January 30, 2014

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

**Re: California Independent System Operator Corporation
Docket Nos. ER08-1178-___, and EL08-88-___
October 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 the Commission's May 4 Order.

The attached report provides Chart 2 data for the month of October 2013. The attached Chart 2 report also includes the price impact analysis for the month of October 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 October 2014.

Respectfully submitted,

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Exceptional Dispatch Report

Table 2: October 2013

Market Quality and Renewable Integration   January 30, 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 October 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 October is presented in Appendix B. This report also includes the degree of mitigation analysis for October 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 October 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 exceptional 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 October 2013, the ISO issued exceptional dispatches for the following generation and transmission operating requirements:

    (1) 6510, SCIT Operating procedure,
    (2) 7110, Humboldt Area
    (3) 7620, South of Lugo Generation Requirements
    (4) 7820, San Diego Area
    (5) 7830, Both SONGS Units Off-Line

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

The following additional reason for exceptional dispatch instructions in October 2013 was not related to specific generation or transmission operating procedures: Software Limitation, when an exceptional dispatch instruction was used to bridge schedules across days for resources with a minimum down time of 24 hours, as the ISO software does not handle multi day commitment. For instance, a resource has a day-ahead schedule from 0600 till 2300, and then is shut down in 2400. If this resource had a minimum down time of 24 hours and it is required the following day, then the ISO issues an exceptional dispatch to commit this resource in 2400 so that it can be dispatched economically in the following day. Software limitation reason was also used for exceptional dispatches to manually issue shut down instructions to a resource because of a temporary Automatic Dispatch System ("ADS") failure, or similar issues. There were a few other reasons used to explain exceptional dispatch instructions in October, 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 October. In addition, it contains volume (MWh) and cost information. Each entry in Table 1 is a summary of exceptional dispatches classified by (1) the reason for the exceptional dispatch; (2) the location of the resource by Participating Transmission Owner (PTO) service area; (3) the Local Reliability Area (LRA) where applicable; (4) the market in which the exceptional dispatch occurred (day-ahead vs. real-time); and (5) the date of the exceptional dispatch. For each classification the following information is provided: (1) Megawatts (MW); (2) Commitment; (3) Inc or Dec; (4) Hours; (5) Begin Time; (6) End Time; (7) Total Volume (MWh); (8) Min Load Cost; (9) Start

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[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.

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 these charge codes are portion of the real-time instructed imbalance energy charge code (6470). [4]
- The CC6482 column shows the real-time excess cost for the classification.[5]

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

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

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

- The CC6488 column shows the real-time exceptional dispatch uplift settlement for the classification.[6] The CC6620 column 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 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.

The ISO issued an Exceptional Dispatch CPM designation to Huntington Beach Unit 2 from September 1 to October 30, 2013. Huntington Beach Unit 2 was designated for 163 MW of capacity for the month of September with a 60-day term under the Exceptional Dispatch CPM provisions of the tariff to address a non-system reliability need.

The ISO has posted the September 2013 Exceptional Dispatch Capacity Procurement Designation Report to its website.This report contains additional information about the Huntington Beach Unit 2 exceptional dispatch capacity procurement mechanism designation on September 1, 2013.

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[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 October 2013

California Independent System Operator Corporation Exceptional Dispatch Report January 31, 2013
Chart 2: Table of Exceptional Dispatches for Period 01/October/2013 - 31/October/2013

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
1	RT	6510	SCE	Big Creek-Ventura	7-Oct-13	100	Yes	INC	9	13:50	21:59	858.29	$26,088	$0	($40,630)	460	($21,092)	$0	$0	$0	$0
2	RT	6510	SCE	LA Basin	27-Oct-13	40-60	Yes	INC	24	0:00	23:59	2770.94	$161,107	$0	($114,266)	0	($14)	$0	($3)	$0	$0
3	RT	6510	SCE	N/A	18-Oct-13	101	No	DEC	1	9:17	9:47	-49.70	$0	$0	$3,065	(41)	$0	$558	$0	$0	$0
4	RT	6510	SDG&E	San Diego-IV	27-Oct-13	20	No	INC	24	0:00	23:59	438.66	$58,848	$0	($12,475)	0	($6)	$0	($5)	$0	$0
5	RT	6510	SDG&E	San Diego-IV	29-Oct-13	20	Yes	INC	22	2:00	23:59	615.48	$46,297	$0	($40,568)	0	$0	$0	$0	$0	$0
6	RT	7110	PG&E	Humboldt	1-Oct-13	16	No	INC	11	6:50	16:22	201.53	$0	$91	($6,532)	9	($287)	$0	$0	($41)	$0
7	RT	7620	SCE	LA Basin	24-Oct-13	75	Yes	INC	24	0:00	23:59	3467.29	$286,987	$0	($306,139)	1	($41)	$0	$0	($14)	$0
8	RT	7620	SCE	LA Basin	25-Oct-13	40	Yes	INC	24	0:00	23:59	3813.60	$163,920	$0	($255,539)	0	$0	$0	$0	$0	$0
9	RT	7820	SDG&E	San Diego-IV	3-Oct-13	280	No	INC	6	12:26	17:59	-2399.81	$0	$0	$78,999	(1287)	$0	$42,769	$0	($5,082)	$0
10	RT	7820	SDG&E	San Diego-IV	18-Oct-13	110	No	DEC	1	9:10	9:47	-60.79	$0	$0	$6,633	(20)	$0	$427	$0	$0	$0
11	RT	7820	SDG&E	San Diego-IV	18-Oct-13	310	No	INC	1	9:08	9:47	-16.18	$0	$0	$249	(16)	$0	$258	$0	$0	$0
12	RT	7820	SDG&E	San Diego-IV	20-Oct-13	109	No	DEC	1	11:21	11:32	-19.66	$0	$0	($629)	(4)	$0	($137)	$0	$0	$0
13	RT	7820	SDG&E	San Diego-IV	20-Oct-13	788	No	INC	1	11:17	11:31	-45.22	$0	$0	($1,610)	(21)	$0	($2,111)	$0	$0	$0
14	RT	7830	SCE	LA Basin	3-Oct-13	20	Yes	INC	12	12:00	23:59	720.54	$31,128	$32,654	($30,905)	0	$0	$0	$0	$0	$0
15	RT	7830	SCE	LA Basin	4-Oct-13	87-206	No	DEC	12	0:00	11:59	-370.76	$0	$0	$11,923	0	$0	$0	$0	$0	$0
16	RT	7830	SCE	LA Basin	4-Oct-13	0	No	INC	12	0:00	11:59	56.64	$0	$0	($1,986)	0	$0	$0	$0	$0	$0
17	RT	Bridging Schedules	SCE	LA Basin	23-Oct-13	20	No	INC	2	22:00	23:59	-2.83	$0	$0	$120	0	$0	$0	$0	$0	$0
18	RT	Intertie Emergency Assistance	Intertie	N/A	5-Oct-13	70	No	INC	1	13:00	13:59	0.00	$0	$0	$0	0	$0	$0	$0	$0	$0
19	RT	Intertie Emergency Assistance	Intertie	N/A	8-Oct-13	70	No	INC	1	0:35	0:59	0.00	$0	$0	$0	0	$0	$0	$0	$0	$0

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
20	RT	Intertie Emergency Assistance	Intertie	N/A	13-Oct-13	60	No	INC	1	13:16	13:59	0.00	$0	$0	$0	0	$0	$0	$0	$0	$0
21	RT	Software Limitation	PG&E	Fresno	10-Oct-13	39	No	INC	3	21:45	23:54	71.64	$2,365	$0	($10,238)	0	$0	$0	$0	$0	$0
22	RT	Software Limitation	SCE	Big Creek-Ventura	7-Oct-13	0	Yes	INC	1	23:25	23:59	1.33	$183	$0	($41)	0	$0	$0	$0	$0	$0
23	RT	Software Limitation	SCE	Big Creek-Ventura	10-Oct-13	0	Yes	INC	2	21:15	22:14	3.92	$0	$54	($129)	0	$0	$0	$0	$0	$0
24	RT	Software Limitation	SCE	Big Creek-Ventura	26-Oct-13	0	Yes	INC	2	0:45	1:44	3.92	$796	$0	($128)	0	$0	$0	$0	$0	$0
25	RT	Software Limitation	SCE	LA Basin	7-Oct-13	0	Yes	INC	1	23:25	23:54	3.98	$539	$0	($124)	0	$0	$0	$0	$0	$0
26	RT	Software Limitation	SCE	LA Basin	16-Oct-13	47	Yes	INC	1	15:47	15:59	2.40	$0	$0	($133)	0	$0	$0	$0	$0	$0
27	RT	Software Limitation	SCE	LA Basin	24-Oct-13	0	Yes	INC	21	0:40	20:34	-8.06	$0	$0	$4,012	0	$0	$0	$0	$0	$0
28	RT	Software Limitation	SCE	LA Basin	28-Oct-13	91-92	Yes	DEC	3	19:45	21:49	-169.79	$0	$0	$3,613	(170)	$0	$3,612	$0	$0	$0
29	RT	Software Limitation	SCE	LA Basin	29-Oct-13	92	Yes	DEC	2	20:17	21:39	-100.06	$0	$0	$1,981	(92)	$0	$1,663	$0	$0	$0
30	RT	Software Limitation	SCE	LA Basin	29-Oct-13	0	Yes	INC	14	9:05	22:24	0.06	$0	$121	($71)	0	$0	$0	$0	$0	$0
31	RT	Software Limitation	SCE	LA Basin	30-Oct-13	92	No	DEC	2	20:17	21:44	-100.06	$0	$0	$3,424	(83)	$0	$2,723	$0	$0	$0
32	RT	Software Limitation	SCE	LA Basin	30-Oct-13	0	Yes	INC	9	13:55	21:44	0.17	$536	$46	$6	0	$0	$0	$0	$0	$0
33	RT	Software Limitation	SDG&E	San Diego-IV	2-Oct-13	48	Yes	DEC	2	10:45	11:44	-55.88	$0	$0	$391	(44)	$0	$0	$0	$0	$0
34	RT	Software Limitation	SDG&E	San Diego-IV	2-Oct-13	0	Yes	INC	4	18:30	21:24	0.00	$0	$0	$0	0	$0	$0	$0	$0	$0
35	RT	Software Limitation	SDG&E	San Diego-IV	9-Oct-13	0	Yes	INC	3	6:15	8:04	0.00	$0	$0	$0	0	$0	$0	$0	$0	$0
36	RT	Software Limitation	SDG&E	San Diego-IV	18-Oct-13	0	No	INC	2	9:37	10:49	0.00	$0	$0	$0	0	$0	$0	$0	$0	$0
37	RT	Software Limitation	SDG&E	San Diego-IV	29-Oct-13	48	Yes	DEC	13	6:40	18:24	-58.96	$0	$0	$3,337	(44)	$0	$1,769	$0	$0	$0
38	RT	Software Limitation	SDG&E	San Diego-IV	29-Oct-13	0	Yes	INC	2	6:40	7:39	-2.00	$0	$0	$101	0	$0	$0	$0	$0	$0
39	RT	System Energy	Intertie	N/A	7-Oct-13	15-20	No	INC	8	16:00	23:59	0.00	$0	$0	$0	0	$0	$0	$0	$0	$0
40	RT	System Energy	Intertie	N/A	9-Oct-13	20	No	INC	1	15:00	15:59	0.00	$0	$0	$0	0	$0	$0	$0	$0	$0
41	RT	System Energy	Intertie	N/A	10-Oct-13	460	No	INC	8	11:00	18:59	0.00	$0	$0	$0	0	$0	$0	$0	$0	$0
42	RT	System Energy	Intertie	N/A	21-Oct-13	100	No	DEC	1	6:00	6:59	0.00	$0	$0	$0	0	$0	$0	$0	$0	$0
43	RT	System Energy	Intertie	N/A	21-Oct-13	226-400	No	INC	3	6:00	8:59	46.00	$0	$0	($2,258)	46	($2,258)	$0	($1,422)	$0	$0
44	RT	System Energy	Intertie	N/A	22-Oct-13	75	No	DEC	1	6:00	6:59	0.00	$0	$0	$0	0	$0	$0	$0	$0	$0
45	RT	System Energy	Intertie	N/A	22-Oct-13	400	No	INC	1	6:00	6:59	0.00	$0	$0	$0	0	$0	$0	$0	$0	$0
46	RT	System Energy	Intertie	N/A	25-Oct-13	745	No	INC	1	18:00	18:59	0.00	$0	$0	$0	0	$0	$0	$0	$0	$0
47	RT	System Energy	Intertie	N/A	28-Oct-13	400	No	INC	1	23:00	23:59	0.00	$0	$0	$0	0	$0	$0	$0	$0	$0
48	RT	System Energy	Intertie	N/A	29-Oct-13	312-325	No	INC	13	6:00	18:59	50.00	$0	$0	($2,020)	50	($2,020)	$0	($2,980)	$0	$0

