



California Independent
System Operator Corporation

January 13, 2011

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 Nov/Dec report covering Market Disruptions reportable events under Section 7.7.15 of its FERC Electric Tariff (ISO Tariff) that occurred from November 16, 2010 to December 15, 2010.¹

Please contact the undersigned with any questions.

Respectfully submitted,

By: /s/ Anna McKenna

Nancy Saracino
General Counsel
Anthony Ivancovich
Assistant General Counsel
Anna McKenna
Senior Counsel
California Independent System
Operator Corporation
250 Outcropping Way
Folsom, CA 95630
Tel: (916) 608-7209
Fax: (916) 608-7296
amckenna@caiso.com

¹ 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
Shaping a Renewed Future

Market Disruption Report November 16, 2010 to December 15, 2010

January 13, 2011

ISO Department of Market Services

CAISO
151 Blue Ravine Road
Folsom, California 95630
(916) 351-4400

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.¹ 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 7.7.15.²

¹ 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.

² *Id.* at P 29 & n.29.

II. Report on Market Disruptions Occurring from November 16, 2010 through December 15, 2010

The ISO’s report on Market Disruptions that occurred during the time period from November 16, 2010 through December 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 47 Market Disruptions for the reporting period, all of which occurred in the Real-Time Market (RTM). The number of Market Disruptions decreased significantly as compared with the December 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: Summary of Market Disruption Report

Type of CAISO Market	Market Disruption or Reportable Events	Removal of Bids (including Self-Schedules)
Day-Ahead		
IFM	0	0
RUC	0	0
Real-Time		
Real-Time Unit Commitment Interval 1	2	0
Real-Time Unit Commitment Interval 2	4	0
Real-Time Unit Commitment Interval 3	10	0
Real-Time Unit Commitment Interval 4	2	0
Real-Time Dispatch	29	0

Table 1 and Attachment A indicate that there were 18 instances of RTUC failures, including four HASP failures. The count of RTUC failures and HASP failures decreased significantly by 29 compared with the December 2010 Report. Most of the RTUC failures (including the HASP failure) were caused by software application failure, software application not running, database issue or RTN MSG deployment. The frequency of RTD failures decreased to 29 from 67 such instances reported in the December 2010 Report. Most of the RTD failures were due to software application failure, software application timing out, database issue, broadcast results failure or RTN MSG deployment. RTD failures accounted for approximately 62 percent of all of the Market Disruptions during this reporting period.

On November 18, there were four RTD failures, along with one RTUC failure due to Real Time Network Multi Stage Generating patch deployment. On December 2, four RTD failures and one HASP failure occurred due to broadcast results failure.

On December 7, three RTD failures occurred with advisory results being sent out later. One RTUC failure occurred on the same day due to STUC engine timeout. Another RTD failure occurred on December 7 due to failures of broadcasting results.

On December 9, three RTUC failures, along with two RTD failures and one HASP failure occurred due to database error issue. On December 14, four RTD failures and one RTUC failure occurred due to EMS work. Three other RTUC failures occurred on the same day when solving a difficult case.

ATTACHMENT A

**California Independent System Operator Corporation
Market Disruption Report
January 14, 2011**

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	11/16/2010	13	8	RTD	Broadcast of RTD results failed. Loss clearing payload and LMP filled from last good interval.
2	11/16/2010	20	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.
3	11/16/2010	20	6	RTD	Broadcast of RTD results failed. Loss clearing payload and LMP filled from last good interval.
4	11/16/2010	20	7	RTD	Broadcast of RTD results failed. Loss clearing payload and LMP filled from last good interval.
5	11/17/2010	24	2	HASP	HASP failed due to SIBR bids not getting into RTN. 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.
6	11/17/2010	24	3	RTUC	RTUC failed due to SIBR bids not getting into RTN. 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
7	11/18/2010	14	7	RTD	RTD did not run due to RTN MSG code drop patch deployment. Loss clearing payload and LMP filled from last good interval.
8	11/18/2010	14	8	RTD	RTD did not run due to RTN MSG code drop patch deployment. Loss clearing payload and LMP filled from last good interval.
9	11/18/2010	14	9	RTD	RTD did not run due to RTN MSG code drop patch deployment. Loss clearing payload and LMP filled from last good interval.
10	11/18/2010	14	10	RTD	RTD did not run due to RTN MSG code drop patch deployment. Loss clearing payload and LMP filled from last good interval.
11	11/18/2010	16	3	RTUC	RTUC failed. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
12	11/22/2010	5	1	RTUC	RTUC failed. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
13	11/26/2010	7	2	HASP	HASP failed due to engine infeasibility in SMPM. 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.
14	11/27/2010	21	3	RTUC	RTUC timeout due to difficult solution for transition into the next day. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
15	11/27/2010	22	3	RTUC	RTUC timeout due to difficult solution for transition into the next day. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
16	11/29/2010	6	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
17	11/29/2010	6	6	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.
18	11/30/2010	6	4	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.
19	11/30/2010	6	8	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.
20	12/2/2010	15	12	RTD	Broadcast of RTD results failed. Loss clearing payload and LMP filled from last good interval.
21	12/2/2010	16	1	RTD	Broadcast of RTD results failed. Loss clearing payload and LMP filled from last good interval.
22	12/2/2010	16	2	HASP	Broadcast of HASP results failed. 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.
23	12/2/2010	16	2	RTD	Broadcast of RTD results failed. Loss clearing payload and LMP filled from last good interval.
24	12/2/2010	16	3	RTD	Broadcast of RTD results failed. Loss clearing payload and LMP filled from last good interval.
25	12/2/2010	16	4	RTD	Broadcast of RTD results failed. Loss clearing payload and LMP filled from last good interval.
26	12/6/2010	17	3	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.
27	12/7/2010	1	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
28	12/7/2010	5	6	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.
29	12/7/2010	10	9	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.
30	12/7/2010	20	6	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.
31	12/7/2010	22	3	RTUC	RTUC failed due to engine timeout. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
32	12/9/2010	15	2	HASP	HASP failed due to database error. 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.
33	12/9/2010	15	3	RTUC	RTUC did not run due to database error. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
34	12/9/2010	15	4	RTUC	RTUC did not run due to database error. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
35	12/9/2010	15	11	RTD	RTD failed due to database error. Loss clearing payload and LMP filled from last good interval.
36	12/9/2010	15	12	RTD	RTD failed due to database error. Loss clearing payload and LMP filled from last good interval.
37	12/9/2010	16	1	RTUC	RTUC did not run due to database error. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
38	12/11/2010	23	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
39	12/12/2010	22	1	RTD	RTD failed. Loss clearing payload and LMP filled from advisory results.
40	12/14/2010	1	3	RTUC	RTUC failed when solving a difficult case. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
41	12/14/2010	2	3	RTUC	RTUC failed when solving a difficult case. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
42	12/14/2010	6	3	RTUC	RTUC failed when solving a difficult case. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
43	12/14/2010	11	4	RTUC	RTUC did not run due to EMS work. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
44	12/14/2010	11	8	RTD	RTD did not run due to EMS work. Loss clearing payload and LMP filled from last good interval.
45	12/14/2010	11	9	RTD	RTD did not run due to EMS work. Loss clearing payload and LMP filled from last good interval.
46	12/14/2010	11	10	RTD	RTD did not run due to EMS work. Loss clearing payload and LMP filled from last good interval.
47	12/14/2010	11	11	RTD	RTD did not run due to EMS work. Loss clearing payload and LMP filled from last good interval.

Notes:
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 13th day of January, 2011.

Anna Pascuzzo

Anna Pascuzzo