

April 30, 2013

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-____, and EL08-88-____
January 2013 Exceptional Dispatch Report (Chart 2 data)**

Dear Secretary Bose:

Pursuant to the September 2, 2009 and May 4, 2010 orders in the above referenced docket, the California Independent System Operator Corporation submits the attached report. The attached report provides Exceptional Dispatch information that the Commission directed be included in "Chart 2", which was set forth in Appendix A to the September 2 Order, as modified by the Commission's May 4 Order.

The attached report provides Chart 2 data for the month of January 2013. The attached Chart 2 report also includes the price impact analysis for the month of January 2013 required by Paragraph 44 of the September 2 Order as well as the degree of mitigation analysis required by ISO tariff section 34.9.4 for the month of January 2013.

Respectfully submitted,

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Exceptional Dispatch Report

Table 2: January 2013

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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 January 2013.

In addition, this report contains a price impact analysis as prescribed by FERC in its September 2 order. The price impact analysis for the month of January is presented in Appendix B. This report also includes the degree of mitigation analysis for January 2013 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 January 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 intertie 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.

In January 2013, the ISO issued exceptional dispatches for the following generation and transmission operating requirement: (1) Operating procedure 7810, San Diego area generation requirements. Exceptional dispatch instructions were also issued for the following transmission management requirements: (1) Operating procedure 6510, Southern California import transmission (SCIT) nomogram; (2) Operating procedure 7110, transmission facilities in Humboldt area; (3) Operating procedure 7320, transmission facilities in Bay Area; (4) Operating procedure 7410, transmission facilities in Tesla/Bellota Area; (5) Operating procedure 7820, transmission facilities in San Diego and Imperial Valley area; and (6) other transmission outages in PG&E, SCE and SDG&E area.

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 reasons for exceptional dispatch instructions in January 2013 were not related to specific generation or transmission operating procedures: (1) 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; and (2) Market Disruption, when the exceptional dispatch instructions were issued due to HASP failures. There were a few other reasons used to explain exceptional dispatch instructions in January, 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 January. 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

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.

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.
- 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 of these charge codes are a portion of the real-time instructed imbalance energy charge code (6470).⁴

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.

- 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.

Charge codes 6470, 6470 INC, 6470 DEC, 6482 and 6488 are shown in Table 1 because all of 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. There is no Capacity Procurement Mechanism (CPM) designation issued on Exceptional Dispatch for January 2013.

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.

Table 1: Exceptional Dispatches in January 2013

**California Independent System Operator Corporation
Exceptional Dispatch Report
April 30, 2013**

Chart 2: Table of Exceptional Dispatches for Period 01/January/2013 - 31/January/2013

Num ber	Mar ket Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commit ment	INC_ DEC	Hours	Begin Time	End Time	Total MWH	Min Load cost	Startup Cost	CC6470	ED MWH (INC/DE C)	CC6470 INC	CC6470 DEC	CC6482	CC6488	CC6620
1	RT	6510	SCE	LA Basin	3-Jan-13	63- 120	Yes	DEC	14	8:00	21:59	77.26	\$0	\$0	(\$30,989)	0	\$0	\$0	\$0	\$0	\$0
2	RT	6510	SCE	LA Basin	3-Jan-13	30- 50	Yes	INC	14	8:00	21:59	815.47	\$0	\$0	(\$157,990)	523	(\$27,741)	\$0	\$0	\$0	\$0
3	RT	6510	SCE	LA Basin	8-Jan-13	20	Yes	INC	6	9:00	14:19	135.80	\$18,645	\$0	(\$6,149)	0	(\$2)	\$0	(\$0)	\$0	\$0
4	RT	6510	SCE	LA Basin	9-Jan-13	170	Yes	INC	1	6:40	6:59	4.98	\$0	\$0	(\$210)	5	(\$210)	\$0	(\$23)	\$0	\$0
5	RT	7110	PG&E	Humboldt	9-Jan-13	60- 75	No	INC	2	19:25	20:15	-24.27	\$0	\$0	\$859	-15	(\$5)	\$523	\$0	(\$302)	\$0
6	RT	7320	PG&E	Bay Area	14-Jan-13	20	No	INC	2	21:35	22:33	13.33	\$1,061	\$0	(\$2,076)	0	\$0	\$0	\$0	\$0	\$0
7	RT	7320	PG&E	Bay Area	16-Jan-13	19- 37	No	INC	3	7:07	9:44	165.12	\$12,270	\$1,596	(\$5,813)	2	(\$64)	\$0	\$0	\$0	\$0
8	RT	7410	PG&E	N/A	15-Jan-13	27	No	INC	4	19:20	22:27	35.83	\$0	\$0	(\$1,180)	0	\$0	\$0	\$0	\$0	\$0
9	RT	7410	PG&E	N/A	16-Jan-13	34	No	INC	5	19:17	23:59	65.74	\$0	\$0	(\$2,178)	0	\$0	\$0	\$0	\$0	\$0
10	RT	7810	SCE	LA Basin	15-Jan-13	20	Yes	INC	24	0:00	23:59	735.94	\$69,865	\$0	(\$28,868)	0	(\$5)	\$0	(\$1)	\$0	\$0
11	RT	7820	SDG&E	San Diego-IV	10-Jan-13	95	No	DEC	3	17:43	19:13	148.93	\$0	\$0	\$5,035	-69	\$0	\$2,454	\$0	(\$427)	\$0
12	RT	Bridging Schedules	PG&E	Bay Area	21-Jan-13	45	Yes	INC	2	22:00	23:59	90.09	\$6,722	\$0	(\$3,126)	0	(\$1)	\$0	\$0	\$0	\$0
13	RT	Bridging Schedules	SCE	LA Basin	4-Jan-13	20	No	INC	1	23:00	23:59	25.36	\$0	\$0	(\$921)	0	(\$0)	\$0	\$0	\$0	\$0
14	RT	Conditions beyond control of the CAISO BA	SDG&E	San Diego-IV	14-Jan-13	340	No	INC	3	17:28	19:59	906.37	\$29,088	\$0	(\$34,135)	535	(\$20,136)	\$0	(\$7,853)	\$0	\$0
15	RT	Contingency	Intertie	N/A	23-Jan-13	77- 159	No	INC	2	15:57	16:05	-15.76	\$0	\$0	\$675	0	\$0	\$0	\$0	\$0	\$0
16	RT	Contingency	PG&E	Bay Area	23-Jan-13	41	No	INC	1	16:00	16:11	7.84	\$0	\$0	(\$323)	4	(\$188)	\$0	\$0	\$0	\$0
17	RT	Contingency	PG&E	Fresno	23-Jan-13	34	Yes	DEC	4	16:40	19:59	15.23	\$0	\$0	(\$696)	0	\$0	\$0	\$0	\$0	\$0
18	RT	Contingency	PG&E	Fresno	23-Jan-13	808	Yes	INC	5	15:56	19:59	540.90	\$10,561	\$0	(\$87,978)	176	(\$7,965)	\$0	(\$2,191)	\$0	\$0
19	RT	Contingency	PG&E	Fresno	25-Jan-13	461	Yes	INC	1	19:06	19:14	61.45	\$0	\$0	(\$19,861)	35	(\$10,741)	\$0	(\$15)	\$0	\$0
20	RT	Contingency	PG&E	N/A	23-Jan-13	47- 380	No	INC	4	16:26	19:59	2074.33	\$75,924	\$2,632	(\$256,195)	0	\$0	\$0	\$0	\$0	\$0
21	RT	Contingency	PG&E	Sierra	23-Jan-13	165	Yes	INC	1	18:00	18:59	169.86	\$5,670	\$1,000	(\$8,458)	0	\$0	\$0	\$0	\$0	\$0
22	RT	Contingency	SCE	LA Basin	25-Jan-13	92	No	INC	2	19:14	20:19	88.13	\$6,814	\$961	(\$43,429)	0	(\$1)	\$0	\$0	\$0	\$0
23	RT	Contingency	SDG&E	San Diego-IV	23-Jan-13	70	No	INC	2	15:59	16:09	7.19	\$0	\$0	(\$319)	5	(\$223)	\$0	\$0	\$0	\$0
24	RT	Fire	PG&E	Fresno	5-Jan-13	166	Yes	INC	2	21:25	22:59	327.62	\$22,129	\$0	(\$11,492)	0	(\$9)	\$0	(\$1)	\$0	\$0
25	RT	Fire	SCE	Big Creek-Ventura	5-Jan-13	20	Yes	INC	2	21:15	22:59	43.49	\$4,399	\$0	(\$1,471)	0	(\$5)	\$0	(\$3)	\$0	\$0
26	RT	Gas/Fuel Supply Limitations	SCE	LA Basin	15-Jan-13	4- 26	No	DEC	2	6:40	7:59	-32.92	\$0	\$0	\$8,064	0	\$0	\$0	\$0	\$0	\$0
27	RT	Gas/Fuel Supply Limitations	SCE	LA Basin	15-Jan-13	200	Yes	INC	5	6:40	10:29	222.38	\$3,964	\$0	(\$36,905)	101	(\$4,551)	\$0	(\$375)	\$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	Startup Cost	CC6470	ED MWH (INC/DEC)	CC6470 INC	CC6470 DEC	CC6482	CC6488	CC6620
28	RT	Gas/Fuel Supply Limitations	SDG&E	San Diego-IV	15-Jan-13	90- 138	No	DEC	9	6:44	14:59	537.44	\$0	\$0	\$3,770	-526	\$0	\$3,616	\$0	\$0	\$0
29	RT	Gas/Fuel Supply Limitations	SDG&E	San Diego-IV	15-Jan-13	20-1441	Yes	INC	15	6:33	20:49	1947.40	\$13,385	\$268	(\$52,766)	-4329	(\$564)	\$57,852	(\$21)	\$0	\$0
30	RT	Generation Outage	SDG&E	San Diego-IV	3-Jan-13	20	Yes	INC	24	0:00	23:59	512.35	\$50,517	\$0	(\$19,074)	0	\$0	\$0	\$0	\$0	\$0
31	RT	Generation Outage	SDG&E	San Diego-IV	4-Jan-13	20	Yes	INC	24	0:00	23:59	489.02	\$50,517	\$0	(\$18,479)	0	\$0	\$0	\$0	\$0	\$0
32	RT	Intertie Emergency Assistance	Intertie	N/A	12-Jan-13	55	No	INC	1	0:42	0:59	0.00	\$0	\$0	\$0	0	\$0	\$0	\$0	\$0	\$0
33	RT	Intertie Emergency Assistance	Intertie	N/A	15-Jan-13	25	No	INC	1	15:30	15:59	0.00	\$0	\$0	\$0	0	\$0	\$0	\$0	\$0	\$0
34	RT	Market Disruption	Intertie	N/A	23-Jan-13	950	Yes	INC	1	15:00	15:59	0.00	\$0	\$0	\$0	0	\$0	\$0	\$0	\$0	\$0
35	RT	Over Generation	SCE	N/A	27-Jan-13	300	No	INC	3	5:41	7:29	260.06	\$0	\$0	(\$4,265)	-260	\$0	(\$4,271)	\$0	\$0	\$0
36	RT	SP26 Capacity	SCE	LA Basin	15-Jan-13	25	Yes	INC	2	22:00	23:59	46.37	\$6,135	\$0	(\$1,609)	0	(\$1)	\$0	(\$1)	\$0	\$0
37	RT	SP26 Capacity	SCE	LA Basin	16-Jan-13	45	Yes	INC	24	0:00	23:59	1206.79	\$144,971	\$0	(\$45,667)	0	(\$13)	\$0	(\$5)	\$0	\$0
38	RT	SP26 Capacity	SDG&E	San Diego-IV	16-Jan-13	40	No	INC	16	2:00	17:51	646.34	\$76,045	\$0	(\$23,567)	0	(\$10)	\$0	(\$4)	\$0	\$0
39	RT	SP26 Capacity	SDG&E	San Diego-IV	17-Jan-13	20	No	INC	24	0:00	23:59	1750.74	\$129,049	\$0	(\$88,096)	0	\$0	\$0	\$0	\$0	\$0
40	RT	Software Limitation	PG&E	Bay Area	9-Jan-13	330	No	INC	1	16:01	16:39	1.40	\$0	\$0	\$281	0	\$0	\$0	\$0	\$0	\$0
41	RT	Software Limitation	PG&E	Bay Area	27-Jan-13	261	No	INC	1	22:21	22:44	0.00	\$0	\$0	\$0	0	\$0	\$0	\$0	\$0	\$0
42	RT	Software Limitation	PG&E	Fresno	7-Jan-13	7- 77	Yes	DEC	10	11:55	20:59	-30.43	\$0	\$0	\$1,022	-13	\$0	\$480	\$0	\$0	\$0
43	RT	Software Limitation	PG&E	Fresno	7-Jan-13	83	Yes	INC	10	11:55	20:59	1049.29	\$28,055	\$886	(\$76,122)	0	\$0	\$0	\$0	\$0	\$0
44	RT	Software Limitation	PG&E	Fresno	8-Jan-13	77- 117	Yes	DEC	4	16:50	19:59	-35.64	\$0	\$0	\$1,406	-1	\$0	\$32	\$0	\$0	\$0
45	RT	Software Limitation	PG&E	Fresno	8-Jan-13	83	Yes	INC	4	16:50	19:59	21.12	\$1,017	\$167	(\$858)	0	\$0	\$0	\$0	\$0	\$0
46	RT	Software Limitation	PG&E	Fresno	21-Jan-13	0	Yes	INC	1	23:00	23:59	0.00	\$0	\$0	(\$0)	0	\$0	\$0	\$0	\$0	\$0
47	RT	Software Limitation	PG&E	Fresno	26-Jan-13	323-325	Yes	DEC	3	5:13	7:14	1055.83	\$0	\$0	\$33,631	0	\$0	\$0	\$0	\$0	\$0
48	RT	Software Limitation	PG&E	Fresno	29-Jan-13	323	No	DEC	1	0:01	0:59	296.21	\$0	\$0	\$9,651	0	\$0	\$0	\$0	\$0	\$0
49	RT	Software Limitation	PG&E	N/A	9-Jan-13	200	Yes	DEC	1	16:00	16:35	125.02	\$0	\$0	\$918	0	\$0	\$0	\$0	\$0	\$0
50	RT	Software Limitation	PG&E	N/A	31-Jan-13	55	No	DEC	2	10:23	11:59	-34.37	\$0	\$0	\$984	0	\$0	\$0	\$0	\$0	\$0
51	RT	Software Limitation	PG&E	N/A	31-Jan-13	0	No	INC	2	10:23	11:59	-2.29	\$0	\$0	\$68	0	\$0	\$0	\$0	\$0	\$0
52	RT	Software Limitation	SCE	Big Creek-Ventura	3-Jan-13	0	Yes	INC	14	10:45	23:44	1.70	\$420	\$66	(\$61)	0	\$0	\$0	\$0	\$0	\$0
53	RT	Software Limitation	SCE	Big Creek-Ventura	22-Jan-13	0	Yes	INC	1	23:00	23:29	0.00	\$0	\$0	(\$0)	0	\$0	\$0	\$0	\$0	\$0
54	RT	Software Limitation	SCE	LA Basin	2-Jan-13	0	Yes	INC	2	20:00	21:59	0.00	\$0	\$170	(\$0)	0	\$0	\$0	\$0	\$0	\$0
55	RT	Software Limitation	SCE	LA Basin	3-Jan-13	0	Yes	INC	1	23:00	23:59	0.00	\$0	\$0	\$0	0	\$0	\$0	\$0	\$0	\$0

Department of Market Quality and Renewable Integration – California ISO

Num ber	Mar ket Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commit ment	INC_ DEC	Hours	Begin Time	End Time	Total MWH	Min Load cost	Startup Cost	CC6470	ED MWH (INC/DE C)	CC6470 INC	CC6470 DEC	CC6482	CC6488	CC6620
56	RT	Software Limitation	SCE	LA Basin	4-Jan-13	0	No	INC	1	0:00	0:29	0.00	\$0	\$0	\$0	0	\$0	\$0	\$0	\$0	\$0
57	RT	Software Limitation	SCE	LA Basin	5-Jan-13	46	No	DEC	2	20:25	21:24	-53.67	\$0	\$0	\$2,043	-46	\$0	\$1,692	\$0	\$0	\$0
58	RT	Software Limitation	SCE	LA Basin	9-Jan-13	640	No	INC	2	15:58	16:32	269.64	\$0	\$0	\$1,922	0	\$0	\$0	\$0	\$0	\$0
59	RT	Software Limitation	SCE	LA Basin	15-Jan-13	47	No	DEC	2	19:50	20:49	-47.00	\$0	\$0	\$1,770	-47	\$0	\$1,769	\$0	\$0	\$0
60	RT	Software Limitation	SCE	LA Basin	15-Jan-13	0	Yes	INC	2	10:15	11:14	3.83	\$0	\$0	(\$141)	0	\$0	\$0	\$0	\$0	\$0
61	RT	Software Limitation	SCE	LA Basin	17-Jan-13	0	Yes	INC	1	1:15	1:44	1.28	\$0	\$0	(\$45)	0	\$0	\$0	\$0	\$0	\$0
62	RT	Software Limitation	SCE	LA Basin	19-Jan-13	0	Yes	INC	2	21:45	22:44	3.91	\$0	\$0	(\$129)	0	\$0	\$0	\$0	\$0	\$0
63	RT	Software Limitation	SCE	LA Basin	23-Jan-13	0	Yes	INC	1	0:00	0:59	0.00	\$0	\$0	(\$0)	0	\$0	\$0	\$0	\$0	\$0
64	RT	Software Limitation	SCE	N/A	1-Jan-13	375	No	INC	5	9:25	13:59	472.73	\$57,397	\$0	\$11,798	0	\$0	\$0	\$0	\$0	\$0
65	RT	Software Limitation	SCE	N/A	12-Jan-13	352	No	INC	3	1:55	3:59	536.43	\$15,455	\$14,622	\$38,915	-24	\$0	\$820	\$0	\$0	\$0
66	RT	Software Limitation	SCE	N/A	13-Jan-13	410	No	INC	1	23:11	23:59	-5.74	\$0	\$0	\$138	0	\$0	\$0	\$0	\$0	\$0
67	RT	Software Limitation	SCE	N/A	14-Jan-13	410	No	INC	12	0:00	11:59	789.59	\$53,758	\$0	\$15,014	-406	\$0	\$1,497	\$0	\$0	\$0
68	RT	Software Limitation	SCE	N/A	30-Jan-13	352	No	INC	1	10:00	10:59	237.09	\$7,736	\$0	(\$6,808)	0	(\$0)	\$0	\$0	\$0	\$0
69	RT	Software Limitation	SDG&E	San Diego-IV	8-Jan-13	0	No	INC	11	0:25	10:24	0.00	\$0	\$0	\$0	0	\$0	\$0	\$0	\$0	\$0
70	RT	Software Limitation	SDG&E	San Diego-IV	9-Jan-13	571- 745	No	INC	1	16:03	16:34	-27.12	\$0	\$0	\$154	-5	\$0	\$0	\$0	\$0	\$0
71	RT	Software Limitation	SDG&E	San Diego-IV	13-Jan-13	310	No	INC	2	13:44	14:39	195.25	\$0	\$0	\$3,452	-177	\$0	\$2,981	\$0	\$0	\$0
72	RT	Software Limitation	SDG&E	San Diego-IV	14-Jan-13	131	No	INC	12	6:50	17:27	1298.6 1	\$103,803	\$13,609	(\$47,190)	1	(\$26)	\$0	(\$3)	\$0	\$0
73	RT	Software Limitation	SDG&E	San Diego-IV	16-Jan-13	131	No	INC	7	17:52	23:58	898.31	\$51,673	\$0	(\$34,168)	8	(\$904)	\$0	(\$2)	\$0	\$0
74	RT	Software Limitation	SDG&E	San Diego-IV	17-Jan-13	270	No	INC	2	4:52	5:29	-62.29	\$0	\$0	\$1,582	-27	\$0	\$448	\$0	\$0	\$0
75	RT	System Energy	Intertie	N/A	10-Jan-13	439	No	DEC	1	1:00	1:59	0.00	\$0	\$0	\$0	0	\$0	\$0	\$0	\$0	\$0
76	RT	System Energy	Intertie	N/A	10-Jan-13	150	Yes	INC	1	1:00	1:59	0.00	\$0	\$0	\$0	0	\$0	\$0	\$0	\$0	\$0
77	RT	System Energy	Intertie	N/A	11-Jan-13	200	No	DEC	1	17:00	17:59	0.00	\$0	\$0	\$0	0	\$0	\$0	\$0	\$0	\$0
78	RT	System Energy	Intertie	N/A	23-Jan-13	200	Yes	INC	1	17:00	17:59	0.00	\$0	\$0	\$0	0	\$0	\$0	\$0	\$0	\$0
79	RT	System Energy	Intertie	N/A	27-Jan-13	175	No	DEC	1	8:00	8:59	0.00	\$0	\$0	\$0	0	\$0	\$0	\$0	\$0	\$0
80	RT	System Energy	Intertie	N/A	27-Jan-13	200- 300	Yes	INC	8	8:00	15:59	0.00	\$0	\$0	\$0	0	\$0	\$0	\$0	\$0	\$0
81	RT	System Energy	PG&E	N/A	10-Jan-13	52	No	INC	9	15:00	23:59	465.83	\$35,565	\$0	(\$12,757)	0	\$0	\$0	\$0	\$0	\$0
82	RT	System Load	PG&E	Bay Area	7-Jan-13	60	Yes	INC	6	14:40	19:59	374.69	\$28,043	\$6,788	(\$22,300)	74	(\$4,223)	\$0	\$0	\$0	\$0
83	RT	System Load	SCE	Big Creek- Ventura	7-Jan-13	100	Yes	INC	6	14:30	19:59	834.66	\$0	\$0	(\$52,482)	215	(\$8,680)	\$0	\$0	\$0	\$0
84	RT	System Load	SCE	Big Creek- Ventura	8-Jan-13	165	Yes	DEC	6	14:20	19:59	-80.61	\$0	\$0	(\$12,738)	-2	\$0	\$16	\$0	\$0	\$0
85	RT	System Load	SCE	Big Creek-	8-Jan-13	27- 30	Yes	INC	6	14:20	19:59	97.45	\$0	\$0	(\$3,946)	73	(\$2,946)	\$0	\$0	\$0	\$0

