

September 15, 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. ER06-615-____ and ER07-1257-____
Market Disruption Report**

Dear Secretary Bose:

The California Independent System Operator Corporation (ISO) hereby submits its July/August report covering Market Disruption reportable events under Section 7.7.15 of its FERC Electric Tariff (ISO Tariff) that occurred from July 16, 2014 to August 15, 2014.¹

Please contact the undersigned with any questions.

Respectfully submitted,

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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 July 16, 2014 to August 15, 2014

September 15, 2014

ISO Market Quality and Renewable Integration

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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.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 reports Market Disruption 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), the Real-Time Market, which includes the Hour-Ahead Scheduling Process (HASP), Fifteen Minute Market (FMM), and the 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 July 16, 2014 through August 15, 2014

The ISO’s report on Market Disruptions that occurred during the time period from July 16, 2014 through August 15, 2014, 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 40 Market Disruptions for the reporting period, all of which occurred in the real-time. Table 1 also indicates that the ISO did not remove any Bids (including Self-Schedules) in any of its markets during the reporting period.

On May 1, 2014, the ISO adopted its new FMM and fifteen minute scheduling in the real-time.³

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		
Fifteen Minute Market Interval 1	0	0
Fifteen Minute Market Interval 2	1	0
Fifteen Minute Market Interval 3	1	0
Fifteen Minute Market Interval 4	1	0
Real-Time Dispatch	37	0

³ California Indep. Sys. Operator Corp., 146 FERC ¶ 61,204 (2014).

Table 1 above shows the market disruptions in the real time market in order to incorporate the FMM binding intervals.

Table 1 and Attachment A indicate that there were 2 instances of FMM disruptions and 1 instance of HASP disruptions during this reporting period. The count of FMM failures decreased from 5 to 2 compared with the July 2014 Report. Most of the RTD, FMM and HASP instances (16 instances) were caused due to broadcast failure. The frequency of RTD failures increased by 16 from 21 such instances reported in the July 2014 Report. Most of the RTD failures (13 instances) were due to unplanned outages due to broadcast failure. RTD failures accounted for approximately 92 percent of all of the Market Disruptions during this reporting period.

The frequency of RTD failures in this report was 37. On July 18, there were 7 RTD failures due to contingency dispatch. On July 28, there were 14 RTD failures, 2 FMM failures and 1 HASP disruption, due to broadcast failures.

There were about 17 failures during this reporting period due to unplanned broadcast failures combined in RTD, FMM and HASP.

ATTACHMENT A

**California Independent System Operator Corporation
Market Disruption Report
September 15, 2014**

Table 3: 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	7/16/2014	14	3	RTD	RTD was run in Manual Planned maintenance, due to patch deployment
2	7/16/2014	15	3	RTD	RTD was run in Manual Planned maintenance, due to patch deployment
3	7/18/2014	17	3	RTD	RTD did not run due to application problem. Loss clearing payload and LMP filled from previous good interval. Contingency dispatch
4	7/18/2014	17	4	RTD	RTD did not run due to application problem. Loss clearing payload and LMP filled from previous good interval. Contingency dispatch
5	7/18/2014	17	5	RTD	RTD did not run due to application problem. Loss clearing payload and LMP filled from previous good interval. Contingency dispatch
6	7/18/2014	17	6	RTD	RTD did not run due to application problem. Loss clearing payload and LMP filled from previous good interval. Contingency dispatch
7	7/18/2014	17	7	RTD	RTD did not run due to application problem. Loss clearing payload and LMP filled from previous good interval. Contingency dispatch

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
8	7/18/2014	17	8	RTD	RTD did not run due to application problem. Loss clearing payload and LMP filled from previous good interval. Contingency dispatch
9	7/18/2014	17	9	RTD	RTD did not run due to application problem. Loss clearing payload and LMP filled from previous good interval. Contingency dispatch
10	7/19/2014	21	9	RTD	RTD Broadcast failed. Loss clearing payload and LMP filled from previous good interval. Contingency dispatch
11	7/19/2014	21	10	RTD	RTD did not run due to application problem. Loss clearing payload and LMP filled from previous good interval. Contingency dispatch
12	7/19/2014	21	11	RTD	RTD did not run due to application problem. Loss clearing payload and LMP filled from previous good interval. Contingency dispatch
13	7/19/2014	21	12	RTD	RTD did not run due to application problem. Loss clearing payload and LMP filled from previous good interval. Contingency dispatch
14	7/22/2014	14	3	RTD	RTD was run in Manual Planned maintenance, due to patch deployment
15	7/24/2014	14	3	RTD	RTD was run in Manual Planned maintenance, due to patch deployment
16	7/28/2014	15	11	RTD	RTD Broadcast failed. Loss clearing payload and LMP filled from previous good interval. Software failure / Unplanned outage, due to broadcast failure
17	7/28/2014	15	12	RTD	RTD Broadcast failed. Loss clearing payload and LMP filled from previous good interval. Software failure / Unplanned outage, due to broadcast failure