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
49	RT	System Energy	SCE	Big Creek-Ventura	9-Oct-13	0	Yes	INC	2	20:20	21:19	0.00	$0	$8	($0)	0	$0	$0	$0	$0	$0
50	RT	System Energy	SCE	LA Basin	9-Oct-13	0	Yes	INC	1	23:45	23:59	3.78	$0	$0	($118)	0	$0	$0	$0	$0	$0
51	RT	System Energy	SCE	LA Basin	10-Oct-13	0	Yes	INC	24	0:00	23:29	0.00	$0	$0	($0)	0	$0	$0	$0	$0	$0
52	RT	Transmission Mitigation	SDG&E	San Diego-IV	2-Oct-13	21-22	No	INC	3	8:36	10:59	51.36	$5,593	$330	($955)	0	($0)	$0	$0	$0	$0
53	RT	Transmission Outage Other	PG&E	Sierra	1-Oct-13	2-11	Yes	DEC	13	8:15	20:59	-17.88	$0	$0	$680	0	$0	$0	$0	$0	$0
54	RT	Transmission Outage Other	PG&E	Sierra	1-Oct-13	20	Yes	INC	21	0:00	20:59	203.99	$11,123	$0	($8,233)	0	$0	$0	$0	$0	$0
55	RT	Transmission Outage PG&E	PG&E	Bay Area	15-Oct-13	500	No	INC	4	20:33	23:59	347.78	$0	$0	($12,430)	(113)	$0	$4,402	$0	($668)	$0
56	RT	Transmission Outage PG&E	PG&E	Bay Area	16-Oct-13	525	No	INC	24	0:00	23:59	-981.47	$0	$0	$39,042	(915)	$0	$37,369	$0	($8,341)	$0
57	RT	Transmission Outage PG&E	PG&E	Bay Area	17-Oct-13	525	No	INC	24	0:00	23:59	-663.37	$15,542	$0	$23,404	(807)	$0	$30,600	$0	($4,655)	$0
58	RT	Transmission Outage PG&E	PG&E	Bay Area	18-Oct-13	525	No	INC	18	0:00	17:59	-728.55	$0	$0	$25,920	(518)	$0	$19,124	$0	($2,724)	$0
59	RT	Transmission Outage PG&E	PG&E	Bay Area	21-Oct-13	525-552	No	INC	3	7:00	9:59	21.75	$0	$0	($1,155)	(2)	$0	$90	$0	($17)	$0
60	RT	Transmission Outage PG&E	PG&E	Humboldt	7-Oct-13	32	No	INC	18	6:41	23:59	315.93	$0	$0	($12,976)	60	($2,456)		$0	($50)	$0
61	RT	Transmission Outage PG&E	PG&E	Humboldt	8-Oct-13	32-62	No	INC	24	0:00	23:59	1029.30	$0	$0	($35,434)	83	($2,812)		$0	($181)	$0
62	RT	Transmission Outage PG&E	PG&E	Humboldt	9-Oct-13	15-45	No	INC	24	0:00	23:59	768.73	$0	$0	($32,749)	12	($531)		$0	($9)	$0
63	RT	Transmission Outage PG&E	PG&E	Humboldt	10-Oct-13	15-60	No	INC	19	5:05	23:58	893.28	$0	$0	($34,507)	29	($1,137)		$0	($109)	$0
64	RT	Transmission Outage PG&E	PG&E	Humboldt	11-Oct-13	15-60	No	INC	22	0:00	21:20	859.83	$13,328	$76	($33,962)	31	($1,242)		$0	($44)	$0
65	RT	Transmission Outage PG&E	PG&E	Humboldt	14-Oct-13	30-60	No	INC	18	6:39	23:58	324.20	$0	$63	($19,644)	23	($1,352)		$0	($24)	$0
66	RT	Transmission Outage PG&E	PG&E	Humboldt	15-Oct-13	16-46	No	INC	24	0:00	23:59	414.02	$2,680	$30	($16,309)	33	($1,255)		$0	($108)	$0
67	RT	Transmission Outage PG&E	PG&E	Humboldt	16-Oct-13	32-46	No	INC	24	0:00	23:59	747.08	$902	$0	($26,685)	18	($647)		$0	($113)	$0
68	RT	Transmission Outage PG&E	PG&E	Humboldt	17-Oct-13	32-60	No	INC	24	0:00	23:59	721.45	$9,618	$0	($25,528)	42	($1,534)		$0	($221)	$0
69	RT	Transmission Outage PG&E	PG&E	Humboldt	18-Oct-13	32-48	No	INC	24	0:00	23:59	693.44	$0	$0	($24,999)	66	($2,404)		$0	($298)	$0

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
70	RT	Transmission Outage PG&E	PG&E	Humboldt	19-Oct-13	16-32	No	INC	10	5:29	14:57	285.58	$10,242	$192	($9,950)	27	($928)	$0	$0	$0	$0
71	RT	Transmission Outage PG&E	PG&E	Humboldt	24-Oct-13	15	No	INC	4	18:54	21:59	56.19	$0	$0	($1,996)	1	($35)	$0	$0	($1)	$0
72	RT	Transmission Outage PG&E	PG&E	Humboldt	30-Oct-13	16	No	INC	4	18:50	21:41	41.57	$0	$0	($1,837)	4	($180)	$0	$0	$0	$0
73	RT	Transmission Outage PG&E	PG&E	Humboldt	31-Oct-13	15	No	INC	15	7:09	21:02	197.44	$0	$68	($7,565)	0	$0	$0	$0	$0	$0
74	RT	Transmission Outage PG&E	PG&E	N/A	1-Oct-13	400-499	No	INC	6	15:30	20:59	-937.46	$0	$0	$17,815	(754)	$0	$15,196	$0	($229)	$0
75	RT	Transmission Outage PG&E	PG&E	NCNB	8-Oct-13	84	No	DEC	5	2:48	6:47	-343.23	$0	$0	($10,237)	(335)	$0	($10,018)	$0	($29)	$0
76	RT	Transmission Outage PG&E	PG&E	NCNB	10-Oct-13	25	No	DEC	6	0:31	5:37	-127.37	$0	$0	$3,744	(127)	$0	$3,744	$0	($7,246)	$0
77	RT	Transmission Outage PG&E	PG&E	Sierra	9-Oct-13	3- 18	No	DEC	3	13:15	15:59	-22.77	$0	$0	$837	(17)	$0	$621	$0	($6)	$0
78	RT	Transmission Outage PG&E	PG&E	Sierra	25-Oct-13	20	Yes	INC	13	6:03	18:59	287.05	$19,588	$501	($11,697)	0	$0	$0	$0	$0	$0
79	RT	Transmission Outage PG&E	SCE	Big Creek-Ventura	8-Oct-13	0	No	INC	1	0:00	0:24	0.00	$0	$0	$0	0	$0	$0	$0	$0	$0
80	RT	Transmission Outage SCE	SCE	Big Creek-Ventura	30-Oct-13	0	No	INC	3	20:00	22:29	-8.21	$0	$0	$360	0	$0	$0	$0	$0	$0
81	RT	Transmission Outage SCE	SCE	LA Basin	15-Oct-13	20	Yes	INC	12	12:00	23:59	346.32	$30,420	$16,738	($15,564)	0	($2)	$0	$0	($0)	$0
82	RT	Transmission Outage SCE	SCE	LA Basin	21-Oct-13	25-65	Yes	INC	17	7:00	23:59	7049.74	$126,600	$43,723	($837,455)	0	$0	$0	$0	$0	$0
83	RT	Transmission Outage SCE	SCE	LA Basin	22-Oct-13	10-481	Yes	INC	24	0:00	23:59	11747.55	$175,310	$45,832	($793,260)	2402	($113,500)	$0	$0	$0	$0
84	RT	Transmission Outage SCE	SCE	LA Basin	23-Oct-13	75-225	Yes	INC	24	0:00	23:59	6548.53	$258,019	$0	($377,395)	0	$0	$0	$0	$0	$0
85	RT	Transmission Outage SDG&E	SCE	LA Basin	26-Oct-13	215-310	No	INC	4	0:20	3:59	1580.21	$0	$0	($80,685)	902	($42,788)	$0	$0	$0	$0
86	RT	Transmission Outage SDG&E	SDG&E	San Diego-IV	4-Oct-13	3	Yes	DEC	8	9:41	16:59	-20.25	$0	$0	$645	0	$0	$0	$0	$0	$0
87	RT	Transmission Outage SDG&E	SDG&E	San Diego-IV	4-Oct-13	150-195	Yes	INC	7	9:22	15:59	-741.46	$386	$0	($278,224)	(713)	$0	($278,802)	$0	$0	$0
88	RT	Transmission Outage SDG&E	SDG&E	San Diego-IV	25-Oct-13	105-292	No	DEC	3	21:45	23:59	-458.99	$0	$0	($4,638)	(423)	$0	$18,791	$0	($14,741)	$0
89	RT	Transmission Outage SDG&E	SDG&E	San Diego-IV	25-Oct-13	1-151	No	INC	3	21:40	23:59	112.42	$1,598	$0	$69,830	0	$0	$0	$0	$0	$0
90	RT	Transmission Outage	SDG&E	San Diego-IV	26-Oct-13	238	No	DEC	4	0:00	3:59	-	$0	$0	$5,115	(1031)	$0	$5,115	$0	$0	$0

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
		SDG&E										1031.33									
91	RT	Transmission Outage SDG&E	SDG&E	San Diego-IV	26-Oct-13	83	Yes	INC	24	0:00	23:59	-81.68	$15,084	$1,316	($13,827)	(432)	($4)	$2,699	$0	$0	$0
92	RT	Unit Testing	PG&E	Bay Area	30-Oct-13	366-563	No	INC	1	11:07	11:36	-0.96	$0	$0	$42	0	($0)	$0	$0	$0	$0
93	RT	Unit Testing	PG&E	Sierra	31-Oct-13	0	No	INC	1	11:00	11:29	0.00	$0	$0	$0	0	$0	$0	$0	$0	$0
94	RT	Unit Testing	SCE	Big Creek-Ventura	23-Oct-13	8	No	DEC	2	8:10	9:05	-3.91	$0	$0	$164	(4)	$0	$164	$0	$0	$0
95	RT	Unit Testing	SCE	Big Creek-Ventura	23-Oct-13	2- 16	No	INC	2	8:52	9:52	0.00	$0	$0	$0	0	$0	$0	$0	$0	$0
96	RT	Unit Testing	SCE	Big Creek-Ventura	30-Oct-13	17	No	INC	2	9:24	10:03	0.00	$0	$0	$0	0	$0	$0	$0	$0	$0
97	RT	Unit Testing	SCE	LA Basin	1-Oct-13	5	No	INC	1	9:02	9:39	2.47	$0	$0	($82)	0	$0	$0	$0	$0	$0
98	RT	Unit Testing	SCE	LA Basin	24-Oct-13	92	Yes	INC	4	8:18	11:20	59.95	$0	$0	($2,301)	0	($3)	$0	$0	$0	$0
99	RT	Unit Testing	SCE	LA Basin	31-Oct-13	14	No	INC	2	9:39	10:08	0.00	$0	$0	$0	0	$0	$0	$0	$0	$0

Appendix A: Explanation by Example

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

Example 1: Exceptional Dispatch Instructions Prior to DAM

In this fictitious example the ISO issued an exceptional dispatch instruction for resource A to be committed at its Pmin of 50 MW from hours ending 5 through 10 for a generation procedure 7630. Similarly, the ISO issued additional instructions to resources B and C for the same reason as shown in Table 2. Generally exceptional dispatches prior to the day-ahead market are commitments to minimum load. In this case the dispatch levels are all at minimum load. Table 2 below also shows the commitment costs and the total volume (MWh) of exceptional dispatch instruction for each resource. The minimum load costs and start up costs, shown in Table 2 are the eligible minimum load and start up costs which are different from the bid-in minimum load and start up costs[7]. 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 02, 2009. This summary classifies the data by reason, resource location, local reliability area, and trade date. The MW column in Table 3 is the range of MW; in this case the minimum instruction MW is 20 MW for resource C which occurs from hours ending 21 through 23. The maximum instruction occurs in hour ending 10. In this hour resource A is committed at 50 MW, resource B is committed at 30 MW and resource C is committed at 20 MW. This adds up to 100 MW. Thus the MW column shows the minimum and maximum of the overlaps of all the exceptional dispatch instructions. The Commitment column shows whether a resource was committed between the begin time and end time. Commitments are broken out separately from energy dispatches. In the day-ahead, however the exceptional dispatches are nearly always just commitments, as in this example. The Begin Time column shows hour ending 5 as this was the hour ending for first dispatch of the day, and the End Time column shows hour ending 23, as this was the hour with last dispatch. It is also possible that there might be some hours between the begin time and the end time where there might not be exceptional dispatch instructions for the given reason, meaning that the range between the begin time and end time can include null hours with no dispatch. The total volume (MWh) is the sum of MWh quantity for each resource, which adds up to 990 MWh. Similarly, all cost information is sum of individual resource costs. It is possible that some resources bid-in zero start-up cost; as seen in this example, resource A bid in zero for its start up cost. Since the ISO does not explicitly pay a resource for bid-in minimum load costs and start-up costs; these costs are recovered through the charge code CC6620 (Bid Cost Recovery), this table shows the summary of CC6620 for the classification. In this case, it is the sum of CC6620 for all three resources which adds up to $5000. This column shows the impact of exceptional dispatch on bid cost recovery for all pre-day-ahead exceptional dispatch commitments.

Table 3: FERC Summary of Instructions Prior to DAM

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

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[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 *($10/MWh-$100/MWh)). Similarly, volumes and real-time charge codes are calculated for resource C.

Table 4: Incremental Exceptional Dispatch Instructions in RTM

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

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

Table 5: FERC Summary of ED Instructions in RTM

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

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

Example 3: Decremental Exceptional Dispatch Instructions in RTM

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

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

Table 6: Decremental Exceptional Dispatch Instructions in RTM

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

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

Table 7: FERC Summary of Decremental ED Instructions in RTM

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

Appendix B: Price Impact Analysis

In the September 2 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 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 its bid set. The calculated LMP is equal to that bid price corresponding to the constrained MW segment.

Table 8 shows the price impact analysis information for node A, which is located in the 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 8640 five-minute intervals in October, this resource was issued exceptional dispatch instructions in 110 five-minute intervals. This resource was eligible to set the LMP in all of 110 intervals. Resource calculated LMP was less than the market LMP in all of 110 intervals. In the 110 intervals, the average decrease in five minute LMP was $33.52/MWh. This implies that if the ISO was able to model the constraint for this exceptional dispatch, then this resource and all other pricing nodes associated with that constraint would observe an average decrease of $33.52/MWh.

Table 9 shows the price impact analysis information for node B, which is located in the SCE area. This table shows all the five minute intervals in which the resource at PNode B was issued an exceptional dispatch instruction. Out of the 8640 five minute intervals, this resource was issued an exceptional dispatch instruction in 935 five minute intervals. This resource was eligible to set the LMP in all 935 intervals. Out of the 935 intervals, resource calculated LMP was larger than the market LMP in 657 intervals. In the 657 intervals, the average increase in five minute LMP was $12.60/MWh. Out of the 935 intervals, resource calculated LMP was less than the market LMP in 278 intervals. In the 278 intervals, the average decrease in five minute LMP was $45.10/MWh. This implies that if the ISO was able to model the constraint for this exceptional dispatch, then this resource and all other pricing nodes associated with that constraint would observe an average decrease of $4.55/MWh.

