



California Independent  
System Operator Corporation

February 13, 2012

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. ER08-1178-\_\_\_\_, and EL08-88-\_\_\_\_  
120 Day Exceptional Dispatch Report**

Dear Secretary Bose:

Pursuant to the Commission's September 2, 2009 order in the above referenced dockets, the California ISO submits the attached report. The September 2 order directed the ISO to continue to file reports every 120 days that describe the status of the ISO's efforts to reduce the frequency of Exceptional Dispatch and the status of the ISO's development of operational and product enhancements that would reduce reliance on Exceptional Dispatch. The attached report provides an update of the ISO's efforts to meet the Commission's directives as set forth in the September 2 Order.

Respectfully submitted,

**By: /s/ Sidney M. Davies**

Nancy Saracino  
General Counsel  
Sidney M. Davies  
Assistant General Counsel  
California Independent System  
Operator Corporation  
250 Outcropping Way  
Folsom, CA 95630  
Tel: (916) 608-7144  
Fax: (916) 608-7222  
[sdavies@caiso.com](mailto:sdavies@caiso.com)

# **Exceptional Dispatch Report**

**Prepared by  
California Independent System Operator**

**February 13, 2012**

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## 1. Introduction

This is the California ISO's eighth 120-day exceptional dispatch report. Previous 120-day reports are available on the ISO website.<sup>1</sup> This report provides information to the Commission and market participants on the measures the ISO is taking to reduce reliance on exceptional dispatch. This 120-day report covers a five-month reporting period with a one-month lag due to the availability of data. This report covers August 2011 through December 2011.

## 2. Exceptional Dispatch Data and Reports

Since the last 120-day report, the overall volume of exceptional dispatch has remained relatively constant during this reporting period averaging 0.44% of load, with a monthly average ranging from 0.14% in December 2011 to 0.72% in August 2011. The volume of exceptional dispatch increased in August and September, largely due to the supplemental manual unit commitments after the day-ahead market closes to mitigate risks of potential supply shortage that can occur during the summer peaking months. Additionally, on September 8 and September 9, a major system disturbance occurred between Arizona and Southern California which caused all of San Diego Gas and Electric (SDG&E) customers to lose power. During this major disturbance, the ISO utilized exceptional dispatch to manage reliability which contributed to the relatively high level of the volume of exceptional dispatch in September. Starting from October 2011, the volume of exceptional dispatch dropped in three straight months to the lowest level of 2011 in December, approximately 25,000 MWh.

To comply with FERC directives and inform the market, the ISO produces and files two reports on exceptional dispatch in addition to the 120-day report. One report is filed on the 15<sup>th</sup> of every month and another is filed on the 30<sup>th</sup> of every month. The monthly reports provide the market with the most recent summary of exceptional dispatch activity and associated costs. The monthly reports are available on the ISO's website at:

<http://www.caiso.com/market/Pages/ReportsBulletins/Default.aspx>.

**Table 1 Report.** This report provides information on the frequency, quantity, and duration of exceptional dispatch. The report is based on a template specified in the September 2 Order as modified by the May 4 Order. Each line item entry is a summary of exceptional dispatches classified by (1) the reason for the exceptional dispatch; (2) the location of the resource by Participating Transmission Owner ("PTO") service area; (3) the Local Reliability Area ("LRA") where applicable; (4) the market in which the exceptional dispatch occurred (day-ahead vs. real-time); and (5) the date of the exceptional dispatch. For each classification the following information is provided: (1) Megawatts ("MW"); (2) Commitment (3) Inc or Dec (4) Hours; (5) Begin Time; and (6) End Time. Appendix A to the Table 1 Exceptional Dispatch Report contains three illustrative examples of how exceptional dispatch activity is captured in the report.

**Table 2 Report.** The Table 2 Report contains all the Table 1 Report fields in the same format, but adds ten additional columns to the report which include the six listed above as well as: (7) Total Volume (MWh); (8) Min Load Cost; (9) Start Up Cost; (10) Charge Code "CC" CC6470; (11) Exceptional Dispatch Volume (MWh INC/DEC); (12) CC6470 INC; (13) CC6470 DEC; (14) CC6482; (15) CC6488; and (16) CC6620.

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<sup>1</sup> ISO 120-day reports, <http://www.caiso.com/informed/Pages/RegulatoryFilingsAndOrders.aspx>.

The ISO also publishes a monthly market performance report at: <http://www.caiso.com/market/Pages/ReportsBulletins/Default.aspx>. This monthly report highlights the frequency and cost of exceptional dispatch as a subset of the broader category of operator intervention. The report is published approximately three weeks after the end of every month and is based on preliminary settlement data available about 10 days after month end.

Additional information is also explained in greater detail in the Market Performance Metric Catalog which is issued on a monthly basis. This report provides the explanation and context for each market metric, including information on exceptional dispatch. It is available at: <http://www.caiso.com/market/Pages/ReportsBulletins/Default.aspx>.

