that if the ISO was able to model the constraint for this exceptional dispatch, then this resource and all other pricing nodes associated with that constraint would observe an average decrease of \$8.07/MWh.

Table 9 shows the price impact analysis information for node B, which is located in the SCE area. This table shows all the five minute intervals in which the resource at PNode B was issued an exceptional dispatch instruction. Out of the 8,064 five minute intervals, this resource was issued an exceptional dispatch instruction in 98 five minute intervals. This resource was eligible to set the LMP in all 96 intervals. Out of the 96 intervals, resource calculated LMP was larger than the market LMP in 84 intervals. In the 84 intervals, the average increase in five minute LMP was \$26.20/MWh. Out of the 96 intervals, resource calculated LMP was less than the market LMP in 12 intervals. In the 12 intervals, the average decrease in five minute LMP was \$211.35/MWh. This implies that if the ISO was able to model the constraint for this exceptional dispatch, then this resource and all other pricing nodes associated with that constraint would observe an average decrease of \$3.08/MWh.

Table 8: Price Impact Analysis Information for Pricing Node A in PG&E LAP

Number	Trade Date	Trade Hour	Interval	Market LMP	Eligible Flag	Calculated LMP	Change in LMP
1	1-Jul-14	12	5	\$47.23	Yes	\$69.23	\$22.00
2	1-Jul-14	12	5	\$47.23	Yes	\$84.85	\$37.62
3	1-Jul-14	12	10	\$47.23	Yes	\$84.85	\$37.62
4	3-Jul-14	14	5	\$46.87	Yes	\$69.23	\$22.36
5	3-Jul-14	14	10	\$49.67	Yes	\$69.23	\$19.56
6	18-Jul-14	21	10	\$46.61	Yes	\$92.14	\$45.53
7	18-Jul-14	22	5	\$109.37	Yes	\$92.14	(\$17.23)
8	18-Jul-14	22	5	\$109.37	Yes	\$104.87	(\$4.50)
9	18-Jul-14	22	10	\$55.63	Yes	\$104.87	\$49.24
10	18-Jul-14	24	5	\$112.44	Yes	\$85.55	(\$26.89)
11	18-Jul-14	24	10	\$112.44	Yes	\$85.55	(\$26.89)
12	26-Jul-14	13	5	\$64.28	Yes	\$95.75	\$31.47
13	26-Jul-14	13	10	\$64.86	Yes	\$95.75	\$30.89
14	26-Jul-14	14	5	\$269.21	Yes	\$103.13	(\$166.08)
15	26-Jul-14	14	10	\$278.93	Yes	\$103.13	(\$175.80)

