



California Independent  
System Operator Corporation

June 15, 2010

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. ER06-615-\_\_\_ and ER07-1257-\_\_\_  
Market Disruption Report**

Dear Secretary Bose:

The California Independent System Operator Corporation (ISO) hereby submits its April/May report covering Market Disruptions reportable events under Section 7.7.15 of its FERC Electric Tariff (ISO Tariff) that occurred from April 16, 2010 to May 15, 2010.<sup>1</sup>

Please contact the undersigned with any questions.

Respectfully submitted,

**/s/ Anna McKenna**

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<sup>1</sup> The ISO submits the Market Disruption report pursuant to *California Independent System Operator Corp.*, 126 FERC ¶ 61,211 (2009), and Section 7.7.15.4 of the ISO Tariff.



California ISO  
Your Link to Power

# Market Disruption Report April 16, 2010 to May 15, 2010

June 15, 2010

ISO Department of Market Services

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## I. Background

A Market Disruption is an action or event that causes a failure of a CAISO Market, related to system operation issues or System Emergencies.<sup>1</sup> Pursuant to Section 7.7.15 of the CAISO Tariff, the California Independent System Operator Corporation (ISO or CAISO) can take one or more of a number of specified actions in the event of a Market Disruption, to prevent a Market Disruption, or to minimize the extent of a Market Disruption. The ISO interprets this to mean that a Market Disruption occurs and the ISO is obligated to report its occurrence in any of the following circumstances:

- When any of the ISO market processes fail to publish, including the Integrated Forward Market (“IFM”), Residual Unit Commitment (“RUC”), Hour-Ahead Scheduling Process (“HASP”), Real-Time Unit Commitment (“RTUC”), or Real-Time Dispatch (“RTD”) processes;
- When the ISO manually overrides the closing of the Day-Ahead Market; or
- Any time that the ISO removes Bids from a CAISO Market to prevent a Market Disruption or to minimize the extent of a Market Disruption.

The Market Disruption report contains the following information:

- The frequency and types of actions taken by the ISO pursuant to Section 7.7.15;
- The nature of the Market Disruptions that caused the ISO to take action, or the Market Disruptions that were successfully prevented or minimized by the ISO as a result of taking action, and the ISO’s rationale for taking such actions pursuant to Section 7.7.15;
- Information about the Bids (including Self-Schedules) removed pursuant to Section 7.7.15 (*i.e.* megawatt quantity, point of interconnection, specification of the Day-Ahead versus Real-Time Bid, and Energy or Ancillary Services Bid); and
- The ISO’s rationale for its removal of Bids (including Self-Schedules) pursuant to Section 7.7.15.<sup>2</sup>

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<sup>1</sup> These system operation issues or System Emergencies are referred to in Sections 7.6 and 7.7, respectively, of the CAISO Tariff. CAISO Tariff, Appendix A, definition of Market Disruption. Capitalized terms not otherwise defined herein have the meanings set forth in the CAISO Tariff.

<sup>2</sup> *Id.* at P 29 & n.29.

## **II. Report on Market Disruptions Occurring from April 16, 2010 through May 15, 2010**

The ISO's report on Market Disruptions that occurred during the time period from April 16, 2010 through May 15, 2010, is provided in Table 1 and Attachment A below. Attachment A includes an entry for each reportable Market Disruption event and each entry also indicates:

- (1) The date of the Market Disruption;
- (2) The hour and Dispatch Interval when the Market Disruption ended;
- (3) The type of CAISO Market in which the Market Disruption occurred;  
and
- (4) A description of the nature of the Market Disruption, the nature of any actions taken by the ISO, the rationale for such actions, and the Market Disruption prevented or minimized as a result of taking such actions.

For each of the CAISO Markets, Table 1 lists the number of Market Disruptions and the number of times that the ISO removed Bids (including Self-Schedules) during the time period covered by this report. As shown in Table 1, there were a total of 117 Market Disruptions for the reporting period, all of which occurred in the Real-Time Market (RTM). The number of Market Disruptions increased by 54 compared with the May 2010 report. Table 1 also indicates that the ISO did not remove any Bids (including Self-Schedules) in any of its markets during the reporting period.