Table 8: Price Impact Analysis Information for Pricing Node A in PGAE LAP

Number	Trade Date	Trade Hour	Interval	Market LMP	Eligible Flag	Calculated LMP	Change in LMP
1	8-Oct-13	3	11	($29.98)	Yes	($30.00)	($0.02)
2	8-Oct-13	3	12	($29.98)	Yes	($30.00)	($0.02)
3	8-Oct-13	4	1	($29.99)	Yes	($30.00)	($0.01)
4	8-Oct-13	4	2	($29.98)	Yes	($30.00)	($0.02)
5	8-Oct-13	4	3	($29.90)	Yes	($30.00)	($0.10)
6	8-Oct-13	4	4	($29.90)	Yes	($30.00)	($0.10)
7	8-Oct-13	4	5	($29.90)	Yes	($30.00)	($0.10)
8	8-Oct-13	4	6	($29.90)	Yes	($30.00)	($0.10)
9	8-Oct-13	4	7	($29.90)	Yes	($30.00)	($0.10)
10	8-Oct-13	4	8	($29.90)	Yes	($30.00)	($0.10)
11	8-Oct-13	4	9	($29.90)	Yes	($30.00)	($0.10)
12	8-Oct-13	4	10	($29.90)	Yes	($30.00)	($0.10)
13	8-Oct-13	4	11	($29.90)	Yes	($30.00)	($0.10)
14	8-Oct-13	4	12	($29.90)	Yes	($30.00)	($0.10)
15	8-Oct-13	5	1	($29.93)	Yes	($30.00)	($0.07)
16	8-Oct-13	5	2	($29.93)	Yes	($30.00)	($0.07)
17	8-Oct-13	5	3	($29.92)	Yes	($30.00)	($0.08)
18	8-Oct-13	5	4	($29.91)	Yes	($30.00)	($0.09)
19	8-Oct-13	5	5	($29.91)	Yes	($30.00)	($0.09)
20	8-Oct-13	5	6	($29.91)	Yes	($30.00)	($0.09)
21	8-Oct-13	5	7	($29.91)	Yes	($30.00)	($0.09)
22	8-Oct-13	5	8	($29.91)	Yes	($30.00)	($0.09)
23	8-Oct-13	5	9	($29.91)	Yes	($30.00)	($0.09)
24	8-Oct-13	5	10	($29.90)	Yes	($30.00)	($0.10)
25	8-Oct-13	5	11	($29.90)	Yes	($30.00)	($0.10)
26	8-Oct-13	5	12	($29.90)	Yes	($30.00)	($0.10)
27	8-Oct-13	6	1	($29.92)	Yes	($30.00)	($0.08)
28	8-Oct-13	6	2	($29.93)	Yes	($30.00)	($0.07)
29	8-Oct-13	6	3	($29.93)	Yes	($30.00)	($0.07)
30	8-Oct-13	6	4	($29.91)	Yes	($30.00)	($0.09)
31	8-Oct-13	6	5	($29.90)	Yes	($30.00)	($0.10)
32	8-Oct-13	6	6	($29.90)	Yes	($30.00)	($0.10)
33	8-Oct-13	6	7	($29.90)	Yes	($30.00)	($0.10)
34	8-Oct-13	6	8	($29.90)	Yes	($30.00)	($0.10)
35	8-Oct-13	6	9	($29.90)	Yes	($30.00)	($0.10)
36	8-Oct-13	6	10	($29.90)	Yes	($30.00)	($0.10)
37	8-Oct-13	6	11	($29.90)	Yes	($30.00)	($0.10)
38	8-Oct-13	6	12	($29.90)	Yes	($30.00)	($0.10)
39	8-Oct-13	7	1	($29.90)	Yes	($30.00)	($0.10)
40	8-Oct-13	7	2	($29.90)	Yes	($30.00)	($0.10)
41	8-Oct-13	7	3	($29.90)	Yes	($30.00)	($0.10)
42	8-Oct-13	7	4	($29.90)	Yes	($30.00)	($0.10)

43	8-Oct-13	7	5	($29.87)	Yes	($30.00)	($0.13)
44	8-Oct-13	7	6	($29.88)	Yes	($30.00)	($0.12)
45	8-Oct-13	7	7	($29.87)	Yes	($30.00)	($0.13)
46	8-Oct-13	7	8	($29.87)	Yes	($30.00)	($0.13)
47	8-Oct-13	7	9	($29.85)	Yes	($30.00)	($0.15)
48	8-Oct-13	7	10	($29.84)	Yes	($30.00)	($0.16)
49	10-Oct-13	1	7	$30.70	Yes	($30.00)	($60.70)
50	10-Oct-13	1	8	$30.41	Yes	($30.00)	($60.41)
51	10-Oct-13	1	9	$29.67	Yes	($30.00)	($59.67)
52	10-Oct-13	1	10	$29.33	Yes	($30.00)	($59.33)
53	10-Oct-13	1	11	$29.29	Yes	($30.00)	($59.29)
54	10-Oct-13	1	12	$29.29	Yes	($30.00)	($59.29)
55	10-Oct-13	2	1	$30.63	Yes	($30.00)	($60.63)
56	10-Oct-13	2	2	$30.63	Yes	($30.00)	($60.63)
57	10-Oct-13	2	3	$30.57	Yes	($30.00)	($60.57)
58	10-Oct-13	2	4	$30.53	Yes	($30.00)	($60.53)
59	10-Oct-13	2	5	$29.51	Yes	($30.00)	($59.51)
60	10-Oct-13	2	6	$29.51	Yes	($30.00)	($59.51)
61	10-Oct-13	2	7	$29.29	Yes	($30.00)	($59.29)
62	10-Oct-13	2	8	$29.38	Yes	($30.00)	($59.38)
63	10-Oct-13	2	9	$29.38	Yes	($30.00)	($59.38)
64	10-Oct-13	2	10	$29.30	Yes	($30.00)	($59.30)
65	10-Oct-13	2	11	$29.30	Yes	($30.00)	($59.30)
66	10-Oct-13	2	12	$29.23	Yes	($30.00)	($59.23)
67	10-Oct-13	3	1	$30.24	Yes	($30.00)	($60.24)
68	10-Oct-13	3	2	$30.49	Yes	($30.00)	($60.49)
69	10-Oct-13	3	3	$30.49	Yes	($30.00)	($60.49)
70	10-Oct-13	3	4	$30.47	Yes	($30.00)	($60.47)
71	10-Oct-13	3	5	$30.47	Yes	($30.00)	($60.47)
72	10-Oct-13	3	6	$29.97	Yes	($30.00)	($59.97)
73	10-Oct-13	3	7	$30.17	Yes	($30.00)	($60.17)
74	10-Oct-13	3	8	$30.17	Yes	($30.00)	($60.17)
75	10-Oct-13	3	9	$29.21	Yes	($30.00)	($59.21)
76	10-Oct-13	3	10	$29.16	Yes	($30.00)	($59.16)
77	10-Oct-13	3	11	$29.16	Yes	($30.00)	($59.16)
78	10-Oct-13	3	12	$29.21	Yes	($30.00)	($59.21)
79	10-Oct-13	4	1	$30.06	Yes	($30.00)	($60.06)
80	10-Oct-13	4	2	$30.22	Yes	($30.00)	($60.22)
81	10-Oct-13	4	3	$30.46	Yes	($30.00)	($60.46)
82	10-Oct-13	4	4	$30.44	Yes	($30.00)	($60.44)
83	10-Oct-13	4	5	$30.44	Yes	($30.00)	($60.44)
84	10-Oct-13	4	6	$30.44	Yes	($30.00)	($60.44)
85	10-Oct-13	4	7	$30.45	Yes	($30.00)	($60.45)
86	10-Oct-13	4	8	$30.45	Yes	($30.00)	($60.45)
87	10-Oct-13	4	9	$30.45	Yes	($30.00)	($60.45)
88	10-Oct-13	4	10	$31.38	Yes	($30.00)	($61.38)

89	10-Oct-13	4	11	$33.59	Yes	($30.00)	($63.59)
90	10-Oct-13	4	12	$33.59	Yes	($30.00)	($63.59)
91	10-Oct-13	5	1	$31.50	Yes	($30.00)	($61.50)
92	10-Oct-13	5	2	$30.46	Yes	($30.00)	($60.46)
93	10-Oct-13	5	3	$30.46	Yes	($30.00)	($60.46)
94	10-Oct-13	5	4	$30.52	Yes	($30.00)	($60.52)
95	10-Oct-13	5	5	$29.31	Yes	($30.00)	($59.31)
96	10-Oct-13	5	6	$29.31	Yes	($30.00)	($59.31)
97	10-Oct-13	5	7	$29.39	Yes	($30.00)	($59.39)
98	10-Oct-13	5	8	$28.25	Yes	($30.00)	($58.25)
99	10-Oct-13	5	9	$28.25	Yes	($30.00)	($58.25)
100	10-Oct-13	5	10	$28.93	Yes	($30.00)	($58.93)
101	10-Oct-13	5	11	$28.17	Yes	($30.00)	($58.17)
102	10-Oct-13	5	12	$28.93	Yes	($30.00)	($58.93)
103	10-Oct-13	6	1	$26.25	Yes	($30.00)	($56.25)
104	10-Oct-13	6	2	$19.52	Yes	($30.00)	($49.52)
105	10-Oct-13	6	3	$18.90	Yes	($30.00)	($48.90)
106	10-Oct-13	6	4	$19.50	Yes	($30.00)	($49.50)
107	10-Oct-13	6	5	$27.75	Yes	($30.00)	($57.75)
108	10-Oct-13	6	6	$29.42	Yes	($30.00)	($59.42)
109	10-Oct-13	6	7	$30.73	Yes	($30.00)	($60.73)
110	10-Oct-13	6	8	$30.84	Yes	($30.00)	($60.84)

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	21-Oct-13	11	1	$45.65	Yes	$45.00	($0.65)
2	21-Oct-13	11	2	$45.64	Yes	$45.00	($0.64)
3	21-Oct-13	11	3	$45.70	Yes	$45.00	($0.70)
4	21-Oct-13	11	4	$39.48	Yes	$45.00	$5.52
5	21-Oct-13	11	5	$45.64	Yes	$45.00	($0.64)
6	21-Oct-13	11	6	$39.49	Yes	$45.00	$5.51
7	21-Oct-13	11	7	$52.92	Yes	$45.00	($7.92)
8	21-Oct-13	11	8	$50.42	Yes	$45.00	($5.42)
9	21-Oct-13	11	9	$45.86	Yes	$45.00	($0.86)
10	21-Oct-13	11	10	$39.52	Yes	$45.00	$5.48
11	21-Oct-13	11	11	$39.97	Yes	$45.00	$5.03
12	21-Oct-13	11	12	$39.54	Yes	$45.00	$5.46
13	21-Oct-13	12	1	$52.29	Yes	$45.00	($7.29)
14	21-Oct-13	12	2	$52.40	Yes	$45.00	($7.40)
15	21-Oct-13	12	3	$134.78	Yes	$45.00	($89.78)
16	21-Oct-13	12	4	$43.07	Yes	$45.00	$1.93
17	21-Oct-13	12	5	$43.13	Yes	$45.00	$1.87
18	21-Oct-13	12	6	$45.55	Yes	$45.00	($0.55)
19	21-Oct-13	12	7	$56.57	Yes	$45.00	($11.57)
20	21-Oct-13	12	8	$56.57	Yes	$45.00	($11.57)
21	21-Oct-13	12	9	$56.22	Yes	$45.00	($11.22)
22	21-Oct-13	12	10	$55.19	Yes	$45.00	($10.19)
23	21-Oct-13	12	11	$53.26	Yes	$45.00	($8.26)
24	21-Oct-13	12	12	$53.15	Yes	$45.00	($8.15)
25	21-Oct-13	13	1	$55.30	Yes	$45.00	($10.30)
26	21-Oct-13	13	2	$56.87	Yes	$45.00	($11.87)
27	21-Oct-13	13	3	$55.28	Yes	$45.00	($10.28)
28	21-Oct-13	13	4	$46.75	Yes	$45.00	($1.75)
29	21-Oct-13	13	5	$99.25	Yes	$45.00	($54.25)
30	21-Oct-13	13	6	$95.52	Yes	$45.00	($50.52)
31	21-Oct-13	13	7	$55.04	Yes	$45.00	($10.04)
32	21-Oct-13	13	8	$55.04	Yes	$45.00	($10.04)
33	21-Oct-13	13	9	$55.12	Yes	$45.00	($10.12)
34	21-Oct-13	13	10	$55.22	Yes	$45.00	($10.22)
35	21-Oct-13	13	11	$55.38	Yes	$45.00	($10.38)
36	21-Oct-13	13	12	$56.32	Yes	$45.00	($11.32)
37	21-Oct-13	14	1	$54.46	Yes	$45.00	($9.46)
38	21-Oct-13	14	2	$54.58	Yes	$45.00	($9.58)
39	21-Oct-13	14	3	$54.47	Yes	$45.00	($9.47)
40	21-Oct-13	14	4	$54.87	Yes	$45.00	($9.87)
41	21-Oct-13	14	5	$54.72	Yes	$45.00	($9.72)
42	21-Oct-13	14	6	$54.60	Yes	$45.00	($9.60)