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Num ber	Mar ket Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commit ment	INC_ DEC	Hours	Begin Time	End Time	Total MWH	Min Load cost	Startup Cost	CC6470	ED MWH (INC/DE C)	CC6470 INC	CC6470 DEC	CC6482	CC6488	CC6620
				Ventura																	
86	RT	System Load	SCE	Big Creek- Ventura	14-Jan-13	83- 140	No	DEC	14	6:35	19:59	-47.84	\$0	\$0	\$1,626	-2	\$0	\$57	\$0	\$0	\$0
87	RT	System Load	SCE	Big Creek- Ventura	14-Jan-13	50- 100	No	INC	14	6:35	19:59	1194.7 1	\$0	\$0	(\$48,332)	713	(\$30,46 9)	\$0	\$0	\$0	\$0
88	RT	System Load	SCE	Big Creek- Ventura	15-Jan-13	213- 252	Yes	DEC	5	15:05	19:59	-64.28	\$0	\$0	\$2,304	0	\$0	\$0	\$0	\$0	\$0
89	RT	System Load	SCE	Big Creek- Ventura	15-Jan-13	60	Yes	INC	5	15:05	19:59	101.67	\$0	\$0	(\$5,336)	101	(\$5,329)	\$0	\$0	\$0	\$0
90	RT	System Load	SCE	Big Creek- Ventura	19-Jan-13	100	Yes	INC	2	18:40	19:59	132.40	\$0	\$0	(\$5,329)	79	(\$3,309)	\$0	\$0	\$0	\$0
91	RT	System Load	SCE	Big Creek- Ventura	20-Jan-13	100	Yes	INC	3	18:10	20:14	210.61	\$0	\$0	(\$10,033)	120	(\$6,832)	\$0	\$0	\$0	\$0
92	RT	System Load	SCE	Big Creek- Ventura	25-Jan-13	50	Yes	INC	5	15:15	19:59	290.02	\$0	\$0	(\$76,331)	121	(\$10,66 1)	\$0	\$0	\$0	\$0
93	RT	System Load	SCE	Big Creek- Ventura	26-Jan-13	50	Yes	INC	3	17:10	19:59	139.31	\$0	\$0	(\$5,286)	83	(\$3,466)	\$0	\$0	\$0	\$0
94	RT	System Load	SCE	Big Creek- Ventura	30-Jan-13	50	Yes	INC	4	16:30	19:59	173.77	\$0	\$0	(\$7,180)	104	(\$4,449)	\$0	\$0	\$0	\$0
95	RT	System Load	SCE	Big Creek- Ventura	31-Jan-13	50	Yes	INC	4	16:30	19:59	174.73	\$0	\$0	(\$8,146)	105	(\$5,809)	\$0	\$0	\$0	\$0
96	RT	System Load	SCE	LA Basin	7-Jan-13	71	Yes	INC	6	14:25	19:59	723.69	\$0	\$0	(\$48,672)	188	(\$8,167)	\$0	\$0	\$0	\$0
97	RT	System Load	SCE	LA Basin	8-Jan-13	166- 195	No	DEC	6	14:20	19:59	-18.62	\$0	\$0	\$632	-1	\$0	\$50	\$0	\$0	\$0
98	RT	System Load	SCE	LA Basin	8-Jan-13	20- 236	Yes	INC	10	14:20	23:59	1316.1 5	\$33,795	\$0	(\$54,941)	862	(\$37,11 8)	\$0	(\$0)	\$0	\$0
99	RT	System Load	SCE	LA Basin	9-Jan-13	120	Yes	DEC	15	6:50	20:59	9.85	\$0	\$0	(\$284)	0	\$0	\$0	\$0	\$0	\$0
100	RT	System Load	SCE	LA Basin	9-Jan-13	71- 233	Yes	INC	15	6:50	20:59	2386.9 5	\$14,826	\$0	(\$77,260)	2116	(\$70,73 9)	\$0	(\$28,75 9)	\$0	\$0
101	RT	System Load	SCE	LA Basin	10-Jan-13	46	Yes	INC	7	14:00	20:59	312.40	\$0	\$0	(\$17,125)	311	(\$17,09 4)	\$0	\$0	\$0	\$0
102	RT	System Load	SCE	LA Basin	14-Jan-13	71	No	INC	14	6:35	19:59	959.49	\$41,411	\$9,061	(\$40,003)	612	(\$27,26 5)	\$0	\$0	\$0	\$0
103	RT	System Load	SCE	LA Basin	15-Jan-13	20	Yes	DEC	5	15:05	19:59	-6.57	\$0	\$0	\$258	0	\$0	\$0	\$0	\$0	\$0
104	RT	System Load	SCE	LA Basin	15-Jan-13	0- 46	Yes	INC	6	15:05	20:49	186.78	\$0	\$0	(\$10,103)	169	(\$9,407)	\$0	(\$0)	\$0	\$0
105	RT	System Load	SCE	LA Basin	19-Jan-13	120- 265	Yes	DEC	5	15:15	19:59	-62.00	\$0	\$0	\$2,223	0	\$0	\$0	\$0	\$0	\$0

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Num ber	Mar ket Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commit ment	INC_ DEC	Hours	Begin Time	End Time	Total MWH	Min Load cost	Startup Cost	CC6470	ED MWH (INC/DE C)	CC6470 INC	CC6470 DEC	CC6482	CC6488	CC6620
106	RT	System Load	SCE	LA Basin	19-Jan-13	50	Yes	INC	4	15:15	18:59	31.42	\$0	\$0	(\$1,308)	29	(\$1,223)	\$0	\$0	\$0	\$0
107	RT	System Load	SCE	LA Basin	20-Jan-13	120- 146	No	DEC	6	14:40	19:59	-21.26	\$0	\$0	\$758	0	\$0	\$0	\$0	\$0	\$0
108	RT	System Load	SCE	LA Basin	20-Jan-13	71- 233	Yes	INC	6	14:40	19:59	466.52	\$0	\$0	(\$22,973)	328	(\$18,374)	\$0	\$0	\$0	\$0
109	RT	System Load	SCE	LA Basin	30-Jan-13	215- 230	No	DEC	4	16:30	19:59	-19.46	\$0	\$0	\$499	0	\$0	\$0	\$0	\$0	\$0
110	RT	System Load	SCE	LA Basin	30-Jan-13	71- 104	Yes	INC	4	16:30	19:59	288.49	\$0	\$0	(\$11,851)	172	(\$7,491)	\$0	\$0	\$0	\$0
111	RT	System Load	SCE	LA Basin	31-Jan-13	215- 230	No	DEC	4	16:30	19:59	-32.28	\$0	\$0	\$1,046	0	\$0	\$0	\$0	\$0	\$0
112	RT	System Load	SCE	LA Basin	31-Jan-13	71- 104	Yes	INC	4	16:30	19:59	285.34	\$0	\$0	(\$13,517)	172	(\$9,739)	\$0	\$0	\$0	\$0
113	RT	System Load	SCE	N/A	7-Jan-13	200	Yes	INC	6	14:40	19:59	1238.5 3	\$53,001	\$2,678	(\$71,863)	354	(\$13,332)	\$0	\$0	\$0	\$0
114	RT	Thermal Margin	PG&E	Bay Area	7-Jan-13	45	Yes	INC	15	9:00	23:59	447.89	\$50,827	\$12,303	(\$21,113)	0	\$0	\$0	\$0	\$0	\$0
115	RT	Thermal Margin	SCE	Big Creek- Ventura	29-Jan-13	50	Yes	INC	18	6:00	23:59	1068.4 4	\$120,042	\$0	(\$52,766)	0	\$0	\$0	\$0	\$0	\$0
116	RT	Thermal Margin	SCE	LA Basin	7-Jan-13	25	Yes	INC	17	7:00	23:59	311.32	\$0	\$0	(\$10,430)	0	\$0	\$0	\$0	\$0	\$0
117	RT	Thermal Margin	SCE	LA Basin	20-Jan-13	20	Yes	INC	4	20:55	23:59	73.78	\$6,750	\$0	(\$2,617)	0	(\$0)	\$0	(\$0)	\$0	\$0
118	RT	Thermal Margin	SCE	LA Basin	21-Jan-13	20	Yes	INC	24	0:00	23:59	1358.3 8	\$54,000	\$0	(\$66,179)	0	(\$4)	\$0	(\$0)	\$0	\$0
119	RT	Thermal Margin	SCE	N/A	7-Jan-13	80	Yes	INC	16	8:00	23:59	1143.5 3	\$89,265	\$2,594	(\$38,653)	0	\$0	\$0	\$0	\$0	\$0
120	RT	Transmission Outage PG&E	PG&E	Bay Area	11-Jan-13	29	Yes	DEC	10	9:10	18:59	-0.72	\$0	\$0	(\$0)	0	\$0	\$11	\$0	(\$0)	\$0
121	RT	Transmission Outage PG&E	PG&E	Bay Area	11-Jan-13	45- 90	Yes	INC	20	4:00	23:59	2455.3 7	\$102,626	\$392	(\$268,924)	-3	(\$1)	\$157	\$0	(\$8)	\$0
122	RT	Transmission Outage PG&E	PG&E	Fresno	7-Jan-13	500- 600	Yes	INC	2	8:25	9:59	950.34	\$22,291	\$815	(\$34,813)	553	(\$19,944)	\$0	(\$13,844)	\$0	\$0
123	RT	Transmission Outage PG&E	PG&E	Fresno	8-Jan-13	460	No	INC	5	18:11	22:59	346.21	\$0	\$0	\$6,754	-247	\$0	\$5,866	\$0	(\$4,790)	\$0
124	RT	Transmission Outage PG&E	PG&E	Fresno	11-Jan-13	117- 304	Yes	DEC	10	9:10	18:59	-63.71	\$0	\$0	\$12,018	-17	\$0	\$4,500	\$0	(\$3,811)	\$0
125	RT	Transmission Outage PG&E	PG&E	Fresno	11-Jan-13	83- 166	Yes	INC	10	9:10	18:59	2944.5 5	\$74,049	\$676	(\$121,644)	0	(\$2)	\$0	\$0	(\$0)	\$0
126	RT	Transmission Outage PG&E	PG&E	Fresno	22-Jan-13	16	No	INC	1	12:20	12:59	11.96	\$0	\$0	(\$469)	4	(\$142)	\$0	\$0	\$0	\$0
127	RT	Transmission Outage PG&E	PG&E	Humboldt	8-Jan-13	16- 73	No	INC	16	7:30	22:59	222.95	\$534	\$0	\$4,299	-190	(\$46)	\$4,027	\$0	(\$3,035)	\$0
128	RT	Transmission Outage PG&E	PG&E	N/A	11-Jan-13	27	Yes	DEC	10	9:10	18:59	-0.57	\$0	\$0	(\$5)	0	\$0	\$10	\$0	(\$0)	\$0
129	RT	Transmission Outage PG&E	PG&E	N/A	11-Jan-13	20	Yes	INC	10	9:10	18:59	325.43	\$11,014	\$0	(\$13,073)	0	(\$0)	\$0	\$0	(\$0)	\$0
130	RT	Transmission Outage PG&E	PG&E	N/A	27-Jan-13	400	No	INC	2	20:01	21:29	130.96	\$0	\$0	\$4,373	-131	\$0	\$4,373	\$0	(\$560)	\$0
131	RT	Transmission Outage PG&E	PG&E	N/A	29-Jan-13	300	No	INC	5	17:40	21:32	979.23	\$0	\$0	\$76,188	-963	\$0	\$75,526	\$0	##### #	\$0
132	RT	Transmission Outage PG&E	PG&E	Sierra	25-Jan-13	20	Yes	INC	6	0:45	5:59	105.89	\$7,975	\$0	(\$3,248)	0	(\$2)	\$0	\$0	(\$1)	\$0
133	RT	Transmission Outage PG&E	SCE	LA Basin	13-Jan-13	20	Yes	INC	1	23:00	23:59	28.88	\$2,529	\$0	(\$878)	0	(\$0)	\$0	(\$0)	\$0	\$0

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Num ber	Mar ket Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commit ment	INC_ DEC	Hours	Begin Time	End Time	Total MWH	Min Load cost	Startup Cost	CC6470	ED MWH (INC/DE C)	CC6470 INC	CC6470 DEC	CC6482	CC6488	CC6620
134	RT	Transmission Outage PG&E	SCE	LA Basin	14-Jan-13	20- 45	Yes	INC	24	0:00	23:59	969.75	\$85,666	\$3,132	(\$38,801)	0	(\$6)	\$0	(\$1)	\$0	\$0
135	RT	Transmission Outage PG&E	SCE	N/A	14-Jan-13	40	No	INC	18	6:00	23:59	1208.0 9	\$90,378	\$26,821	(\$44,936)	0	(\$5)	\$0	(\$1)	\$0	\$0
136	RT	Transmission Outage PG&E	SDG&E	San Diego-IV	14-Jan-13	40	No	INC	18	6:00	23:59	708.04	\$45,026	\$12,680	(\$28,152)	0	(\$0)	\$0	(\$0)	\$0	\$0
137	RT	Transmission Outage SCE	SCE	N/A	30-Jan-13	226	No	INC	3	10:46	12:59	93.48	\$2,807	\$0	(\$2,686)	0	\$0	\$0	\$0	\$0	\$0
138	RT	Transmission Outage SDG&E	SDG&E	San Diego-IV	4-Jan-13	15	Yes	INC	2	14:30	15:29	14.00	\$1,544	\$421	(\$443)	1	\$0	\$0	\$0	\$0	\$0
139	RT	Transmission Outage SDG&E	SDG&E	San Diego-IV	7-Jan-13	20	No	INC	17	7:00	23:59	16.26	\$0	\$0	(\$716)	0	\$0	\$0	\$0	\$0	\$0
140	RT	Transmission Outage SDG&E	SDG&E	San Diego-IV	17-Jan-13	275- 350	No	INC	8	6:15	13:59	- 337.40	\$0	\$0	\$11,236	-346	\$0	\$11,464	\$0	(\$5,050)	\$0
141	RT	Transmission Outage SDG&E	SDG&E	San Diego-IV	18-Jan-13	181	No	INC	2	5:43	6:59	51.10	\$0	\$0	(\$1,628)	-14	\$0	\$450	\$0	(\$104)	\$0
142	RT	Unit Testing	PG&E	N/A	6-Jan-13	125- 200	No	INC	5	13:20	17:59	0.00	\$0	\$0	\$0	0	\$0	\$0	\$0	\$0	\$0
143	RT	Unit Testing	PG&E	N/A	11-Jan-13	580	No	INC	1	0:30	0:50	-21.67	\$0	\$0	\$589	0	\$0	\$0	\$0	\$0	\$0
144	RT	Unit Testing	PG&E	N/A	30-Jan-13	6- 200	Yes	INC	9	7:30	15:59	966.45	\$0	\$0	(\$30,681)	325	(\$12,523)	\$0	\$0	\$0	\$0
145	RT	Unit Testing	PG&E	N/A	31-Jan-13	200	Yes	INC	6	11:30	16:19	950.27	\$0	\$0	(\$30,497)	374	(\$14,441)	\$0	\$0	\$0	\$0
146	RT	Unit Testing	SCE	N/A	30-Jan-13	90- 183	Yes	INC	10	10:00	19:59	540.00	\$0	\$165	(\$20,273)	238	(\$9,346)	\$0	\$0	\$0	\$0
147	RT	Voltage Support	PG&E	Fresno	6-Jan-13	300	Yes	DEC	5	3:35	7:59	- 1350.0 0	\$0	\$0	\$32,275	0	\$0	\$0	\$0	\$0	\$0
148	RT	Voltage Support	PG&E	Fresno	20-Jan-13	320	Yes	DEC	3	3:20	5:59	906.67	\$0	\$0	\$34,679	0	\$0	\$0	\$0	\$0	\$0
149	RT	Voltage Support	PG&E	Fresno	26-Jan-13	407	Yes	INC	1	3:15	3:59	332.25	\$0	\$500	(\$9,234)	0	\$0	\$0	\$0	\$0	\$0
150	RT	Voltage Support	SCE	N/A	28-Jan-13	172	No	INC	20	4:00	23:59	3439.4 2	\$132,689	\$19,014	(\$75,048)	0	(\$4)	\$0	\$0	(\$2)	\$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 the 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 is 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 * (\$100/MWh-\$10/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 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 (PGAE) 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 PGAE 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 a 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 Pmax or, in other words, the resource was exceptionally dispatched to its Pmax 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 Pmin, 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 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 PGAE 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 8928 five-minute intervals in January, this resource was issued exceptional dispatch instructions in 272 five-minute intervals. This resource was eligible to set the LMP in 221 intervals. Resource calculated LMP was larger than the market LMP in 96 of the 221 intervals. In the 96 intervals, the average increase in five minute LMP was \$3.83/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 increase of \$3.83/MWh. Note that 96 five minute intervals are approximately 1.08 percent of the total 8640 five minute intervals.

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 8928 five minute intervals, this resource was issued an exceptional dispatch instruction in 1189 five minute intervals. This resource was eligible to set the LMP in all 1153 intervals. Out of the 1029 intervals, resource calculated LMP was larger than the market LMP in 1132 intervals. In the 1132 intervals, the average increase in five minute LMP was \$22.61/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 increase of \$22.61/MWh. The 1132 five minute intervals account for approximately 12.68 percent of the total 8928 five minute intervals.

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	5-Jan-13	22	6	\$40.42	Yes	\$42.60	\$2.18
2	5-Jan-13	22	7	\$38.64	Yes	\$42.60	\$3.96
3	5-Jan-13	22	8	\$38.45	Yes	\$42.60	\$4.15
4	5-Jan-13	22	9	\$36.54	Yes	\$42.60	\$6.06
5	5-Jan-13	22	10	\$35.93	Yes	\$42.60	\$6.67
6	5-Jan-13	22	11	\$35.59	Yes	\$42.60	\$7.01
7	5-Jan-13	22	12	\$35.93	Yes	\$42.60	\$6.67
8	5-Jan-13	23	1	\$35.33	Yes	\$42.60	\$7.27
9	5-Jan-13	23	2	\$35.33	Yes	\$42.60	\$7.27
10	5-Jan-13	23	3	\$35.33	Yes	\$42.60	\$7.27
11	5-Jan-13	23	4	\$32.13	Yes	\$42.60	\$10.47
12	5-Jan-13	23	5	\$31.70	Yes	\$42.60	\$10.90
13	5-Jan-13	23	6	\$32.07	Yes	\$42.60	\$10.53
14	5-Jan-13	23	7	\$31.75	Yes	\$42.60	\$10.85
15	5-Jan-13	23	8	\$31.65	Yes	\$42.60	\$10.95
16	5-Jan-13	23	9	\$31.25	Yes	\$42.60	\$11.35
17	5-Jan-13	23	10	\$30.33	Yes	\$42.60	\$12.27
18	5-Jan-13	23	11	\$30.33	Yes	\$42.60	\$12.27
19	5-Jan-13	23	12	\$26.76	Yes	\$42.60	\$15.84
20	7-Jan-13	9	6	\$40.85	Yes	\$40.51	(\$0.34)
21	7-Jan-13	9	7	\$39.85	Yes	\$40.51	\$0.66
22	7-Jan-13	9	8	\$39.88	Yes	\$40.51	\$0.63
23	7-Jan-13	9	9	\$34.48	Yes	\$40.51	\$6.03
24	7-Jan-13	9	10	\$32.53	Yes	\$40.51	\$7.98
25	7-Jan-13	9	11	\$33.45	Yes	\$40.51	\$7.06
26	7-Jan-13	9	12	\$33.61	Yes	\$40.51	\$6.90
27	7-Jan-13	10	1	\$34.05	Yes	\$40.51	\$6.46
28	7-Jan-13	10	2	\$34.05	Yes	\$40.51	\$6.46
29	7-Jan-13	10	3	\$36.59	Yes	\$40.51	\$3.92
30	7-Jan-13	10	4	\$36.35	Yes	\$40.51	\$4.16
31	7-Jan-13	10	5	\$36.35	Yes	\$40.51	\$4.16
32	7-Jan-13	10	6	\$36.35	Yes	\$40.51	\$4.16
33	7-Jan-13	10	7	\$37.24	Yes	\$40.51	\$3.27
34	7-Jan-13	10	8	\$36.26	Yes	\$40.51	\$4.25
35	7-Jan-13	10	9	\$36.26	Yes	\$40.51	\$4.25
36	7-Jan-13	10	10	\$40.48	Yes	\$40.51	\$0.03
37	7-Jan-13	10	11	\$40.48	Yes	\$40.51	\$0.03
38	7-Jan-13	10	12	\$41.35	Yes	\$40.51	(\$0.84)
39	8-Jan-13	17	11	\$40.27	Yes	\$39.55	(\$0.72)
40	8-Jan-13	17	12	\$41.24	Yes	\$39.55	(\$1.69)
41	8-Jan-13	18	1	\$25.56	No	\$38.02	\$12.46
42	8-Jan-13	18	2	\$31.74	No	\$38.02	\$6.28