Table 1 and Attachment A indicate that there were 38 instances of RTUC failures, including 3 HASP failures. The count of RTUC failures decreased by 5 and the count of HASP failures increased by 1 compared with the May 2010 Report. Most of the RTUC failures (including HASP failures) were caused by software application failure, software application not running, software application timing out, patch installation maintenance, or broadcast of results failure. The frequency of RTD failures increased by 59 from 20 such instances reported in the May 2010 Report. Most of the RTD failures were due to software application failure, applications fallback activities, patch installation maintenance, or broadcast of results failure. RTD failures accounted for approximately 68 percent of all of the Market Disruptions during this reporting period.

On April 19, three consecutive RTUC failures and 11 RTD failures occurred in hours ending 8 and 9 when the broadcast of results failed, driven by a payload system issue. This issue was resolved subsequently. There was another RTUC failure and three other RTD failures on the same day, which were not related to this issue. On April 29, seven consecutive RTUC failures

(including 2 HASP failures) occurred in hours ending 19, 20 and 21, and 12 consecutive RTD failures occurred in hours ending 18 and 19 due to patch installation maintenance. There were eight other Market Disruptions due to software application failure, software application timing out, broadcast of result failure, or bid issues. On May 13, the Scheduling Infrastructure Business Rules (SIBR), IFM, Real-Time Nodal (RTN), and Automated Dispatch System (ADS) fell back to Alhambra in hour ending 15, contributing to one RTUC failure and five consecutive RTD failures in that hour. There were two other RTD failures at the same day which were not related to this fallback activity.

**Table 1: Summary of Market Disruption Report**

Type of CAISO Market	Market Disruption or Reportable Events	Removal of Bids (including Self-Schedules)
<b>Day-Ahead</b>		
IFM	0	0
RUC	0	0
<b>Real-Time</b>		
Real-Time Unit Commitment Interval 1	4	0
Real-Time Unit Commitment Interval 2	4	0
Real-Time Unit Commitment Interval 3	24	0
Real-Time Unit Commitment Interval 4	6	0
Real-Time Dispatch	79	0

## **ATTACHMENT A**

**California Independent System Operator Corporation  
Market Disruption Report  
June 15, 2010**

**Table 1: Market Disruptions, Nature of Actions Taken by the California ISO, Rationale and/or Market Disruption Prevented or Minimized as a Result of such Actions**

Count	Date	Hour	Interval	Market	Nature of Actions, Nature of Market Disruption, Rationale and/or Market Disruption Prevented or Minimized as a Result of such Actions
1	4/16/2010	21	3	RTUC	RTUC failed. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
2	4/16/2010	23	3	RTUC	RTUC timed out. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
3	4/16/2010	23	4	RTUC	RTUC failed. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
4	4/17/2010	23	3	RTUC	Broadcast of RTUC results failed. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
5	4/19/2010	8	9	RTD	Broadcast of RTD results failed. Loss clearing payload and LMP filled from last good interval.
6	4/19/2010	8	10	RTD	Broadcast of RTD results failed. Loss clearing payload and LMP filled from last good interval.
7	4/19/2010	8	11	RTD	Broadcast of RTD results failed. Loss clearing payload and LMP filled from last good interval.
8	4/19/2010	8	12	RTD	Broadcast of RTD results failed. Loss clearing payload and LMP filled from last good interval.
9	4/19/2010	9	1	RTD	Broadcast of RTD results failed. Loss clearing payload and LMP filled from next good interval.

Count	Date	Hour	Interval	Market	Nature of Actions, Nature of Market Disruption, Rationale and/or Market Disruption Prevented or Minimized as a Result of such Actions
10	4/19/2010	9	1	RTUC	Broadcast of RTUC results failed. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
11	4/19/2010	9	2	RTD	Broadcast of RTD results failed. Loss clearing payload and LMP filled from last good interval.
12	4/19/2010	9	2	RTUC	Broadcast of RTUC results failed. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
13	4/19/2010	9	3	RTD	Broadcast of RTD results failed. Loss clearing payload and LMP filled from last good interval.
14	4/19/2010	9	3	RTUC	Broadcast of RTUC results failed. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
15	4/19/2010	9	4	RTD	Broadcast of RTD results failed. Loss clearing payload and LMP filled from last good interval.
16	4/19/2010	9	5	RTD	Broadcast of RTD results failed. Loss clearing payload and LMP filled from last good interval.
17	4/19/2010	9	6	RTD	Broadcast of RTD results failed. Loss clearing payload and LMP filled from last good interval.
18	4/19/2010	9	7	RTD	Broadcast of RTD results failed. Loss clearing payload and LMP filled from last good interval.
19	4/19/2010	10	7	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.
20	4/19/2010	10	9	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.
21	4/19/2010	23	3	RTUC	Broadcast of RTUC results failed. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
22	4/19/2010	24	4	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.
23	4/20/2010	18	3	RTUC	RTUC failed due to solution infeasibility. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
24	4/20/2010	7	1	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.
25	4/20/2010	14	4	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.