43	21-Oct-13	14	7	$54.59	Yes	$45.00	($9.59)
44	21-Oct-13	14	8	$54.71	Yes	$45.00	($9.71)
45	21-Oct-13	14	9	$54.71	Yes	$45.00	($9.71)
46	21-Oct-13	14	10	$54.42	Yes	$45.00	($9.42)
47	21-Oct-13	14	11	$54.50	Yes	$45.00	($9.50)
48	21-Oct-13	14	12	$54.42	Yes	$45.00	($9.42)
49	21-Oct-13	15	1	$53.32	Yes	$45.00	($8.32)
50	21-Oct-13	15	2	$42.66	Yes	$45.00	$2.34
51	21-Oct-13	15	3	$42.57	Yes	$45.00	$2.43
52	21-Oct-13	15	4	$290.94	Yes	$45.00	($245.94)
53	21-Oct-13	15	5	$52.02	Yes	$45.00	($7.02)
54	21-Oct-13	15	6	$52.02	Yes	$45.00	($7.02)
55	21-Oct-13	15	7	$53.60	Yes	$45.00	($8.60)
56	21-Oct-13	15	8	$53.65	Yes	$45.00	($8.65)
57	21-Oct-13	15	9	$54.02	Yes	$45.00	($9.02)
58	21-Oct-13	15	10	$51.29	Yes	$45.00	($6.29)
59	21-Oct-13	15	11	$51.62	Yes	$45.00	($6.62)
60	21-Oct-13	15	12	$51.49	Yes	$45.00	($6.49)
61	21-Oct-13	16	1	$53.92	Yes	$45.00	($8.92)
62	21-Oct-13	16	2	$53.92	Yes	$45.00	($8.92)
63	21-Oct-13	16	3	$53.92	Yes	$45.00	($8.92)
64	21-Oct-13	16	4	$52.12	Yes	$45.00	($7.12)
65	21-Oct-13	16	5	$52.09	Yes	$45.00	($7.09)
66	21-Oct-13	16	6	$50.79	Yes	$45.00	($5.79)
67	21-Oct-13	16	7	$53.61	Yes	$45.00	($8.61)
68	21-Oct-13	16	8	$54.00	Yes	$45.00	($9.00)
69	21-Oct-13	16	9	$54.00	Yes	$45.00	($9.00)
70	21-Oct-13	16	10	$53.89	Yes	$45.00	($8.89)
71	21-Oct-13	16	11	$57.19	Yes	$45.00	($12.19)
72	21-Oct-13	16	12	$53.68	Yes	$45.00	($8.68)
73	21-Oct-13	17	1	$52.52	Yes	$45.00	($7.52)
74	21-Oct-13	17	2	$52.49	Yes	$45.00	($7.49)
75	21-Oct-13	17	3	$51.64	Yes	$45.00	($6.64)
76	21-Oct-13	17	4	$39.40	Yes	$45.00	$5.60
77	21-Oct-13	17	5	$39.43	Yes	$45.00	$5.57
78	21-Oct-13	17	6	$45.00	Yes	$45.00	$0.00
79	21-Oct-13	17	7	$51.10	Yes	$45.00	($6.10)
80	21-Oct-13	17	8	$45.65	Yes	$45.00	($0.65)
81	21-Oct-13	17	9	$129.94	Yes	$45.00	($84.94)
82	21-Oct-13	17	10	$50.48	Yes	$45.00	($5.48)
83	21-Oct-13	17	11	$57.73	Yes	$45.00	($12.73)
84	21-Oct-13	17	12	$53.21	Yes	$45.00	($8.21)
85	21-Oct-13	18	1	$51.23	Yes	$45.00	($6.23)
86	21-Oct-13	18	2	$52.86	Yes	$45.00	($7.86)
87	21-Oct-13	18	3	$62.14	Yes	$45.00	($17.14)
88	21-Oct-13	18	4	$53.07	Yes	$45.00	($8.07)

89	21-Oct-13	18	5	$53.07	Yes	$45.00	($8.07)
90	21-Oct-13	18	6	$53.39	Yes	$45.00	($8.39)
91	21-Oct-13	18	7	$54.41	Yes	$45.00	($9.41)
92	21-Oct-13	18	8	$58.36	Yes	$45.00	($13.36)
93	21-Oct-13	18	9	$54.46	Yes	$45.00	($9.46)
94	21-Oct-13	18	10	$61.92	Yes	$45.00	($16.92)
95	21-Oct-13	18	11	$54.42	Yes	$45.00	($9.42)
96	21-Oct-13	18	12	$500.08	Yes	$45.00	($455.08)
97	21-Oct-13	19	1	$49.58	Yes	$45.00	($4.58)
98	21-Oct-13	19	2	$45.61	Yes	$45.00	($0.61)
99	21-Oct-13	19	3	$50.88	Yes	$45.00	($5.88)
100	21-Oct-13	19	4	$566.61	Yes	$45.00	($521.61)
101	21-Oct-13	19	5	$545.49	Yes	$45.00	($500.49)
102	21-Oct-13	19	6	$479.23	Yes	$45.00	($434.23)
103	21-Oct-13	19	7	$774.79	Yes	$45.00	($729.79)
104	21-Oct-13	19	8	$697.49	Yes	$45.00	($652.49)
105	21-Oct-13	19	9	$267.95	Yes	$45.00	($222.95)
106	21-Oct-13	19	10	$305.69	Yes	$45.00	($260.69)
107	21-Oct-13	19	11	$555.77	Yes	$45.00	($510.77)
108	21-Oct-13	19	12	$555.77	Yes	$45.00	($510.77)
109	21-Oct-13	20	1	$314.53	Yes	$45.00	($269.53)
110	21-Oct-13	20	2	$308.81	Yes	$45.00	($263.81)
111	21-Oct-13	20	3	$78.13	Yes	$45.00	($33.13)
112	21-Oct-13	20	4	$51.52	Yes	$45.00	($6.52)
113	21-Oct-13	20	5	$39.38	Yes	$45.00	$5.62
114	21-Oct-13	20	6	$47.43	Yes	$45.00	($2.43)
115	21-Oct-13	20	7	$39.33	Yes	$45.00	$5.67
116	21-Oct-13	20	8	$49.23	Yes	$45.00	($4.23)
117	21-Oct-13	20	9	$50.42	Yes	$45.00	($5.42)
118	21-Oct-13	20	10	$39.30	Yes	$45.00	$5.70
119	21-Oct-13	20	11	$39.30	Yes	$45.00	$5.70
120	21-Oct-13	20	12	$39.19	Yes	$45.00	$5.81
121	21-Oct-13	21	1	$45.00	Yes	$45.00	$0.00
122	21-Oct-13	21	2	$40.13	Yes	$45.00	$4.87
123	21-Oct-13	21	3	$49.90	Yes	$45.00	($4.90)
124	21-Oct-13	21	4	$49.28	Yes	$45.00	($4.28)
125	21-Oct-13	21	5	$49.27	Yes	$45.00	($4.27)
126	21-Oct-13	21	6	$46.85	Yes	$45.00	($1.85)
127	21-Oct-13	21	7	$50.04	Yes	$45.00	($5.04)
128	21-Oct-13	21	8	$50.13	Yes	$45.00	($5.13)
129	21-Oct-13	21	9	$52.12	Yes	$45.00	($7.12)
130	21-Oct-13	21	10	$40.07	Yes	$45.00	$4.93
131	21-Oct-13	21	11	$39.81	Yes	$45.00	$5.19
132	21-Oct-13	21	12	$39.81	Yes	$45.00	$5.19
133	21-Oct-13	22	1	$45.00	Yes	$45.00	$0.00
134	21-Oct-13	22	2	$40.21	Yes	$45.00	$4.79

135	21-Oct-13	22	3	$40.21	Yes	$45.00	$4.79
136	21-Oct-13	22	4	$44.63	Yes	$45.00	$0.37
137	21-Oct-13	22	5	$45.00	Yes	$45.00	$0.00
138	21-Oct-13	22	6	$39.75	Yes	$45.00	$5.25
139	21-Oct-13	22	7	$489.24	Yes	$45.00	($444.24)
140	21-Oct-13	22	8	$51.01	Yes	$45.00	($6.01)
141	21-Oct-13	22	9	$39.32	Yes	$45.00	$5.68
142	21-Oct-13	22	10	$39.26	Yes	$45.00	$5.74
143	21-Oct-13	22	11	$39.22	Yes	$45.00	$5.78
144	21-Oct-13	22	12	$33.98	Yes	$45.00	$11.02
145	21-Oct-13	23	1	$38.32	Yes	$45.00	$6.68
146	21-Oct-13	23	2	$36.40	Yes	$45.00	$8.60
147	21-Oct-13	23	3	$36.16	Yes	$45.00	$8.84
148	21-Oct-13	23	4	$35.90	Yes	$45.00	$9.10
149	21-Oct-13	23	5	$35.64	Yes	$45.00	$9.36
150	21-Oct-13	23	6	$35.56	Yes	$45.00	$9.44
151	21-Oct-13	23	7	$35.51	Yes	$45.00	$9.49
152	21-Oct-13	23	8	$34.99	Yes	$45.00	$10.01
153	21-Oct-13	23	9	$33.68	Yes	$45.00	$11.32
154	21-Oct-13	23	10	$32.58	Yes	$45.00	$12.42
155	21-Oct-13	23	11	$32.58	Yes	$45.00	$12.42
156	21-Oct-13	23	12	$32.00	Yes	$45.00	$13.00
157	21-Oct-13	24	1	$36.67	Yes	$45.00	$8.33
158	21-Oct-13	24	2	$35.24	Yes	$45.00	$9.76
159	21-Oct-13	24	3	$38.34	Yes	$45.00	$6.66
160	21-Oct-13	24	4	$38.26	Yes	$45.00	$6.74
161	21-Oct-13	24	5	$38.26	Yes	$45.00	$6.74
162	21-Oct-13	24	6	$41.67	Yes	$45.00	$3.33
163	21-Oct-13	24	7	$41.54	Yes	$45.00	$3.46
164	21-Oct-13	24	8	$38.18	Yes	$45.00	$6.82
165	21-Oct-13	24	9	$35.29	Yes	$45.00	$9.71
166	21-Oct-13	24	10	$34.28	Yes	$45.00	$10.72
167	21-Oct-13	24	11	$34.28	Yes	$45.00	$10.72
168	21-Oct-13	24	12	$33.39	Yes	$45.00	$11.61
169	22-Oct-13	12	10	$38.65	Yes	$46.49	$7.84
170	22-Oct-13	12	11	$42.44	Yes	$46.49	$4.05
171	22-Oct-13	12	12	$35.11	Yes	$46.49	$11.38
172	22-Oct-13	13	1	$49.31	Yes	$46.49	($2.82)
173	22-Oct-13	13	2	$46.49	Yes	$46.49	$0.00
174	22-Oct-13	13	3	$45.03	Yes	$46.49	$1.46
175	22-Oct-13	13	4	$47.33	Yes	$46.49	($0.84)
176	22-Oct-13	13	5	$46.83	Yes	$46.49	($0.34)
177	22-Oct-13	13	6	$46.82	Yes	$46.49	($0.33)
178	22-Oct-13	13	7	$477.97	Yes	$46.49	($431.48)
179	22-Oct-13	13	8	$53.81	Yes	$46.49	($7.32)
180	22-Oct-13	13	9	$52.58	Yes	$46.49	($6.09)

181	22-Oct-13	13	10	$46.97	Yes	$46.49	($0.48)
182	22-Oct-13	13	11	$50.43	Yes	$46.49	($3.94)
183	22-Oct-13	13	12	$48.46	Yes	$46.49	($1.97)
184	22-Oct-13	14	1	$46.81	Yes	$46.49	($0.32)
185	22-Oct-13	14	2	$34.62	Yes	$46.49	$11.87
186	22-Oct-13	14	3	$38.11	Yes	$46.49	$8.38
187	22-Oct-13	14	4	$46.48	Yes	$46.49	$0.01
188	22-Oct-13	14	5	$43.10	Yes	$46.49	$3.39
189	22-Oct-13	14	6	$45.96	Yes	$46.49	$0.53
190	22-Oct-13	14	7	$52.50	Yes	$46.49	($6.01)
191	22-Oct-13	14	8	$51.34	Yes	$46.49	($4.85)
192	22-Oct-13	14	9	$52.83	Yes	$46.49	($6.34)
193	22-Oct-13	14	10	$52.86	Yes	$46.49	($6.37)
194	22-Oct-13	14	11	$154.09	Yes	$46.49	($107.60)
195	22-Oct-13	14	12	$53.15	Yes	$46.49	($6.66)
196	22-Oct-13	15	1	$52.99	Yes	$46.49	($6.50)
197	22-Oct-13	15	2	$49.30	Yes	$46.49	($2.81)
198	22-Oct-13	15	3	$39.25	Yes	$46.49	$7.24
199	22-Oct-13	15	4	$51.42	Yes	$46.49	($4.93)
200	22-Oct-13	15	5	$52.94	Yes	$46.49	($6.45)
201	22-Oct-13	15	6	$52.94	Yes	$46.49	($6.45)
202	22-Oct-13	15	7	$46.56	Yes	$46.49	($0.07)
203	22-Oct-13	15	8	$51.39	Yes	$46.49	($4.90)
204	22-Oct-13	15	9	$48.03	Yes	$46.49	($1.54)
205	22-Oct-13	15	10	$49.30	Yes	$46.49	($2.81)
206	22-Oct-13	15	11	$51.46	Yes	$46.49	($4.97)
207	22-Oct-13	15	12	$53.70	Yes	$46.49	($7.21)
208	22-Oct-13	16	1	$51.08	Yes	$46.49	($4.59)
209	22-Oct-13	16	2	$47.63	Yes	$46.49	($1.14)
210	22-Oct-13	16	3	$47.08	Yes	$46.49	($0.59)
211	22-Oct-13	16	4	$51.68	Yes	$46.49	($5.19)
212	22-Oct-13	16	5	$50.98	Yes	$46.49	($4.49)
213	22-Oct-13	16	6	$62.78	Yes	$46.49	($16.29)
214	22-Oct-13	16	7	$46.23	Yes	$46.49	$0.26
215	22-Oct-13	16	8	$46.93	Yes	$46.49	($0.44)
216	22-Oct-13	16	9	$48.46	Yes	$46.49	($1.97)
217	22-Oct-13	16	10	$47.79	Yes	$46.49	($1.30)
218	22-Oct-13	16	11	$49.30	Yes	$46.49	($2.81)
219	22-Oct-13	16	12	$51.75	Yes	$46.49	($5.26)
220	22-Oct-13	17	1	$51.08	Yes	$46.49	($4.59)
221	22-Oct-13	17	2	$51.28	Yes	$46.49	($4.79)
222	22-Oct-13	17	3	$51.07	Yes	$46.49	($4.58)
223	22-Oct-13	17	4	$46.94	Yes	$46.49	($0.45)
224	22-Oct-13	17	5	$48.46	Yes	$46.49	($1.97)
225	22-Oct-13	17	6	$49.30	Yes	$46.49	($2.81)
226	22-Oct-13	17	7	$49.29	Yes	$46.49	($2.80)

