September 15, 2009

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 September report covering Market Disruptions reportable events under Section 7.7.15 of its FERC Electric Tariff (ISO Tariff) that occurred from July 16 to August 15, 2009.[1]

Please contact the undersigned with any questions.

Respectfully submitted,

*/s/ Anna McKenna*
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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.

# Market Disruption Report
# July 16 to August 15, 2009

September 15, 2009

ISO Market Services

## 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 ISO 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 Pre-Dispatch ("RTPD"), 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]

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[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 July 16 through August 15, 2009

The ISO's report on Market Disruptions that occurred during the time period from July 16 through August 15, 2009, 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.

Table 1 lists, for each type of CAISO Market, 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, which was slightly higher than the 35 Market Disruptions listed in the August 2009 Report.  Table 1 also indicates that no reportable events occurred in the Day-Ahead Market (IFM or RUC) and that the ISO did not remove any Bids (including Self-Schedules) during the reporting period.

As shown in Table 1 and Attachment A, there were 16 total instances of RTPD failure, including 6 HASP failures.  The RTPD failures (including HASP failures) accounted for 40 percent of all of the Market Disruptions during this reporting period.  The count of RTPD failures declined by twelve while the count of HASP failures increased by three compared with the August 2009 Report.  Most of the RTPD failures (including HASP failures) were due to data issue or software variance.  The ISO has implemented a procedure to reduce the HASP failures pending delivery of the software fix from the vendor.

During this reporting period, the number of RTD failures increased significantly to 24 from the 6 such instances listed in the August 2009 Report.  A total of 19 out of the 24 RTD failures occurred on August 12$^{th}$ and August 15$^{th}$, which accounted for approximately 80 percent of total RTD failures from July 16 through August 15, 2009.  On average there was less than one RTD failure per day.  Most of the RTD failures were due to software variance, bid processing issue, or the software application timing out.

On August 12$^{th}$, RTD run was aborted by the operators in interval 5 hour ending 15 and it did not start again due to a software variance.  When the

operators aborted the initial interval RTD run for the subsequent interval, some operational flags were not reset in the database.  Consequently, in the next RTD run, the application thought that the previous RTD run was still active and then prevented the current RTD from running.  This software variance resulted in 6 RTD failures in hour ending 15 on August 12th.

On August 15th, the bids in two tables in RTD were not synchronized in interval 3 hour ending 18, resulting in inconsistent dispatches.  The operators switched to merit order dispatch.  This issue caused 12 consecutive RTD failures in hour ending 18 and 19.  The issue was subsequently resolved.  There was a single RTD failure in hour ending 6 on August 15th, which was not related to the above issue.

**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 Pre-Dispatch Interval 1 | 2 | 0 |
| Real-Time Pre-Dispatch Interval 2 | 6 | 0 |
| Real-Time Pre-Dispatch Interval 3 | 5 | 0 |
| Real-Time Pre-Dispatch Interval 4 | 3 | 0 |
| Real-Time Dispatch | 24 | 0 |