Count	Date	Hour	Interval	Market	Nature of Actions, Nature of Market Disruption, Rationale and/or Market Disruption Prevented or Minimized as a Result of such Actions
26	4/20/2010	14	5	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.
27	4/20/2010	14	6	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.
28	4/20/2010	24	12	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.
29	4/21/2010	22	3	RTUC	Broadcast of RTUC results failed. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
30	4/21/2010	23	3	RTUC	RTUC did not run. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
31	4/21/2010	7	4	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.
32	4/21/2010	24	11	RTD	Broadcast of RTD results failed. Loss clearing payload and LMP filled from last good interval.
33	4/22/2010	1	1	RTD	RTD did not run due to full network model DB 47 promotion. Loss clearing payload and LMP filled from last good interval.
34	4/22/2010	1	1	RTUC	RTUC did not run due to full network model DB 47 promotion. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
35	4/22/2010	1	2	RTD	RTD did not run due to full network model DB 47 promotion. Loss clearing payload and LMP filled from last good interval.
36	4/22/2010	1	3	RTD	RTD timed out. Loss clearing payload and LMP filled from last good interval.
37	4/22/2010	21	3	RTUC	RTUC timed out. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
38	4/22/2010	22	3	RTUC	RTUC timed out. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
39	4/22/2010	22	4	RTUC	RTUC failed. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
40	4/22/2010	10	1	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.
41	4/22/2010	10	2	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.
42	4/22/2010	10	3	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.
43	4/22/2010	10	5	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.

Count	Date	Hour	Interval	Market	Nature of Actions, Nature of Market Disruption, Rationale and/or Market Disruption Prevented or Minimized as a Result of such Actions
44	4/22/2010	11	2	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.
45	4/22/2010	11	3	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.
46	4/23/2010	24	1	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.
47	4/26/2010	21	3	RTUC	RTUC timed out. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
48	4/26/2010	21	4	RTUC	RTUC failed. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
49	4/26/2010	22	3	RTUC	RTUC failed due to engine error. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
50	4/27/2010	21	3	RTUC	RTUC timed out. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
51	4/27/2010	21	4	RTUC	RTUC failed. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
52	4/27/2010	23	3	RTUC	RTUC timed out. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
53	4/27/2010	23	4	RTUC	RTUC failed. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
54	4/29/2010	1	2	HASP	HASP did not run due to bids not transferring on time. ISO issued a notice through the Market Notification System instructing resources to follow Day-Ahead Schedules and Awards for interties. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval. Any incremental or decremental Real-Time Energy at the interties beyond the Day-Ahead Schedules that was not dispatched by the ISO is treated as an Operational Adjustment (Tier 2) for Settlement purposes.
55	4/29/2010	1	3	RTUC	RTUC did not run. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
56	4/29/2010	8	4	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.
57	4/29/2010	8	6	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.

Count	Date	Hour	Interval	Market	Nature of Actions, Nature of Market Disruption, Rationale and/or Market Disruption Prevented or Minimized as a Result of such Actions
58	4/29/2010	18	11	RTD	RTD timed out due to patch installation maintenance. Loss clearing payload and LMP filled from last good interval.
59	4/29/2010	18	12	RTD	RTD timed out due to patch installation maintenance. Loss clearing payload and LMP filled from last good interval.
60	4/29/2010	19	1	RTD	RTD timed out due to patch installation maintenance. Loss clearing payload and LMP filled from last good interval.
61	4/29/2010	19	1	RTUC	RTUC timed out due to patch installation maintenance. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
62	4/29/2010	19	2	RTD	RTD timed out due to patch installation maintenance. Loss clearing payload and LMP filled from last good interval.
63	4/29/2010	19	2	HASP	HASP did not run due to patch installation maintenance. ISO issued a notice through the Market Notification System instructing resources to follow Day-Ahead Schedules and Awards for interties. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval. Any incremental or decremental Real-Time Energy at the interties beyond the Day-Ahead Schedules that was not dispatched by the ISO is treated as an Operational Adjustment (Tier 2) for Settlement purposes.
64	4/29/2010	19	3	RTD	RTD timed out due to patch installation maintenance. Loss clearing payload and LMP filled from last good interval.
65	4/29/2010	19	3	RTUC	RTUC failed due to patch installation maintenance. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
66	4/29/2010	19	4	RTD	RTD timed out due to patch installation maintenance. Loss clearing payload and LMP filled from last good interval.
67	4/29/2010	19	4	RTUC	RTUC did not run due to patch installation maintenance. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.