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Number	Trade Date	Trade Hour	Interval	Market LMP	Eligible Flag	Calculated LMP	Change in LMP
43	8-Jan-13	18	3	\$30.71	No	\$38.02	\$7.31
44	8-Jan-13	18	4	\$32.69	No	\$38.02	\$5.33
45	8-Jan-13	18	5	\$40.75	No	\$38.02	(\$2.73)
46	8-Jan-13	18	6	\$51.82	No	\$38.02	(\$13.80)
47	8-Jan-13	18	7	\$51.88	No	\$38.02	(\$13.86)
48	8-Jan-13	18	8	\$50.47	No	\$38.02	(\$12.45)
49	8-Jan-13	18	9	\$49.33	No	\$38.02	(\$11.31)
50	8-Jan-13	18	10	\$51.75	No	\$38.02	(\$13.73)
51	8-Jan-13	18	11	\$51.75	No	\$38.02	(\$13.73)
52	8-Jan-13	18	12	\$51.75	No	\$38.02	(\$13.73)
53	8-Jan-13	19	1	\$46.61	Yes	\$38.02	(\$8.59)
54	8-Jan-13	19	2	\$41.43	Yes	\$38.02	(\$3.41)
55	8-Jan-13	19	3	\$40.52	Yes	\$38.02	(\$2.50)
56	8-Jan-13	19	4	\$42.88	Yes	\$38.02	(\$4.86)
57	8-Jan-13	19	5	\$46.54	Yes	\$38.02	(\$8.52)
58	8-Jan-13	19	6	\$52.11	Yes	\$38.02	(\$14.09)
59	8-Jan-13	19	7	\$50.46	Yes	\$38.02	(\$12.44)
60	8-Jan-13	19	8	\$50.38	Yes	\$38.02	(\$12.36)
61	8-Jan-13	19	9	\$47.22	Yes	\$38.02	(\$9.20)
62	8-Jan-13	19	10	\$46.34	Yes	\$38.02	(\$8.32)
63	8-Jan-13	19	11	\$43.17	Yes	\$38.02	(\$5.15)
64	8-Jan-13	19	12	\$41.07	Yes	\$38.02	(\$3.05)
65	8-Jan-13	20	1	\$47.00	Yes	\$38.02	(\$8.98)
66	8-Jan-13	20	2	\$47.00	Yes	\$38.02	(\$8.98)
67	8-Jan-13	20	3	\$50.01	Yes	\$38.02	(\$11.99)
68	8-Jan-13	20	4	\$50.08	Yes	\$38.02	(\$12.06)
69	8-Jan-13	20	5	\$50.08	Yes	\$38.02	(\$12.06)
70	8-Jan-13	20	6	\$49.52	Yes	\$38.02	(\$11.50)
71	8-Jan-13	20	7	\$49.95	Yes	\$38.02	(\$11.93)
72	8-Jan-13	20	8	\$47.26	Yes	\$38.02	(\$9.24)
73	8-Jan-13	20	9	\$46.41	Yes	\$38.02	(\$8.39)
74	8-Jan-13	20	10	\$45.03	Yes	\$38.02	(\$7.01)
75	8-Jan-13	20	11	\$41.10	Yes	\$38.02	(\$3.08)
76	8-Jan-13	20	12	\$39.64	Yes	\$38.02	(\$1.62)
77	11-Jan-13	10	6	\$39.81	Yes	\$39.60	(\$0.21)
78	11-Jan-13	10	7	\$41.53	Yes	\$39.60	(\$1.93)
79	11-Jan-13	10	8	\$43.77	Yes	\$39.60	(\$4.17)
80	11-Jan-13	10	9	\$43.77	Yes	\$39.60	(\$4.17)
81	11-Jan-13	10	10	\$43.34	Yes	\$39.60	(\$3.74)
82	11-Jan-13	10	11	\$43.34	Yes	\$39.60	(\$3.74)
83	11-Jan-13	10	12	\$44.04	Yes	\$39.60	(\$4.44)
84	11-Jan-13	11	1	\$46.12	Yes	\$39.60	(\$6.52)
85	11-Jan-13	11	2	\$45.17	Yes	\$39.60	(\$5.57)
86	11-Jan-13	11	3	\$44.82	Yes	\$39.60	(\$5.22)
87	11-Jan-13	11	4	\$45.20	Yes	\$39.60	(\$5.60)

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Number	Trade Date	Trade Hour	Interval	Market LMP	Eligible Flag	Calculated LMP	Change in LMP
88	11-Jan-13	11	5	\$44.84	Yes	\$39.60	(\$5.24)
89	11-Jan-13	11	6	\$40.81	Yes	\$39.60	(\$1.21)
90	11-Jan-13	11	7	\$39.77	Yes	\$39.60	(\$0.17)
91	11-Jan-13	11	8	\$39.77	Yes	\$39.60	(\$0.17)
92	11-Jan-13	11	9	\$39.79	Yes	\$39.60	(\$0.19)
93	11-Jan-13	11	10	\$39.45	Yes	\$39.60	\$0.15
94	11-Jan-13	11	11	\$39.43	Yes	\$39.60	\$0.17
95	11-Jan-13	11	12	\$39.44	Yes	\$39.60	\$0.16
96	11-Jan-13	12	1	\$44.95	Yes	\$39.60	(\$5.35)
97	11-Jan-13	12	2	\$44.85	Yes	\$39.60	(\$5.25)
98	11-Jan-13	12	3	\$45.20	Yes	\$39.60	(\$5.60)
99	11-Jan-13	12	4	\$44.42	Yes	\$39.60	(\$4.82)
100	11-Jan-13	12	5	\$44.78	Yes	\$39.60	(\$5.18)
101	11-Jan-13	12	6	\$45.13	Yes	\$39.60	(\$5.53)
102	11-Jan-13	12	7	\$43.00	Yes	\$39.60	(\$3.40)
103	11-Jan-13	12	8	\$43.24	Yes	\$39.60	(\$3.64)
104	11-Jan-13	12	9	\$43.07	Yes	\$39.60	(\$3.47)
105	11-Jan-13	12	10	\$43.15	Yes	\$39.60	(\$3.55)
106	11-Jan-13	12	11	\$43.11	Yes	\$39.60	(\$3.51)
107	11-Jan-13	12	12	\$43.23	Yes	\$39.60	(\$3.63)
108	11-Jan-13	13	1	\$41.28	Yes	\$39.60	(\$1.68)
109	11-Jan-13	13	2	\$41.28	Yes	\$39.60	(\$1.68)
110	11-Jan-13	13	3	\$40.88	Yes	\$39.60	(\$1.28)
111	11-Jan-13	13	4	\$43.75	Yes	\$39.60	(\$4.15)
112	11-Jan-13	13	5	\$43.71	Yes	\$39.60	(\$4.11)
113	11-Jan-13	13	6	\$43.55	Yes	\$39.60	(\$3.95)
114	11-Jan-13	13	7	\$40.80	Yes	\$39.60	(\$1.20)
115	11-Jan-13	13	8	\$40.80	Yes	\$39.60	(\$1.20)
116	11-Jan-13	13	9	\$40.40	Yes	\$39.60	(\$0.80)
117	11-Jan-13	13	10	\$40.76	Yes	\$39.60	(\$1.16)
118	11-Jan-13	13	11	\$40.08	Yes	\$39.60	(\$0.48)
119	11-Jan-13	13	12	\$37.42	Yes	\$39.60	\$2.18
120	11-Jan-13	14	1	\$37.83	Yes	\$39.60	\$1.77
121	11-Jan-13	14	2	\$36.58	Yes	\$39.60	\$3.02
122	11-Jan-13	14	3	\$39.55	Yes	\$39.60	\$0.05
123	11-Jan-13	14	4	\$38.97	Yes	\$39.60	\$0.63
124	11-Jan-13	14	5	\$38.78	Yes	\$39.60	\$0.82
125	11-Jan-13	14	6	\$38.79	Yes	\$39.60	\$0.81
126	11-Jan-13	14	7	\$36.25	Yes	\$39.60	\$3.35
127	11-Jan-13	14	8	\$35.84	Yes	\$39.60	\$3.76
128	11-Jan-13	14	9	\$35.84	Yes	\$39.60	\$3.76
129	11-Jan-13	14	10	\$38.55	Yes	\$39.60	\$1.05
130	11-Jan-13	14	11	\$38.57	Yes	\$39.60	\$1.03
131	11-Jan-13	14	12	\$38.41	Yes	\$39.60	\$1.19
132	11-Jan-13	15	1	\$31.95	Yes	\$39.60	\$7.65

Department of Market Quality and Renewable Integration – California ISO

Number	Trade Date	Trade Hour	Interval	Market LMP	Eligible Flag	Calculated LMP	Change in LMP
133	11-Jan-13	15	2	\$35.83	Yes	\$39.60	\$3.77
134	11-Jan-13	15	3	\$38.59	Yes	\$39.60	\$1.01
135	11-Jan-13	15	4	\$35.81	Yes	\$39.60	\$3.79
136	11-Jan-13	15	5	\$38.55	Yes	\$39.60	\$1.05
137	11-Jan-13	15	6	\$38.60	Yes	\$39.60	\$1.00
138	11-Jan-13	15	7	\$38.67	Yes	\$39.60	\$0.93
139	11-Jan-13	15	8	\$38.50	Yes	\$39.60	\$1.10
140	11-Jan-13	15	9	\$38.50	Yes	\$39.60	\$1.10
141	11-Jan-13	15	10	\$38.74	Yes	\$39.60	\$0.86
142	11-Jan-13	15	11	\$38.79	Yes	\$39.60	\$0.81
143	11-Jan-13	15	12	\$38.78	Yes	\$39.60	\$0.82
144	11-Jan-13	16	1	\$31.37	Yes	\$39.60	\$8.23
145	11-Jan-13	16	2	\$31.37	Yes	\$39.60	\$8.23
146	11-Jan-13	16	3	\$31.37	Yes	\$39.60	\$8.23
147	11-Jan-13	16	4	\$32.00	Yes	\$39.60	\$7.60
148	11-Jan-13	16	5	\$34.86	Yes	\$39.60	\$4.74
149	11-Jan-13	16	6	\$36.42	Yes	\$39.60	\$3.18
150	11-Jan-13	16	7	\$36.15	Yes	\$39.60	\$3.45
151	11-Jan-13	16	8	\$36.19	Yes	\$39.60	\$3.41
152	11-Jan-13	16	9	\$38.47	Yes	\$39.60	\$1.13
153	11-Jan-13	16	10	\$38.44	Yes	\$39.60	\$1.16
154	11-Jan-13	16	11	\$38.49	Yes	\$39.60	\$1.11
155	11-Jan-13	16	12	\$38.76	Yes	\$39.60	\$0.84
156	11-Jan-13	17	1	\$38.54	Yes	\$39.60	\$1.06
157	11-Jan-13	17	2	\$38.65	Yes	\$39.60	\$0.95
158	11-Jan-13	17	3	\$38.65	Yes	\$39.60	\$0.95
159	11-Jan-13	17	4	\$38.14	Yes	\$39.60	\$1.46
160	11-Jan-13	17	5	\$38.93	Yes	\$39.60	\$0.67
161	11-Jan-13	17	6	\$38.97	Yes	\$39.60	\$0.63
162	11-Jan-13	17	7	\$39.79	Yes	\$39.60	(\$0.19)
163	11-Jan-13	17	8	\$40.57	Yes	\$39.60	(\$0.97)
164	11-Jan-13	17	9	\$55.06	Yes	\$39.60	(\$15.46)
165	11-Jan-13	17	10	\$58.10	Yes	\$39.60	(\$18.50)
166	11-Jan-13	17	11	\$41.56	Yes	\$39.60	(\$1.96)
167	11-Jan-13	17	12	\$41.59	Yes	\$39.60	(\$1.99)
168	11-Jan-13	18	1	\$39.25	Yes	\$39.60	\$0.35
169	11-Jan-13	18	2	\$37.73	Yes	\$39.60	\$1.87
170	11-Jan-13	18	3	\$35.71	Yes	\$39.60	\$3.89
171	11-Jan-13	18	4	\$38.88	Yes	\$39.60	\$0.72
172	11-Jan-13	18	5	\$39.82	Yes	\$39.60	(\$0.22)
173	11-Jan-13	18	6	\$41.06	Yes	\$39.60	(\$1.46)
174	11-Jan-13	18	7	\$46.34	Yes	\$39.60	(\$6.74)
175	11-Jan-13	18	8	\$91.35	Yes	\$39.60	(\$51.75)
176	11-Jan-13	18	9	\$1,007.74	Yes	\$39.60	(\$968.14)
177	11-Jan-13	18	10	\$50.60	Yes	\$39.60	(\$11.00)

Department of Market Quality and Renewable Integration – California ISO

Number	Trade Date	Trade Hour	Interval	Market LMP	Eligible Flag	Calculated LMP	Change in LMP
178	11-Jan-13	18	11	\$50.57	Yes	\$39.60	(\$10.97)
179	11-Jan-13	18	12	\$50.35	Yes	\$39.60	(\$10.75)
180	11-Jan-13	19	1	\$1,012.22	Yes	\$39.60	(\$972.62)
181	11-Jan-13	19	2	\$1,011.96	Yes	\$39.60	(\$972.36)
182	11-Jan-13	19	3	\$1,012.04	Yes	\$39.60	(\$972.44)
183	11-Jan-13	19	4	\$1,011.17	Yes	\$39.60	(\$971.57)
184	11-Jan-13	19	5	\$1,011.22	Yes	\$39.60	(\$971.62)
185	11-Jan-13	19	6	\$1,011.22	Yes	\$39.60	(\$971.62)
186	11-Jan-13	19	7	\$50.38	Yes	\$39.60	(\$10.78)
187	11-Jan-13	19	8	\$50.74	Yes	\$39.60	(\$11.14)
188	11-Jan-13	19	9	\$50.75	Yes	\$39.60	(\$11.15)
189	11-Jan-13	19	10	\$46.15	Yes	\$39.60	(\$6.55)
190	11-Jan-13	19	11	\$48.33	Yes	\$39.60	(\$8.73)
191	11-Jan-13	19	12	\$49.95	Yes	\$39.60	(\$10.35)
192	20-Jan-13	4	5	\$36.23	No	\$39.72	\$3.49
193	20-Jan-13	4	6	\$36.23	No	\$39.72	\$3.49
194	20-Jan-13	4	7	\$37.20	No	\$39.72	\$2.52
195	20-Jan-13	4	8	\$37.20	No	\$39.72	\$2.52
196	20-Jan-13	4	9	\$37.20	No	\$39.72	\$2.52
197	20-Jan-13	4	10	\$37.73	No	\$39.72	\$1.99
198	20-Jan-13	4	11	\$37.73	No	\$39.72	\$1.99
199	20-Jan-13	4	12	\$38.43	No	\$39.72	\$1.29
200	20-Jan-13	5	1	\$38.49	No	\$39.72	\$1.23
201	20-Jan-13	5	2	\$37.84	No	\$39.72	\$1.88
202	20-Jan-13	5	3	\$38.49	No	\$39.72	\$1.23
203	20-Jan-13	5	4	\$37.89	No	\$39.72	\$1.83
204	20-Jan-13	5	5	\$37.89	No	\$39.72	\$1.83
205	20-Jan-13	5	6	\$38.55	No	\$39.72	\$1.17
206	20-Jan-13	5	7	\$37.82	No	\$39.72	\$1.90
207	20-Jan-13	5	8	\$37.82	No	\$39.72	\$1.90
208	20-Jan-13	5	9	\$38.47	No	\$39.72	\$1.25
209	20-Jan-13	5	10	\$38.62	No	\$39.72	\$1.10
210	20-Jan-13	5	11	\$38.62	No	\$39.72	\$1.10
211	20-Jan-13	5	12	\$40.56	No	\$39.72	(\$0.84)
212	20-Jan-13	6	1	\$33.52	No	\$39.72	\$6.20
213	20-Jan-13	6	2	\$33.52	No	\$39.72	\$6.20
214	20-Jan-13	6	3	\$33.52	No	\$39.72	\$6.20
215	20-Jan-13	6	4	\$34.90	No	\$39.72	\$4.82
216	20-Jan-13	6	5	\$36.42	No	\$39.72	\$3.30
217	20-Jan-13	6	6	\$38.43	No	\$39.72	\$1.29
218	20-Jan-13	6	7	\$38.65	No	\$39.72	\$1.07
219	20-Jan-13	6	8	\$38.65	No	\$39.72	\$1.07
220	20-Jan-13	6	9	\$40.71	No	\$39.72	(\$0.99)
221	20-Jan-13	6	10	\$40.62	No	\$39.72	(\$0.90)
222	20-Jan-13	6	11	\$44.09	No	\$39.72	(\$4.37)

Department of Market Quality and Renewable Integration – California ISO

Number	Trade Date	Trade Hour	Interval	Market LMP	Eligible Flag	Calculated LMP	Change in LMP
223	20-Jan-13	6	12	\$49.29	No	\$39.72	(\$9.57)
224	23-Jan-13	16	12	\$42.22	Yes	\$44.34	\$2.12
225	23-Jan-13	17	1	\$60.63	Yes	\$44.34	(\$16.29)
226	23-Jan-13	17	2	\$42.22	No	\$81.15	\$38.93
227	23-Jan-13	17	3	\$32.75	No	\$81.15	\$48.40
228	23-Jan-13	17	4	\$32.75	No	\$81.15	\$48.40
229	23-Jan-13	17	5	\$79.64	No	\$81.15	\$1.51
230	23-Jan-13	17	6	\$996.40	No	\$81.15	(\$915.25)
231	23-Jan-13	17	7	\$48.14	No	\$81.15	\$33.01
232	23-Jan-13	17	8	\$48.21	No	\$81.15	\$32.94
233	23-Jan-13	17	9	\$59.22	Yes	\$44.34	(\$14.88)
234	23-Jan-13	17	10	\$50.58	Yes	\$44.34	(\$6.24)
235	23-Jan-13	17	11	\$53.74	Yes	\$44.34	(\$9.40)
236	23-Jan-13	17	12	\$55.73	Yes	\$44.34	(\$11.39)
237	23-Jan-13	18	1	\$38.33	Yes	\$42.81	\$4.48
238	23-Jan-13	18	2	\$41.88	Yes	\$42.81	\$0.93
239	23-Jan-13	18	3	\$59.54	Yes	\$42.81	(\$16.73)
240	23-Jan-13	18	4	\$47.29	Yes	\$42.81	(\$4.48)
241	23-Jan-13	18	5	\$50.03	Yes	\$42.81	(\$7.22)
242	23-Jan-13	18	6	\$102.87	Yes	\$42.81	(\$60.06)
243	23-Jan-13	18	7	\$217.96	Yes	\$42.81	(\$175.15)
244	23-Jan-13	18	8	\$360.50	Yes	\$42.81	(\$317.69)
245	23-Jan-13	18	9	\$988.17	Yes	\$42.81	(\$945.36)
246	23-Jan-13	18	10	\$985.15	Yes	\$42.81	(\$942.34)
247	23-Jan-13	18	11	\$76.55	Yes	\$42.81	(\$33.74)
248	23-Jan-13	18	12	\$114.73	Yes	\$42.81	(\$71.92)
249	23-Jan-13	19	1	\$49.56	Yes	\$42.81	(\$6.75)
250	23-Jan-13	19	2	\$49.56	Yes	\$42.81	(\$6.75)
251	23-Jan-13	19	3	\$48.96	Yes	\$42.81	(\$6.15)
252	23-Jan-13	19	4	\$49.37	Yes	\$42.81	(\$6.56)
253	23-Jan-13	19	5	\$49.73	Yes	\$42.81	(\$6.92)
254	23-Jan-13	19	6	\$52.48	Yes	\$42.81	(\$9.67)
255	23-Jan-13	19	7	\$52.58	Yes	\$42.81	(\$9.77)
256	23-Jan-13	19	8	\$54.07	Yes	\$42.81	(\$11.26)
257	23-Jan-13	19	9	\$52.58	Yes	\$42.81	(\$9.77)
258	23-Jan-13	19	10	\$52.59	Yes	\$42.81	(\$9.78)
259	23-Jan-13	19	11	\$46.92	Yes	\$42.81	(\$4.11)
260	23-Jan-13	19	12	\$41.40	Yes	\$42.81	\$1.41
261	23-Jan-13	20	1	\$48.41	Yes	\$42.81	(\$5.60)
262	23-Jan-13	20	2	\$42.37	Yes	\$42.81	\$0.44
263	23-Jan-13	20	3	\$42.37	Yes	\$42.81	\$0.44
264	23-Jan-13	20	4	\$42.33	Yes	\$42.81	\$0.48
265	23-Jan-13	20	5	\$43.57	Yes	\$42.81	(\$0.76)
266	23-Jan-13	20	6	\$60.03	Yes	\$42.81	(\$17.22)
267	23-Jan-13	20	7	\$48.90	Yes	\$42.81	(\$6.09)

Department of Market Quality and Renewable Integration – California ISO

Number	Trade Date	Trade Hour	Interval	Market LMP	Eligible Flag	Calculated LMP	Change in LMP
268	23-Jan-13	20	8	\$43.44	Yes	\$42.81	(\$0.63)
269	23-Jan-13	20	9	\$54.22	Yes	\$42.81	(\$11.41)
270	23-Jan-13	20	10	\$42.26	Yes	\$42.81	\$0.55
271	23-Jan-13	20	11	\$39.09	Yes	\$42.81	\$3.72
272	23-Jan-13	20	12	\$35.29	Yes	\$42.81	\$7.52