227	22-Oct-13	17	8	$51.27	Yes	$46.49	($4.78)
228	22-Oct-13	17	9	$52.27	Yes	$46.49	($5.78)
229	22-Oct-13	17	10	$51.75	Yes	$46.49	($5.26)
230	22-Oct-13	17	11	$52.86	Yes	$46.49	($6.37)
231	22-Oct-13	17	12	$52.89	Yes	$46.49	($6.40)
232	22-Oct-13	18	1	$48.46	Yes	$46.49	($1.97)
233	22-Oct-13	18	2	$46.91	Yes	$46.49	($0.42)
234	22-Oct-13	18	3	$47.21	Yes	$46.49	($0.72)
235	22-Oct-13	18	4	$39.77	Yes	$46.49	$6.72
236	22-Oct-13	18	5	$44.52	Yes	$46.49	$1.97
237	22-Oct-13	18	6	$48.46	Yes	$46.49	($1.97)
238	22-Oct-13	18	7	$46.48	Yes	$46.49	$0.01
239	22-Oct-13	18	8	$51.01	Yes	$46.49	($4.52)
240	22-Oct-13	18	9	$53.01	Yes	$46.49	($6.52)
241	22-Oct-13	18	10	$50.05	Yes	$46.49	($3.56)
242	22-Oct-13	18	11	$40.95	Yes	$46.49	$5.54
243	22-Oct-13	18	12	$40.59	Yes	$46.49	$5.90
244	22-Oct-13	19	1	$38.50	Yes	$46.49	$7.99
245	22-Oct-13	19	2	$39.80	Yes	$46.49	$6.69
246	22-Oct-13	19	3	$46.49	Yes	$46.49	$0.00
247	22-Oct-13	19	4	$46.48	Yes	$46.49	$0.01
248	22-Oct-13	19	5	$52.88	Yes	$46.49	($6.39)
249	22-Oct-13	19	6	$53.09	Yes	$46.49	($6.60)
250	22-Oct-13	19	7	$49.44	Yes	$46.49	($2.95)
251	22-Oct-13	19	8	$53.96	Yes	$46.49	($7.47)
252	22-Oct-13	19	9	$433.52	Yes	$46.49	($387.03)
253	22-Oct-13	19	10	$675.19	Yes	$46.49	($628.70)
254	22-Oct-13	19	11	$106.83	Yes	$46.49	($60.34)
255	22-Oct-13	19	12	$69.06	Yes	$46.49	($22.57)
256	22-Oct-13	20	1	$46.48	Yes	$46.49	$0.01
257	22-Oct-13	20	2	$47.56	Yes	$46.49	($1.07)
258	22-Oct-13	20	3	$46.48	Yes	$46.49	$0.01
259	22-Oct-13	20	4	$52.28	Yes	$46.49	($5.79)
260	22-Oct-13	20	5	$49.30	Yes	$46.49	($2.81)
261	22-Oct-13	20	6	$49.30	Yes	$46.49	($2.81)
262	22-Oct-13	20	7	$41.18	Yes	$46.49	$5.31
263	22-Oct-13	20	8	$41.18	Yes	$46.49	$5.31
264	22-Oct-13	20	9	$41.18	Yes	$46.49	$5.31
265	22-Oct-13	20	10	$40.83	Yes	$46.49	$5.66
266	22-Oct-13	20	11	$40.64	Yes	$46.49	$5.85
267	22-Oct-13	20	12	$40.12	Yes	$46.49	$6.37
268	22-Oct-13	21	1	$46.49	Yes	$46.49	$0.00
269	22-Oct-13	21	2	$46.13	Yes	$46.49	$0.36
270	22-Oct-13	21	3	$51.19	Yes	$46.49	($4.70)
271	22-Oct-13	21	4	$53.95	Yes	$46.49	($7.46)
272	22-Oct-13	21	5	$52.69	Yes	$46.49	($6.20)

273	22-Oct-13	21	6	$51.79	Yes	$46.49	($5.30)
274	22-Oct-13	21	7	$48.45	Yes	$46.49	($1.96)
275	22-Oct-13	21	8	$51.45	Yes	$46.49	($4.96)
276	22-Oct-13	21	9	$40.08	Yes	$46.49	$6.41
277	22-Oct-13	21	10	$40.16	Yes	$46.49	$6.33
278	22-Oct-13	21	11	$40.07	Yes	$46.49	$6.42
279	22-Oct-13	21	12	$38.67	Yes	$46.49	$7.82
280	22-Oct-13	22	1	$44.09	Yes	$46.49	$2.40
281	22-Oct-13	22	2	$40.48	Yes	$46.49	$6.01
282	22-Oct-13	22	3	$41.21	Yes	$46.49	$5.28
283	22-Oct-13	22	4	$46.49	Yes	$46.49	$0.00
284	22-Oct-13	22	5	$42.64	Yes	$46.49	$3.85
285	22-Oct-13	22	6	$41.14	Yes	$46.49	$5.35
286	22-Oct-13	22	7	$41.11	Yes	$46.49	$5.38
287	22-Oct-13	22	8	$39.10	Yes	$46.49	$7.39
288	22-Oct-13	22	9	$35.63	Yes	$46.49	$10.86
289	22-Oct-13	22	10	$35.42	Yes	$46.49	$11.07
290	22-Oct-13	22	11	$34.49	Yes	$46.49	$12.00
291	22-Oct-13	22	12	$28.45	Yes	$46.49	$18.04
292	22-Oct-13	23	1	$35.44	Yes	$46.49	$11.05
293	22-Oct-13	23	2	$35.44	Yes	$46.49	$11.05
294	22-Oct-13	23	3	$37.79	Yes	$46.49	$8.70
295	22-Oct-13	23	4	$37.80	Yes	$46.49	$8.69
296	22-Oct-13	23	5	$37.43	Yes	$46.49	$9.06
297	22-Oct-13	23	6	$36.20	Yes	$46.49	$10.29
298	22-Oct-13	23	7	$34.87	Yes	$46.49	$11.62
299	22-Oct-13	23	8	$34.14	Yes	$46.49	$12.35
300	22-Oct-13	23	9	$34.30	Yes	$46.49	$12.19
301	22-Oct-13	23	10	$33.59	Yes	$46.49	$12.90
302	22-Oct-13	23	11	$33.13	Yes	$46.49	$13.36
303	22-Oct-13	23	12	$32.75	Yes	$46.49	$13.74
304	22-Oct-13	24	1	$35.21	Yes	$46.49	$11.28
305	22-Oct-13	24	2	$34.99	Yes	$46.49	$11.50
306	22-Oct-13	24	3	$35.74	Yes	$46.49	$10.75
307	22-Oct-13	24	4	$35.48	Yes	$46.49	$11.01
308	22-Oct-13	24	5	$36.40	Yes	$46.49	$10.09
309	22-Oct-13	24	6	$35.50	Yes	$46.49	$10.99
310	22-Oct-13	24	7	$34.85	Yes	$46.49	$11.64
311	22-Oct-13	24	8	$34.54	Yes	$46.49	$11.95
312	22-Oct-13	24	9	$34.39	Yes	$46.49	$12.10
313	22-Oct-13	24	10	$34.14	Yes	$46.49	$12.35
314	22-Oct-13	24	11	$33.61	Yes	$46.49	$12.88
315	22-Oct-13	24	12	$32.52	Yes	$46.49	$13.97
316	23-Oct-13	1	1	$32.46	Yes	$45.33	$12.87
317	23-Oct-13	1	2	$33.02	Yes	$45.33	$12.31
318	23-Oct-13	1	3	$33.09	Yes	$45.33	$12.24

319	23-Oct-13	1	4	$33.09	Yes	$45.33	$12.24
320	23-Oct-13	1	5	$32.42	Yes	$45.33	$12.91
321	23-Oct-13	1	6	$32.20	Yes	$45.33	$13.13
322	23-Oct-13	1	7	$32.38	Yes	$45.33	$12.95
323	23-Oct-13	1	8	$32.29	Yes	$45.33	$13.04
324	23-Oct-13	1	9	$32.10	Yes	$45.33	$13.23
325	23-Oct-13	1	10	$32.11	Yes	$45.33	$13.22
326	23-Oct-13	1	11	$32.11	Yes	$45.33	$13.22
327	23-Oct-13	1	12	$32.11	Yes	$45.33	$13.22
328	23-Oct-13	2	1	$33.11	Yes	$45.33	$12.22
329	23-Oct-13	2	2	$32.58	Yes	$45.33	$12.75
330	23-Oct-13	2	3	$32.80	Yes	$45.33	$12.53
331	23-Oct-13	2	4	$32.48	Yes	$45.33	$12.85
332	23-Oct-13	2	5	$32.15	Yes	$45.33	$13.18
333	23-Oct-13	2	6	$32.48	Yes	$45.33	$12.85
334	23-Oct-13	2	7	$32.64	Yes	$45.33	$12.69
335	23-Oct-13	2	8	$33.21	Yes	$45.33	$12.12
336	23-Oct-13	2	9	$34.40	Yes	$45.33	$10.93
337	23-Oct-13	2	10	$34.13	Yes	$45.33	$11.20
338	23-Oct-13	2	11	$33.88	Yes	$45.33	$11.45
339	23-Oct-13	2	12	$33.34	Yes	$45.33	$11.99
340	23-Oct-13	3	1	$34.44	Yes	$45.33	$10.89
341	23-Oct-13	3	2	$34.19	Yes	$45.33	$11.14
342	23-Oct-13	3	3	$34.19	Yes	$45.33	$11.14
343	23-Oct-13	3	4	$34.15	Yes	$45.33	$11.18
344	23-Oct-13	3	5	$34.15	Yes	$45.33	$11.18
345	23-Oct-13	3	6	$33.89	Yes	$45.33	$11.44
346	23-Oct-13	3	7	$34.39	Yes	$45.33	$10.94
347	23-Oct-13	3	8	$34.39	Yes	$45.33	$10.94
348	23-Oct-13	3	9	$34.23	Yes	$45.33	$11.10
349	23-Oct-13	3	10	$34.19	Yes	$45.33	$11.14
350	23-Oct-13	3	11	$34.19	Yes	$45.33	$11.14
351	23-Oct-13	3	12	$34.19	Yes	$45.33	$11.14
352	23-Oct-13	4	1	$33.39	Yes	$45.33	$11.94
353	23-Oct-13	4	2	$33.15	Yes	$45.33	$12.18
354	23-Oct-13	4	3	$33.15	Yes	$45.33	$12.18
355	23-Oct-13	4	4	$33.39	Yes	$45.33	$11.94
356	23-Oct-13	4	5	$33.43	Yes	$45.33	$11.90
357	23-Oct-13	4	6	$33.40	Yes	$45.33	$11.93
358	23-Oct-13	4	7	$33.40	Yes	$45.33	$11.93
359	23-Oct-13	4	8	$33.40	Yes	$45.33	$11.93
360	23-Oct-13	4	9	$33.91	Yes	$45.33	$11.42
361	23-Oct-13	4	10	$33.44	Yes	$45.33	$11.89
362	23-Oct-13	4	11	$33.44	Yes	$45.33	$11.89
363	23-Oct-13	4	12	$34.16	Yes	$45.33	$11.17
364	23-Oct-13	5	1	$33.99	Yes	$45.33	$11.34

365	23-Oct-13	5	2	$33.99	Yes	$45.33	$11.34
366	23-Oct-13	5	3	$33.99	Yes	$45.33	$11.34
367	23-Oct-13	5	4	$34.03	Yes	$45.33	$11.30
368	23-Oct-13	5	5	$34.29	Yes	$45.33	$11.04
369	23-Oct-13	5	6	$34.33	Yes	$45.33	$11.00
370	23-Oct-13	5	7	$34.52	Yes	$45.33	$10.81
371	23-Oct-13	5	8	$34.71	Yes	$45.33	$10.62
372	23-Oct-13	5	9	$35.49	Yes	$45.33	$9.84
373	23-Oct-13	5	10	$38.12	Yes	$45.33	$7.21
374	23-Oct-13	5	11	$38.12	Yes	$45.33	$7.21
375	23-Oct-13	5	12	$40.55	Yes	$45.33	$4.78
376	23-Oct-13	6	1	$33.86	Yes	$45.33	$11.47
377	23-Oct-13	6	2	$34.18	Yes	$45.33	$11.15
378	23-Oct-13	6	3	$34.44	Yes	$45.33	$10.89
379	23-Oct-13	6	4	$33.85	Yes	$45.33	$11.48
380	23-Oct-13	6	5	$34.08	Yes	$45.33	$11.25
381	23-Oct-13	6	6	$34.08	Yes	$45.33	$11.25
382	23-Oct-13	6	7	$34.20	Yes	$45.33	$11.13
383	23-Oct-13	6	8	$34.70	Yes	$45.33	$10.63
384	23-Oct-13	6	9	$34.96	Yes	$45.33	$10.37
385	23-Oct-13	6	10	$34.91	Yes	$45.33	$10.42
386	23-Oct-13	6	11	$35.87	Yes	$45.33	$9.46
387	23-Oct-13	6	12	$34.54	Yes	$45.33	$10.79
388	23-Oct-13	7	1	$32.89	Yes	$45.33	$12.44
389	23-Oct-13	7	2	$32.89	Yes	$45.33	$12.44
390	23-Oct-13	7	3	$33.11	Yes	$45.33	$12.22
391	23-Oct-13	7	4	$43.70	Yes	$45.33	$1.63
392	23-Oct-13	7	5	$36.26	Yes	$45.33	$9.07
393	23-Oct-13	7	6	$45.14	Yes	$45.33	$0.19
394	23-Oct-13	7	7	$37.82	Yes	$45.33	$7.51
395	23-Oct-13	7	8	$40.73	Yes	$45.33	$4.60
396	23-Oct-13	7	9	$44.03	Yes	$45.33	$1.30
397	23-Oct-13	7	10	$48.72	Yes	$45.33	($3.39)
398	23-Oct-13	7	11	$50.67	Yes	$45.33	($5.34)
399	23-Oct-13	7	12	$54.63	Yes	$45.33	($9.30)
400	23-Oct-13	8	1	$51.27	Yes	$45.33	($5.94)
401	23-Oct-13	8	2	$54.78	Yes	$45.33	($9.45)
402	23-Oct-13	8	3	$67.98	Yes	$45.33	($22.65)
403	23-Oct-13	8	4	$64.40	Yes	$45.33	($19.07)
404	23-Oct-13	8	5	$83.37	Yes	$45.33	($38.04)
405	23-Oct-13	8	6	$71.33	Yes	$45.33	($26.00)
406	23-Oct-13	8	7	$65.98	Yes	$45.33	($20.65)
407	23-Oct-13	8	8	$67.18	Yes	$45.33	($21.85)
408	23-Oct-13	8	9	$64.41	Yes	$45.33	($19.08)
409	23-Oct-13	8	10	$48.47	Yes	$45.33	($3.14)
410	23-Oct-13	8	11	$54.10	Yes	$45.33	($8.77)