# ATTACHMENT A

**California Independent System Operator Corporation**
**Market Disruption Report**
**September 15, 2009**

**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 | 7/21/09 | 9 | 4 | RTPD | RTPD timed out due to database performance issue. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval. |
| 2 | 7/21/09 | 16 | 4 | RTD | RTD did not run. Loss clearing payload and LMP filled from last good interval. |
| 3 | 7/23/09 | 15 | 4 | RTD | RTD did not run due to database slowness. Loss clearing payload and LMP filled from last good interval. |
| 4 | 7/27/09 | 3 | 2 | HASP | HASP did not run due to lack of clean bids. 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. |
| 5 | 7/27/09 | 3 | 3 | RTPD | RTPD did not run due to lack of clean bids. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval. |
| 6 | 7/27/09 | 3 | 4 | RTPD | RTPD did not run due to lack of clean bids. 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 | 7/31/09 | 3 | 2 | HASP | HASP failed because the master file application introduced a lock which prevented HASP from running. Market Disruption was limited to one interval. 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. |
| 8 | 7/31/09 | 15 | 1 | RTPD | RTPD timed out. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval. |
| 9 | 7/31/09 | 19 | 1 | RTPD | RTPD failed due to solution infeasibility of one unit. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval. |
| 10 | 8/5/09 | 9 | 11 | RTD | RTD did not run because the updated inputs process timed out at the beginning of the run. Loss clearing payload and LMP filled from last good interval. |
| 11 | 8/5/09 | 17 | 2 | HASP | HASP failed due to missing data. 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. |
| 12 | 8/5/09 | 23 | 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. |
| 13 | 8/8/09 | 8 | 3 | RTPD | RTPD failed due to network application failure. 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 |
|-------|------|------|----------|--------|---|
| 14 | 8/8/09 | 8 | 4 | RTPD | Broadcast of RTPD results failed. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval. |
| 15 | 8/10/09 | 1 | 3 | RTPD | RTPD failed due to an engine infeasibility caused by a conflicting exceptional dispatch instruction and a STUC bid. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval. |
| 16 | 8/10/09 | 15 | 2 | HASP | HASP did not run due to a late bid. Market Disruption was limited to one interval. 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. |
| 17 | 8/12/09 | 15 | 5 | RTD | RTD failed due to software variance. See more details on page 4. Loss clearing payload and LMP filled from last good interval. |
| 18 | 8/12/09 | 15 | 6 | RTD | RTD did not run due to software variance. See more details on page 4. Loss clearing payload and LMP filled from last good interval. |
| 19 | 8/12/09 | 15 | 7 | RTD | RTD failed due to software variance. See more details on page 4. Loss clearing payload and LMP filled from last good interval. |
| 20 | 8/12/09 | 15 | 8 | RTD | RTD did not run due to software variance. See more details on page 4. Loss clearing payload and LMP filled from last good interval. |
| 21 | 8/12/09 | 15 | 9 | RTD | RTD failed due to software variance. See more details on page 4. Loss clearing payload and LMP filled from last good interval. |
| 22 | 8/12/09 | 15 | 11 | RTD | RTD did not run due to software variance. See more details on page 4. Loss clearing payload and LMP filled from last good interval. |
| 23 | 8/14/09 | 15 | 3 | RTD | RTD timed out. Loss clearing payload and LMP filled from last good interval. |
| 24 | 8/14/09 | 15 | 4 | RTD | RTD timed out. Loss clearing payload and LMP filled from last good interval. |
| 25 | 8/15/09 | 3 | 3 | RTPD | RTPD failed due to network application failure. 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 |
|---|---|---|---|---|---|
| 26 | 8/15/09 | 6 | 1 | RTD | RTD did not run. Loss clearing payload and LMP filled from last good interval. |
| 27 | 8/15/09 | 17 | 2 | HASP | HASP failed due to lack of clean bids. Market Disruption was limited to one interval. 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. |
| 28 | 8/15/09 | 17 | 3 | RTPD | RTPD timed out. This interval was filled either automatically or interactively. MQS published PNode clearing and resource awards for this interval. |
| 29 | 8/15/09 | 18 | 3 | RTD | RTD did not run because the bids in two tables in RTD were not synchronized. Loss clearing payload and LMP filled from last good interval. |
| 30 | 8/15/09 | 18 | 4 | RTD | RTD did not run because the bids in two tables in RTD were not synchronized. Loss clearing payload and LMP filled from last good interval. |
| 31 | 8/15/09 | 18 | 5 | RTD | RTD did not run because the bids in two tables in RTD were not synchronized. Loss clearing payload and LMP filled from last good interval. |
| 32 | 8/15/09 | 18 | 6 | RTD | RTD did not run because the bids in two tables in RTD were not synchronized. Loss clearing payload and LMP filled from last good interval. |
| 33 | 8/15/09 | 18 | 7 | RTD | RTD did not run because the bids in two tables in RTD were not synchronized. Loss clearing payload and LMP filled from last good interval. |
| 34 | 8/15/09 | 18 | 8 | RTD | RTD did not run because the bids in two tables in RTD were not synchronized. Loss clearing payload and LMP filled from last good interval. |
| 35 | 8/15/09 | 18 | 9 | RTD | RTD did not run because the bids in two tables in RTD were not synchronized. Loss clearing payload and LMP filled from last good interval. |
| 36 | 8/15/09 | 18 | 10 | RTD | RTD did not run because the bids in two tables in RTD were not synchronized. Loss clearing payload and LMP filled from last good interval. |
| 37 | 8/15/09 | 18 | 11 | RTD | RTD did not run because the bids in two tables in RTD were not synchronized. 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 |
|---|---|---|---|---|---|
| 38 | 8/15/09 | 18 | 12 | RTD | RTD did not run because the bids in two tables in RTD were not synchronized. Loss clearing payload and LMP filled from last good interval. |
| 39 | 8/15/09 | 19 | 1 | RTD | RTD did not run because the bids in two tables in RTD were not synchronized. Loss clearing payload and LMP filled from last good interval. |
| 40 | 8/15/09 | 19 | 2 | RTD | RTD did not run because the bids in two tables in RTD were not synchronized. 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 Pre-Dispatch (RTPD) 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 Pre-Dispatch (RTPD) 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 Pre-Dispatch (RTPD) 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 Pre-Dispatch (RTPD) 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 15th day of September, 2009.


/s/ Anna Pascuzzo
Anna Pascuzzo