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	7-Jan-13	8	1	\$31.15	Yes	\$47.40	\$16.25
2	7-Jan-13	8	2	\$31.06	Yes	\$47.40	\$16.34
3	7-Jan-13	8	3	\$17.28	Yes	\$47.40	\$30.12
4	7-Jan-13	8	4	(\$14.21)	Yes	\$47.40	\$61.61
5	7-Jan-13	8	5	\$24.66	Yes	\$47.40	\$22.74
6	7-Jan-13	8	6	\$19.43	Yes	\$47.40	\$27.97
7	7-Jan-13	8	7	\$40.63	Yes	\$47.40	\$6.77
8	7-Jan-13	8	8	\$31.16	Yes	\$47.40	\$16.24
9	7-Jan-13	8	9	\$31.17	Yes	\$47.40	\$16.23
10	7-Jan-13	8	10	\$33.86	Yes	\$47.40	\$13.54
11	7-Jan-13	8	11	\$31.19	Yes	\$47.40	\$16.21
12	7-Jan-13	8	12	\$24.77	Yes	\$47.40	\$22.63
13	7-Jan-13	9	1	\$29.91	Yes	\$47.40	\$17.49
14	7-Jan-13	9	2	\$17.27	Yes	\$47.40	\$30.13
15	7-Jan-13	9	3	\$17.27	Yes	\$47.40	\$30.13
16	7-Jan-13	9	4	\$17.32	Yes	\$47.40	\$30.08
17	7-Jan-13	9	5	\$18.23	Yes	\$47.40	\$29.17
18	7-Jan-13	9	6	\$29.93	Yes	\$47.40	\$17.47
19	7-Jan-13	9	7	\$33.33	Yes	\$47.40	\$14.07
20	7-Jan-13	9	8	\$31.05	Yes	\$47.40	\$16.35
21	7-Jan-13	9	9	\$31.05	Yes	\$47.40	\$16.35
22	7-Jan-13	9	10	\$31.08	Yes	\$47.40	\$16.32
23	7-Jan-13	9	11	\$30.99	Yes	\$47.40	\$16.41
24	7-Jan-13	9	12	\$31.08	Yes	\$47.40	\$16.32
25	7-Jan-13	10	1	\$31.09	Yes	\$47.40	\$16.31
26	7-Jan-13	10	2	\$31.09	Yes	\$47.40	\$16.31
27	7-Jan-13	10	3	\$31.09	Yes	\$47.40	\$16.31
28	7-Jan-13	10	4	\$34.82	Yes	\$47.40	\$12.58
29	7-Jan-13	10	5	\$34.82	Yes	\$47.40	\$12.58
30	7-Jan-13	10	6	\$34.82	Yes	\$47.40	\$12.58
31	7-Jan-13	10	7	\$35.84	Yes	\$47.40	\$11.56
32	7-Jan-13	10	8	\$34.90	Yes	\$47.40	\$12.50
33	7-Jan-13	10	9	\$34.90	Yes	\$47.40	\$12.50
34	7-Jan-13	10	10	\$39.22	Yes	\$47.40	\$8.18
35	7-Jan-13	10	11	\$39.22	Yes	\$47.40	\$8.18
36	7-Jan-13	10	12	\$40.06	Yes	\$47.40	\$7.34
37	7-Jan-13	11	1	\$45.01	Yes	\$47.40	\$2.39
38	7-Jan-13	11	2	\$43.79	Yes	\$47.40	\$3.61
39	7-Jan-13	11	3	\$43.79	Yes	\$47.40	\$3.61
40	7-Jan-13	11	4	\$39.62	Yes	\$47.40	\$7.78
41	7-Jan-13	11	5	\$38.99	Yes	\$47.40	\$8.41

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Number	Trade Date	Trade Hour	Interval	Market LMP	Eligible Flag	Calculated LMP	Change in LMP
42	7-Jan-13	11	6	\$39.62	Yes	\$47.40	\$7.78
43	7-Jan-13	11	7	\$41.17	Yes	\$47.40	\$6.23
44	7-Jan-13	11	8	\$41.17	Yes	\$47.40	\$6.23
45	7-Jan-13	11	9	\$39.27	Yes	\$47.40	\$8.13
46	7-Jan-13	11	10	\$38.68	Yes	\$47.40	\$8.72
47	7-Jan-13	11	11	\$38.68	Yes	\$47.40	\$8.72
48	7-Jan-13	11	12	\$38.68	Yes	\$47.40	\$8.72
49	7-Jan-13	12	1	\$33.61	Yes	\$47.40	\$13.79
50	7-Jan-13	12	2	\$41.33	Yes	\$47.40	\$6.07
51	7-Jan-13	12	3	\$42.63	Yes	\$47.40	\$4.77
52	7-Jan-13	12	4	\$33.34	Yes	\$47.40	\$14.06
53	7-Jan-13	12	5	\$40.97	Yes	\$47.40	\$6.43
54	7-Jan-13	12	6	\$40.97	Yes	\$47.40	\$6.43
55	7-Jan-13	12	7	\$40.33	Yes	\$47.40	\$7.07
56	7-Jan-13	12	8	\$33.22	Yes	\$47.40	\$14.18
57	7-Jan-13	12	9	\$37.67	Yes	\$47.40	\$9.73
58	7-Jan-13	12	10	\$29.74	Yes	\$47.40	\$17.66
59	7-Jan-13	12	11	\$33.21	Yes	\$47.40	\$14.19
60	7-Jan-13	12	12	\$36.00	Yes	\$47.40	\$11.40
61	7-Jan-13	13	1	\$39.94	Yes	\$47.40	\$7.46
62	7-Jan-13	13	2	\$39.91	Yes	\$47.40	\$7.49
63	7-Jan-13	13	3	\$39.94	Yes	\$47.40	\$7.46
64	7-Jan-13	13	4	\$40.27	Yes	\$47.40	\$7.13
65	7-Jan-13	13	5	\$40.27	Yes	\$47.40	\$7.13
66	7-Jan-13	13	6	\$40.27	Yes	\$47.40	\$7.13
67	7-Jan-13	13	7	\$39.60	Yes	\$47.40	\$7.80
68	7-Jan-13	13	8	\$40.16	Yes	\$47.40	\$7.24
69	7-Jan-13	13	9	\$40.16	Yes	\$47.40	\$7.24
70	7-Jan-13	13	10	\$40.17	Yes	\$47.40	\$7.23
71	7-Jan-13	13	11	\$40.13	Yes	\$47.40	\$7.27
72	7-Jan-13	13	12	\$38.19	Yes	\$47.40	\$9.21
73	7-Jan-13	14	1	\$39.29	Yes	\$47.40	\$8.11
74	7-Jan-13	14	2	\$37.84	Yes	\$47.40	\$9.56
75	7-Jan-13	14	3	\$37.53	Yes	\$47.40	\$9.87
76	7-Jan-13	14	4	\$37.42	Yes	\$47.40	\$9.98
77	7-Jan-13	14	5	\$37.42	Yes	\$47.40	\$9.98
78	7-Jan-13	14	6	\$37.24	Yes	\$47.40	\$10.16
79	7-Jan-13	14	7	\$37.55	Yes	\$47.40	\$9.85
80	7-Jan-13	14	8	\$37.45	Yes	\$47.40	\$9.95
81	7-Jan-13	14	9	\$37.02	Yes	\$47.40	\$10.38
82	7-Jan-13	14	10	\$35.76	Yes	\$47.40	\$11.64
83	7-Jan-13	14	11	\$34.18	Yes	\$47.40	\$13.22
84	7-Jan-13	14	12	\$35.76	Yes	\$47.40	\$11.64
85	7-Jan-13	15	1	\$34.53	Yes	\$47.40	\$12.87
86	7-Jan-13	15	2	\$33.21	Yes	\$47.40	\$14.19

Department of Market Quality and Renewable Integration – California ISO

Number	Trade Date	Trade Hour	Interval	Market LMP	Eligible Flag	Calculated LMP	Change in LMP
87	7-Jan-13	15	3	\$33.03	Yes	\$47.40	\$14.37
88	7-Jan-13	15	4	\$33.01	Yes	\$47.40	\$14.39
89	7-Jan-13	15	5	\$33.01	Yes	\$47.40	\$14.39
90	7-Jan-13	15	6	\$33.00	Yes	\$47.73	\$14.73
91	7-Jan-13	15	7	\$31.90	Yes	\$47.73	\$15.83
92	7-Jan-13	15	8	\$31.80	Yes	\$47.73	\$15.93
93	7-Jan-13	15	9	\$31.20	Yes	\$47.73	\$16.53
94	7-Jan-13	15	10	\$31.19	Yes	\$47.73	\$16.54
95	7-Jan-13	15	11	\$31.19	Yes	\$47.73	\$16.54
96	7-Jan-13	15	12	\$31.19	Yes	\$47.73	\$16.54
97	7-Jan-13	16	1	\$31.14	Yes	\$47.73	\$16.59
98	7-Jan-13	16	2	\$31.14	Yes	\$47.73	\$16.59
99	7-Jan-13	16	3	\$31.14	Yes	\$47.73	\$16.59
100	7-Jan-13	16	4	\$31.17	Yes	\$47.73	\$16.56
101	7-Jan-13	16	5	\$31.17	Yes	\$47.73	\$16.56
102	7-Jan-13	16	6	\$29.62	Yes	\$47.73	\$18.11
103	7-Jan-13	16	7	\$31.20	Yes	\$47.73	\$16.53
104	7-Jan-13	16	8	\$31.21	Yes	\$47.73	\$16.52
105	7-Jan-13	16	9	\$29.61	Yes	\$47.73	\$18.12
106	7-Jan-13	16	10	\$29.59	Yes	\$47.73	\$18.14
107	7-Jan-13	16	11	\$31.21	Yes	\$47.73	\$16.52
108	7-Jan-13	16	12	\$31.21	Yes	\$47.73	\$16.52
109	7-Jan-13	17	1	\$31.00	Yes	\$47.73	\$16.73
110	7-Jan-13	17	2	\$31.00	Yes	\$47.73	\$16.73
111	7-Jan-13	17	3	\$31.09	Yes	\$47.73	\$16.64
112	7-Jan-13	17	4	\$30.95	Yes	\$47.73	\$16.78
113	7-Jan-13	17	5	\$31.04	Yes	\$47.73	\$16.69
114	7-Jan-13	17	6	\$33.39	Yes	\$47.73	\$14.34
115	7-Jan-13	17	7	\$31.87	Yes	\$47.73	\$15.86
116	7-Jan-13	17	8	\$44.07	Yes	\$47.73	\$3.66
117	7-Jan-13	17	9	\$83.89	Yes	\$47.73	(\$36.16)
118	7-Jan-13	17	10	\$44.99	Yes	\$47.73	\$2.74
119	7-Jan-13	17	11	\$48.15	Yes	\$47.73	(\$0.42)
120	7-Jan-13	17	12	\$53.22	Yes	\$47.73	(\$5.49)
121	7-Jan-13	18	1	\$28.71	Yes	\$47.73	\$19.02
122	7-Jan-13	18	2	\$27.31	Yes	\$47.73	\$20.42
123	7-Jan-13	18	3	\$28.71	Yes	\$47.73	\$19.02
124	7-Jan-13	18	4	\$35.00	Yes	\$47.73	\$12.73
125	7-Jan-13	18	5	\$72.80	Yes	\$47.73	(\$25.07)
126	7-Jan-13	18	6	\$75.91	Yes	\$47.73	(\$28.18)
127	7-Jan-13	18	7	\$89.87	Yes	\$47.73	(\$42.14)
128	7-Jan-13	18	8	\$145.22	Yes	\$47.73	(\$97.49)
129	7-Jan-13	18	9	\$145.22	Yes	\$47.73	(\$97.49)
130	7-Jan-13	18	10	\$145.16	Yes	\$47.73	(\$97.43)
131	7-Jan-13	18	11	\$210.10	Yes	\$47.73	(\$162.37)

Department of Market Quality and Renewable Integration – California ISO

Number	Trade Date	Trade Hour	Interval	Market LMP	Eligible Flag	Calculated LMP	Change in LMP
132	7-Jan-13	18	12	\$106.81	Yes	\$47.73	(\$59.08)
133	7-Jan-13	19	1	\$105.31	Yes	\$47.73	(\$57.58)
134	7-Jan-13	19	2	\$79.91	Yes	\$47.73	(\$32.18)
135	7-Jan-13	19	3	\$74.57	Yes	\$47.73	(\$26.84)
136	7-Jan-13	19	4	\$91.48	Yes	\$47.73	(\$43.75)
137	7-Jan-13	19	5	\$43.17	Yes	\$47.73	\$4.56
138	7-Jan-13	19	6	\$39.83	Yes	\$47.73	\$7.90
139	7-Jan-13	19	7	\$37.34	Yes	\$47.73	\$10.39
140	7-Jan-13	19	8	\$38.29	Yes	\$47.73	\$9.44
141	7-Jan-13	19	9	\$45.01	Yes	\$47.73	\$2.72
142	7-Jan-13	19	10	\$47.41	Yes	\$47.73	\$0.32
143	7-Jan-13	19	11	\$46.07	Yes	\$47.73	\$1.66
144	7-Jan-13	19	12	\$44.95	Yes	\$47.73	\$2.78
145	7-Jan-13	20	1	\$45.05	Yes	\$47.73	\$2.68
146	7-Jan-13	20	2	\$38.25	Yes	\$47.73	\$9.48
147	7-Jan-13	20	3	\$38.25	Yes	\$47.73	\$9.48
148	7-Jan-13	20	4	\$38.48	Yes	\$47.73	\$9.25
149	7-Jan-13	20	5	\$38.48	Yes	\$47.73	\$9.25
150	7-Jan-13	20	6	\$38.84	Yes	\$47.73	\$8.89
151	7-Jan-13	20	7	\$36.16	Yes	\$47.73	\$11.57
152	7-Jan-13	20	8	\$37.39	Yes	\$47.73	\$10.34
153	7-Jan-13	20	9	\$38.14	Yes	\$47.73	\$9.59
154	7-Jan-13	20	10	\$37.39	Yes	\$47.73	\$10.34
155	7-Jan-13	20	11	\$36.35	Yes	\$47.73	\$11.38
156	7-Jan-13	20	12	\$35.00	Yes	\$47.73	\$12.73
157	7-Jan-13	21	1	\$44.71	Yes	\$47.40	\$2.69
158	7-Jan-13	21	2	\$41.58	Yes	\$47.40	\$5.82
159	7-Jan-13	21	3	\$41.24	Yes	\$47.40	\$6.16
160	7-Jan-13	21	4	\$39.45	Yes	\$47.40	\$7.95
161	7-Jan-13	21	5	\$38.14	Yes	\$47.40	\$9.26
162	7-Jan-13	21	6	\$38.14	Yes	\$47.40	\$9.26
163	7-Jan-13	21	7	\$29.77	Yes	\$47.40	\$17.63
164	7-Jan-13	21	8	\$31.17	Yes	\$47.40	\$16.23
165	7-Jan-13	21	9	\$31.17	Yes	\$47.40	\$16.23
166	7-Jan-13	21	10	\$31.17	Yes	\$47.40	\$16.23
167	7-Jan-13	21	11	\$31.17	Yes	\$47.40	\$16.23
168	7-Jan-13	21	12	\$29.47	Yes	\$47.40	\$17.93
169	7-Jan-13	22	1	\$34.97	Yes	\$56.40	\$21.43
170	7-Jan-13	22	2	\$37.74	Yes	\$56.40	\$18.66
171	7-Jan-13	22	3	\$40.00	Yes	\$56.40	\$16.40
172	7-Jan-13	22	4	\$37.41	Yes	\$56.40	\$18.99
173	7-Jan-13	22	5	\$34.07	Yes	\$56.40	\$22.33
174	7-Jan-13	22	6	\$29.78	Yes	\$56.40	\$26.62
175	7-Jan-13	22	7	\$31.09	Yes	\$56.40	\$25.31
176	7-Jan-13	22	8	\$31.09	Yes	\$56.40	\$25.31

Department of Market Quality and Renewable Integration – California ISO

Number	Trade Date	Trade Hour	Interval	Market LMP	Eligible Flag	Calculated LMP	Change in LMP
177	7-Jan-13	22	9	\$29.66	Yes	\$56.40	\$26.74
178	7-Jan-13	22	10	\$28.12	Yes	\$56.40	\$28.28
179	7-Jan-13	22	11	\$28.71	Yes	\$56.40	\$27.69
180	7-Jan-13	22	12	\$27.56	Yes	\$56.40	\$28.84
181	7-Jan-13	23	1	\$32.78	Yes	\$56.40	\$23.62
182	7-Jan-13	23	2	\$31.04	Yes	\$56.40	\$25.36
183	7-Jan-13	23	3	\$31.04	Yes	\$56.40	\$25.36
184	7-Jan-13	23	4	\$29.04	Yes	\$56.40	\$27.36
185	7-Jan-13	23	5	\$28.83	Yes	\$56.40	\$27.57
186	7-Jan-13	23	6	\$28.83	Yes	\$56.40	\$27.57
187	7-Jan-13	23	7	\$28.14	Yes	\$56.40	\$28.26
188	7-Jan-13	23	8	\$25.53	Yes	\$56.40	\$30.87
189	7-Jan-13	23	9	\$24.23	Yes	\$56.40	\$32.17
190	7-Jan-13	23	10	\$24.14	Yes	\$56.40	\$32.26
191	7-Jan-13	23	11	\$17.33	Yes	\$56.40	\$39.07
192	7-Jan-13	23	12	\$21.00	Yes	\$56.40	\$35.40
193	7-Jan-13	24	1	\$28.54	Yes	\$56.40	\$27.86
194	7-Jan-13	24	2	\$28.54	Yes	\$56.40	\$27.86
195	7-Jan-13	24	3	\$28.54	Yes	\$56.40	\$27.86
196	7-Jan-13	24	4	\$28.58	Yes	\$56.40	\$27.82
197	7-Jan-13	24	5	\$17.17	Yes	\$56.40	\$39.23
198	7-Jan-13	24	6	\$17.17	Yes	\$56.40	\$39.23
199	7-Jan-13	24	7	\$24.34	Yes	\$56.40	\$32.06
200	7-Jan-13	24	8	\$22.83	Yes	\$56.40	\$33.57
201	7-Jan-13	24	9	\$22.83	Yes	\$56.40	\$33.57
202	7-Jan-13	24	10	\$10.66	Yes	\$56.40	\$45.74
203	7-Jan-13	24	11	\$24.47	Yes	\$56.40	\$31.93
204	7-Jan-13	24	12	\$17.60	Yes	\$56.40	\$38.80
205	8-Jan-13	15	5	\$30.20	Yes	\$52.98	\$22.78
206	8-Jan-13	15	6	\$30.20	Yes	\$52.98	\$22.78
207	8-Jan-13	15	7	\$30.18	Yes	\$52.98	\$22.80
208	8-Jan-13	15	8	\$29.85	Yes	\$52.98	\$23.13
209	8-Jan-13	15	9	\$29.16	Yes	\$52.98	\$23.82
210	8-Jan-13	15	10	\$29.89	Yes	\$52.98	\$23.09
211	8-Jan-13	15	11	\$30.22	Yes	\$52.98	\$22.76
212	8-Jan-13	15	12	\$28.88	Yes	\$52.98	\$24.10
213	8-Jan-13	16	1	\$30.21	Yes	\$52.98	\$22.77
214	8-Jan-13	16	2	\$29.89	Yes	\$52.98	\$23.09
215	8-Jan-13	16	3	\$34.14	Yes	\$52.98	\$18.84
216	8-Jan-13	16	4	\$35.44	Yes	\$52.98	\$17.54
217	8-Jan-13	16	5	\$39.89	Yes	\$52.98	\$13.09
218	8-Jan-13	16	6	\$39.89	Yes	\$52.98	\$13.09
219	8-Jan-13	16	7	\$39.87	Yes	\$52.98	\$13.11
220	8-Jan-13	16	8	\$39.87	Yes	\$52.98	\$13.11
221	8-Jan-13	16	9	\$39.87	Yes	\$52.98	\$13.11

Department of Market Quality and Renewable Integration – California ISO

Number	Trade Date	Trade Hour	Interval	Market LMP	Eligible Flag	Calculated LMP	Change in LMP
222	8-Jan-13	16	10	\$39.72	Yes	\$52.98	\$13.26
223	8-Jan-13	16	11	\$45.69	Yes	\$52.98	\$7.29
224	8-Jan-13	16	12	\$39.72	Yes	\$52.98	\$13.26
225	8-Jan-13	17	1	\$40.58	Yes	\$52.98	\$12.40
226	8-Jan-13	17	2	\$39.59	Yes	\$52.98	\$13.39
227	8-Jan-13	17	3	\$35.90	Yes	\$52.98	\$17.08
228	8-Jan-13	17	4	\$40.48	Yes	\$52.98	\$12.50
229	8-Jan-13	17	5	\$41.67	Yes	\$52.98	\$11.31
230	8-Jan-13	17	6	\$41.67	Yes	\$52.98	\$11.31
231	8-Jan-13	17	7	\$40.54	Yes	\$52.98	\$12.44
232	8-Jan-13	17	8	\$40.54	Yes	\$52.98	\$12.44
233	8-Jan-13	17	9	\$40.54	Yes	\$52.98	\$12.44
234	8-Jan-13	17	10	\$40.43	Yes	\$52.98	\$12.55
235	8-Jan-13	17	11	\$39.48	Yes	\$52.98	\$13.50
236	8-Jan-13	17	12	\$40.43	Yes	\$52.98	\$12.55
237	8-Jan-13	18	1	\$24.24	No	\$43.82	\$19.58
238	8-Jan-13	18	2	\$30.10	No	\$43.82	\$13.72
239	8-Jan-13	18	3	\$29.12	No	\$43.82	\$14.70
240	8-Jan-13	18	4	\$31.52	No	\$43.82	\$12.30
241	8-Jan-13	18	5	\$39.29	No	\$43.82	\$4.53
242	8-Jan-13	18	6	\$85.07	No	\$43.82	(\$41.25)
243	8-Jan-13	18	7	\$87.29	No	\$43.82	(\$43.47)
244	8-Jan-13	18	8	\$121.84	No	\$43.82	(\$78.02)
245	8-Jan-13	18	9	\$115.08	No	\$43.82	(\$71.26)
246	8-Jan-13	18	10	\$85.87	No	\$43.82	(\$42.05)
247	8-Jan-13	18	11	\$85.87	No	\$43.82	(\$42.05)
248	8-Jan-13	18	12	\$85.87	No	\$43.82	(\$42.05)
249	8-Jan-13	19	1	\$79.23	No	\$44.16	(\$35.07)
250	8-Jan-13	19	2	\$76.51	No	\$44.16	(\$32.35)
251	8-Jan-13	19	3	\$91.50	No	\$44.16	(\$47.34)
252	8-Jan-13	19	4	\$73.94	No	\$44.16	(\$29.78)
253	8-Jan-13	19	5	\$80.80	No	\$44.16	(\$36.64)
254	8-Jan-13	19	6	\$95.89	No	\$44.16	(\$51.73)
255	8-Jan-13	19	7	\$97.67	No	\$44.16	(\$53.51)
256	8-Jan-13	19	8	\$95.88	No	\$44.16	(\$51.72)
257	8-Jan-13	19	9	\$85.90	No	\$44.16	(\$41.74)
258	8-Jan-13	19	10	\$82.97	No	\$44.16	(\$38.81)
259	8-Jan-13	19	11	\$75.81	No	\$44.16	(\$31.65)
260	8-Jan-13	19	12	\$103.46	No	\$44.16	(\$59.30)
261	8-Jan-13	20	1	\$45.69	No	\$43.82	(\$1.87)
262	8-Jan-13	20	2	\$45.69	No	\$43.82	(\$1.87)
263	8-Jan-13	20	3	\$48.61	No	\$43.82	(\$4.79)
264	8-Jan-13	20	4	\$48.64	No	\$43.82	(\$4.82)
265	8-Jan-13	20	5	\$48.63	No	\$43.82	(\$4.81)
266	8-Jan-13	20	6	\$48.09	No	\$43.82	(\$4.27)

