



California Independent
System Operator Corporation

June 15, 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 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, 2011 to May 15, 2011.¹

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 April 16, 2011 to May 15, 2011

June 15, 2011

ISO Department of Market Services

California ISO
250 Outcropping Way
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 ISO 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 ISO Tariff. ISO Tariff, Appendix A, definition of Market Disruption. Capitalized terms not otherwise defined herein have the meanings set forth in the ISO Tariff.

² *Id.* at P 29 & n.29.

II. Report on Market Disruptions Occurring from April 16, 2011 through May 15, 2011

The ISO’s report on Market Disruptions that occurred during the time period from April 16, 2011 through May 15, 2011, 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 32 Market Disruptions for the reporting period, all of which occurred in the Real-Time Market (RTM). The number of Market Disruptions decreased as compared with the May 2011 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	0	0
Real-Time Unit Commitment Interval 3	4	0
Real-Time Unit Commitment Interval 4	3	0
Real-Time Dispatch	23	0

Table 1 and Attachment A indicate that there were 9 instances of RTUC failures, including zero HASP failures. The count of RTUC failures and HASP

failures decreased by 12 compared with the May 2011 Report. Most of the RTUC failures (including the HASP failures) were caused by software application failure, software application not running, and database issue. The frequency of RTD failures decreased to 23 from 53 of such instances reported in the May 2011 Report. Most of the RTD failures were due to software application failure, software application timing out, database issue, and broadcast results failure. RTD failures accounted for approximately 72 percent of all of the Market Disruptions during this reporting period.

On April 19, seven RTD failures and three RTUC failures occurred due to broadcast errors.

On May 3, six RTD failures occurred due to planned outage of software application. On the same day three RTUC failures occurred due to either planned outage of software application or bids not coming in.

On May 4, two RTD failures and one RTUC failure occurred due to database issues.

On May 8, two RTD failures occurred due to ramp rate infeasibility.

On May 10, two RTD failures and one RTUC failure occurred.

On February 8, 2011, the ISO suspended the following intertie locations from the list of convergence bidding eligible locations due to real-time physical schedule cuts:

INTERM1G_7_N501
GONDER_2_N501
MONA_3_N501
MARKETPL_5_N501
MEADN_2_N501
MEAD_5_N501
WESTWING_5_N501
FOURCORN_3_N501
MCCULLGX_5_N501

The ISO exercised its authority under Section 7.9, 7.7.15 and 31.8 of the ISO tariff. The rules implemented to enforce tariff section 31.8 do not work at the identified suspended locations. The suspension continues until further notice.

ATTACHMENT A

**California Independent System Operator Corporation
Market Disruption Report
June 15, 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	4/17/2011	21	12	RTD	Broadcast of RTD results failed. Loss clearing payload and LMP filled from last good interval.
2	4/18/2011	4	11	RTD	Broadcast of RTD results failed. Loss clearing payload and LMP filled from last good interval.
3	4/19/2011	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.
4	4/19/2011	22	4	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	4/19/2011	22	5	RTD	Broadcast of RTD results missing. Loss clearing payload and LMP filled from last good interval.
6	4/19/2011	22	6	RTD	Broadcast of RTD results missing. Loss clearing payload and LMP filled from last good interval.
7	4/19/2011	22	7	RTD	Broadcast of RTD results missing. Loss clearing payload and LMP filled from last good interval.
8	4/19/2011	22	8	RTD	Broadcast of RTD results missing. 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
9	4/19/2011	22	9	RTD	Broadcast of RTD results missing. Loss clearing payload and LMP filled from last good interval.
10	4/19/2011	22	10	RTD	Broadcast of RTD results missing. Loss clearing payload and LMP filled from last good interval.
11	4/19/2011	22	11	RTD	Broadcast of RTD results missing. Loss clearing payload and LMP filled from last good interval.
12	4/19/2011	23	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.
13	4/23/2011	24	3	RTUC	RTUC did not run due to bid set issue. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
14	4/28/2011	14	7	RTD	RTD time out due to deployment of CPLEX plug-in patch. Loss clearing payload and LMP filled from advisory results.
15	5/3/2011	15	3	RTUC	RTUC did not run due to bids not coming in. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this
16	5/3/2011	16	4	RTUC	RTUC did not run due to planned outage. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this
17	5/3/2011	16	6	RTD	RTD did not run due to planned outage. Loss clearing payload and LMP filled from last good interval.
18	5/3/2011	16	7	RTD	RTD did not run due to planned outage. Loss clearing payload and LMP filled from last good interval.
19	5/3/2011	16	8	RTD	RTD did not run due to planned outage. Loss clearing payload and LMP filled from last good interval.
20	5/3/2011	16	9	RTD	RTD did not run due to planned outage. 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
21	5/3/2011	16	10	RTD	RTD did not run due to planned outage. Loss clearing payload and LMP filled from last good interval.
22	5/3/2011	16	11	RTD	RTD did not run due to planned outage. Loss clearing payload and LMP filled from last good interval.
23	5/3/2011	17	1	RTUC	RTUC did not run due to planned outage. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this
24	5/4/2011	11	4	RTUC	RTUC failed due to database issue. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
25	5/4/2011	11	9	RTD	RTD did not run due to database issue. Loss clearing payload and LMP filled from last good interval.
26	5/4/2011	11	10	RTD	RTD failed due to database issue. Loss clearing payload and LMP filled from last good interval.
27	5/7/2011	21	4	RTD	RTD failed due to ramp rate infeasibility. Loss clearing payload and LMP filled from last good interval.
28	5/8/2011	10	12	RTD	RTD failed due to ramp rate infeasibility. Loss clearing payload and LMP filled from last good interval.
29	5/8/2011	22	6	RTD	RTD failed due to ramp rate infeasibility. Loss clearing payload and LMP filled from last good interval.
30	5/10/2011	11	3	RTUC	RTUC failed. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval.
31	5/10/2011	13	5	RTD	RTD failed. Loss clearing payload and LMP filled from last good interval.
32	5/10/2011	14	2	RTD	RTD failed. 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 15^h day of June, 2011.

Anna Pascuzzo
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