The ISO also provides two regularly scheduled forums for discussing exceptional dispatch issues, among other issues: the bi-weekly market update call scheduled every other Thursday at 10:15 a.m. and the Market Performance and Planning Forum meetings held every six weeks. The market update call is available to address market participant questions on any topic, including exceptional dispatch. The Market Performance and Planning meetings provide for high-level dialogue on release planning, implementation and new market enhancements. Agendas include items of importance to stakeholders including the ISO’s progress on reducing reliance on exceptional dispatch. Meeting agendas, presentations, and stakeholder comments are posted on the Market Performance and Planning Forum webpage: <http://www.caiso.com/Documents/Market%20performance%20and%20planning%20forum>.

### 3. Actions to Address Exceptional Dispatch

This section describes the actions that have been taken since the last 120-day report to reduce exceptional dispatch, as well as actions that are currently underway or planned for future implementation. Updates to the actions in this section will be provided as developed through ISO Market Notices, the Market Performance and Planning Forum, the bi-weekly Market Update Call,<sup>2</sup> and through topic-specific ISO stakeholder initiatives.

Table 1 provides an overview of actions since the last 120-day report. These actions are described in chronological order below. The numbering below continues from the last 120-day report. These actions have been ongoing activities.

Table 1: Actions to Address Exceptional Dispatch	
Date Implemented	Action
TBD	23. Better Modeling Shutdowns Profile
Second phase TBD	26. Day-Ahead Market Commitment Process Enhancements to Reduce Cycling of Resources
Ongoing	27. Other Software Fixes
Ongoing	28. Market Model Improvements
Ongoing	29. Renewable Integration Market and Product Review

<sup>2</sup> Market Update conference call, <http://www.caiso.com/23dc/23dc932e2b630.html>.

**23. Better Modeling Shutdowns Profile** – This action focuses on reducing the artificial ramp created by high Pmin units. Improving profile modeling will allow the ISO to better predict the imbalance energy impacts of resources shutting down that currently are assumed to shutdown instantaneously. The current instantaneous assumption results in a high burden on the ramping capability of a resource. An interim step was implemented in April 2011. Instead of directly modeling the shutdown profile by ramping down its output over a number of intervals, this interim approach adjusts the RTD load downward to count for the energy surplus created by generation ramping down over three RTD intervals. This interim solution has proven to be effective in better representing the demand/supply balance during late evening hours, reducing the need to exceptionally dispatch generation to count for the supply inaccuracy caused by modeling generator shutdown in one RTD interval. The next step would be to directly model the shutdown of a generator by reducing its output over a number of RTD intervals, and may require more realistic input data from the Scheduling Coordinators. The activation date of this direct approach in production has not yet been determined.

**26. Day-Ahead Market Commitment Process Enhancements to Reduce Cycling of Resources** – The first phase of this action was implemented on December 7, 2010. To avoid unnecessary cycling of resources that can occur with a single-day commitment horizon the ISO is exploring options concerning how initial conditions of a resource are determined. The ISO is taking two actions that are related to mitigation of cycling of resources in the Day-Ahead Market. First the ISO implemented enhancements to the existing initial conditions process to allow for resources that intend to stay online to inform the ISO of this intent prior to the ISO starting the next day's Day Ahead market process. Second, the ISO has started to explore options to phase-in a multi-day unit commitment process first utilizing the deferred functionality that was intended to provide for optimal decisions regarding Extremely Long Start resources possibly combined with an extension of the existing Residual Unit Commitment process to evaluate a 48 to 72 hour time horizon instead of the current 24 hour time horizon. This approach would provide benefits of incorporating a bridged commitment decision across off-peak hours as well as improving initial conditions for the next day's Day-Ahead market. The initial condition enhancement was activated on December 7, 2010, and the 72 Hour RUC project has started and is targeted for implementation in 2012.

**27. Other Software Fixes** – At times resource commitment status does not track with the schedule or actual telemetry. Until these issues are fully addressed, exceptional dispatch is a mechanism to force the resource status to the correct status. Several of these issues have been addressed and the ISO will continue to address these occurrences. This is an ongoing activity.

**28. Market Model Improvements** – The ISO plans to continue the efforts to expand the network modeling to include more transmission network, generation resources and loads external to the ISO Controlled Grid. Initial planning and conceptual design has started. This is an ongoing activity.

**29. Renewable Integration Market and Product Review** – The ISO is working with stakeholders on an initiative known as the Renewable Integration Market Product and Review ("RI-MPR") initiative. In this effort the ISO and stakeholders are taking a comprehensive look at what new products might be necessary and appropriate in light of the ISO's new market design and its renewable integration goals, and efforts here are expected to have a positive impact on reducing exceptional dispatch. As part of this effort the ISO will develop new products to ensure that sufficient resources are available in the market to meet the increased variability that is expected on the grid with higher levels than today of variable energy resources. This effort also

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will put in place enhancements that will result in increased dispatch-ability for variable energy resources. Phase 1 of the effort addresses shorter-term issues, whereas Phase 2 addresses longer-term considerations. This is an ongoing activity.<sup>3</sup>

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<sup>3</sup> Information on Phase 1 can be found at <http://www.caiso.com/informed/Pages/StakeholderProcesses/RenewablesIntegrationMarketProductReviewPhase1.aspx>. Information on Phase 2 can be found at <http://www.caiso.com/informed/Pages/StakeholderProcesses/RenewablesIntegrationMarketProductReviewPhase2.aspx>.

## 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 13<sup>th</sup> day of February, 2012.

*Anna Pascuzzo*  
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