Department of Market Quality and Renewable Integration – California ISO

Number	Trade Date	Trade Hour	Interval	Market LMP	Eligible Flag	Calculated LMP	Change in LMP
267	8-Jan-13	20	7	\$48.61	No	\$43.82	(\$4.79)
268	8-Jan-13	20	8	\$46.00	No	\$43.82	(\$2.18)
269	8-Jan-13	20	9	\$45.17	No	\$43.82	(\$1.35)
270	8-Jan-13	20	10	\$43.60	No	\$43.82	\$0.22
271	8-Jan-13	20	11	\$39.80	No	\$43.82	\$4.02
272	8-Jan-13	20	12	\$38.39	No	\$43.82	\$5.43
273	9-Jan-13	11	2	\$30.71	Yes	\$57.12	\$26.41
274	9-Jan-13	11	3	\$30.69	Yes	\$57.12	\$26.43
275	9-Jan-13	11	4	\$30.55	Yes	\$57.12	\$26.57
276	9-Jan-13	11	5	\$30.51	Yes	\$57.12	\$26.61
277	9-Jan-13	11	6	\$30.48	Yes	\$57.12	\$26.64
278	9-Jan-13	11	7	\$29.46	Yes	\$57.12	\$27.66
279	9-Jan-13	11	8	\$29.02	Yes	\$57.12	\$28.10
280	9-Jan-13	11	9	\$29.13	Yes	\$57.12	\$27.99
281	9-Jan-13	11	10	\$29.53	Yes	\$57.12	\$27.59
282	9-Jan-13	11	11	\$29.99	Yes	\$57.12	\$27.13
283	9-Jan-13	11	12	\$29.99	Yes	\$57.12	\$27.13
284	9-Jan-13	12	1	\$30.28	Yes	\$57.12	\$26.84
285	9-Jan-13	12	2	\$30.39	Yes	\$57.12	\$26.73
286	9-Jan-13	12	3	\$30.28	Yes	\$57.12	\$26.84
287	9-Jan-13	12	4	\$30.41	Yes	\$57.12	\$26.71
288	9-Jan-13	12	5	\$30.41	Yes	\$57.12	\$26.71
289	9-Jan-13	12	6	\$29.98	Yes	\$57.12	\$27.14
290	9-Jan-13	12	7	\$29.96	Yes	\$57.12	\$27.16
291	9-Jan-13	12	8	\$29.96	Yes	\$57.12	\$27.16
292	9-Jan-13	12	9	\$29.68	Yes	\$57.12	\$27.44
293	9-Jan-13	12	10	\$29.98	Yes	\$57.12	\$27.14
294	9-Jan-13	12	11	\$29.98	Yes	\$57.12	\$27.14
295	9-Jan-13	12	12	\$29.98	Yes	\$57.12	\$27.14
296	9-Jan-13	13	1	\$30.32	Yes	\$57.12	\$26.80
297	9-Jan-13	13	2	\$30.61	Yes	\$57.12	\$26.51
298	9-Jan-13	13	3	\$32.15	Yes	\$57.12	\$24.97
299	9-Jan-13	13	4	\$31.41	Yes	\$57.12	\$25.71
300	9-Jan-13	13	5	\$31.41	Yes	\$57.12	\$25.71
301	9-Jan-13	13	6	\$31.41	Yes	\$57.12	\$25.71
302	9-Jan-13	13	7	\$31.44	Yes	\$57.12	\$25.68
303	9-Jan-13	13	8	\$31.44	Yes	\$57.12	\$25.68
304	9-Jan-13	13	9	\$31.44	Yes	\$57.12	\$25.68
305	9-Jan-13	13	10	\$31.46	Yes	\$57.12	\$25.66
306	9-Jan-13	13	11	\$31.37	Yes	\$57.12	\$25.75
307	9-Jan-13	13	12	\$31.46	Yes	\$57.12	\$25.66
308	9-Jan-13	14	1	\$31.45	Yes	\$57.12	\$25.67
309	9-Jan-13	14	2	\$33.25	Yes	\$57.12	\$23.87
310	9-Jan-13	14	3	\$32.42	Yes	\$57.12	\$24.70
311	9-Jan-13	14	4	\$33.25	Yes	\$57.12	\$23.87

Department of Market Quality and Renewable Integration – California ISO

Number	Trade Date	Trade Hour	Interval	Market LMP	Eligible Flag	Calculated LMP	Change in LMP
312	9-Jan-13	14	5	\$34.46	Yes	\$57.12	\$22.66
313	9-Jan-13	14	6	\$33.25	Yes	\$57.12	\$23.87
314	9-Jan-13	14	7	\$30.91	Yes	\$57.12	\$26.21
315	9-Jan-13	14	8	\$31.49	Yes	\$57.12	\$25.63
316	9-Jan-13	14	9	\$31.55	Yes	\$57.12	\$25.57
317	9-Jan-13	14	10	\$31.16	Yes	\$57.12	\$25.96
318	9-Jan-13	14	11	\$31.16	Yes	\$57.12	\$25.96
319	9-Jan-13	14	12	\$30.76	Yes	\$57.12	\$26.36
320	9-Jan-13	15	1	\$31.17	Yes	\$57.12	\$25.95
321	9-Jan-13	15	2	\$31.17	Yes	\$57.12	\$25.95
322	9-Jan-13	15	3	\$31.41	Yes	\$57.12	\$25.71
323	9-Jan-13	15	4	\$31.40	Yes	\$57.12	\$25.72
324	9-Jan-13	15	5	\$31.40	Yes	\$57.12	\$25.72
325	9-Jan-13	15	6	\$31.40	Yes	\$57.12	\$25.72
326	9-Jan-13	15	7	\$31.37	Yes	\$57.12	\$25.75
327	9-Jan-13	15	8	\$31.37	Yes	\$57.12	\$25.75
328	9-Jan-13	15	9	\$31.37	Yes	\$57.12	\$25.75
329	9-Jan-13	15	10	\$31.34	Yes	\$57.12	\$25.78
330	9-Jan-13	15	11	\$31.34	Yes	\$57.12	\$25.78
331	9-Jan-13	15	12	\$31.34	Yes	\$57.12	\$25.78
332	9-Jan-13	16	1	\$31.76	Yes	\$57.12	\$25.36
333	9-Jan-13	16	2	\$32.59	Yes	\$57.12	\$24.53
334	9-Jan-13	16	3	\$35.62	Yes	\$57.12	\$21.50
335	9-Jan-13	16	4	\$32.88	Yes	\$57.12	\$24.24
336	9-Jan-13	16	5	\$31.10	Yes	\$57.12	\$26.02
337	9-Jan-13	16	6	\$31.84	Yes	\$57.12	\$25.28
338	9-Jan-13	16	7	\$30.94	Yes	\$57.12	\$26.18
339	9-Jan-13	16	8	\$29.94	Yes	\$57.12	\$27.18
340	9-Jan-13	16	9	\$29.94	Yes	\$57.12	\$27.18
341	9-Jan-13	16	10	\$13.73	Yes	\$57.12	\$43.39
342	9-Jan-13	16	11	\$5.05	Yes	\$57.12	\$52.07
343	9-Jan-13	16	12	\$5.05	Yes	\$57.12	\$52.07
344	9-Jan-13	17	1	\$5.05	Yes	\$57.12	\$52.07
345	9-Jan-13	17	2	\$5.05	Yes	\$57.12	\$52.07
346	9-Jan-13	17	3	\$5.05	Yes	\$57.12	\$52.07
347	9-Jan-13	17	4	\$5.05	Yes	\$57.12	\$52.07
348	9-Jan-13	17	5	\$5.05	Yes	\$57.12	\$52.07
349	9-Jan-13	17	6	\$5.05	Yes	\$57.12	\$52.07
350	9-Jan-13	17	7	\$5.00	Yes	\$57.12	\$52.12
351	9-Jan-13	17	8	\$22.50	Yes	\$57.12	\$34.62
352	9-Jan-13	17	9	\$27.32	Yes	\$57.12	\$29.80
353	9-Jan-13	17	10	\$30.55	Yes	\$57.12	\$26.57
354	9-Jan-13	17	11	\$35.79	Yes	\$57.12	\$21.33
355	9-Jan-13	17	12	\$40.48	Yes	\$57.12	\$16.64
356	9-Jan-13	18	1	\$24.94	Yes	\$57.12	\$32.18

Department of Market Quality and Renewable Integration – California ISO

Number	Trade Date	Trade Hour	Interval	Market LMP	Eligible Flag	Calculated LMP	Change in LMP
357	9-Jan-13	18	2	\$25.97	Yes	\$57.12	\$31.15
358	9-Jan-13	18	3	\$28.16	Yes	\$57.12	\$28.96
359	9-Jan-13	18	4	\$31.43	Yes	\$57.12	\$25.69
360	9-Jan-13	18	5	\$31.86	Yes	\$57.12	\$25.26
361	9-Jan-13	18	6	\$33.07	Yes	\$57.12	\$24.05
362	9-Jan-13	18	7	\$32.48	Yes	\$57.12	\$24.64
363	9-Jan-13	18	8	\$31.46	Yes	\$57.12	\$25.66
364	9-Jan-13	18	9	\$31.31	Yes	\$57.12	\$25.81
365	9-Jan-13	18	10	\$31.46	Yes	\$57.12	\$25.66
366	9-Jan-13	18	11	\$31.50	Yes	\$57.12	\$25.62
367	9-Jan-13	18	12	\$31.46	Yes	\$57.12	\$25.66
368	9-Jan-13	19	1	\$31.44	Yes	\$57.12	\$25.68
369	9-Jan-13	19	2	\$31.44	Yes	\$57.12	\$25.68
370	9-Jan-13	19	3	\$31.44	Yes	\$57.12	\$25.68
371	9-Jan-13	19	4	\$31.49	Yes	\$57.12	\$25.63
372	9-Jan-13	19	5	\$31.49	Yes	\$57.12	\$25.63
373	9-Jan-13	19	6	\$32.09	Yes	\$57.12	\$25.03
374	9-Jan-13	19	7	\$32.22	Yes	\$57.12	\$24.90
375	9-Jan-13	19	8	\$31.69	Yes	\$57.12	\$25.43
376	9-Jan-13	19	9	\$30.59	Yes	\$57.12	\$26.53
377	9-Jan-13	19	10	\$31.42	Yes	\$57.12	\$25.70
378	9-Jan-13	19	11	\$30.62	Yes	\$57.12	\$26.50
379	9-Jan-13	19	12	\$30.62	Yes	\$57.12	\$26.50
380	9-Jan-13	20	1	\$31.38	Yes	\$57.12	\$25.74
381	9-Jan-13	20	2	\$31.19	Yes	\$57.12	\$25.93
382	9-Jan-13	20	3	\$31.19	Yes	\$57.12	\$25.93
383	9-Jan-13	20	4	\$30.40	Yes	\$57.12	\$26.72
384	9-Jan-13	20	5	\$30.71	Yes	\$57.12	\$26.41
385	9-Jan-13	20	6	\$30.16	Yes	\$57.12	\$26.96
386	9-Jan-13	20	7	\$29.18	Yes	\$57.12	\$27.94
387	9-Jan-13	20	8	\$29.79	Yes	\$57.12	\$27.33
388	9-Jan-13	20	9	\$29.46	Yes	\$57.12	\$27.66
389	9-Jan-13	20	10	\$28.93	Yes	\$57.12	\$28.19
390	9-Jan-13	20	11	\$29.80	Yes	\$57.12	\$27.32
391	9-Jan-13	20	12	\$30.50	Yes	\$57.12	\$26.62
392	9-Jan-13	21	1	\$31.75	Yes	\$57.12	\$25.37
393	9-Jan-13	21	2	\$31.50	Yes	\$57.12	\$25.62
394	9-Jan-13	21	3	\$31.75	Yes	\$57.12	\$25.37
395	9-Jan-13	21	4	\$31.34	Yes	\$57.12	\$25.78
396	9-Jan-13	21	5	\$31.34	Yes	\$57.12	\$25.78
397	9-Jan-13	21	6	\$31.25	Yes	\$57.12	\$25.87
398	9-Jan-13	21	7	\$31.41	Yes	\$57.12	\$25.71
399	9-Jan-13	21	8	\$31.21	Yes	\$57.12	\$25.91
400	9-Jan-13	21	9	\$30.87	Yes	\$57.12	\$26.25
401	9-Jan-13	21	10	\$29.97	Yes	\$57.12	\$27.15

Department of Market Quality and Renewable Integration – California ISO

Number	Trade Date	Trade Hour	Interval	Market LMP	Eligible Flag	Calculated LMP	Change in LMP
402	9-Jan-13	21	11	\$29.29	Yes	\$57.12	\$27.83
403	9-Jan-13	21	12	\$28.44	Yes	\$57.12	\$28.68
404	10-Jan-13	15	1	\$26.74	Yes	\$55.04	\$28.30
405	10-Jan-13	15	2	\$24.99	Yes	\$55.04	\$30.05
406	10-Jan-13	15	3	\$24.99	Yes	\$55.04	\$30.05
407	10-Jan-13	15	4	\$26.04	Yes	\$55.04	\$29.00
408	10-Jan-13	15	5	\$23.89	Yes	\$55.04	\$31.15
409	10-Jan-13	15	6	\$26.04	Yes	\$55.04	\$29.00
410	10-Jan-13	15	7	\$25.94	Yes	\$55.04	\$29.10
411	10-Jan-13	15	8	\$25.94	Yes	\$55.04	\$29.10
412	10-Jan-13	15	9	\$16.69	Yes	\$55.04	\$38.35
413	10-Jan-13	15	10	\$24.07	Yes	\$55.04	\$30.97
414	10-Jan-13	15	11	\$24.07	Yes	\$55.04	\$30.97
415	10-Jan-13	15	12	\$24.85	Yes	\$55.04	\$30.19
416	10-Jan-13	16	1	\$15.39	Yes	\$55.04	\$39.65
417	10-Jan-13	16	2	\$16.66	Yes	\$55.04	\$38.38
418	10-Jan-13	16	3	\$24.08	Yes	\$55.04	\$30.96
419	10-Jan-13	16	4	\$23.75	Yes	\$55.04	\$31.29
420	10-Jan-13	16	5	\$25.74	Yes	\$55.04	\$29.30
421	10-Jan-13	16	6	\$24.09	Yes	\$55.04	\$30.95
422	10-Jan-13	16	7	\$25.98	Yes	\$55.04	\$29.06
423	10-Jan-13	16	8	\$28.07	Yes	\$55.04	\$26.97
424	10-Jan-13	16	9	\$27.38	Yes	\$55.04	\$27.66
425	10-Jan-13	16	10	\$27.89	Yes	\$55.04	\$27.15
426	10-Jan-13	16	11	\$27.17	Yes	\$55.04	\$27.87
427	10-Jan-13	16	12	\$27.89	Yes	\$55.04	\$27.15
428	10-Jan-13	17	1	\$15.09	Yes	\$55.04	\$39.95
429	10-Jan-13	17	2	\$13.74	Yes	\$55.04	\$41.30
430	10-Jan-13	17	3	\$15.09	Yes	\$55.04	\$39.95
431	10-Jan-13	17	4	\$15.11	Yes	\$55.04	\$39.93
432	10-Jan-13	17	5	\$16.62	Yes	\$55.04	\$38.42
433	10-Jan-13	17	6	\$24.01	Yes	\$55.04	\$31.03
434	10-Jan-13	17	7	\$19.47	Yes	\$55.04	\$35.57
435	10-Jan-13	17	8	\$25.61	Yes	\$55.04	\$29.43
436	10-Jan-13	17	9	\$26.49	Yes	\$55.04	\$28.55
437	10-Jan-13	17	10	\$27.92	Yes	\$55.04	\$27.12
438	10-Jan-13	17	11	\$28.84	Yes	\$55.04	\$26.20
439	10-Jan-13	17	12	\$28.92	Yes	\$55.04	\$26.12
440	10-Jan-13	18	1	\$15.40	Yes	\$55.04	\$39.64
441	10-Jan-13	18	2	\$15.40	Yes	\$55.04	\$39.64
442	10-Jan-13	18	3	\$20.77	Yes	\$55.04	\$34.27
443	10-Jan-13	18	4	\$27.19	Yes	\$55.04	\$27.85
444	10-Jan-13	18	5	\$31.20	Yes	\$55.04	\$23.84
445	10-Jan-13	18	6	\$32.32	Yes	\$55.04	\$22.72
446	10-Jan-13	18	7	\$34.94	Yes	\$55.04	\$20.10

Department of Market Quality and Renewable Integration – California ISO

Number	Trade Date	Trade Hour	Interval	Market LMP	Eligible Flag	Calculated LMP	Change in LMP
447	10-Jan-13	18	8	\$31.65	Yes	\$55.04	\$23.39
448	10-Jan-13	18	9	\$34.27	Yes	\$55.04	\$20.77
449	10-Jan-13	18	10	\$34.63	Yes	\$55.04	\$20.41
450	10-Jan-13	18	11	\$36.68	Yes	\$55.04	\$18.36
451	10-Jan-13	18	12	\$39.72	Yes	\$55.04	\$15.32
452	10-Jan-13	19	1	\$30.73	Yes	\$55.04	\$24.31
453	10-Jan-13	19	2	\$32.73	Yes	\$55.04	\$22.31
454	10-Jan-13	19	3	\$32.73	Yes	\$55.04	\$22.31
455	10-Jan-13	19	4	\$33.38	Yes	\$55.04	\$21.66
456	10-Jan-13	19	5	\$32.63	Yes	\$55.04	\$22.41
457	10-Jan-13	19	6	\$32.37	Yes	\$55.04	\$22.67
458	10-Jan-13	19	7	\$31.62	Yes	\$55.04	\$23.42
459	10-Jan-13	19	8	\$31.18	Yes	\$55.04	\$23.86
460	10-Jan-13	19	9	\$31.29	Yes	\$55.04	\$23.75
461	10-Jan-13	19	10	\$31.21	Yes	\$55.04	\$23.83
462	10-Jan-13	19	11	\$31.03	Yes	\$55.04	\$24.01
463	10-Jan-13	19	12	\$31.20	Yes	\$55.04	\$23.84
464	10-Jan-13	20	1	\$31.24	Yes	\$55.04	\$23.80
465	10-Jan-13	20	2	\$31.24	Yes	\$55.04	\$23.80
466	10-Jan-13	20	3	\$31.24	Yes	\$55.04	\$23.80
467	10-Jan-13	20	4	\$31.16	Yes	\$55.04	\$23.88
468	10-Jan-13	20	5	\$31.16	Yes	\$55.04	\$23.88
469	10-Jan-13	20	6	\$31.16	Yes	\$55.04	\$23.88
470	10-Jan-13	20	7	\$31.11	Yes	\$55.04	\$23.93
471	10-Jan-13	20	8	\$31.11	Yes	\$55.04	\$23.93
472	10-Jan-13	20	9	\$31.11	Yes	\$55.04	\$23.93
473	10-Jan-13	20	10	\$30.98	Yes	\$55.04	\$24.06
474	10-Jan-13	20	11	\$30.98	Yes	\$55.04	\$24.06
475	10-Jan-13	20	12	\$31.08	Yes	\$55.04	\$23.96
476	10-Jan-13	21	1	\$31.27	Yes	\$55.04	\$23.77
477	10-Jan-13	21	2	\$31.77	Yes	\$55.04	\$23.27
478	10-Jan-13	21	3	\$31.25	Yes	\$55.04	\$23.79
479	10-Jan-13	21	4	\$31.22	Yes	\$55.04	\$23.82
480	10-Jan-13	21	5	\$31.12	Yes	\$55.04	\$23.92
481	10-Jan-13	21	6	\$31.11	Yes	\$55.04	\$23.93
482	10-Jan-13	21	7	\$31.12	Yes	\$55.04	\$23.92
483	10-Jan-13	21	8	\$31.12	Yes	\$55.04	\$23.92
484	10-Jan-13	21	9	\$31.12	Yes	\$55.04	\$23.92
485	10-Jan-13	21	10	\$31.07	Yes	\$55.04	\$23.97
486	10-Jan-13	21	11	\$31.07	Yes	\$55.04	\$23.97
487	10-Jan-13	21	12	\$29.80	Yes	\$55.04	\$25.24
488	14-Jan-13	7	1	\$35.06	Yes	\$55.51	\$20.45
489	14-Jan-13	7	2	\$33.47	Yes	\$55.51	\$22.04
490	14-Jan-13	7	3	\$34.15	Yes	\$55.51	\$21.36
491	14-Jan-13	7	4	\$36.51	Yes	\$55.51	\$19.00