Table 9: Price Impact Analysis Information for Pricing Node B in SCE LAP

Number	Trade Date	Trade Hour	Interval	Market LMP	Eligible Flag	Calculated LMP	Change in LMP
1	1-Jul-14	11	10	\$60.70	Yes	\$60.74	\$0.04
2	1-Jul-14	12	5	\$60.70	Yes	\$60.74	\$0.04
3	1-Jul-14	12	10	\$60.70	Yes	\$60.74	\$0.04
4	1-Jul-14	13	5	\$36.72	Yes	\$60.74	\$24.02
5	1-Jul-14	13	10	\$36.71	Yes	\$60.74	\$24.03
6	2-Jul-14	13	5	\$42.54	Yes	\$88.78	\$46.24
7	2-Jul-14	13	10	\$42.63	Yes	\$88.78	\$46.15
8	3-Jul-14	13	5	\$45.65	Yes	\$49.50	\$3.85
9	3-Jul-14	13	10	\$48.91	Yes	\$49.50	\$0.59
10	3-Jul-14	21	5	\$83.26	Yes	\$49.50	(\$33.76)
11	3-Jul-14	21	10	\$77.86	Yes	\$49.50	(\$28.36)
12	4-Jul-14	13	5	\$98.89	Yes	\$54.87	(\$44.02)
13	4-Jul-14	13	10	\$120.36	Yes	\$54.87	(\$65.49)
14	4-Jul-14	22	5	\$40.78	Yes	\$54.87	\$14.09
15	4-Jul-14	22	10	\$40.78	Yes	\$54.87	\$14.09
16	5-Jul-14	1	5	\$37.98	Yes	\$54.87	\$16.89
17	5-Jul-14	1	10	\$38.02	Yes	\$54.87	\$16.85
18	5-Jul-14	3	5	\$36.05	Yes	\$54.87	\$18.82
19	5-Jul-14	3	10	\$35.02	Yes	\$54.87	\$19.85
20	5-Jul-14	12	5	\$41.72	Yes	\$54.87	\$13.15
21	5-Jul-14	12	10	\$41.31	Yes	\$54.87	\$13.56
22	5-Jul-14	13	5	\$54.85	Yes	\$54.87	\$0.02
23	5-Jul-14	13	10	\$54.85	Yes	\$54.87	\$0.02
24	5-Jul-14	14	10	\$54.85	Yes	\$54.87	\$0.02
25	5-Jul-14	15	5	\$48.86	Yes	\$54.87	\$6.01
26	5-Jul-14	15	10	\$50.03	Yes	\$54.87	\$4.84
27	5-Jul-14	17	5	\$43.69	Yes	\$54.87	\$11.18
28	5-Jul-14	17	10	\$43.99	Yes	\$54.87	\$10.88
29	5-Jul-14	22	5	\$54.84	Yes	\$54.87	\$0.03
30	5-Jul-14	22	10	\$54.84	Yes	\$54.87	\$0.03
31	5-Jul-14	23	5	\$36.07	Yes	\$54.87	\$18.80
32	5-Jul-14	23	10	\$38.53	Yes	\$54.87	\$16.34
33	6-Jul-14	1	5	\$34.88	Yes	\$54.87	\$19.99
34	6-Jul-14	1	10	\$35.35	Yes	\$54.87	\$19.52
35	6-Jul-14	5	5	\$43.33	Yes	\$54.87	\$11.54
36	6-Jul-14	5	10	\$43.33	Yes	\$54.87	\$11.54
37	6-Jul-14	6	5	\$38.38	Yes	\$54.87	\$16.49
38	6-Jul-14	6	10	\$38.38	Yes	\$54.87	\$16.49
39	6-Jul-14	11	5	\$39.67	Yes	\$54.87	\$15.20
40	6-Jul-14	12	5	\$40.59	Yes	\$54.87	\$14.28
41	6-Jul-14	12	10	\$40.59	Yes	\$54.87	\$14.28