Count	Date	Hour	Interval	Market	Nature of Actions, Nature of Market Disruption, Rationale and/or Market Disruption Prevented or Minimized as a Result of such Actions
68	4/29/2010	19	5	RTD	RTD timed out due to patch installation maintenance. Loss clearing payload and LMP filled from last good interval.
69	4/29/2010	19	6	RTD	RTD timed out due to patch installation maintenance. Loss clearing payload and LMP filled from last good interval.
70	4/29/2010	19	7	RTD	RTD timed out due to patch installation maintenance. Loss clearing payload and LMP filled from last good interval.
71	4/29/2010	19	8	RTD	RTD timed out due to patch installation maintenance. Loss clearing payload and LMP filled from last good interval.
72	4/29/2010	19	9	RTD	RTD timed out due to patch installation maintenance. Loss clearing payload and LMP filled from last good interval.
73	4/29/2010	19	10	RTD	RTD timed out due to patch installation maintenance. Loss clearing payload and LMP filled from last good interval.
74	4/29/2010	20	1	RTUC	RTUC did not run due to patch installation maintenance. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
75	4/29/2010	20	2	RTD	Broadcast of RTD results failed. Loss clearing payload and LMP filled from last good interval.
76	4/29/2010	20	2	HASP	HASP did not run due to patch installation maintenance. ISO issued a notice through the Market Notification System instructing resources to follow Day-Ahead Schedules and Awards for interties. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval. Any incremental or decremental Real-Time Energy at the interties beyond the Day-Ahead Schedules that was not dispatched by the ISO is treated as an Operational Adjustment (Tier 2) for Settlement purposes.
77	4/29/2010	20	3	RTD	Broadcast of RTD results failed. Loss clearing payload and LMP filled from last good interval.
78	4/29/2010	20	3	RTUC	RTUC did not run due to patch installation maintenance. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.

Count	Date	Hour	Interval	Market	Nature of Actions, Nature of Market Disruption, Rationale and/or Market Disruption Prevented or Minimized as a Result of such Actions
79	4/29/2010	20	4	RTD	RTD did not run. Loss clearing payload and LMP filled from last good interval.
80	4/29/2010	20	5	RTD	Broadcast of RTD results failed. Loss clearing payload and LMP filled from last good interval.
81	5/1/2010	1	4	RTD	Broadcast of RTD results failed. Loss clearing payload and LMP filled from last good interval.
82	5/1/2010	2	2	RTD	Broadcast of RTD results failed. Loss clearing payload and LMP filled from last good interval.
83	5/1/2010	24	3	RTUC	RTUC failed due to solution infeasibility. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
84	5/3/2010	21	3	RTUC	Broadcast of RTUC results failed. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
85	5/4/2010	22	12	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.
86	5/7/2010	21	3	RTUC	RTUC failed due to bids not transferring on time. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
87	5/7/2010	23	3	RTUC	RTUC did not run. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
88	5/7/2010	22	12	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.
89	5/7/2010	24	4	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.
90	5/7/2010	24	5	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.
91	5/7/2010	24	6	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.
92	5/7/2010	24	7	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.
93	5/7/2010	24	10	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.
94	5/8/2010	1	3	RTUC	RTUC did not run due to bids not transferring on time. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
95	5/9/2010	3	10	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.