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
18	7/28/2014	16	2	RTD	RTD Broadcast failed. Loss clearing payload and LMP filled from previous good interval. Software failure / Unplanned outage, due to broadcast failure
19	7/28/2014	16	2	HASP	HASP failed. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval. Software failure / Unplanned outage, due to broadcast failure
20	7/28/2014	16	3	RTD	RTD Broadcast failed. Loss clearing payload and LMP filled from previous good interval. Software failure / Unplanned outage, due to broadcast failure
21	7/28/2014	16	3	FMM	FMM Broadcast failed. Loss clearing payload and LMP filled from previous good interval. Software failure / Unplanned outage, due to broadcast failure
22	7/28/2014	16	4	RTD	RTD Broadcast failed. Loss clearing payload and LMP filled from previous good interval. Software failure / Unplanned outage, due to broadcast failure
23	7/28/2014	16	4	FMM	FMM Broadcast failed. Loss clearing payload and LMP filled from previous good interval. Software failure / Unplanned outage, due to broadcast failure
24	7/28/2014	16	5	RTD	RTD Broadcast failed. Loss clearing payload and LMP filled from previous good interval. Software failure / Unplanned outage, due to broadcast failure
25	7/28/2014	16	6	RTD	RTD Broadcast failed. Loss clearing payload and LMP filled from previous good interval. Software failure / Unplanned outage, due to broadcast failure

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	7/28/2014	16	7	RTD	RTD Broadcast failed. Loss clearing payload and LMP filled from previous good interval. Software failure / Unplanned outage, due to broadcast failure
27	7/28/2014	16	8	RTD	RTD Broadcast failed. Loss clearing payload and LMP filled from previous good interval. Software failure / Unplanned outage, due to broadcast failure
28	7/28/2014	16	9	RTD	RTD Broadcast failed. Loss clearing payload and LMP filled from previous good interval. Software failure / Unplanned outage, due to broadcast failure
29	7/28/2014	16	10	RTD	RTD Broadcast failed. Loss clearing payload and LMP filled from previous good interval. Software failure / Unplanned outage, due to broadcast failure
30	7/28/2014	16	11	RTD	RTD Broadcast failed. Loss clearing payload and LMP filled from previous good interval. Software failure / Unplanned outage, due to broadcast failure
31	7/28/2014	16	12	RTD	RTD results were blocked and previous solution used. Software failure / Unplanned outage, due to broadcast failure
32	7/28/2014	17	1	RTD	RTD Broadcast failed. Loss clearing payload and LMP filled from previous good interval. Software failure / Unplanned outage, due to broadcast failure
33	7/29/2014	23	1	RTD	RTD results were blocked and previous solution used.
34	7/29/2014	23	2	RTD	RTD results were blocked and previous solution used.

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
35	8/4/2014	14	3	RTD	RTD was run in Manual Planned maintenance, due to patch deployment
36	8/6/2014	16	3	RTD	RTD was run in Manual Planned maintenance, due to patch deployment
37	8/12/2014	12	3	RTD	RTD Broadcast failed. Loss clearing payload and LMP filled from previous good interval.
38	8/12/2014	12	4	RTD	RTD did not run due to application problem. Loss clearing payload and LMP filled from previous good interval. Contingency dispatch
39	8/12/2014	12	5	RTD	RTD did not run due to application problem. Loss clearing payload and LMP filled from previous good interval. Contingency dispatch
40	8/13/2014	15	3	RTD	RTD was run in Manual Planned maintenance, due to patch deployment
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.					
Fifteen Minute Market (FMM) 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.					
Fifteen Minute Market (FMM) 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.
Fifteen Minute Market (FMM) 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.
Fifteen Minute Market (FMM) Interval 4: The fourth of a series of four market runs conducted every Trading Hour. This interval is for the Fifteen Minute Market 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 15th day of September, 2014.

Jennifer Rotz

Jennifer Rotz