411	23-Oct-13	8	12	$53.47	Yes	$45.33	($8.14)
412	23-Oct-13	9	1	$47.84	Yes	$45.33	($2.51)
413	23-Oct-13	9	2	$49.89	Yes	$45.33	($4.56)
414	23-Oct-13	9	3	$47.44	Yes	$45.33	($2.11)
415	23-Oct-13	9	4	$54.15	Yes	$45.33	($8.82)
416	23-Oct-13	9	5	$54.64	Yes	$45.33	($9.31)
417	23-Oct-13	9	6	$54.15	Yes	$45.33	($8.82)
418	23-Oct-13	9	7	$46.44	Yes	$45.33	($1.11)
419	23-Oct-13	9	8	$46.44	Yes	$45.33	($1.11)
420	23-Oct-13	9	9	$47.44	Yes	$45.33	($2.11)
421	23-Oct-13	9	10	$51.70	Yes	$45.33	($6.37)
422	23-Oct-13	9	11	$51.70	Yes	$45.33	($6.37)
423	23-Oct-13	9	12	$51.70	Yes	$45.33	($6.37)
424	23-Oct-13	10	1	$51.94	Yes	$45.33	($6.61)
425	23-Oct-13	10	2	$49.10	Yes	$45.33	($3.77)
426	23-Oct-13	10	3	$42.26	Yes	$45.33	$3.07
427	23-Oct-13	10	4	$42.22	Yes	$45.33	$3.11
428	23-Oct-13	10	5	$42.22	Yes	$45.33	$3.11
429	23-Oct-13	10	6	$44.16	Yes	$45.33	$1.17
430	23-Oct-13	10	7	$55.02	Yes	$45.33	($9.69)
431	23-Oct-13	10	8	$43.31	Yes	$45.33	$2.02
432	23-Oct-13	10	9	$43.35	Yes	$45.33	$1.98
433	23-Oct-13	10	10	$52.71	Yes	$45.33	($7.38)
434	23-Oct-13	10	11	$51.87	Yes	$45.33	($6.54)
435	23-Oct-13	10	12	$39.37	Yes	$45.33	$5.96
436	23-Oct-13	11	1	$42.34	Yes	$45.33	$2.99
437	23-Oct-13	11	2	$35.46	Yes	$45.33	$9.87
438	23-Oct-13	11	3	$35.93	Yes	$45.33	$9.40
439	23-Oct-13	11	4	$35.68	Yes	$45.33	$9.65
440	23-Oct-13	11	5	$36.19	Yes	$45.33	$9.14
441	23-Oct-13	11	6	$36.02	Yes	$45.33	$9.31
442	23-Oct-13	11	7	$36.76	Yes	$45.33	$8.57
443	23-Oct-13	11	8	$36.55	Yes	$45.33	$8.78
444	23-Oct-13	11	9	$36.55	Yes	$45.33	$8.78
445	23-Oct-13	11	10	$35.18	Yes	$45.33	$10.15
446	23-Oct-13	11	11	$35.20	Yes	$45.33	$10.13
447	23-Oct-13	11	12	$35.19	Yes	$45.33	$10.14
448	23-Oct-13	12	1	$46.75	Yes	$45.33	($1.42)
449	23-Oct-13	12	2	$45.33	Yes	$45.33	$0.00
450	23-Oct-13	12	3	$45.33	Yes	$45.33	$0.00
451	23-Oct-13	12	4	$44.33	Yes	$45.33	$1.00
452	23-Oct-13	12	5	$34.51	Yes	$45.33	$10.82
453	23-Oct-13	12	6	$44.32	Yes	$45.33	$1.01
454	23-Oct-13	12	7	$734.22	Yes	$45.33	($688.89)
455	23-Oct-13	12	8	$512.50	Yes	$45.33	($467.17)
456	23-Oct-13	12	9	$55.39	Yes	$45.33	($10.06)

457	23-Oct-13	12	10	$44.68	Yes	$45.33	$0.65
458	23-Oct-13	12	11	$45.33	Yes	$45.33	$0.00
459	23-Oct-13	12	12	$34.56	Yes	$45.33	$10.77
460	23-Oct-13	13	1	$33.97	Yes	$45.33	$11.36
461	23-Oct-13	13	2	$33.54	Yes	$45.33	$11.79
462	23-Oct-13	13	3	$33.94	Yes	$45.33	$11.39
463	23-Oct-13	13	4	$32.68	Yes	$45.33	$12.65
464	23-Oct-13	13	5	$32.12	Yes	$45.33	$13.21
465	23-Oct-13	13	6	$33.91	Yes	$45.33	$11.42
466	23-Oct-13	13	7	$33.55	Yes	$45.33	$11.78
467	23-Oct-13	13	8	$32.51	Yes	$45.33	$12.82
468	23-Oct-13	13	9	$33.29	Yes	$45.33	$12.04
469	23-Oct-13	13	10	$33.85	Yes	$45.33	$11.48
470	23-Oct-13	13	11	$33.85	Yes	$45.33	$11.48
471	23-Oct-13	13	12	$33.65	Yes	$45.33	$11.68
472	23-Oct-13	14	1	$34.66	Yes	$45.33	$10.67
473	23-Oct-13	14	2	$34.65	Yes	$45.33	$10.68
474	23-Oct-13	14	3	$34.65	Yes	$45.33	$10.68
475	23-Oct-13	14	4	$408.54	Yes	$45.33	($363.21)
476	23-Oct-13	14	5	$526.76	Yes	$45.33	($481.43)
477	23-Oct-13	14	6	$72.90	Yes	$45.33	($27.57)
478	23-Oct-13	14	7	$50.57	Yes	$45.33	($5.24)
479	23-Oct-13	14	8	$53.88	Yes	$45.33	($8.55)
480	23-Oct-13	14	9	$47.18	Yes	$45.33	($1.85)
481	23-Oct-13	14	10	$46.96	Yes	$45.33	($1.63)
482	23-Oct-13	14	11	$47.43	Yes	$45.33	($2.10)
483	23-Oct-13	14	12	$39.04	Yes	$45.33	$6.29
484	23-Oct-13	15	1	$115.45	Yes	$45.33	($70.12)
485	23-Oct-13	15	2	$47.07	Yes	$45.33	($1.74)
486	23-Oct-13	15	3	$571.19	Yes	$45.33	($525.86)
487	23-Oct-13	15	4	$63.71	Yes	$45.33	($18.38)
488	23-Oct-13	15	5	$46.72	Yes	$45.33	($1.39)
489	23-Oct-13	15	6	$34.60	Yes	$45.33	$10.73
490	23-Oct-13	15	7	$38.30	Yes	$45.33	$7.03
491	23-Oct-13	15	8	$44.33	Yes	$45.33	$1.00
492	23-Oct-13	15	9	$46.76	Yes	$45.33	($1.43)
493	23-Oct-13	15	10	$46.75	Yes	$45.33	($1.42)
494	23-Oct-13	15	11	$54.60	Yes	$45.33	($9.27)
495	23-Oct-13	15	12	$46.44	Yes	$45.33	($1.11)
496	23-Oct-13	16	1	$55.92	Yes	$45.33	($10.59)
497	23-Oct-13	16	2	$50.43	Yes	$45.33	($5.10)
498	23-Oct-13	16	3	$54.03	Yes	$45.33	($8.70)
499	23-Oct-13	16	4	$34.08	Yes	$45.33	$11.25
500	23-Oct-13	16	5	$35.78	Yes	$45.33	$9.55
501	23-Oct-13	16	6	$39.09	Yes	$45.33	$6.24
502	23-Oct-13	16	7	$34.86	Yes	$45.33	$10.47

503	23-Oct-13	16	8	$40.29	Yes	$45.33	$5.04
504	23-Oct-13	16	9	$44.15	Yes	$45.33	$1.18
505	23-Oct-13	16	10	$44.27	Yes	$45.33	$1.06
506	23-Oct-13	16	11	$44.62	Yes	$45.33	$0.71
507	23-Oct-13	16	12	$44.62	Yes	$45.33	$0.71
508	23-Oct-13	17	1	$38.92	Yes	$45.33	$6.41
509	23-Oct-13	17	2	$41.87	Yes	$45.33	$3.46
510	23-Oct-13	17	3	$275.23	Yes	$45.33	($229.90)
511	23-Oct-13	17	4	$46.46	Yes	$45.33	($1.13)
512	23-Oct-13	17	5	$44.31	Yes	$45.33	$1.02
513	23-Oct-13	17	6	$38.94	Yes	$45.33	$6.39
514	23-Oct-13	17	7	$34.45	Yes	$45.33	$10.88
515	23-Oct-13	17	8	$34.45	Yes	$45.33	$10.88
516	23-Oct-13	17	9	$39.03	Yes	$45.33	$6.30
517	23-Oct-13	17	10	$33.84	Yes	$45.33	$11.49
518	23-Oct-13	17	11	$33.96	Yes	$45.33	$11.37
519	23-Oct-13	17	12	$33.84	Yes	$45.33	$11.49
520	23-Oct-13	18	1	$33.42	Yes	$45.33	$11.91
521	23-Oct-13	18	2	$33.31	Yes	$45.33	$12.02
522	23-Oct-13	18	3	$32.66	Yes	$45.33	$12.67
523	23-Oct-13	18	4	$32.57	Yes	$45.33	$12.76
524	23-Oct-13	18	5	$33.29	Yes	$45.33	$12.04
525	23-Oct-13	18	6	$33.73	Yes	$45.33	$11.60
526	23-Oct-13	18	7	$33.68	Yes	$45.33	$11.65
527	23-Oct-13	18	8	$33.90	Yes	$45.33	$11.43
528	23-Oct-13	18	9	$34.16	Yes	$45.33	$11.17
529	23-Oct-13	18	10	$36.05	Yes	$45.33	$9.28
530	23-Oct-13	18	11	$36.24	Yes	$45.33	$9.09
531	23-Oct-13	18	12	$35.07	Yes	$45.33	$10.26
532	23-Oct-13	19	1	$33.14	Yes	$45.33	$12.19
533	23-Oct-13	19	2	$34.35	Yes	$45.33	$10.98
534	23-Oct-13	19	3	$34.35	Yes	$45.33	$10.98
535	23-Oct-13	19	4	$34.37	Yes	$45.33	$10.96
536	23-Oct-13	19	5	$36.39	Yes	$45.33	$8.94
537	23-Oct-13	19	6	$36.61	Yes	$45.33	$8.72
538	23-Oct-13	19	7	$36.92	Yes	$45.33	$8.41
539	23-Oct-13	19	8	$38.69	Yes	$45.33	$6.64
540	23-Oct-13	19	9	$40.76	Yes	$45.33	$4.57
541	23-Oct-13	19	10	$39.85	Yes	$45.33	$5.48
542	23-Oct-13	19	11	$40.27	Yes	$45.33	$5.06
543	23-Oct-13	19	12	$39.58	Yes	$45.33	$5.75
544	23-Oct-13	20	1	$39.40	Yes	$45.33	$5.93
545	23-Oct-13	20	2	$39.44	Yes	$45.33	$5.89
546	23-Oct-13	20	3	$38.15	Yes	$45.33	$7.18
547	23-Oct-13	20	4	$39.38	Yes	$45.33	$5.95
548	23-Oct-13	20	5	$39.35	Yes	$45.33	$5.98

549	23-Oct-13	20	6	$38.00	Yes	$45.33	$7.33
550	23-Oct-13	20	7	$36.91	Yes	$45.33	$8.42
551	23-Oct-13	20	8	$36.90	Yes	$45.33	$8.43
552	23-Oct-13	20	9	$36.70	Yes	$45.33	$8.63
553	23-Oct-13	20	10	$36.72	Yes	$45.33	$8.61
554	23-Oct-13	20	11	$36.72	Yes	$45.33	$8.61
555	23-Oct-13	20	12	$36.38	Yes	$45.33	$8.95
556	23-Oct-13	21	1	$36.60	Yes	$45.33	$8.73
557	23-Oct-13	21	2	$36.47	Yes	$45.33	$8.86
558	23-Oct-13	21	3	$37.06	Yes	$45.33	$8.27
559	23-Oct-13	21	4	$39.44	Yes	$45.33	$5.89
560	23-Oct-13	21	5	$39.49	Yes	$45.33	$5.84
561	23-Oct-13	21	6	$39.49	Yes	$45.33	$5.84
562	23-Oct-13	21	7	$39.32	Yes	$45.33	$6.01
563	23-Oct-13	21	8	$39.28	Yes	$45.33	$6.05
564	23-Oct-13	21	9	$39.27	Yes	$45.33	$6.06
565	23-Oct-13	21	10	$38.00	Yes	$45.33	$7.33
566	23-Oct-13	21	11	$37.07	Yes	$45.33	$8.26
567	23-Oct-13	21	12	$36.47	Yes	$45.33	$8.86
568	23-Oct-13	22	1	$37.82	Yes	$45.33	$7.51
569	23-Oct-13	22	2	$36.36	Yes	$45.33	$8.97
570	23-Oct-13	22	3	$36.52	Yes	$45.33	$8.81
571	23-Oct-13	22	4	$36.65	Yes	$45.33	$8.68
572	23-Oct-13	22	5	$36.54	Yes	$45.33	$8.79
573	23-Oct-13	22	6	$35.41	Yes	$45.33	$9.92
574	23-Oct-13	22	7	$36.15	Yes	$45.33	$9.18
575	23-Oct-13	22	8	$36.41	Yes	$45.33	$8.92
576	23-Oct-13	22	9	$36.15	Yes	$45.33	$9.18
577	23-Oct-13	22	10	$35.00	Yes	$45.33	$10.33
578	23-Oct-13	22	11	$34.63	Yes	$45.33	$10.70
579	23-Oct-13	22	12	$32.64	Yes	$45.33	$12.69
580	23-Oct-13	23	1	$44.29	Yes	$45.33	$1.04
581	23-Oct-13	23	2	$36.10	Yes	$45.33	$9.23
582	23-Oct-13	23	3	$35.08	Yes	$45.33	$10.25
583	23-Oct-13	23	4	$35.16	Yes	$45.33	$10.17
584	23-Oct-13	23	5	$34.43	Yes	$45.33	$10.90
585	23-Oct-13	23	6	$34.11	Yes	$45.33	$11.22
586	23-Oct-13	23	7	$33.96	Yes	$45.33	$11.37
587	23-Oct-13	23	8	$33.07	Yes	$45.33	$12.26
588	23-Oct-13	23	9	$32.42	Yes	$45.33	$12.91
589	23-Oct-13	23	10	$30.67	Yes	$45.33	$14.66
590	23-Oct-13	23	11	$31.59	Yes	$45.33	$13.74
591	23-Oct-13	23	12	$29.84	Yes	$45.33	$15.49
592	23-Oct-13	24	1	$32.49	Yes	$45.33	$12.84
593	23-Oct-13	24	2	$32.49	Yes	$45.33	$12.84
594	23-Oct-13	24	3	$33.09	Yes	$45.33	$12.24