Department of Market Quality and Renewable Integration – California ISO

Number	Trade Date	Trade Hour	Interval	Market LMP	Eligible Flag	Calculated LMP	Change in LMP
492	14-Jan-13	7	5	\$40.29	Yes	\$55.51	\$15.22
493	14-Jan-13	7	6	\$41.86	Yes	\$55.51	\$13.65
494	14-Jan-13	7	7	\$42.45	Yes	\$55.51	\$13.06
495	14-Jan-13	7	8	\$45.57	Yes	\$55.61	\$10.04
496	14-Jan-13	7	9	\$49.34	Yes	\$55.61	\$6.27
497	14-Jan-13	7	10	\$47.39	Yes	\$55.61	\$8.22
498	14-Jan-13	7	11	\$48.49	Yes	\$55.61	\$7.12
499	14-Jan-13	7	12	\$50.81	Yes	\$55.61	\$4.80
500	14-Jan-13	8	1	\$43.76	Yes	\$55.61	\$11.85
501	14-Jan-13	8	2	\$43.63	Yes	\$55.61	\$11.98
502	14-Jan-13	8	3	\$42.25	Yes	\$55.61	\$13.36
503	14-Jan-13	8	4	\$44.09	Yes	\$55.61	\$11.52
504	14-Jan-13	8	5	\$47.05	Yes	\$55.61	\$8.56
505	14-Jan-13	8	6	\$47.05	Yes	\$55.61	\$8.56
506	14-Jan-13	8	7	\$46.26	Yes	\$55.61	\$9.35
507	14-Jan-13	8	8	\$47.60	Yes	\$55.61	\$8.01
508	14-Jan-13	8	9	\$47.60	Yes	\$55.61	\$8.01
509	14-Jan-13	8	10	\$47.42	Yes	\$55.61	\$8.19
510	14-Jan-13	8	11	\$46.41	Yes	\$55.61	\$9.20
511	14-Jan-13	8	12	\$46.41	Yes	\$55.61	\$9.20
512	14-Jan-13	9	1	\$41.30	Yes	\$55.61	\$14.31
513	14-Jan-13	9	2	\$40.04	Yes	\$55.61	\$15.57
514	14-Jan-13	9	3	\$38.44	Yes	\$55.61	\$17.17
515	14-Jan-13	9	4	\$38.50	Yes	\$55.61	\$17.11
516	14-Jan-13	9	5	\$38.50	Yes	\$55.61	\$17.11
517	14-Jan-13	9	6	\$37.62	Yes	\$55.61	\$17.99
518	14-Jan-13	9	7	\$37.61	Yes	\$55.61	\$18.00
519	14-Jan-13	9	8	\$37.61	Yes	\$55.61	\$18.00
520	14-Jan-13	9	9	\$38.50	Yes	\$55.61	\$17.11
521	14-Jan-13	9	10	\$38.51	Yes	\$55.61	\$17.10
522	14-Jan-13	9	11	\$38.51	Yes	\$55.61	\$17.10
523	14-Jan-13	9	12	\$40.12	Yes	\$55.61	\$15.49
524	14-Jan-13	10	1	\$37.62	Yes	\$55.61	\$17.99
525	14-Jan-13	10	2	\$33.93	Yes	\$55.61	\$21.68
526	14-Jan-13	10	3	\$32.84	Yes	\$55.61	\$22.77
527	14-Jan-13	10	4	\$33.44	Yes	\$55.61	\$22.17
528	14-Jan-13	10	5	\$33.70	Yes	\$55.61	\$21.91
529	14-Jan-13	10	6	\$32.67	Yes	\$55.61	\$22.94
530	14-Jan-13	10	7	\$33.45	Yes	\$55.61	\$22.16
531	14-Jan-13	10	8	\$33.08	Yes	\$55.61	\$22.53
532	14-Jan-13	10	9	\$34.30	Yes	\$55.61	\$21.31
533	14-Jan-13	10	10	\$32.88	Yes	\$55.61	\$22.73
534	14-Jan-13	10	11	\$32.87	Yes	\$55.61	\$22.74
535	14-Jan-13	10	12	\$33.35	Yes	\$55.61	\$22.26
536	14-Jan-13	11	1	\$34.81	Yes	\$55.61	\$20.80

Department of Market Quality and Renewable Integration – California ISO

Number	Trade Date	Trade Hour	Interval	Market LMP	Eligible Flag	Calculated LMP	Change in LMP
537	14-Jan-13	11	2	\$34.81	Yes	\$55.61	\$20.80
538	14-Jan-13	11	3	\$34.75	Yes	\$55.61	\$20.86
539	14-Jan-13	11	4	\$34.32	Yes	\$55.61	\$21.29
540	14-Jan-13	11	5	\$33.98	Yes	\$55.61	\$21.63
541	14-Jan-13	11	6	\$32.97	Yes	\$55.61	\$22.64
542	14-Jan-13	11	7	\$31.93	Yes	\$55.61	\$23.68
543	14-Jan-13	11	8	\$31.93	Yes	\$55.61	\$23.68
544	14-Jan-13	11	9	\$31.36	Yes	\$55.61	\$24.25
545	14-Jan-13	11	10	\$32.81	Yes	\$55.61	\$22.80
546	14-Jan-13	11	11	\$31.35	Yes	\$55.61	\$24.26
547	14-Jan-13	11	12	\$31.35	Yes	\$55.61	\$24.26
548	14-Jan-13	12	1	\$30.28	Yes	\$55.61	\$25.33
549	14-Jan-13	12	2	\$30.78	Yes	\$55.61	\$24.83
550	14-Jan-13	12	3	\$30.78	Yes	\$55.61	\$24.83
551	14-Jan-13	12	4	\$30.82	Yes	\$55.61	\$24.79
552	14-Jan-13	12	5	\$30.82	Yes	\$55.61	\$24.79
553	14-Jan-13	12	6	\$30.44	Yes	\$55.61	\$25.17
554	14-Jan-13	12	7	\$32.88	Yes	\$55.61	\$22.73
555	14-Jan-13	12	8	\$32.01	Yes	\$55.61	\$23.60
556	14-Jan-13	12	9	\$34.11	Yes	\$55.61	\$21.50
557	14-Jan-13	12	10	\$32.69	Yes	\$55.61	\$22.92
558	14-Jan-13	12	11	\$32.69	Yes	\$55.61	\$22.92
559	14-Jan-13	12	12	\$32.85	Yes	\$55.61	\$22.76
560	14-Jan-13	13	1	\$34.85	Yes	\$55.51	\$20.66
561	14-Jan-13	13	2	\$34.85	Yes	\$55.51	\$20.66
562	14-Jan-13	13	3	\$34.85	Yes	\$55.51	\$20.66
563	14-Jan-13	13	4	\$34.52	Yes	\$55.51	\$20.99
564	14-Jan-13	13	5	\$35.55	Yes	\$55.51	\$19.96
565	14-Jan-13	13	6	\$35.51	Yes	\$55.51	\$20.00
566	14-Jan-13	13	7	\$35.48	Yes	\$55.51	\$20.03
567	14-Jan-13	13	8	\$35.48	Yes	\$55.51	\$20.03
568	14-Jan-13	13	9	\$35.48	Yes	\$55.51	\$20.03
569	14-Jan-13	13	10	\$34.54	Yes	\$55.51	\$20.97
570	14-Jan-13	13	11	\$34.54	Yes	\$55.51	\$20.97
571	14-Jan-13	13	12	\$34.54	Yes	\$55.51	\$20.97
572	14-Jan-13	14	1	\$34.55	Yes	\$55.51	\$20.96
573	14-Jan-13	14	2	\$34.55	Yes	\$55.51	\$20.96
574	14-Jan-13	14	3	\$34.75	Yes	\$55.51	\$20.76
575	14-Jan-13	14	4	\$35.48	Yes	\$55.51	\$20.03
576	14-Jan-13	14	5	\$35.47	Yes	\$55.51	\$20.04
577	14-Jan-13	14	6	\$35.47	Yes	\$55.51	\$20.04
578	14-Jan-13	14	7	\$36.41	Yes	\$55.51	\$19.10
579	14-Jan-13	14	8	\$41.58	Yes	\$55.51	\$13.93
580	14-Jan-13	14	9	\$41.33	Yes	\$55.51	\$14.18
581	14-Jan-13	14	10	\$40.90	Yes	\$55.51	\$14.61

Department of Market Quality and Renewable Integration – California ISO

Number	Trade Date	Trade Hour	Interval	Market LMP	Eligible Flag	Calculated LMP	Change in LMP
582	14-Jan-13	14	11	\$40.19	Yes	\$55.51	\$15.32
583	14-Jan-13	14	12	\$34.54	Yes	\$55.51	\$20.97
584	14-Jan-13	15	1	\$44.64	Yes	\$55.51	\$10.87
585	14-Jan-13	15	2	\$39.40	Yes	\$55.51	\$16.11
586	14-Jan-13	15	3	\$37.82	Yes	\$55.51	\$17.69
587	14-Jan-13	15	4	\$41.49	Yes	\$55.51	\$14.02
588	14-Jan-13	15	5	\$41.47	Yes	\$55.51	\$14.04
589	14-Jan-13	15	6	\$41.47	Yes	\$55.51	\$14.04
590	14-Jan-13	15	7	\$40.44	Yes	\$55.51	\$15.07
591	14-Jan-13	15	8	\$40.45	Yes	\$55.51	\$15.06
592	14-Jan-13	15	9	\$41.32	Yes	\$55.51	\$14.19
593	14-Jan-13	15	10	\$41.44	Yes	\$55.51	\$14.07
594	14-Jan-13	15	11	\$41.51	Yes	\$55.51	\$14.00
595	14-Jan-13	15	12	\$41.51	Yes	\$55.51	\$14.00
596	14-Jan-13	16	1	\$30.84	Yes	\$55.51	\$24.67
597	14-Jan-13	16	2	\$30.84	Yes	\$55.51	\$24.67
598	14-Jan-13	16	3	\$30.84	Yes	\$55.51	\$24.67
599	14-Jan-13	16	4	\$34.56	Yes	\$55.51	\$20.95
600	14-Jan-13	16	5	\$34.64	Yes	\$55.51	\$20.87
601	14-Jan-13	16	6	\$36.05	Yes	\$55.51	\$19.46
602	14-Jan-13	16	7	\$34.72	Yes	\$55.51	\$20.79
603	14-Jan-13	16	8	\$34.72	Yes	\$55.51	\$20.79
604	14-Jan-13	16	9	\$40.63	Yes	\$55.51	\$14.88
605	14-Jan-13	16	10	\$37.65	Yes	\$55.51	\$17.86
606	14-Jan-13	16	11	\$36.39	Yes	\$55.51	\$19.12
607	14-Jan-13	16	12	\$38.30	Yes	\$55.51	\$17.21
608	14-Jan-13	17	1	\$27.53	Yes	\$55.51	\$27.98
609	14-Jan-13	17	2	\$30.61	Yes	\$55.51	\$24.90
610	14-Jan-13	17	3	\$30.61	Yes	\$55.51	\$24.90
611	14-Jan-13	17	4	\$30.59	Yes	\$55.51	\$24.92
612	14-Jan-13	17	5	\$31.28	Yes	\$55.51	\$24.23
613	14-Jan-13	17	6	\$31.37	Yes	\$55.51	\$24.14
614	14-Jan-13	17	7	\$31.37	Yes	\$55.51	\$24.14
615	14-Jan-13	17	8	\$31.37	Yes	\$55.51	\$24.14
616	14-Jan-13	17	9	\$30.99	Yes	\$55.51	\$24.52
617	14-Jan-13	17	10	\$31.39	Yes	\$55.51	\$24.12
618	14-Jan-13	17	11	\$32.56	Yes	\$55.51	\$22.95
619	14-Jan-13	17	12	\$34.75	Yes	\$55.51	\$20.76
620	14-Jan-13	18	1	\$31.09	Yes	\$55.51	\$24.42
621	14-Jan-13	18	2	\$31.36	Yes	\$55.51	\$24.15
622	14-Jan-13	18	3	\$31.36	Yes	\$55.51	\$24.15
623	14-Jan-13	18	4	\$32.10	Yes	\$55.51	\$23.41
624	14-Jan-13	18	5	\$30.46	Yes	\$55.51	\$25.05
625	14-Jan-13	18	6	\$34.21	Yes	\$55.51	\$21.30
626	14-Jan-13	18	7	\$35.80	Yes	\$55.51	\$19.71

Department of Market Quality and Renewable Integration – California ISO

Number	Trade Date	Trade Hour	Interval	Market LMP	Eligible Flag	Calculated LMP	Change in LMP
627	14-Jan-13	18	8	\$46.58	Yes	\$55.51	\$8.93
628	14-Jan-13	18	9	\$46.58	Yes	\$55.51	\$8.93
629	14-Jan-13	18	10	\$46.04	Yes	\$55.51	\$9.47
630	14-Jan-13	18	11	\$38.63	Yes	\$55.51	\$16.88
631	14-Jan-13	18	12	\$38.63	Yes	\$55.51	\$16.88
632	14-Jan-13	19	1	\$31.81	Yes	\$55.61	\$23.80
633	14-Jan-13	19	2	\$31.81	Yes	\$55.61	\$23.80
634	14-Jan-13	19	3	\$31.53	Yes	\$55.61	\$24.08
635	14-Jan-13	19	4	\$31.45	Yes	\$55.61	\$24.16
636	14-Jan-13	19	5	\$31.52	Yes	\$55.61	\$24.09
637	14-Jan-13	19	6	\$33.21	Yes	\$55.61	\$22.40
638	14-Jan-13	19	7	\$32.38	Yes	\$55.61	\$23.23
639	14-Jan-13	19	8	\$32.13	Yes	\$55.61	\$23.48
640	14-Jan-13	19	9	\$33.14	Yes	\$55.61	\$22.47
641	14-Jan-13	19	10	\$34.02	Yes	\$55.61	\$21.59
642	14-Jan-13	19	11	\$34.51	Yes	\$55.61	\$21.10
643	14-Jan-13	19	12	\$33.87	Yes	\$55.61	\$21.74
644	14-Jan-13	20	1	\$34.64	Yes	\$55.61	\$20.97
645	14-Jan-13	20	2	\$34.90	Yes	\$55.61	\$20.71
646	14-Jan-13	20	3	\$36.59	Yes	\$55.61	\$19.02
647	14-Jan-13	20	4	\$37.36	Yes	\$55.61	\$18.25
648	14-Jan-13	20	5	\$37.53	Yes	\$55.61	\$18.08
649	14-Jan-13	20	6	\$37.79	Yes	\$55.61	\$17.82
650	14-Jan-13	20	7	\$37.74	Yes	\$55.61	\$17.87
651	14-Jan-13	20	8	\$37.74	Yes	\$55.61	\$17.87
652	14-Jan-13	20	9	\$37.68	Yes	\$55.61	\$17.93
653	14-Jan-13	20	10	\$37.58	Yes	\$55.61	\$18.03
654	14-Jan-13	20	11	\$37.67	Yes	\$55.61	\$17.94
655	14-Jan-13	20	12	\$36.88	Yes	\$55.61	\$18.73
656	14-Jan-13	21	1	\$40.44	Yes	\$55.51	\$15.07
657	14-Jan-13	21	2	\$40.44	Yes	\$55.51	\$15.07
658	14-Jan-13	21	3	\$37.75	Yes	\$55.51	\$17.76
659	14-Jan-13	21	4	\$37.74	Yes	\$55.51	\$17.77
660	14-Jan-13	21	5	\$37.74	Yes	\$55.51	\$17.77
661	14-Jan-13	21	6	\$37.74	Yes	\$55.51	\$17.77
662	14-Jan-13	21	7	\$37.66	Yes	\$55.51	\$17.85
663	14-Jan-13	21	8	\$37.33	Yes	\$55.51	\$18.18
664	14-Jan-13	21	9	\$36.62	Yes	\$55.51	\$18.89
665	14-Jan-13	21	10	\$37.13	Yes	\$55.51	\$18.38
666	14-Jan-13	21	11	\$37.53	Yes	\$55.51	\$17.98
667	14-Jan-13	21	12	\$37.61	Yes	\$55.51	\$17.90
668	14-Jan-13	22	1	\$44.93	Yes	\$55.51	\$10.58
669	14-Jan-13	22	2	\$44.46	Yes	\$55.51	\$11.05
670	14-Jan-13	22	3	\$45.04	Yes	\$55.51	\$10.47
671	14-Jan-13	22	4	\$44.87	Yes	\$55.51	\$10.64

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Number	Trade Date	Trade Hour	Interval	Market LMP	Eligible Flag	Calculated LMP	Change in LMP
672	14-Jan-13	22	5	\$44.71	Yes	\$55.51	\$10.80
673	14-Jan-13	22	6	\$37.61	Yes	\$55.51	\$17.90
674	14-Jan-13	22	7	\$33.25	Yes	\$55.51	\$22.26
675	14-Jan-13	22	8	\$31.23	Yes	\$55.51	\$24.28
676	14-Jan-13	22	9	\$31.23	Yes	\$55.51	\$24.28
677	14-Jan-13	22	10	\$31.23	Yes	\$55.51	\$24.28
678	14-Jan-13	22	11	\$44.63	Yes	\$55.51	\$10.88
679	14-Jan-13	22	12	\$44.63	Yes	\$55.51	\$10.88
680	14-Jan-13	23	1	\$36.36	Yes	\$55.45	\$19.09
681	14-Jan-13	23	2	\$37.29	Yes	\$55.45	\$18.16
682	14-Jan-13	23	3	\$37.06	Yes	\$55.45	\$18.39
683	14-Jan-13	23	4	\$31.18	Yes	\$55.45	\$24.27
684	14-Jan-13	23	5	\$32.69	Yes	\$55.45	\$22.76
685	14-Jan-13	23	6	\$33.43	Yes	\$55.45	\$22.02
686	14-Jan-13	23	7	\$31.37	Yes	\$55.45	\$24.08
687	14-Jan-13	23	8	\$31.37	Yes	\$55.45	\$24.08
688	14-Jan-13	23	9	\$31.37	Yes	\$55.45	\$24.08
689	14-Jan-13	23	10	\$31.37	Yes	\$55.45	\$24.08
690	14-Jan-13	23	11	\$32.65	Yes	\$55.45	\$22.80
691	14-Jan-13	23	12	\$30.60	Yes	\$55.45	\$24.85
692	14-Jan-13	24	1	\$39.30	Yes	\$55.45	\$16.15
693	14-Jan-13	24	2	\$39.32	Yes	\$55.45	\$16.13
694	14-Jan-13	24	3	\$41.23	Yes	\$55.45	\$14.22
695	14-Jan-13	24	4	\$45.00	Yes	\$55.45	\$10.45
696	14-Jan-13	24	5	\$41.55	Yes	\$55.45	\$13.90
697	14-Jan-13	24	6	\$41.62	Yes	\$55.45	\$13.83
698	14-Jan-13	24	7	\$37.64	Yes	\$55.45	\$17.81
699	14-Jan-13	24	8	\$40.63	Yes	\$55.45	\$14.82
700	14-Jan-13	24	9	\$40.36	Yes	\$55.45	\$15.09
701	14-Jan-13	24	10	\$40.72	Yes	\$55.45	\$14.73
702	14-Jan-13	24	11	\$40.57	Yes	\$55.45	\$14.88
703	14-Jan-13	24	12	\$33.29	Yes	\$55.45	\$22.16
704	15-Jan-13	16	2	\$30.00	Yes	\$55.87	\$25.87
705	15-Jan-13	16	3	\$29.86	Yes	\$55.87	\$26.01
706	15-Jan-13	16	4	\$29.98	Yes	\$55.87	\$25.89
707	15-Jan-13	16	5	\$35.30	Yes	\$55.87	\$20.57
708	15-Jan-13	16	6	\$31.88	Yes	\$55.87	\$23.99
709	15-Jan-13	16	7	\$31.88	Yes	\$55.87	\$23.99
710	15-Jan-13	16	8	\$35.43	Yes	\$55.87	\$20.44
711	15-Jan-13	16	9	\$35.43	Yes	\$55.87	\$20.44
712	15-Jan-13	16	10	\$35.98	Yes	\$55.87	\$19.89
713	15-Jan-13	16	11	\$35.76	Yes	\$55.87	\$20.11
714	15-Jan-13	16	12	\$35.33	Yes	\$55.87	\$20.54
715	15-Jan-13	17	1	\$29.83	Yes	\$55.87	\$26.04
716	15-Jan-13	17	2	\$30.90	Yes	\$55.87	\$24.97

