

March 18, 2013

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-\_\_\_\_  
January 2014 Exceptional Dispatch Report (Chart 1 data)**

Dear Secretary Bose:

Pursuant to the Commission's September 2, 2009 and May 4, 2010 orders in the above referenced dockets, the California Independent System Operator Corporation submits the attached report. The attached report provides details concerning Exceptional Dispatches the Commission directed to be included in "Chart 1" as set forth in Appendix A of the September 2 order, as modified by the ISO's September 14 motion for clarification, which the Commission granted in its May 4 order. The attached report provides Chart 1 data for the month of January 2014.

Respectfully submitted,

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# Exceptional Dispatch Report

## Table 1: January 2014

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## Introduction

This report is filed pursuant to FERC's September 2, 2009 and June 4, 2010 orders in ER08-1178. These orders require two monthly Exceptional Dispatch reports—one issued on the 15<sup>th</sup> of each month and one issued on the 30<sup>th</sup> of each month. This report provides data on the frequency and reasons for Exceptional Dispatches issued in January 2014. On December 19, 2013, the ISO implemented a new exceptional dispatch tool. This tool improves the ISO's ability to automate the production of the report and provides more granularity and consistency concerning the reasons for the exceptional dispatch.

## The Nature of Exceptional Dispatch

The ISO can issue exceptional dispatch instructions for a resource as a pre-day-ahead unit commitment, which may also include an indicative exceptional dispatch energy schedule, a post-day-ahead unit commitment, or a real-time exceptional dispatch<sup>1</sup>. A pre-day-ahead commitment is an exceptional dispatch instruction that commits a resource at or above its physical minimum operating level in the day-ahead market. A post-day-ahead market commitment is an exceptional dispatch instruction that commits a resource at or above its physical minimum operating level in the real-time market. A real-time exceptional dispatch instruction is a dispatch of a resource at or above its physical minimum operating point. For the purposes of this report, a real-time exceptional dispatch above the resource day-ahead award is considered an incremental exceptional dispatch instruction and an exceptional dispatch below the day-ahead award is considered a decremental dispatch instruction.

The ISO issues exceptional dispatch instructions primarily for constraints which are not enforced or not completely enforced in the market software. Whenever the ISO issues an exceptional dispatch instruction, such instructions are logged into the scheduling and logging system ("SLIC"), including the associated reason. These reasons are associated with the constraints that are not currently incorporated into the market application. In addition to model constraints, the ISO also issues exceptional dispatch instructions for software failures.

Many of the exceptional dispatches listed below in Table 1, were to satisfy either a local area or system reliability requirements, and are classified into local generation requirements, transmission management requirements, non-modeled transmission outages or other requirements, such as ramp requirements and intertie emergency assistance. All of the transmission procedures are available on the CAISO website<sup>2</sup>.

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<sup>1</sup> The ISO can issue exceptional dispatch instructions subject to authority of the ISO Tariff Section 34.9 and in accordance with ISO Operating Procedure 2330 (formerly M-402).

<sup>2</sup> A list of all of the ISO's publicly available Operating Procedures are available at the following link: <http://www.caiso.com/thegrid/operations/opsdoc/index.html>

The following additional reason for exceptional dispatch instructions in January 2014 was not related to specific generation or transmission operating procedures: Software Limitation, when an exceptional dispatch instruction was used to bridge schedules across days for resources with a minimum down time of 24 hours, as the ISO software does not handle multi day commitment. For instance, a resource has a day-ahead schedule from 0600 till 2300, and then is shut down in 2400. If this resource had a minimum down time of 24 hours and it is required the following day, then the ISO issues an exceptional dispatch to commit this resource in 2400 so that it can be dispatched economically in the following day. Software limitation reason was also used for exceptional dispatches to manually issue shut down instructions to a resource because of a temporary Automatic Dispatch System (“ADS”) failure, or similar issues. There were a few other reasons used to explain exceptional dispatch instructions in January, which are self explanatory.

As mentioned earlier, the data shown in Table 1 is based on a template specified in the September 2009 order<sup>3</sup>. Each entry in Attachment A 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.

The MW column shows the range of exceptional dispatch instructions in MW for the classification. The Commitment column specifies if there was a unit commitment for the classification. The INC/DEC/NA column specifies if there was an incremental dispatch, a decremental dispatch, or only a unit commitment. If the exceptional dispatch was only a unit commitment, the column shows NA for the classification. The Begin Time column shows the start of exceptional dispatch for the classification and the End Time column shows the end of exceptional dispatch for the classification. The column Hours is the difference between end time and begin time rounded up to the next hour. The data shown is further explained by way of example in Attachment A.