Count	Date	Hour	Interval	Market	Nature of Actions, Nature of Market Disruption, Rationale and/or Market Disruption Prevented or Minimized as a Result of such Actions
96	5/9/2010	3	11	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.
97	5/10/2010	11	8	RTD	RTD did not run due to applications falling back to Alhambra. Loss clearing payload and LMP filled from last good interval.
98	5/10/2010	11	9	RTD	RTD did not run due to applications falling back to Alhambra. Loss clearing payload and LMP filled from last good interval.
99	5/11/2010	1	11	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.
100	5/11/2010	1	12	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.
101	5/11/2010	23	4	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.
102	5/12/2010	19	2	RTD	Broadcast of RTD results failed. Loss clearing payload and LMP filled from last good interval.
103	5/12/2010	19	3	RTD	Broadcast of RTD results failed. Loss clearing payload and LMP filled from last good interval.
104	5/12/2010	21	3	RTUC	RTUC failed due to solution infeasibility. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
105	5/13/2010	2	11	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.
106	5/13/2010	2	12	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.
107	5/13/2010	15	3	RTD	RTD did not run due to applications falling back to Alhambra. Loss clearing payload and LMP filled from last good interval.
108	5/13/2010	15	3	RTUC	RTUC did not run due to applications falling back to Alhambra. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
109	5/13/2010	15	4	RTD	RTD did not run due to applications falling back to Alhambra. Loss clearing payload and LMP filled from last good interval.
110	5/13/2010	15	5	RTD	RTD did not run due to applications falling back to Alhambra. Loss clearing payload and LMP filled from last good interval.
111	5/13/2010	15	6	RTD	RTD did not run due to applications falling back to Alhambra. Loss clearing payload and LMP filled from last good interval.

Count	Date	Hour	Interval	Market	Nature of Actions, Nature of Market Disruption, Rationale and/or Market Disruption Prevented or Minimized as a Result of such Actions
112	5/13/2010	15	7	RTD	RTD did not run due to applications falling back to Alhambra. Loss clearing payload and LMP filled from last good interval.
113	5/14/2010	2	11	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.
114	5/14/2010	2	12	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.
115	5/14/2010	23	4	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.
116	5/15/2010	3	11	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.
117	5/15/2010	3	12	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.
<b>Notes:</b>					
Integrated Forward Market (IFM): The Day-Ahead Market run in which the ISO conducts the market for purchases and sales of Energy for all hours of the next Trading Day based on submitted supply and demand bids, and performs the procurement of Ancillary Services.					
Residual Unit Commitment (RUC): The Day-Ahead Market run in which the ISO conducts unit commitment of additional resources based on submitted availability bids and the forecast of demand for every hour of the next Trading Day.					
Real-Time Unit commitment (RTUC) Interval 1: The first of a series of four market runs conducted every Trading Hour in advance of the Operating Hour. In this run the ISO conducts the Market Power Mitigation and Reliability Requirement Determination for submitted Bids, which applies to all of the Real-Time Market processes for the given Trading Hour. In this interval the ISO also conducts the procurement of incremental Ancillary Services from internal resources and dynamic external resources.					
Real-Time Unit commitment (RTUC) Interval 2: The second of a series of four market runs conducted every Trading Hour in advance of the Operating Hour during which the ISO conducts the HASP. In the HASP, the ISO conducts the procurement and sale of Energy and Ancillary services from non-dynamic System Resources based on submitted Bids and the CAISO Forecast of CAISO Demand. In this interval the ISO also conducts the advisory procurement of incremental Ancillary Services from internal resources and dynamic external resources from T to T+60 minutes and procurement for the given Trading Hour.					
Real-Time Unit commitment (RTUC) Interval 3: The third of a series of four market runs conducted every Trading Hour. During this interval the ISO conducts the commitment of internal Short-Start and Fast Start Units for the Time Horizon of T-30 minutes to T+240 minutes. In this interval the ISO also conducts the procurement of incremental Ancillary Services from internal resources and dynamic external resources for the given Trading Hour.					
Real-Time Unit commitment (RTUC) Interval 4: The fourth of a series of four market runs conducted every Trading Hour. This interval is for the Real-time Unit Commitment for the T-105 minutes to T+60 minutes time horizon. In this interval the ISO also conducts 15-minute Ancillary Service Awards for non-Hourly System Resources, internal resources and dynamic external resources for the given Trading Hour.					
Real-Time Dispatch (RTD): The five minute interval of any given Operating Hour during which the ISO conducts the market for Energy based on submitted bids and the CAISO Forecast of CAISO Demand.					

## CERTIFICATE OF SERVICE

I hereby certify that I have served the foregoing document upon the parties listed on the official service list in the captioned 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 15<sup>th</sup> day of June, 2010.

*/s/ Jane Ostapovich*

Jane Ostapovich