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Number	Trade Date	Trade Hour	Interval	Market LMP	Eligible Flag	Calculated LMP	Change in LMP
717	15-Jan-13	17	3	\$31.67	Yes	\$55.87	\$24.20
718	15-Jan-13	17	4	\$31.77	Yes	\$55.87	\$24.10
719	15-Jan-13	17	5	\$31.71	Yes	\$55.87	\$24.16
720	15-Jan-13	17	6	\$32.31	Yes	\$55.87	\$23.56
721	15-Jan-13	17	7	\$35.01	Yes	\$55.87	\$20.86
722	15-Jan-13	17	8	\$35.82	Yes	\$55.87	\$20.05
723	15-Jan-13	17	9	\$38.05	Yes	\$55.87	\$17.82
724	15-Jan-13	17	10	\$36.60	Yes	\$55.87	\$19.27
725	15-Jan-13	17	11	\$38.69	Yes	\$55.87	\$17.18
726	15-Jan-13	17	12	\$42.32	Yes	\$55.87	\$13.55
727	15-Jan-13	18	1	\$17.33	Yes	\$55.87	\$38.54
728	15-Jan-13	18	2	\$25.84	Yes	\$55.87	\$30.03
729	15-Jan-13	18	3	\$29.61	Yes	\$55.87	\$26.26
730	15-Jan-13	18	4	\$30.88	Yes	\$55.87	\$24.99
731	15-Jan-13	18	5	\$32.69	Yes	\$55.87	\$23.18
732	15-Jan-13	18	6	\$31.74	Yes	\$55.87	\$24.13
733	15-Jan-13	18	7	\$35.52	Yes	\$55.87	\$20.35
734	15-Jan-13	18	8	\$36.56	Yes	\$55.87	\$19.31
735	15-Jan-13	18	9	\$38.26	Yes	\$55.87	\$17.61
736	15-Jan-13	18	10	\$39.37	Yes	\$55.87	\$16.50
737	15-Jan-13	18	11	\$40.64	Yes	\$55.87	\$15.23
738	15-Jan-13	18	12	\$39.63	Yes	\$55.87	\$16.24
739	15-Jan-13	19	1	\$40.16	Yes	\$55.87	\$15.71
740	15-Jan-13	19	2	\$40.08	Yes	\$55.87	\$15.79
741	15-Jan-13	19	3	\$40.08	Yes	\$55.87	\$15.79
742	15-Jan-13	19	4	\$39.28	Yes	\$55.87	\$16.59
743	15-Jan-13	19	5	\$39.28	Yes	\$55.87	\$16.59
744	15-Jan-13	19	6	\$39.28	Yes	\$55.87	\$16.59
745	15-Jan-13	19	7	\$39.53	Yes	\$55.87	\$16.34
746	15-Jan-13	19	8	\$39.53	Yes	\$55.87	\$16.34
747	15-Jan-13	19	9	\$40.08	Yes	\$55.87	\$15.79
748	15-Jan-13	19	10	\$37.72	Yes	\$55.87	\$18.15
749	15-Jan-13	19	11	\$37.72	Yes	\$55.87	\$18.15
750	15-Jan-13	19	12	\$37.40	Yes	\$55.87	\$18.47
751	15-Jan-13	20	1	\$39.74	Yes	\$55.90	\$16.16
752	15-Jan-13	20	2	\$39.19	Yes	\$55.90	\$16.71
753	15-Jan-13	20	3	\$38.20	Yes	\$55.90	\$17.70
754	15-Jan-13	20	4	\$36.22	Yes	\$55.90	\$19.68
755	15-Jan-13	20	5	\$41.76	Yes	\$55.90	\$14.14
756	15-Jan-13	20	6	\$44.26	Yes	\$55.90	\$11.64
757	15-Jan-13	20	7	\$44.36	Yes	\$55.90	\$11.54
758	15-Jan-13	20	8	\$44.36	Yes	\$55.90	\$11.54
759	15-Jan-13	20	9	\$41.07	Yes	\$55.90	\$14.83
760	15-Jan-13	20	10	\$43.65	Yes	\$55.90	\$12.25
761	15-Jan-13	20	11	\$38.20	Yes	\$55.90	\$17.70

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Number	Trade Date	Trade Hour	Interval	Market LMP	Eligible Flag	Calculated LMP	Change in LMP
762	15-Jan-13	20	12	\$39.68	Yes	\$55.90	\$16.22
763	15-Jan-13	21	1	\$44.10	Yes	\$55.76	\$11.66
764	15-Jan-13	21	2	\$39.75	Yes	\$55.76	\$16.01
765	15-Jan-13	21	3	\$39.75	Yes	\$55.76	\$16.01
766	15-Jan-13	21	4	\$38.48	Yes	\$55.76	\$17.28
767	15-Jan-13	21	5	\$36.65	Yes	\$55.76	\$19.11
768	15-Jan-13	21	6	\$38.15	Yes	\$55.76	\$17.61
769	15-Jan-13	21	7	\$37.78	Yes	\$55.76	\$17.98
770	15-Jan-13	21	8	\$36.40	Yes	\$55.76	\$19.36
771	15-Jan-13	21	9	\$34.01	Yes	\$55.76	\$21.75
772	15-Jan-13	21	10	\$32.32	Yes	\$55.76	\$23.44
773	15-Jan-13	23	1	\$37.56	Yes	\$110.70	\$73.14
774	15-Jan-13	23	2	\$40.44	Yes	\$110.70	\$70.26
775	15-Jan-13	23	3	\$40.46	Yes	\$110.70	\$70.24
776	15-Jan-13	23	4	\$38.94	Yes	\$110.70	\$71.76
777	15-Jan-13	23	5	\$36.33	Yes	\$110.70	\$74.37
778	15-Jan-13	23	6	\$31.67	Yes	\$110.70	\$79.03
779	15-Jan-13	23	7	\$31.65	Yes	\$110.70	\$79.05
780	15-Jan-13	23	8	\$31.65	Yes	\$110.70	\$79.05
781	15-Jan-13	23	9	\$31.64	Yes	\$110.70	\$79.06
782	15-Jan-13	23	10	\$32.42	Yes	\$110.70	\$78.28
783	15-Jan-13	23	11	\$32.42	Yes	\$110.70	\$78.28
784	15-Jan-13	23	12	\$31.27	Yes	\$110.70	\$79.43
785	15-Jan-13	24	1	\$35.92	Yes	\$110.70	\$74.78
786	15-Jan-13	24	2	\$36.02	Yes	\$110.70	\$74.68
787	15-Jan-13	24	3	\$45.51	Yes	\$110.70	\$65.19
788	15-Jan-13	24	4	\$36.70	Yes	\$110.70	\$74.00
789	15-Jan-13	24	5	\$38.00	Yes	\$110.70	\$72.70
790	15-Jan-13	24	6	\$36.03	Yes	\$110.70	\$74.67
791	15-Jan-13	24	7	\$30.25	Yes	\$110.70	\$80.45
792	15-Jan-13	24	8	\$31.66	Yes	\$110.70	\$79.04
793	15-Jan-13	24	9	\$31.66	Yes	\$110.70	\$79.04
794	15-Jan-13	24	10	\$35.70	Yes	\$110.70	\$75.00
795	15-Jan-13	24	11	\$35.80	Yes	\$110.70	\$74.90
796	15-Jan-13	24	12	\$30.34	Yes	\$110.70	\$80.36
797	16-Jan-13	1	1	\$35.52	Yes	\$55.70	\$20.18
798	16-Jan-13	1	2	\$35.36	Yes	\$55.70	\$20.34
799	16-Jan-13	1	3	\$35.36	Yes	\$55.70	\$20.34
800	16-Jan-13	1	4	\$35.36	Yes	\$55.70	\$20.34
801	16-Jan-13	1	5	\$37.02	Yes	\$55.70	\$18.68
802	16-Jan-13	1	6	\$37.03	Yes	\$55.70	\$18.67
803	16-Jan-13	1	7	\$29.88	Yes	\$55.70	\$25.82
804	16-Jan-13	1	8	\$32.95	Yes	\$55.70	\$22.75
805	16-Jan-13	1	9	\$34.73	Yes	\$55.70	\$20.97
806	16-Jan-13	1	10	\$29.98	Yes	\$55.70	\$25.72

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Number	Trade Date	Trade Hour	Interval	Market LMP	Eligible Flag	Calculated LMP	Change in LMP
807	16-Jan-13	1	11	\$31.69	Yes	\$55.70	\$24.01
808	16-Jan-13	1	12	\$30.65	Yes	\$55.70	\$25.05
809	16-Jan-13	2	1	\$32.74	Yes	\$55.70	\$22.96
810	16-Jan-13	2	2	\$32.73	Yes	\$55.70	\$22.97
811	16-Jan-13	2	3	\$35.63	Yes	\$55.70	\$20.07
812	16-Jan-13	2	4	\$34.73	Yes	\$55.70	\$20.97
813	16-Jan-13	2	5	\$34.72	Yes	\$55.70	\$20.98
814	16-Jan-13	2	6	\$34.72	Yes	\$55.70	\$20.98
815	16-Jan-13	2	7	\$32.73	Yes	\$55.70	\$22.97
816	16-Jan-13	2	8	\$32.73	Yes	\$55.70	\$22.97
817	16-Jan-13	2	9	\$32.73	Yes	\$55.70	\$22.97
818	16-Jan-13	2	10	\$32.77	Yes	\$55.70	\$22.93
819	16-Jan-13	2	11	\$32.77	Yes	\$55.70	\$22.93
820	16-Jan-13	2	12	\$31.75	Yes	\$55.70	\$23.95
821	16-Jan-13	3	1	\$32.73	Yes	\$55.70	\$22.97
822	16-Jan-13	3	2	\$32.73	Yes	\$55.70	\$22.97
823	16-Jan-13	3	3	\$32.73	Yes	\$55.70	\$22.97
824	16-Jan-13	3	4	\$31.75	Yes	\$55.70	\$23.95
825	16-Jan-13	3	5	\$31.75	Yes	\$55.70	\$23.95
826	16-Jan-13	3	6	\$32.73	Yes	\$55.70	\$22.97
827	16-Jan-13	3	7	\$32.72	Yes	\$55.70	\$22.98
828	16-Jan-13	3	8	\$32.72	Yes	\$55.70	\$22.98
829	16-Jan-13	3	9	\$34.79	Yes	\$55.70	\$20.91
830	16-Jan-13	3	10	\$32.72	Yes	\$55.70	\$22.98
831	16-Jan-13	3	11	\$32.72	Yes	\$55.70	\$22.98
832	16-Jan-13	3	12	\$32.72	Yes	\$55.70	\$22.98
833	16-Jan-13	4	1	\$30.17	Yes	\$55.70	\$25.53
834	16-Jan-13	4	2	\$31.76	Yes	\$55.70	\$23.94
835	16-Jan-13	4	3	\$30.32	Yes	\$55.70	\$25.38
836	16-Jan-13	4	4	\$28.35	Yes	\$55.70	\$27.35
837	16-Jan-13	4	5	\$29.64	Yes	\$55.70	\$26.06
838	16-Jan-13	4	6	\$30.17	Yes	\$55.70	\$25.53
839	16-Jan-13	4	7	\$34.84	Yes	\$55.70	\$20.86
840	16-Jan-13	4	8	\$32.76	Yes	\$55.70	\$22.94
841	16-Jan-13	4	9	\$30.18	Yes	\$55.70	\$25.52
842	16-Jan-13	4	10	\$31.76	Yes	\$55.70	\$23.94
843	16-Jan-13	4	11	\$32.74	Yes	\$55.70	\$22.96
844	16-Jan-13	4	12	\$31.76	Yes	\$55.70	\$23.94
845	16-Jan-13	5	1	\$27.25	Yes	\$55.70	\$28.45
846	16-Jan-13	5	2	\$27.25	Yes	\$55.70	\$28.45
847	16-Jan-13	5	3	\$27.77	Yes	\$55.70	\$27.93
848	16-Jan-13	5	4	\$29.76	Yes	\$55.70	\$25.94
849	16-Jan-13	5	5	\$30.45	Yes	\$55.70	\$25.25
850	16-Jan-13	5	6	\$30.45	Yes	\$55.70	\$25.25
851	16-Jan-13	5	7	\$31.75	Yes	\$55.70	\$23.95

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Number	Trade Date	Trade Hour	Interval	Market LMP	Eligible Flag	Calculated LMP	Change in LMP
852	16-Jan-13	5	8	\$31.75	Yes	\$55.70	\$23.95
853	16-Jan-13	5	9	\$31.76	Yes	\$55.70	\$23.94
854	16-Jan-13	5	10	\$31.73	Yes	\$55.70	\$23.97
855	16-Jan-13	5	11	\$31.73	Yes	\$55.70	\$23.97
856	16-Jan-13	5	12	\$32.78	Yes	\$55.70	\$22.92
857	16-Jan-13	6	1	\$28.61	Yes	\$55.70	\$27.09
858	16-Jan-13	6	2	\$28.26	Yes	\$55.70	\$27.44
859	16-Jan-13	6	3	\$29.65	Yes	\$55.70	\$26.05
860	16-Jan-13	6	4	\$30.52	Yes	\$55.70	\$25.18
861	16-Jan-13	6	5	\$31.60	Yes	\$55.70	\$24.10
862	16-Jan-13	6	6	\$32.81	Yes	\$55.70	\$22.89
863	16-Jan-13	6	7	\$27.41	Yes	\$55.70	\$28.29
864	16-Jan-13	6	8	\$32.81	Yes	\$55.70	\$22.89
865	16-Jan-13	6	9	\$32.80	Yes	\$55.70	\$22.90
866	16-Jan-13	6	10	\$38.06	Yes	\$55.70	\$17.64
867	16-Jan-13	6	11	\$34.95	Yes	\$55.70	\$20.75
868	16-Jan-13	6	12	\$41.56	Yes	\$55.70	\$14.14
869	16-Jan-13	7	1	\$25.01	Yes	\$55.70	\$30.69
870	16-Jan-13	7	2	\$28.17	Yes	\$55.70	\$27.53
871	16-Jan-13	7	3	\$31.73	Yes	\$55.70	\$23.97
872	16-Jan-13	7	4	\$31.73	Yes	\$55.70	\$23.97
873	16-Jan-13	7	5	\$31.73	Yes	\$55.70	\$23.97
874	16-Jan-13	7	6	\$34.92	Yes	\$55.70	\$20.78
875	16-Jan-13	7	7	\$32.95	Yes	\$55.70	\$22.75
876	16-Jan-13	7	8	\$36.38	Yes	\$55.70	\$19.32
877	16-Jan-13	7	9	\$41.70	Yes	\$55.70	\$14.00
878	16-Jan-13	7	10	\$37.74	Yes	\$55.70	\$17.96
879	16-Jan-13	7	11	\$40.37	Yes	\$55.70	\$15.33
880	16-Jan-13	7	12	\$43.64	Yes	\$55.70	\$12.06
881	16-Jan-13	8	1	\$44.13	Yes	\$55.76	\$11.63
882	16-Jan-13	8	2	\$39.18	Yes	\$55.76	\$16.58
883	16-Jan-13	8	3	\$39.24	Yes	\$55.76	\$16.52
884	16-Jan-13	8	4	\$39.19	Yes	\$55.76	\$16.57
885	16-Jan-13	8	5	\$39.19	Yes	\$55.76	\$16.57
886	16-Jan-13	8	6	\$39.19	Yes	\$55.76	\$16.57
887	16-Jan-13	8	7	\$86.01	Yes	\$55.76	(\$30.25)
888	16-Jan-13	8	8	\$45.40	Yes	\$55.76	\$10.36
889	16-Jan-13	8	9	\$45.40	Yes	\$55.76	\$10.36
890	16-Jan-13	8	10	\$41.45	Yes	\$55.76	\$14.31
891	16-Jan-13	8	11	\$38.97	Yes	\$55.76	\$16.79
892	16-Jan-13	8	12	\$35.17	Yes	\$55.76	\$20.59
893	16-Jan-13	9	1	\$37.59	Yes	\$55.70	\$18.11
894	16-Jan-13	9	2	\$38.08	Yes	\$55.70	\$17.62
895	16-Jan-13	9	3	\$38.08	Yes	\$55.70	\$17.62
896	16-Jan-13	9	4	\$47.77	Yes	\$55.70	\$7.93

Department of Market Quality and Renewable Integration – California ISO

Number	Trade Date	Trade Hour	Interval	Market LMP	Eligible Flag	Calculated LMP	Change in LMP
897	16-Jan-13	9	5	\$43.62	Yes	\$55.70	\$12.08
898	16-Jan-13	9	6	\$42.76	Yes	\$55.70	\$12.94
899	16-Jan-13	9	7	\$35.06	Yes	\$55.70	\$20.64
900	16-Jan-13	9	8	\$34.55	Yes	\$55.70	\$21.15
901	16-Jan-13	9	9	\$35.03	Yes	\$55.70	\$20.67
902	16-Jan-13	9	10	\$34.25	Yes	\$55.70	\$21.45
903	16-Jan-13	9	11	\$33.04	Yes	\$55.70	\$22.66
904	16-Jan-13	9	12	\$30.86	Yes	\$55.70	\$24.84
905	16-Jan-13	10	1	\$38.64	Yes	\$55.70	\$17.06
906	16-Jan-13	10	2	\$35.06	Yes	\$55.70	\$20.64
907	16-Jan-13	10	3	\$38.09	Yes	\$55.70	\$17.61
908	16-Jan-13	10	4	\$46.46	Yes	\$55.70	\$9.24
909	16-Jan-13	10	5	\$45.10	Yes	\$55.70	\$10.60
910	16-Jan-13	10	6	\$35.14	Yes	\$55.70	\$20.56
911	16-Jan-13	10	7	\$34.95	Yes	\$55.70	\$20.75
912	16-Jan-13	10	8	\$34.94	Yes	\$55.70	\$20.76
913	16-Jan-13	10	9	\$34.05	Yes	\$55.70	\$21.65
914	16-Jan-13	10	10	\$34.19	Yes	\$55.70	\$21.51
915	16-Jan-13	10	11	\$33.01	Yes	\$55.70	\$22.69
916	16-Jan-13	10	12	\$31.78	Yes	\$55.70	\$23.92
917	16-Jan-13	11	1	\$35.09	Yes	\$55.70	\$20.61
918	16-Jan-13	11	2	\$35.18	Yes	\$55.70	\$20.52
919	16-Jan-13	11	3	\$35.18	Yes	\$55.70	\$20.52
920	16-Jan-13	11	4	\$38.61	Yes	\$55.70	\$17.09
921	16-Jan-13	11	5	\$35.43	Yes	\$55.70	\$20.27
922	16-Jan-13	11	6	\$35.43	Yes	\$55.70	\$20.27
923	16-Jan-13	11	7	\$38.09	Yes	\$55.70	\$17.61
924	16-Jan-13	11	8	\$35.09	Yes	\$55.70	\$20.61
925	16-Jan-13	11	9	\$35.41	Yes	\$55.70	\$20.29
926	16-Jan-13	11	10	\$35.09	Yes	\$55.70	\$20.61
927	16-Jan-13	11	11	\$35.09	Yes	\$55.70	\$20.61
928	16-Jan-13	11	12	\$35.08	Yes	\$55.70	\$20.62
929	16-Jan-13	12	1	\$35.07	Yes	\$55.70	\$20.63
930	16-Jan-13	12	2	\$35.40	Yes	\$55.70	\$20.30
931	16-Jan-13	12	3	\$38.08	Yes	\$55.70	\$17.62
932	16-Jan-13	12	4	\$37.60	Yes	\$55.70	\$18.10
933	16-Jan-13	12	5	\$35.47	Yes	\$55.70	\$20.23
934	16-Jan-13	12	6	\$35.02	Yes	\$55.70	\$20.68
935	16-Jan-13	12	7	\$35.13	Yes	\$55.70	\$20.57
936	16-Jan-13	12	8	\$35.13	Yes	\$55.70	\$20.57
937	16-Jan-13	12	9	\$35.13	Yes	\$55.70	\$20.57
938	16-Jan-13	12	10	\$35.12	Yes	\$55.70	\$20.58
939	16-Jan-13	12	11	\$33.93	Yes	\$55.70	\$21.77
940	16-Jan-13	12	12	\$44.98	Yes	\$55.70	\$10.72
941	16-Jan-13	13	1	\$35.13	Yes	\$55.70	\$20.57

Department of Market Quality and Renewable Integration – California ISO

Number	Trade Date	Trade Hour	Interval	Market LMP	Eligible Flag	Calculated LMP	Change in LMP
942	16-Jan-13	13	2	\$35.14	Yes	\$55.70	\$20.56
943	16-Jan-13	13	3	\$35.13	Yes	\$55.70	\$20.57
944	16-Jan-13	13	4	\$45.43	Yes	\$55.70	\$10.27
945	16-Jan-13	13	5	\$38.75	Yes	\$55.70	\$16.95
946	16-Jan-13	13	6	\$38.09	Yes	\$55.70	\$17.61
947	16-Jan-13	13	7	\$31.03	Yes	\$55.70	\$24.67
948	16-Jan-13	13	8	\$34.24	Yes	\$55.70	\$21.46
949	16-Jan-13	13	9	\$34.24	Yes	\$55.70	\$21.46
950	16-Jan-13	13	10	\$34.25	Yes	\$55.70	\$21.45
951	16-Jan-13	13	11	\$34.25	Yes	\$55.70	\$21.45
952	16-Jan-13	13	12	\$33.04	Yes	\$55.70	\$22.66
953	16-Jan-13	14	1	\$38.70	Yes	\$55.70	\$17.00
954	16-Jan-13	14	2	\$35.14	Yes	\$55.70	\$20.56
955	16-Jan-13	14	3	\$35.13	Yes	\$55.70	\$20.57
956	16-Jan-13	14	4	\$34.24	Yes	\$55.70	\$21.46
957	16-Jan-13	14	5	\$34.24	Yes	\$55.70	\$21.46
958	16-Jan-13	14	6	\$34.24	Yes	\$55.70	\$21.46
959	16-Jan-13	14	7	\$35.11	Yes	\$55.70	\$20.59
960	16-Jan-13	14	8	\$35.11	Yes	\$55.70	\$20.59
961	16-Jan-13	14	9	\$35.11	Yes	\$55.70	\$20.59
962	16-Jan-13	14	10	\$34.22	Yes	\$55.70	\$21.48
963	16-Jan-13	14	11	\$34.22	Yes	\$55.70	\$21.48
964	16-Jan-13	14	12	\$34.22	Yes	\$55.70	\$21.48
965	16-Jan-13	15	1	\$34.20	Yes	\$55.70	\$21.50
966	16-Jan-13	15	2	\$35.11	Yes	\$55.70	\$20.59
967	16-Jan-13	15	3	\$35.11	Yes	\$55.70	\$20.59
968	16-Jan-13	15	4	\$34.22	Yes	\$55.70	\$21.48
969	16-Jan-13	15	5	\$34.22	Yes	\$55.70	\$21.48
970	16-Jan-13	15	6	\$34.22	Yes	\$55.70	\$21.48
971	16-Jan-13	15	7	\$34.23	Yes	\$55.70	\$21.47
972	16-Jan-13	15	8	\$34.23	Yes	\$55.70	\$21.47
973	16-Jan-13	15	9	\$34.23	Yes	\$55.70	\$21.47
974	16-Jan-13	15	10	\$34.24	Yes	\$55.70	\$21.46
975	16-Jan-13	15	11	\$35.15	Yes	\$55.70	\$20.55
976	16-Jan-13	15	12	\$35.14	Yes	\$55.70	\$20.56
977	16-Jan-13	16	1	\$45.33	Yes	\$55.70	\$10.37
978	16-Jan-13	16	2	\$45.33	Yes	\$55.70	\$10.37
979	16-Jan-13	16	3	\$44.89	Yes	\$55.70	\$10.81
980	16-Jan-13	16	4	\$35.16	Yes	\$55.70	\$20.54
981	16-Jan-13	16	5	\$35.28	Yes	\$55.70	\$20.42
982	16-Jan-13	16	6	\$38.57	Yes	\$55.70	\$17.13
983	16-Jan-13	16	7	\$37.51	Yes	\$55.70	\$18.19
984	16-Jan-13	16	8	\$38.66	Yes	\$55.70	\$17.04
985	16-Jan-13	16	9	\$44.86	Yes	\$55.70	\$10.84
986	16-Jan-13	16	10	\$45.21	Yes	\$55.70	\$10.49