595	23-Oct-13	24	4	$32.53	Yes	$45.33	$12.80
596	23-Oct-13	24	5	$32.25	Yes	$45.33	$13.08
597	23-Oct-13	24	6	$31.69	Yes	$45.33	$13.64
598	23-Oct-13	24	7	$29.78	Yes	$45.33	$15.55
599	23-Oct-13	24	8	$29.78	Yes	$45.33	$15.55
600	23-Oct-13	24	9	$27.17	Yes	$45.33	$18.16
601	23-Oct-13	24	10	$23.13	Yes	$45.33	$22.20
602	23-Oct-13	24	11	$23.13	Yes	$45.33	$22.20
603	23-Oct-13	24	12	$21.57	Yes	$45.33	$23.76
604	26-Oct-13	1	5	$39.28	Yes	$45.70	$6.42
605	26-Oct-13	1	6	$38.24	Yes	$45.70	$7.46
606	26-Oct-13	1	7	$38.23	Yes	$45.70	$7.47
607	26-Oct-13	1	8	$35.98	Yes	$45.70	$9.72
608	26-Oct-13	1	9	$33.82	Yes	$45.70	$11.88
609	26-Oct-13	1	10	$34.53	Yes	$45.70	$11.17
610	26-Oct-13	1	11	$34.53	Yes	$45.70	$11.17
611	26-Oct-13	1	12	$37.26	Yes	$45.70	$8.44
612	26-Oct-13	2	1	$38.01	Yes	$45.70	$7.69
613	26-Oct-13	2	2	$40.93	Yes	$45.70	$4.77
614	26-Oct-13	2	3	$40.93	Yes	$45.70	$4.77
615	26-Oct-13	2	4	$41.01	Yes	$45.70	$4.69
616	26-Oct-13	2	5	$39.38	Yes	$45.70	$6.32
617	26-Oct-13	2	6	$39.38	Yes	$45.70	$6.32
618	26-Oct-13	2	7	$37.14	Yes	$45.70	$8.56
619	26-Oct-13	2	8	$37.14	Yes	$45.70	$8.56
620	26-Oct-13	2	9	$34.52	Yes	$45.70	$11.18
621	26-Oct-13	2	10	$33.88	Yes	$45.70	$11.82
622	26-Oct-13	2	11	$32.67	Yes	$45.70	$13.03
623	26-Oct-13	2	12	$37.12	Yes	$45.70	$8.58
624	26-Oct-13	3	1	$38.32	Yes	$45.70	$7.38
625	26-Oct-13	3	2	$42.22	Yes	$45.70	$3.48
626	26-Oct-13	3	3	$58.66	Yes	$45.70	($12.96)
627	26-Oct-13	3	4	$56.58	Yes	$45.70	($10.88)
628	26-Oct-13	3	5	$126.77	Yes	$45.70	($81.07)
629	26-Oct-13	3	6	$65.13	Yes	$45.70	($19.43)
630	26-Oct-13	3	7	$44.94	Yes	$45.70	$0.76
631	26-Oct-13	3	8	$50.51	Yes	$45.70	($4.81)
632	26-Oct-13	3	9	$49.12	Yes	$45.70	($3.42)
633	26-Oct-13	3	10	$52.41	Yes	$45.70	($6.71)
634	26-Oct-13	3	11	$48.63	Yes	$45.70	($2.93)
635	26-Oct-13	3	12	$45.30	Yes	$45.70	$0.40
636	26-Oct-13	4	1	$44.78	Yes	$45.70	$0.92
637	26-Oct-13	4	2	$45.11	Yes	$45.70	$0.59
638	26-Oct-13	4	3	$34.08	Yes	$45.70	$11.63
639	26-Oct-13	4	4	$39.04	Yes	$45.70	$6.66
640	26-Oct-13	4	5	$39.04	Yes	$45.70	$6.66

641	26-Oct-13	4	6	$39.79	Yes	$45.70	$5.91
642	26-Oct-13	4	7	$39.81	Yes	$45.70	$5.89
643	26-Oct-13	4	8	$40.71	Yes	$45.70	$4.99
644	26-Oct-13	4	9	$39.81	Yes	$45.70	$5.89
645	26-Oct-13	4	10	$42.52	Yes	$45.70	$3.18
646	26-Oct-13	4	11	$42.52	Yes	$45.70	$3.18
647	26-Oct-13	4	12	$42.53	Yes	$45.70	$3.17
648	27-Oct-13	1	1	$33.02	Yes	$45.72	$12.70
649	27-Oct-13	1	2	$31.73	Yes	$45.72	$13.99
650	27-Oct-13	1	3	$32.15	Yes	$45.72	$13.57
651	27-Oct-13	1	4	$32.57	Yes	$45.72	$13.15
652	27-Oct-13	1	5	$33.00	Yes	$45.72	$12.72
653	27-Oct-13	1	6	$45.42	Yes	$45.72	$0.30
654	27-Oct-13	1	7	$40.95	Yes	$45.72	$4.77
655	27-Oct-13	1	8	$34.37	Yes	$45.72	$11.35
656	27-Oct-13	1	9	$34.31	Yes	$45.72	$11.41
657	27-Oct-13	1	10	$31.04	Yes	$45.72	$14.68
658	27-Oct-13	1	11	$34.48	Yes	$45.72	$11.24
659	27-Oct-13	1	12	$39.20	Yes	$45.72	$6.52
660	27-Oct-13	2	1	$34.45	Yes	$45.72	$11.27
661	27-Oct-13	2	2	$40.58	Yes	$45.72	$5.14
662	27-Oct-13	2	3	$48.12	Yes	$45.72	($2.40)
663	27-Oct-13	2	4	$34.45	Yes	$45.72	$11.27
664	27-Oct-13	2	5	$30.03	Yes	$45.72	$15.69
665	27-Oct-13	2	6	$32.64	Yes	$45.72	$13.08
666	27-Oct-13	2	7	$32.61	Yes	$45.72	$13.11
667	27-Oct-13	2	8	$31.62	Yes	$45.72	$14.10
668	27-Oct-13	2	9	$31.07	Yes	$45.72	$14.65
669	27-Oct-13	2	10	$31.23	Yes	$45.72	$14.49
670	27-Oct-13	2	11	$30.12	Yes	$45.72	$15.60
671	27-Oct-13	2	12	$31.04	Yes	$45.72	$14.68
672	27-Oct-13	3	1	$31.13	Yes	$45.72	$14.59
673	27-Oct-13	3	2	$31.13	Yes	$45.72	$14.59
674	27-Oct-13	3	3	$30.78	Yes	$45.72	$14.94
675	27-Oct-13	3	4	$32.60	Yes	$45.72	$13.12
676	27-Oct-13	3	5	$31.48	Yes	$45.72	$14.24
677	27-Oct-13	3	6	$31.61	Yes	$45.72	$14.11
678	27-Oct-13	3	7	$31.48	Yes	$45.72	$14.24
679	27-Oct-13	3	8	$31.95	Yes	$45.72	$13.77
680	27-Oct-13	3	9	$34.29	Yes	$45.72	$11.43
681	27-Oct-13	3	10	$33.16	Yes	$45.72	$12.56
682	27-Oct-13	3	11	$34.38	Yes	$45.72	$11.34
683	27-Oct-13	3	12	$34.39	Yes	$45.72	$11.33
684	27-Oct-13	4	1	$40.58	Yes	$45.72	$5.14
685	27-Oct-13	4	2	$40.58	Yes	$45.72	$5.14
686	27-Oct-13	4	3	$40.58	Yes	$45.72	$5.14

687	27-Oct-13	4	4	$40.57	Yes	$45.72	$5.15
688	27-Oct-13	4	5	$40.57	Yes	$45.72	$5.15
689	27-Oct-13	4	6	$40.57	Yes	$45.72	$5.15
690	27-Oct-13	4	7	$40.15	Yes	$45.72	$5.57
691	27-Oct-13	4	8	$40.15	Yes	$45.72	$5.57
692	27-Oct-13	4	9	$40.15	Yes	$45.72	$5.57
693	27-Oct-13	4	10	$41.45	Yes	$45.72	$4.27
694	27-Oct-13	4	11	$40.21	Yes	$45.72	$5.51
695	27-Oct-13	4	12	$40.21	Yes	$45.72	$5.51
696	27-Oct-13	5	1	$40.53	Yes	$45.72	$5.19
697	27-Oct-13	5	2	$40.53	Yes	$45.72	$5.19
698	27-Oct-13	5	3	$40.53	Yes	$45.72	$5.19
699	27-Oct-13	5	4	$40.53	Yes	$45.72	$5.19
700	27-Oct-13	5	5	$40.53	Yes	$45.72	$5.19
701	27-Oct-13	5	6	$34.48	Yes	$45.72	$11.24
702	27-Oct-13	5	7	$33.24	Yes	$45.72	$12.48
703	27-Oct-13	5	8	$33.24	Yes	$45.72	$12.48
704	27-Oct-13	5	9	$33.24	Yes	$45.72	$12.48
705	27-Oct-13	5	10	$32.65	Yes	$45.72	$13.07
706	27-Oct-13	5	11	$31.88	Yes	$45.72	$13.84
707	27-Oct-13	5	12	$31.40	Yes	$45.72	$14.32
708	27-Oct-13	6	1	$31.00	Yes	$45.72	$14.72
709	27-Oct-13	6	2	$30.56	Yes	$45.72	$15.16
710	27-Oct-13	6	3	$30.91	Yes	$45.72	$14.81
711	27-Oct-13	6	4	$31.04	Yes	$45.72	$14.68
712	27-Oct-13	6	5	$31.04	Yes	$45.72	$14.68
713	27-Oct-13	6	6	$31.47	Yes	$45.72	$14.25
714	27-Oct-13	6	7	$31.45	Yes	$45.72	$14.27
715	27-Oct-13	6	8	$31.62	Yes	$45.72	$14.10
716	27-Oct-13	6	9	$31.62	Yes	$45.72	$14.10
717	27-Oct-13	6	10	$31.02	Yes	$45.72	$14.70
718	27-Oct-13	6	11	$31.02	Yes	$45.72	$14.70
719	27-Oct-13	6	12	$31.64	Yes	$45.72	$14.08
720	27-Oct-13	7	1	$23.22	Yes	$45.72	$22.50
721	27-Oct-13	7	2	$29.53	Yes	$45.72	$16.19
722	27-Oct-13	7	3	$31.63	Yes	$45.72	$14.09
723	27-Oct-13	7	4	$31.58	Yes	$45.72	$14.14
724	27-Oct-13	7	5	$31.79	Yes	$45.72	$13.93
725	27-Oct-13	7	6	$32.56	Yes	$45.72	$13.16
726	27-Oct-13	7	7	$32.53	Yes	$45.72	$13.19
727	27-Oct-13	7	8	$32.57	Yes	$45.72	$13.15
728	27-Oct-13	7	9	$32.57	Yes	$45.72	$13.15
729	27-Oct-13	7	10	$32.57	Yes	$45.72	$13.15
730	27-Oct-13	7	11	$32.52	Yes	$45.72	$13.20
731	27-Oct-13	7	12	$32.80	Yes	$45.72	$12.92
732	27-Oct-13	8	1	$32.50	Yes	$45.72	$13.22

733	27-Oct-13	8	2	$32.50	Yes	$45.72	$13.22
734	27-Oct-13	8	3	$29.00	Yes	$45.72	$16.72
735	27-Oct-13	8	4	$30.97	Yes	$45.72	$14.75
736	27-Oct-13	8	5	$31.31	Yes	$45.72	$14.41
737	27-Oct-13	8	6	$32.49	Yes	$45.72	$13.23
738	27-Oct-13	8	7	$32.64	Yes	$45.72	$13.08
739	27-Oct-13	8	8	$32.64	Yes	$45.72	$13.08
740	27-Oct-13	8	9	$32.64	Yes	$45.72	$13.08
741	27-Oct-13	8	10	$32.80	Yes	$45.72	$12.92
742	27-Oct-13	8	11	$32.65	Yes	$45.72	$13.07
743	27-Oct-13	8	12	$33.56	Yes	$45.72	$12.16
744	27-Oct-13	9	1	$34.37	Yes	$45.72	$11.35
745	27-Oct-13	9	2	$33.66	Yes	$45.72	$12.06
746	27-Oct-13	9	3	$33.15	Yes	$45.72	$12.57
747	27-Oct-13	9	4	$34.37	Yes	$45.72	$11.35
748	27-Oct-13	9	5	$34.47	Yes	$45.72	$11.25
749	27-Oct-13	9	6	$34.47	Yes	$45.72	$11.25
750	27-Oct-13	9	7	$34.20	Yes	$45.72	$11.52
751	27-Oct-13	9	8	$34.20	Yes	$45.72	$11.52
752	27-Oct-13	9	9	$33.50	Yes	$45.72	$12.22
753	27-Oct-13	9	10	$33.18	Yes	$45.72	$12.54
754	27-Oct-13	9	11	$33.43	Yes	$45.72	$12.29
755	27-Oct-13	9	12	$33.16	Yes	$45.72	$12.56
756	27-Oct-13	10	1	$23.22	Yes	$45.72	$22.50
757	27-Oct-13	10	2	$31.10	Yes	$45.72	$14.62
758	27-Oct-13	10	3	$31.50	Yes	$45.72	$14.22
759	27-Oct-13	10	4	$32.68	Yes	$45.72	$13.04
760	27-Oct-13	10	5	$32.68	Yes	$45.72	$13.04
761	27-Oct-13	10	6	$32.68	Yes	$45.72	$13.04
762	27-Oct-13	10	7	$32.68	Yes	$45.72	$13.04
763	27-Oct-13	10	8	$32.53	Yes	$45.72	$13.19
764	27-Oct-13	10	9	$33.01	Yes	$45.72	$12.71
765	27-Oct-13	10	10	$33.03	Yes	$45.72	$12.69
766	27-Oct-13	10	11	$33.03	Yes	$45.72	$12.69
767	27-Oct-13	10	12	$33.03	Yes	$45.72	$12.69
768	27-Oct-13	11	1	$32.59	Yes	$45.72	$13.13
769	27-Oct-13	11	2	$25.72	Yes	$45.72	$20.00
770	27-Oct-13	11	3	$31.23	Yes	$45.72	$14.49
771	27-Oct-13	11	4	$31.34	Yes	$45.72	$14.38
772	27-Oct-13	11	5	$32.41	Yes	$45.72	$13.31
773	27-Oct-13	11	6	$32.71	Yes	$45.72	$13.01
774	27-Oct-13	11	7	$32.30	Yes	$45.72	$13.42
775	27-Oct-13	11	8	$31.82	Yes	$45.72	$13.90
776	27-Oct-13	11	9	$31.35	Yes	$45.72	$14.37
777	27-Oct-13	11	10	$31.52	Yes	$45.72	$14.20
778	27-Oct-13	11	11	$31.73	Yes	$45.72	$13.99