Table 1 indicates that there were a total of 42 exceptional dispatches in January 2014, as compared to 170 exceptional dispatches in December 2013. Exceptional dispatches issued for the following reasons accounted for

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<sup>3</sup> The data in Table 1 is principally SLIC information supplemented with data from the Market Quality System (MQS). It is the most accurate currently available and it is worth noting that this data has been through the T+38B initial statement process wherein many unresolved issues are fixed. The CAISO believes that this data will correlate well with the settlements data that will be available when the CAISO files the Table 2 report for the reporting period.

approximately 66 percent of the total exceptional dispatches during the reporting period: software limitation, over generation, unit testing, and load forecast uncertainty, and planned transmission outage & constraint.

**Table 1: Exceptional Dispatches in January 2014**

**California Independent System Operator Corporation  
Exceptional Dispatch Report  
March 14, 2014**

**Chart 1: Table of Exceptional Dispatches for Period 01/January/2014 – 31/January/2014**

Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time
1	RT	Conditions beyond the control of the CAISO	SCE	Big Creek-Ventura	7-Jan-14	20	No	INC	10	11:10	20:59
2	RT	Conditions beyond the control of the CAISO	SDG&E	San Diego-IV	9-Jan-14	20	No	INC	12	11:00	22:59
3	RT	Contingency Dispatch	PG&E	Fresno	15-Jan-14	83	No	INC	2	6:13	7:59
4	RT	Contingency Dispatch	PG&E	Fresno	15-Jan-14	83	No	INC	2	6:13	7:59
5	RT	Contingency Dispatch	SCE	LA Basin	15-Jan-14	98	No	INC	2	6:55	7:59
6	RT	Fast Start Unit Management	PG&E	Fresno	9-Jan-14	0	No	INC	2	15:40	16:39
7	RT	Fast Start Unit Management	SCE	Big Creek-Ventura	15-Jan-14	20	No	INC	1	7:00	7:44
8	RT	Intertie Emergency Assistance	Intertie	N/A	5-Jan-14	80	No	INC	2	15:45	16:59
9	RT	Intertie Emergency Assistance	Intertie	N/A	18-Jan-14	80	No	INC	2	18:55	19:59
10	RT	Load Forecast Uncertainty	Intertie	N/A	17-Jan-14	533	No	INC	1	17:00	17:59
11	RT	Load Forecast Uncertainty	Intertie	N/A	28-Jan-14	200	No	INC	1	15:00	15:59
12	RT	Load Forecast Uncertainty	SCE	Big Creek-Ventura	2-Jan-14	20	No	INC	10	9:00	18:59
13	RT	Load Forecast Uncertainty	SCE	LA Basin	24-Jan-14	20	No	INC	1	22:55	22:59
14	RT	Load Forecast Uncertainty	SCE	LA Basin	25-Jan-14	25- 45	Yes	INC	18	5:00	22:59
15	RT	Market Disruption	Intertie	N/A	8-Jan-14	400	No	INC	1	15:00	15:59
16	RT	Market Disruption	Intertie	N/A	26-Jan-14	67	No	INC	1	17:00	17:59

Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time
17	RT	Over Generation	PG&E	Bay Area	23-Jan-14	930-1530	No	INC	2	8:50	9:29
18	RT	Over Generation	SCE	LA Basin	23-Jan-14	160-600	No	INC	2	8:45	9:14
19	RT	Over Generation	SCE	N/A	23-Jan-14	352	No	INC	2	8:53	9:29
20	RT	Over Generation	SDG&E	San Diego-IV	23-Jan-14	281-750	No	INC	2	8:45	9:19
21	RT	Planned Transmission Outage and Constraint	SDG&E	San Diego-IV	16-Jan-14	20	Yes	INC	12	11:30	22:59
22	RT	Planned Transmission Outage and Constraint	PG&E	Bay Area	3-Jan-14	450	No	INC	3	9:24	11:04
23	RT	Planned Transmission Outage and Constraint	SCE	LA Basin	6-Jan-14	45	No	INC	3	19:40	21:59
24	RT	Planned Transmission Outage and Constraint	SCE	LA Basin	22-Jan-14	71	No	INC	7	12:35	18:59
25	RT	Planned Transmission Outage and Constraint	SDG&E	San Diego-IV	15-Jan-14	20- 126	No	INC	19	4:00	22:59
26	RT	Planned Transmission Outage and Constraint	SDG&E	San Diego-IV	16-Jan-14	250-550	No	INC	12	11:30	22:59
27	RT	Planned Transmission Outage and Constraint	SDG&E	San Diego-IV	17-Jan-14	20	No	INC	19	2:00	20:59
28	RT	Pump Management	PG&E	Fresno	13-Jan-14	-320- 0	No	INC	2	0:00	1:29
29	RT	Shutdown	PG&E	Bay Area	15-Jan-14	0	No	INC	2	19:55	20:59
30	RT	Shutdown	SCE	LA Basin	6-Jan-14	0	No	INC	3	19:40	21:59
31	RT	Shutdown	SCE	LA Basin	18-Jan-14	0	No	INC	2	16:59	17:59
32	RT	Shutdown	SCE	LA Basin	28-Jan-14	0	No	INC	1	22:15	22:44
33	RT	Software Limitation	SCE	LA Basin	15-Jan-14	49- 245	No	INC	2	6:55	7:59
34	RT	Software Limitation	PG&E	Fresno	15-Jan-14	83	No	INC	2	6:13	7:59
35	RT	Software Limitation	SCE	Big Creek-Ventura	15-Jan-14	108	No	INC	1	7:00	7:44
36	RT	Software Limitation	SCE	LA Basin	15-Jan-14	94	No	INC	2	6:55	7:59

Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time
37	RT	Unit Testing	PG&E	Bay Area	9-Jan-14	500	No	INC	6	11:55	16:59
38	RT	Unit Testing	PG&E	N/A	7-Jan-14	105-115	No	INC	2	9:09	10:54
39	RT	Unit Testing	PG&E	N/A	8-Jan-14	535-1000	No	INC	2	9:04	10:34
40	RT	Unit Testing	SDG&E	San Diego-IV	10-Jan-14	49	No	INC	7	6:30	12:59
41	RT	Unplanned Outage	Intertie	N/A	29-Jan-14	250	No	INC	1	7:00	7:59
42	RT	Unplanned Outage	PG&E	Fresno	15-Jan-14	166	No	INC	2	6:13	7:59

## Appendix A: Explanation by Example

All examples listed below are based on fictitious data.

### Example 1: Exceptional Dispatch Instructions Prior to DAM

In this fictitious example, the ISO issued an exceptional dispatch instruction for resource A to be committed at its physical minimum (Pmin) of 50 MW from hours ending 5 through 10 for a generation procedure 7630. Similarly, the ISO issued additional instructions to resources B and C for the same reason as shown in Table 2. Generally, exceptional dispatches prior to the day-ahead market are commitments to minimum load. In this case the dispatch levels are all at minimum load.

**Table 2: Instructions Prior to Day-Ahead Market**

Date	Market	Resource	Location	Local Reliability Area (LRA)	Begin Time	End Time	Dispatch Level (MW)	Reason
01-Jul-09	DA	A	SCE	LA BASIN	05:00	10:00	50	7630
01-Jul-09	DA	B	SCE	LA BASIN	08:00	20:00	30	7630
01-Jul-09	DA	C	SCE	LA BASIN	09:00	23:00	20	7630

This data is summarized as shown in Table 3, which is the prescribed format specified in the FERC order on September 02, 2009. This summary classifies the data by reason, resource location, local reliability area, and trade date. The MW column in Table 3 is the range of MW; in this case the minimum instruction MW is 20 MW for resource C which occurs from hours ending 21 through 23. The maximum instruction occurs in hour ending 10. In this hour resource A is committed at 50 MW, resource B is committed at 30 MW and resource C is committed at 20 MW. This adds up to 100 MW. Thus the MW column shows the minimum and maximum of the overlaps of all the exceptional dispatch instructions. The Commitment column shows whether a resource was committed between the begin time and end time. Commitments are broken out separately from energy dispatches. In the day-ahead, however the exceptional dispatches are nearly always just commitments, as in this example. The Begin Time column shows hour ending 5 as this was the hour ending for first dispatch of the day, and the End Time column shows hour ending 23, as this was the hour with last dispatch. It is also possible that there might be some hours between the begin time and the end time where there might not be exceptional dispatch instructions for the given reason, meaning that the range between the begin time and end time can include null hours with no dispatch.

**Table 3: FERC Summary of Instructions Prior to DAM**

Number	Market Type	Reason	Location	Local Reliability Area (LRA)	Trade Date	MW	Commitment	INC/DEC	Hour	Begin Time	End Time
1	DA	7630	SCE	LA Basin	1-Jul-09	20-100	Yes	N/A	19	05:00	23:00

**Example 2: Incremental Exceptional Dispatch Instructions in RTM**

In this fictitious example, the ISO issued an exceptional dispatch instruction to resource A to be committed at its Pmin of 30 MW from hours ending 7 through 11 after completion of the day-ahead market for the transmission procedure 7110. This resource did not have a day-ahead award in those hours. The ISO issued another exceptional dispatch instruction to resource B, to be dispatched at 40 MW from hours ending 8 through 9 in real-time for the transmission procedure 7110. This resource had a day-ahead schedule of 20 MW from the day-ahead market, which implies that this exceptional dispatch instruction was an incremental instruction and the exceptional dispatch MW was 20 MW. Similarly, the details of exceptional dispatch (ED) instruction for resource C are shown in Table 4.