Department of Market Quality and Renewable Integration – California ISO

42	6-Jul-14	13	5	\$37.67	No	\$54.87	\$17.20
43	6-Jul-14	13	5	\$37.67	Yes	\$54.87	\$17.20
44	6-Jul-14	13	10	\$38.67	No	\$54.87	\$16.20
45	6-Jul-14	16	5	\$47.19	Yes	\$54.87	\$7.68
46	6-Jul-14	16	10	\$47.19	Yes	\$54.87	\$7.68
47	6-Jul-14	19	5	\$53.79	Yes	\$54.87	\$1.08
48	6-Jul-14	19	10	\$52.80	Yes	\$54.87	\$2.07
49	6-Jul-14	20	5	\$55.95	Yes	\$54.87	(\$1.08)
50	6-Jul-14	20	10	\$55.95	Yes	\$54.87	(\$1.08)
51	6-Jul-14	23	5	\$48.91	Yes	\$54.87	\$5.96
52	6-Jul-14	23	10	\$41.08	Yes	\$54.87	\$13.79
53	6-Jul-14	24	5	\$37.57	Yes	\$54.87	\$17.30
54	6-Jul-14	24	10	\$38.15	Yes	\$54.87	\$16.72
55	7-Jul-14	4	5	\$36.53	Yes	\$54.87	\$18.34
56	7-Jul-14	4	10	\$36.46	Yes	\$54.87	\$18.41
57	7-Jul-14	22	5	\$54.84	Yes	\$54.87	\$0.03
58	7-Jul-14	22	10	\$54.84	Yes	\$54.87	\$0.03
59	7-Jul-14	24	10	\$37.60	Yes	\$54.87	\$17.27
60	8-Jul-14	1	5	\$36.93	Yes	\$62.86	\$25.93
61	8-Jul-14	1	10	\$39.02	Yes	\$62.86	\$23.84
62	8-Jul-14	19	5	\$476.39	Yes	\$62.86	(\$413.53)
63	8-Jul-14	19	10	\$476.93	Yes	\$62.86	(\$414.07)
64	8-Jul-14	20	5	\$62.83	Yes	\$62.86	\$0.03
65	8-Jul-14	20	10	\$62.83	Yes	\$62.86	\$0.03
66	11-Jul-14	13	10	\$33.14	Yes	\$93.75	\$60.61
67	11-Jul-14	14	5	\$31.56	Yes	\$93.75	\$62.19
68	11-Jul-14	14	10	\$31.26	Yes	\$93.75	\$62.49
69	11-Jul-14	16	5	\$33.01	Yes	\$93.75	\$60.74
70	11-Jul-14	16	10	\$33.13	Yes	\$93.75	\$60.62
71	11-Jul-14	18	5	\$35.47	Yes	\$93.75	\$58.28
72	11-Jul-14	18	10	\$34.61	Yes	\$93.75	\$59.14
73	11-Jul-14	19	5	\$34.98	Yes	\$93.75	\$58.77
74	11-Jul-14	19	10	\$34.99	Yes	\$93.75	\$58.76
75	13-Jul-14	18	5	\$49.23	Yes	\$110.37	\$61.14
76	13-Jul-14	18	10	\$49.25	Yes	\$110.37	\$61.12
77	14-Jul-14	13	5	\$38.34	Yes	\$110.37	\$72.03
78	14-Jul-14	13	10	\$43.96	Yes	\$110.37	\$66.41
79	14-Jul-14	14	5	\$40.73	Yes	\$110.37	\$69.64
80	15-Jul-14	12	5	\$44.70	Yes	\$99.60	\$54.90
81	15-Jul-14	12	10	\$42.22	Yes	\$99.60	\$57.38
82	15-Jul-14	13	5	\$47.95	Yes	\$99.60	\$51.65
83	15-Jul-14	13	10	\$49.38	Yes	\$99.60	\$50.22
84	15-Jul-14	14	5	\$48.05	Yes	\$99.60	\$51.55

Department of Market Quality and Renewable Integration – California ISO

85	15-Jul-14	14	10	\$48.05	Yes	\$99.60	\$51.55
86	16-Jul-14	11	5	\$44.55	Yes	\$91.97	\$47.42
87	16-Jul-14	11	10	\$44.48	Yes	\$91.97	\$47.49
88	16-Jul-14	12	5	\$37.39	Yes	\$91.97	\$54.58
89	16-Jul-14	12	10	\$37.06	Yes	\$91.97	\$54.91
90	16-Jul-14	20	5	\$41.27	Yes	\$91.97	\$50.70
91	16-Jul-14	20	10	\$41.27	Yes	\$91.97	\$50.70
92	17-Jul-14	20	5	\$84.12	Yes	\$84.18	\$0.06
93	17-Jul-14	20	10	\$84.12	Yes	\$84.18	\$0.06
94	17-Jul-14	21	5	\$460.17	Yes	\$84.18	(\$375.99)
95	17-Jul-14	21	10	\$460.17	Yes	\$84.18	(\$375.99)
96	17-Jul-14	22	5	\$475.61	Yes	\$84.18	(\$391.43)
97	17-Jul-14	22	10	\$475.61	Yes	\$84.18	(\$391.43)
98	17-Jul-14	23	10	\$51.58	Yes	\$84.18	\$32.60

Appendix C: Exceptional Dispatch Bid Mitigation Analysis

ISO did not have any cost savings for the exceptional dispatch bid mitigation for June and July 2014.

CERTIFICATE OF SERVICE

I hereby certify that I have served the foregoing document upon the parties listed on the official service lists in the above-referenced proceedings, in accordance with the requirements of Rule 2010 of the Commission's Rules of Practice and Procedure (18 C.F.R. § 385.2010).

Dated at Folsom, California this 30th day of October 2014.

Is/ Anna Pascuzzo

Anna Pascuzzo