779	27-Oct-13	11	12	$31.72	Yes	$45.72	$14.00
780	27-Oct-13	12	1	$31.29	Yes	$45.72	$14.43
781	27-Oct-13	12	2	$31.29	Yes	$45.72	$14.43
782	27-Oct-13	12	3	$29.26	Yes	$45.72	$16.46
783	27-Oct-13	12	4	$31.27	Yes	$45.72	$14.45
784	27-Oct-13	12	5	$29.29	Yes	$45.72	$16.43
785	27-Oct-13	12	6	$25.81	Yes	$45.72	$19.91
786	27-Oct-13	12	7	$29.26	Yes	$45.72	$16.46
787	27-Oct-13	12	8	$29.26	Yes	$45.72	$16.46
788	27-Oct-13	12	9	$28.78	Yes	$45.72	$16.94
789	27-Oct-13	12	10	$31.18	Yes	$45.72	$14.54
790	27-Oct-13	12	11	$31.18	Yes	$45.72	$14.54
791	27-Oct-13	12	12	$31.18	Yes	$45.72	$14.54
792	27-Oct-13	13	1	$31.35	Yes	$45.72	$14.37
793	27-Oct-13	13	2	$31.32	Yes	$45.72	$14.40
794	27-Oct-13	13	3	$29.35	Yes	$45.72	$16.37
795	27-Oct-13	13	4	$25.88	Yes	$45.72	$19.84
796	27-Oct-13	13	5	$23.35	Yes	$45.72	$22.37
797	27-Oct-13	13	6	$0.01	Yes	$45.72	$45.71
798	27-Oct-13	13	7	$0.01	Yes	$45.72	$45.71
799	27-Oct-13	13	8	$0.01	Yes	$45.72	$45.71
800	27-Oct-13	13	9	$0.01	Yes	$45.72	$45.71
801	27-Oct-13	13	10	$13.68	Yes	$45.72	$32.04
802	27-Oct-13	13	11	$23.27	Yes	$45.72	$22.45
803	27-Oct-13	13	12	$17.23	Yes	$45.72	$28.49
804	27-Oct-13	14	1	$0.01	Yes	$45.72	$45.71
805	27-Oct-13	14	2	($30.92)	Yes	$45.72	$76.64
806	27-Oct-13	14	3	($32.50)	Yes	$45.72	$78.22
807	27-Oct-13	14	4	($30.70)	Yes	$45.72	$76.42
808	27-Oct-13	14	5	($30.72)	Yes	$45.72	$76.44
809	27-Oct-13	14	6	($32.26)	Yes	$45.72	$77.98
810	27-Oct-13	14	7	($32.35)	Yes	$45.72	$78.07
811	27-Oct-13	14	8	($32.35)	Yes	$45.72	$78.07
812	27-Oct-13	14	9	($32.35)	Yes	$45.72	$78.07
813	27-Oct-13	14	10	($32.42)	Yes	$45.72	$78.14
814	27-Oct-13	14	11	($32.42)	Yes	$45.72	$78.14
815	27-Oct-13	14	12	($34.30)	Yes	$45.72	$80.02
816	27-Oct-13	15	1	($31.66)	Yes	$45.72	$77.38
817	27-Oct-13	15	2	($32.57)	Yes	$45.72	$78.29
818	27-Oct-13	15	3	($30.68)	Yes	$45.72	$76.40
819	27-Oct-13	15	4	$0.01	Yes	$45.72	$45.71
820	27-Oct-13	15	5	$0.00	Yes	$45.72	$45.72
821	27-Oct-13	15	6	$0.01	Yes	$45.72	$45.71
822	27-Oct-13	15	7	$0.01	Yes	$45.72	$45.71
823	27-Oct-13	15	8	$0.01	Yes	$45.72	$45.71
824	27-Oct-13	15	9	$0.01	Yes	$45.72	$45.71

825	27-Oct-13	15	10	$0.01	Yes	$45.72	$45.71
826	27-Oct-13	15	11	$0.01	Yes	$45.72	$45.71
827	27-Oct-13	15	12	$0.01	Yes	$45.72	$45.71
828	27-Oct-13	16	1	$0.00	Yes	$45.72	$45.72
829	27-Oct-13	16	2	$0.01	Yes	$45.72	$45.71
830	27-Oct-13	16	3	$0.01	Yes	$45.72	$45.71
831	27-Oct-13	16	4	$23.16	Yes	$45.72	$22.56
832	27-Oct-13	16	5	$25.45	Yes	$45.72	$20.27
833	27-Oct-13	16	6	$27.03	Yes	$45.72	$18.69
834	27-Oct-13	16	7	$26.89	Yes	$45.72	$18.83
835	27-Oct-13	16	8	$26.89	Yes	$45.72	$18.83
836	27-Oct-13	16	9	$21.03	Yes	$45.72	$24.69
837	27-Oct-13	16	10	$21.58	Yes	$45.72	$24.14
838	27-Oct-13	16	11	$26.83	Yes	$45.72	$18.89
839	27-Oct-13	16	12	$25.25	Yes	$45.72	$20.47
840	27-Oct-13	17	1	$0.01	Yes	$45.72	$45.71
841	27-Oct-13	17	2	$0.01	Yes	$45.72	$45.71
842	27-Oct-13	17	3	$0.01	Yes	$45.72	$45.71
843	27-Oct-13	17	4	$20.03	Yes	$45.72	$25.69
844	27-Oct-13	17	5	$31.32	Yes	$45.72	$14.40
845	27-Oct-13	17	6	$31.24	Yes	$45.72	$14.48
846	27-Oct-13	17	7	$32.95	Yes	$45.72	$12.77
847	27-Oct-13	17	8	$32.61	Yes	$45.72	$13.11
848	27-Oct-13	17	9	$33.34	Yes	$45.72	$12.38
849	27-Oct-13	17	10	$32.05	Yes	$45.72	$13.67
850	27-Oct-13	17	11	$32.56	Yes	$45.72	$13.16
851	27-Oct-13	17	12	$35.10	Yes	$45.72	$10.62
852	27-Oct-13	18	1	$31.31	Yes	$45.72	$14.41
853	27-Oct-13	18	2	$31.89	Yes	$45.72	$13.83
854	27-Oct-13	18	3	$32.84	Yes	$45.72	$12.88
855	27-Oct-13	18	4	$32.83	Yes	$45.72	$12.89
856	27-Oct-13	18	5	$32.50	Yes	$45.72	$13.22
857	27-Oct-13	18	6	$32.50	Yes	$45.72	$13.22
858	27-Oct-13	18	7	$32.94	Yes	$45.72	$12.78
859	27-Oct-13	18	8	$33.22	Yes	$45.72	$12.50
860	27-Oct-13	18	9	$34.16	Yes	$45.72	$11.56
861	27-Oct-13	18	10	$35.07	Yes	$45.72	$10.65
862	27-Oct-13	18	11	$36.81	Yes	$45.72	$8.91
863	27-Oct-13	18	12	$40.97	Yes	$45.72	$4.75
864	27-Oct-13	19	1	$34.92	Yes	$45.72	$10.80
865	27-Oct-13	19	2	$34.92	Yes	$45.72	$10.80
866	27-Oct-13	19	3	$35.30	Yes	$45.72	$10.42
867	27-Oct-13	19	4	$41.24	Yes	$45.72	$4.48
868	27-Oct-13	19	5	$43.29	Yes	$45.72	$2.43
869	27-Oct-13	19	6	$44.20	Yes	$45.72	$1.52
870	27-Oct-13	19	7	$52.21	Yes	$45.72	($6.49)

871	27-Oct-13	19	8	$55.91	Yes	$45.72	($10.19)
872	27-Oct-13	19	9	$55.91	Yes	$45.72	($10.19)
873	27-Oct-13	19	10	$54.66	Yes	$45.72	($8.94)
874	27-Oct-13	19	11	$56.24	Yes	$45.72	($10.52)
875	27-Oct-13	19	12	$55.18	Yes	$45.72	($9.46)
876	27-Oct-13	20	1	$64.18	Yes	$45.72	($18.46)
877	27-Oct-13	20	2	$55.66	Yes	$45.72	($9.94)
878	27-Oct-13	20	3	$41.39	Yes	$45.72	$4.33
879	27-Oct-13	20	4	$44.31	Yes	$45.72	$1.41
880	27-Oct-13	20	5	$49.37	Yes	$45.72	($3.65)
881	27-Oct-13	20	6	$53.06	Yes	$45.72	($7.34)
882	27-Oct-13	20	7	$48.22	Yes	$45.72	($2.50)
883	27-Oct-13	20	8	$46.97	Yes	$45.72	($1.25)
884	27-Oct-13	20	9	$47.27	Yes	$45.72	($1.55)
885	27-Oct-13	20	10	$47.06	Yes	$45.72	($1.34)
886	27-Oct-13	20	11	$47.06	Yes	$45.72	($1.34)
887	27-Oct-13	20	12	$40.40	Yes	$45.72	$5.32
888	27-Oct-13	21	1	$65.59	Yes	$45.72	($19.87)
889	27-Oct-13	21	2	$57.09	Yes	$45.72	($11.37)
890	27-Oct-13	21	3	$56.81	Yes	$45.72	($11.09)
891	27-Oct-13	21	4	$55.95	Yes	$45.72	($10.23)
892	27-Oct-13	21	5	$50.13	Yes	$45.72	($4.41)
893	27-Oct-13	21	6	$48.61	Yes	$45.72	($2.89)
894	27-Oct-13	21	7	$46.54	Yes	$45.72	($0.82)
895	27-Oct-13	21	8	$34.42	Yes	$45.72	$11.30
896	27-Oct-13	21	9	$41.82	Yes	$45.72	$3.90
897	27-Oct-13	21	10	$43.74	Yes	$45.72	$1.98
898	27-Oct-13	21	11	$44.71	Yes	$45.72	$1.01
899	27-Oct-13	21	12	$47.15	Yes	$45.72	($1.43)
900	27-Oct-13	22	1	$35.33	Yes	$45.72	$10.39
901	27-Oct-13	22	2	$40.57	Yes	$45.72	$5.15
902	27-Oct-13	22	3	$41.15	Yes	$45.72	$4.57
903	27-Oct-13	22	4	$33.07	Yes	$45.72	$12.65
904	27-Oct-13	22	5	$32.86	Yes	$45.72	$12.86
905	27-Oct-13	22	6	$32.65	Yes	$45.72	$13.07
906	27-Oct-13	22	7	$32.57	Yes	$45.72	$13.15
907	27-Oct-13	22	8	$23.20	Yes	$45.72	$22.52
908	27-Oct-13	22	9	$29.17	Yes	$45.72	$16.55
909	27-Oct-13	22	10	$28.45	Yes	$45.72	$17.27
910	27-Oct-13	22	11	$29.91	Yes	$45.72	$15.81
911	27-Oct-13	22	12	$26.04	Yes	$45.72	$19.68
912	27-Oct-13	23	1	$32.63	Yes	$45.72	$13.09
913	27-Oct-13	23	2	$32.64	Yes	$45.72	$13.08
914	27-Oct-13	23	3	$34.19	Yes	$45.72	$11.53
915	27-Oct-13	23	4	$32.97	Yes	$45.72	$12.75
916	27-Oct-13	23	5	$32.97	Yes	$45.72	$12.75

917	27-Oct-13	23	6	$32.97	Yes	$45.72	$12.75
918	27-Oct-13	23	7	$33.00	Yes	$45.72	$12.72
919	27-Oct-13	23	8	$32.40	Yes	$45.72	$13.32
920	27-Oct-13	23	9	$32.16	Yes	$45.72	$13.56
921	27-Oct-13	23	10	$31.63	Yes	$45.72	$14.09
922	27-Oct-13	23	11	$31.63	Yes	$45.72	$14.09
923	27-Oct-13	23	12	$20.02	Yes	$45.72	$25.70
924	27-Oct-13	24	1	$36.40	Yes	$45.72	$9.32
925	27-Oct-13	24	2	$36.06	Yes	$45.72	$9.66
926	27-Oct-13	24	3	$44.01	Yes	$45.72	$1.71
927	27-Oct-13	24	4	$43.90	Yes	$45.72	$1.82
928	27-Oct-13	24	5	$42.58	Yes	$45.72	$3.14
929	27-Oct-13	24	6	$37.48	Yes	$45.72	$8.24
930	27-Oct-13	24	7	$34.31	Yes	$45.72	$11.41
931	27-Oct-13	24	8	$30.43	Yes	$45.72	$15.29
932	27-Oct-13	24	9	$31.16	Yes	$45.72	$14.56
933	27-Oct-13	24	10	$31.09	Yes	$45.72	$14.63
934	27-Oct-13	24	11	$31.09	Yes	$45.72	$14.63
935	27-Oct-13	24	12	$21.58	Yes	$45.72	$24.14

Appendix C: Exceptional Dispatch Bid Mitigation Analysis

In October 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 October. With exceptional dispatch bid mitigation, the costs for these types of exceptional dispatches were $ 45,560. Without the exceptional dispatch bid mitigation, the costs for these types of exceptional dispatches would be $ 61,081. The cost saving from the exceptional dispatch bid mitigation was $ 15,520.

Table 10: Bid Mitigation Analysis for October

Type	Number of Resources	Costs without Bid Mitigation	Costs with Bid Mitigation	Cost Saving
NONTMOD	3	$55,165.91	$41,179.11	$13,986.79
TMODEL5	3	$5,915.46	$4,381.41	$1,534.05
Total	6	$61,081.37	$45,560.53	$15,520.84

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 January 2014.

/s/ Anna Pascuzzo
Anna Pascuzzo