**Table 4: Incremental Exceptional Dispatch Instructions in RTM**

Date	Market	Resource	Location	Local Reliability Area (LRA)	Begin Time	End Time	Dispatch Level (MW)	Day-Ahead Award (MW)	Commitment	INC/DEC	ED (MW)	Reason
01-Jul-09	RT	A	PG&E	Humboldt	06:00	11:00	30	0	Yes	INC	30	7110
01-Jul-09	RT	B	PG&E	Humboldt	07:00	09:00	40	20	No	INC	20	7110
01-Jul-09	RT	C	PG&E	Humboldt	12:00	15:00	50	50	No	INC	0	7110
01-Jul-09	RT	C	PG&E	Humboldt	16:00	20:00	50	40	No	INC	10	7110

This data is summarized as shown in Table 5 and is classified by reason, resource location, local reliability area, and trade date. The MW column in Table 5 is the range of MW; in this case the minimum instruction MW is 0 MW for resource C which occurs from hours ending 13 through 15. The maximum instruction occurs in hours ending 8 & 9, as during these two hours both resources A and B have an ED MW of 30MW and 20MW, respectively. This adds up to 50 MW. Thus the MW column shows the minimum and maximum of the overlaps of all the exceptional dispatch instructions. The Commitment column shows whether a resource was committed between the begin time and end time. This column shows a commitment if there was a single commitment in the entire interval of exceptional dispatch. The Begin Time column shows the time of the first dispatch of the day. This is a time not a range. Similarly the End Time column shows a time and not a range. Exceptional dispatches occurred between these two times. Since there was a commitment between the begin time and end time then the Commitment column displays yes for the summary. Similarly, the INC/DEC column shows an INC as there was an incremental dispatch between the begin time and end time. As mentioned in the previous example it is possible that there might be some hours between the begin time and end time where there were no exceptional dispatch instructions for the given reason.

**Table 5: FERC Summary of ED Instructions in RTM**

Number	Market Type	Reason	Location	Local Reliability Area (LRA)	Trade Date	MW	Commitment	INC/DEC	Hour	Begin Time	End Time
1	RT	7110	PG&E	Humboldt	1-Jul-09	0-50	Yes	INC	15	06:00	20:00

### Example 3: Decremental Exceptional Dispatch Instructions in RTM

This example highlights decremental exceptional dispatch instructions in the real-time market. In this fictitious example the ISO issued an exceptional dispatch instruction to resource A to be committed at its Pmin of 20 MW from hours ending 15 through 20 after completion of the day-ahead market for the transmission procedure 7430. The ISO issued additional exceptional dispatch instructions for resources B and C; details of those instructions are shown in Table 6.

**Table 6: Decremental Exceptional Dispatch Instructions in RTM**

Date	Market Type	Resource	Location	Local Reliability Area (LRA)	Begin Time	End Time	Dispatch Level (MW)	Day-Ahead Award (MW)	Commitment	INC/DEC	ED (MW)	Reason
01-Jul-09	RT	A	PG&E	Fresno	15:00	20:00	20	0	Yes	INC	20	7430
01-Jul-09	RT	B	PG&E	Fresno	07:00	09:00	40	60	No	DEC	20	7430
01-Jul-09	RT	C	PG&E	Fresno	10:00	14:00	40	50	No	DEC	10	7430

This data is summarized according to FERC convention as shown in Table 7. This summary classifies the data by reason, resource location, local reliability area, and trade date. Please note that inc and dec are broken out separately. The inc entry is self-explanatory and similar to the previous example. Regarding the dec entry the MW column is the range of MW; in this case the minimum dec instruction is 10 MW (actually -10MW as it is a dec) for resource C which occurs from hours ending 10 through 14. The maximum instruction occurs from hours ending 7 through 9, when resource B was issued a dec instruction of 20 MW. Thus the MW column shows the minimum and maximum of the overlaps of all the exceptional dispatch instructions. The Commitment column shows whether a resource was committed between the begin time and end time.

**Table 7: FERC Summary of Decremental ED Instructions in RTM**

Number	Market Type	Reason	Location	Local Reliability Area (LRA)	Trade Date	MW	Commitment	INC/DEC	Hour	Begin Time	End Time
1	RT	7430	PG&E	Fresno	1-Jul-09	20	Yes	INC	6	15:00	20:00
1	RT	7430	PG&E	Fresno	1-Jul-09	10-20	Yes	DEC	8	07:00	14:00

## CERTIFICATE OF SERVICE

I hereby certify that I have served the foregoing document upon the parties listed on the official service lists in the above-referenced 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 18<sup>th</sup> day of March 2014.

*Anna Pascuzzo*

Anna Pascuzzo