Department of Market Quality and Renewable Integration – California ISO

Number	Trade Date	Trade Hour	Interval	Market LMP	Eligible Flag	Calculated LMP	Change in LMP
987	16-Jan-13	16	11	\$44.82	Yes	\$55.70	\$10.88
988	16-Jan-13	16	12	\$45.57	Yes	\$55.70	\$10.13
989	16-Jan-13	17	1	\$27.24	Yes	\$55.70	\$28.46
990	16-Jan-13	17	2	\$31.75	Yes	\$55.70	\$23.95
991	16-Jan-13	17	3	\$31.75	Yes	\$55.70	\$23.95
992	16-Jan-13	17	4	\$27.78	Yes	\$55.70	\$27.92
993	16-Jan-13	17	5	\$34.00	Yes	\$55.70	\$21.70
994	16-Jan-13	17	6	\$34.02	Yes	\$55.70	\$21.68
995	16-Jan-13	17	7	\$34.32	Yes	\$55.70	\$21.38
996	16-Jan-13	17	8	\$31.77	Yes	\$55.70	\$23.93
997	16-Jan-13	17	9	\$35.23	Yes	\$55.70	\$20.47
998	16-Jan-13	17	10	\$34.47	Yes	\$55.70	\$21.23
999	16-Jan-13	17	11	\$35.33	Yes	\$55.70	\$20.37
1000	16-Jan-13	17	12	\$45.29	Yes	\$55.70	\$10.41
1001	16-Jan-13	18	1	\$25.93	Yes	\$55.70	\$29.77
1002	16-Jan-13	18	2	\$26.92	Yes	\$55.70	\$28.78
1003	16-Jan-13	18	3	\$31.42	Yes	\$55.70	\$24.28
1004	16-Jan-13	18	4	\$32.64	Yes	\$55.70	\$23.06
1005	16-Jan-13	18	5	\$32.85	Yes	\$55.70	\$22.85
1006	16-Jan-13	18	6	\$35.46	Yes	\$55.70	\$20.24
1007	16-Jan-13	18	7	\$32.85	Yes	\$55.70	\$22.85
1008	16-Jan-13	18	8	\$39.59	Yes	\$55.70	\$16.11
1009	16-Jan-13	18	9	\$44.44	Yes	\$55.70	\$11.26
1010	16-Jan-13	18	10	\$124.32	Yes	\$55.70	(\$68.62)
1011	16-Jan-13	18	11	\$124.35	Yes	\$55.70	(\$68.65)
1012	16-Jan-13	18	12	\$113.87	Yes	\$55.70	(\$58.17)
1013	16-Jan-13	19	1	\$38.17	Yes	\$55.76	\$17.59
1014	16-Jan-13	19	2	\$38.82	Yes	\$55.76	\$16.94
1015	16-Jan-13	19	3	\$33.68	Yes	\$55.76	\$22.08
1016	16-Jan-13	19	4	\$33.80	Yes	\$55.76	\$21.96
1017	16-Jan-13	19	5	\$35.64	Yes	\$55.76	\$20.12
1018	16-Jan-13	19	6	\$35.59	Yes	\$55.76	\$20.17
1019	16-Jan-13	19	7	\$35.61	Yes	\$55.76	\$20.15
1020	16-Jan-13	19	8	\$35.61	Yes	\$55.76	\$20.15
1021	16-Jan-13	19	9	\$35.66	Yes	\$55.76	\$20.10
1022	16-Jan-13	19	10	\$35.60	Yes	\$55.76	\$20.16
1023	16-Jan-13	19	11	\$35.45	Yes	\$55.76	\$20.31
1024	16-Jan-13	19	12	\$35.75	Yes	\$55.76	\$20.01
1025	16-Jan-13	20	1	\$36.68	Yes	\$55.64	\$18.96
1026	16-Jan-13	20	2	\$38.49	Yes	\$55.64	\$17.15
1027	16-Jan-13	20	3	\$39.33	Yes	\$55.64	\$16.31
1028	16-Jan-13	20	4	\$39.07	Yes	\$55.64	\$16.57
1029	16-Jan-13	20	5	\$39.07	Yes	\$55.64	\$16.57
1030	16-Jan-13	20	6	\$39.01	Yes	\$55.64	\$16.63
1031	16-Jan-13	20	7	\$38.88	Yes	\$55.64	\$16.76

Department of Market Quality and Renewable Integration – California ISO

Number	Trade Date	Trade Hour	Interval	Market LMP	Eligible Flag	Calculated LMP	Change in LMP
1032	16-Jan-13	20	8	\$38.88	Yes	\$55.64	\$16.76
1033	16-Jan-13	20	9	\$38.86	Yes	\$55.64	\$16.78
1034	16-Jan-13	20	10	\$35.53	Yes	\$55.64	\$20.11
1035	16-Jan-13	20	11	\$35.53	Yes	\$55.64	\$20.11
1036	16-Jan-13	20	12	\$32.98	Yes	\$55.64	\$22.66
1037	16-Jan-13	21	1	\$39.90	Yes	\$55.70	\$15.80
1038	16-Jan-13	21	2	\$39.86	Yes	\$55.70	\$15.84
1039	16-Jan-13	21	3	\$40.52	Yes	\$55.70	\$15.18
1040	16-Jan-13	21	4	\$39.82	Yes	\$55.70	\$15.88
1041	16-Jan-13	21	5	\$39.36	Yes	\$55.70	\$16.34
1042	16-Jan-13	21	6	\$35.34	Yes	\$55.70	\$20.36
1043	16-Jan-13	21	7	\$38.56	Yes	\$55.70	\$17.14
1044	16-Jan-13	21	8	\$36.80	Yes	\$55.70	\$18.90
1045	16-Jan-13	21	9	\$34.26	Yes	\$55.70	\$21.44
1046	16-Jan-13	21	10	\$32.13	Yes	\$55.70	\$23.57
1047	16-Jan-13	21	11	\$31.93	Yes	\$55.70	\$23.77
1048	16-Jan-13	21	12	\$30.99	Yes	\$55.70	\$24.71
1049	16-Jan-13	22	1	\$31.28	Yes	\$55.70	\$24.42
1050	16-Jan-13	22	2	\$34.40	Yes	\$55.70	\$21.30
1051	16-Jan-13	22	3	\$36.22	Yes	\$55.70	\$19.48
1052	16-Jan-13	22	4	\$32.61	Yes	\$55.70	\$23.09
1053	16-Jan-13	22	5	\$31.78	Yes	\$55.70	\$23.92
1054	16-Jan-13	22	6	\$31.76	Yes	\$55.70	\$23.94
1055	16-Jan-13	22	7	\$34.74	Yes	\$55.70	\$20.96
1056	16-Jan-13	22	8	\$33.92	Yes	\$55.70	\$21.78
1057	16-Jan-13	22	9	\$31.76	Yes	\$55.70	\$23.94
1058	16-Jan-13	22	10	\$31.75	Yes	\$55.70	\$23.95
1059	16-Jan-13	22	11	\$31.14	Yes	\$55.70	\$24.56
1060	16-Jan-13	22	12	\$29.31	Yes	\$55.70	\$26.39
1061	16-Jan-13	23	1	\$43.65	Yes	\$55.76	\$12.11
1062	16-Jan-13	23	2	\$73.67	Yes	\$55.76	(\$17.91)
1063	16-Jan-13	23	3	\$73.67	Yes	\$55.76	(\$17.91)
1064	16-Jan-13	23	4	\$45.55	Yes	\$55.76	\$10.21
1065	16-Jan-13	23	5	\$38.74	Yes	\$55.76	\$17.02
1066	16-Jan-13	23	6	\$32.88	Yes	\$55.76	\$22.88
1067	16-Jan-13	23	7	\$32.38	Yes	\$55.76	\$23.38
1068	16-Jan-13	23	8	\$31.68	Yes	\$55.76	\$24.08
1069	16-Jan-13	23	9	\$32.07	Yes	\$55.76	\$23.69
1070	16-Jan-13	23	10	\$31.27	Yes	\$55.76	\$24.49
1071	16-Jan-13	23	11	\$30.50	Yes	\$55.76	\$25.26
1072	16-Jan-13	23	12	\$28.84	Yes	\$55.76	\$26.92
1073	16-Jan-13	24	1	\$34.03	Yes	\$55.70	\$21.67
1074	16-Jan-13	24	2	\$34.04	Yes	\$55.70	\$21.66
1075	16-Jan-13	24	3	\$34.07	Yes	\$55.70	\$21.63
1076	16-Jan-13	24	4	\$31.76	Yes	\$55.70	\$23.94

Department of Market Quality and Renewable Integration – California ISO

Number	Trade Date	Trade Hour	Interval	Market LMP	Eligible Flag	Calculated LMP	Change in LMP
1077	16-Jan-13	24	5	\$31.76	Yes	\$55.70	\$23.94
1078	16-Jan-13	24	6	\$31.76	Yes	\$55.70	\$23.94
1079	16-Jan-13	24	7	\$32.94	Yes	\$55.70	\$22.76
1080	16-Jan-13	24	8	\$31.76	Yes	\$55.70	\$23.94
1081	16-Jan-13	24	9	\$31.76	Yes	\$55.70	\$23.94
1082	16-Jan-13	24	10	\$31.72	Yes	\$55.70	\$23.98
1083	16-Jan-13	24	11	\$31.72	Yes	\$55.70	\$23.98
1084	16-Jan-13	24	12	\$28.29	Yes	\$55.70	\$27.41
1085	20-Jan-13	16	4	\$32.06	Yes	\$67.84	\$35.78
1086	20-Jan-13	16	5	\$32.06	Yes	\$67.84	\$35.78
1087	20-Jan-13	16	6	\$32.17	Yes	\$67.84	\$35.67
1088	20-Jan-13	16	7	\$32.12	Yes	\$67.84	\$35.72
1089	20-Jan-13	16	8	\$32.12	Yes	\$67.84	\$35.72
1090	20-Jan-13	16	9	\$32.12	Yes	\$67.84	\$35.72
1091	20-Jan-13	16	10	\$32.19	Yes	\$67.84	\$35.65
1092	20-Jan-13	16	11	\$32.19	Yes	\$67.84	\$35.65
1093	20-Jan-13	16	12	\$32.19	Yes	\$67.84	\$35.65
1094	20-Jan-13	17	1	\$30.15	Yes	\$67.84	\$37.69
1095	20-Jan-13	17	2	\$27.78	Yes	\$67.84	\$40.06
1096	20-Jan-13	17	3	\$27.60	Yes	\$67.84	\$40.24
1097	20-Jan-13	17	4	\$29.29	Yes	\$67.84	\$38.55
1098	20-Jan-13	17	5	\$29.29	Yes	\$67.84	\$38.55
1099	20-Jan-13	17	6	\$30.22	Yes	\$67.84	\$37.62
1100	20-Jan-13	17	7	\$31.28	Yes	\$67.84	\$36.56
1101	20-Jan-13	17	8	\$32.25	Yes	\$67.84	\$35.59
1102	20-Jan-13	17	9	\$32.25	Yes	\$67.84	\$35.59
1103	20-Jan-13	17	10	\$32.37	Yes	\$67.84	\$35.47
1104	20-Jan-13	17	11	\$32.38	Yes	\$67.84	\$35.46
1105	20-Jan-13	17	12	\$35.87	Yes	\$67.84	\$31.97
1106	20-Jan-13	18	1	\$29.17	Yes	\$67.84	\$38.67
1107	20-Jan-13	18	2	\$28.47	Yes	\$67.84	\$39.37
1108	20-Jan-13	18	3	\$30.28	Yes	\$67.84	\$37.56
1109	20-Jan-13	18	4	\$31.23	Yes	\$67.84	\$36.61
1110	20-Jan-13	18	5	\$32.18	Yes	\$67.84	\$35.66
1111	20-Jan-13	18	6	\$33.73	Yes	\$67.84	\$34.11
1112	20-Jan-13	18	7	\$32.27	Yes	\$67.84	\$35.57
1113	20-Jan-13	18	8	\$38.41	Yes	\$67.84	\$29.43
1114	20-Jan-13	18	9	\$39.67	Yes	\$67.84	\$28.17
1115	20-Jan-13	18	10	\$39.74	Yes	\$67.84	\$28.10
1116	20-Jan-13	18	11	\$39.74	Yes	\$67.84	\$28.10
1117	20-Jan-13	18	12	\$39.74	Yes	\$67.84	\$28.10
1118	20-Jan-13	19	1	\$36.18	Yes	\$67.84	\$31.66
1119	20-Jan-13	19	2	\$36.18	Yes	\$67.84	\$31.66
1120	20-Jan-13	19	3	\$36.18	Yes	\$67.84	\$31.66
1121	20-Jan-13	19	4	\$34.57	Yes	\$67.84	\$33.27

Department of Market Quality and Renewable Integration – California ISO

Number	Trade Date	Trade Hour	Interval	Market LMP	Eligible Flag	Calculated LMP	Change in LMP
1122	20-Jan-13	19	5	\$34.97	Yes	\$67.84	\$32.87
1123	20-Jan-13	19	6	\$34.57	Yes	\$67.84	\$33.27
1124	20-Jan-13	19	7	\$37.00	Yes	\$67.84	\$30.84
1125	20-Jan-13	19	8	\$34.07	Yes	\$67.84	\$33.77
1126	20-Jan-13	19	9	\$32.89	Yes	\$67.84	\$34.95
1127	20-Jan-13	19	10	\$32.56	Yes	\$67.84	\$35.28
1128	20-Jan-13	19	11	\$33.22	Yes	\$67.84	\$34.62
1129	20-Jan-13	19	12	\$34.44	Yes	\$67.84	\$33.40
1130	20-Jan-13	20	1	\$33.74	Yes	\$67.84	\$34.10
1131	20-Jan-13	20	2	\$33.74	Yes	\$67.84	\$34.10
1132	20-Jan-13	20	3	\$33.74	Yes	\$67.84	\$34.10
1133	20-Jan-13	20	4	\$33.22	Yes	\$67.84	\$34.62
1134	20-Jan-13	20	5	\$34.17	Yes	\$67.84	\$33.67
1135	20-Jan-13	20	6	\$35.80	Yes	\$67.84	\$32.04
1136	20-Jan-13	20	7	\$34.05	Yes	\$67.84	\$33.79
1137	20-Jan-13	20	8	\$34.05	Yes	\$67.84	\$33.79
1138	20-Jan-13	20	9	\$34.05	Yes	\$67.84	\$33.79
1139	20-Jan-13	20	10	\$34.18	Yes	\$67.84	\$33.66
1140	20-Jan-13	20	11	\$33.47	Yes	\$67.84	\$34.37
1141	20-Jan-13	20	12	\$33.05	Yes	\$67.84	\$34.79
1142	30-Jan-13	17	7	\$30.78	Yes	\$60.26	\$29.48
1143	30-Jan-13	17	8	\$30.78	Yes	\$60.26	\$29.48
1144	30-Jan-13	17	9	\$30.78	Yes	\$60.26	\$29.48
1145	30-Jan-13	17	10	\$30.79	Yes	\$60.26	\$29.47
1146	30-Jan-13	17	11	\$30.79	Yes	\$60.26	\$29.47
1147	30-Jan-13	17	12	\$34.14	Yes	\$60.26	\$26.12
1148	30-Jan-13	18	1	\$24.75	Yes	\$60.26	\$35.51
1149	30-Jan-13	18	2	\$26.31	Yes	\$60.26	\$33.95
1150	30-Jan-13	18	3	\$27.69	Yes	\$60.26	\$32.57
1151	30-Jan-13	18	4	\$27.66	Yes	\$60.26	\$32.60
1152	30-Jan-13	18	5	\$29.83	Yes	\$60.26	\$30.43
1153	30-Jan-13	18	6	\$30.73	Yes	\$60.26	\$29.53
1154	30-Jan-13	18	7	\$30.57	Yes	\$60.26	\$29.69
1155	30-Jan-13	18	8	\$31.91	Yes	\$60.26	\$28.35
1156	30-Jan-13	18	9	\$33.07	Yes	\$60.26	\$27.19
1157	30-Jan-13	18	10	\$39.37	Yes	\$60.26	\$20.89
1158	30-Jan-13	18	11	\$43.91	Yes	\$60.26	\$16.35
1159	30-Jan-13	18	12	\$50.26	Yes	\$60.26	\$10.00
1160	30-Jan-13	19	1	\$43.08	Yes	\$60.26	\$17.18
1161	30-Jan-13	19	2	\$44.02	Yes	\$60.26	\$16.24
1162	30-Jan-13	19	3	\$44.12	Yes	\$60.26	\$16.14
1163	30-Jan-13	19	4	\$43.99	Yes	\$60.26	\$16.27
1164	30-Jan-13	19	5	\$46.21	Yes	\$60.26	\$14.05
1165	30-Jan-13	19	6	\$47.92	Yes	\$60.26	\$12.34
1166	30-Jan-13	19	7	\$44.67	Yes	\$60.26	\$15.59

Department of Market Quality and Renewable Integration – California ISO

Number	Trade Date	Trade Hour	Interval	Market LMP	Eligible Flag	Calculated LMP	Change in LMP
1167	30-Jan-13	19	8	\$43.50	Yes	\$60.26	\$16.76
1168	30-Jan-13	19	9	\$43.10	Yes	\$60.26	\$17.16
1169	30-Jan-13	19	10	\$42.37	Yes	\$60.26	\$17.89
1170	30-Jan-13	19	11	\$43.10	Yes	\$60.26	\$17.16
1171	30-Jan-13	19	12	\$39.92	Yes	\$60.26	\$20.34
1172	30-Jan-13	20	1	\$40.03	Yes	\$60.26	\$20.23
1173	30-Jan-13	20	2	\$39.71	Yes	\$60.26	\$20.55
1174	30-Jan-13	20	3	\$43.16	Yes	\$60.26	\$17.10
1175	30-Jan-13	20	4	\$40.06	Yes	\$60.26	\$20.20
1176	30-Jan-13	20	5	\$43.53	Yes	\$60.26	\$16.73
1177	30-Jan-13	20	6	\$42.82	Yes	\$60.26	\$17.44
1178	30-Jan-13	20	7	\$43.72	Yes	\$60.26	\$16.54
1179	30-Jan-13	20	8	\$43.12	Yes	\$60.26	\$17.14
1180	30-Jan-13	20	9	\$44.39	Yes	\$60.26	\$15.87
1181	30-Jan-13	20	10	\$43.54	Yes	\$60.26	\$16.72
1182	30-Jan-13	20	11	\$43.47	Yes	\$60.26	\$16.79
1183	30-Jan-13	20	12	\$42.61	Yes	\$60.26	\$17.65
1184	31-Jan-13	17	7	\$32.23	Yes	\$60.67	\$28.44
1185	31-Jan-13	17	8	\$32.23	Yes	\$60.67	\$28.44
1186	31-Jan-13	17	9	\$32.25	Yes	\$60.67	\$28.42
1187	31-Jan-13	17	10	\$32.24	Yes	\$60.67	\$28.43
1188	31-Jan-13	17	11	\$32.26	Yes	\$60.67	\$28.41
1189	31-Jan-13	17	12	\$39.50	Yes	\$60.67	\$21.17

Appendix C: Exceptional Dispatch Bid Mitigation Analysis

In January 2013, the ISO applied the exceptional dispatch bid mitigation to the exceptional dispatches due to noncompetitive constraints. Table 10 shows the costs by instruction type in January. With exceptional dispatch bid mitigation, the costs for these types of exceptional dispatches were \$226,157. Without the exceptional dispatch bid mitigation, the costs for these types of exceptional dispatches would be \$264,032. The cost saving from the exceptional dispatch bid mitigation was \$37,875.

Table 10: Bid Mitigation Analysis for January

Type	Number of Resources	Costs without Bid Mitigation	Costs with Bid Mitigation	Cost Saving
NONTMOD	6	263,858	226,015	37,843
TMODEL5	1	174	142	32
Total	7	264,032	226,157	37,875

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 April 2013.

Jennifer Rotz
Jennifer Rotz