

February 18, 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. ER08-1178-\_\_\_, and EL08-88-\_\_\_ December 2013 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 December 2013.

Respectfully submitted,

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

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# **Exceptional Dispatch Report**

# Table 1: December 2013

ISO Market Quality and Renewable Integration

February 18, 2013

CAISO 250 Outcropping Way Folsom, California 95630 (916) 351-4400

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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 December 2013. 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 benefits will become more apparent in future reports.

## The Nature of Exceptional Dispatch

The ISO can issue exceptional dispatch instructions for a resource as a pre-dayahead 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

<sup>&</sup>lt;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).

intertie emergency assistance. All of the transmission procedures are available on the CAISO website<sup>2</sup>.

In December 2013, the ISO issued exceptional dispatches for the following generation and transmission operating requirements:

- (1) 6510, SCIT Operating procedure
- (2) 7110, Humboldt Area

The following additional reason for exceptional dispatch instructions in December 2013 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 December, 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

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

<sup>&</sup>lt;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.

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 170 exceptional dispatches in December 2013, as compared to 116 exceptional dispatches in November 2013. Exceptional dispatches issued for the following reasons accounted for approximately 59 percent of the total exceptional dispatches during the reporting period: software limitation, system energy, gas/fuel supply limitations and transmission outage PG&E.

## Table 1: Exceptional Dispatches in December 2013

	California Independent System Operator Corporation Exceptional Dispatch Report February 14, 2013														
	Chart 1: Table of Exceptional Dispatches for Period 01/December/2013 – 31/December/2013														
Num ber	ber Type Reason Location Area Trade Date MW Commitment DEC Hours Time Tin														
1	RT	6510	SCE	Big Creek- Ventura	16-Dec-13	70- 272	Yes	DEC	12	8:15	19:59				
2	2         RT         6510         Big Creek- SCE         16-Dec-13         20- 100         Yes         INC         14         6:53         19:59														
3	RT	6510	SCE	Big Creek- Ventura	17-Dec-13	50	Yes	INC	24	0:00	23:59				
4	RT	6510	SCE	LA Basin	8-Dec-13	288	No	DEC	5	15:20	19:59				
5	RT	6510	SCE	LA Basin	16-Dec-13	90- 369	Yes	DEC	10	10:20	19:59				
6	RT	6510	SCE	LA Basin	16-Dec-13	46-96	Yes	INC	10	10:20	19:59				
7	RT	6510	SDG&E	San Diego-IV	17-Dec-13	20	No	INC	22	2:00	23:59				
8	RT	7110	PG&E	Humboldt	4-Dec-13	15	No	INC	1	6:18	6:59				
9	RT	7110	PG&E	Humboldt	7-Dec-13	30- 45	No	INC	15	3:58	17:59				
10	RT	7110	PG&E	Humboldt	8-Dec-13	30- 45	No	INC	16	8:29	23:58				
11	RT	7110	PG&E	Humboldt	9-Dec-13	15- 60	No	INC	21	0:00	20:59				
12	RT	7110	PG&E	Humboldt	10-Dec-13	15	No	INC	18	6:45	23:22				
13	RT	7110	PG&E	Humboldt	11-Dec-13	15	No	INC	5	18:36	22:15				
14	RT	Bridging Schedules	SCE	Big Creek- Ventura	10-Dec-13	20	Yes	INC	2	22:00	23:59				
15	RT	Bridging Schedules	SCE	LA Basin	2-Dec-13	10- 20	Yes	INC	13	11:00	23:59				
16	RT	Bridging Schedules	SCE	LA Basin	4-Dec-13	20	Yes	INC	9	8:00	16:59				
17	RT	Bridging Schedules	SCE	LA Basin	8-Dec-13	20	Yes	INC	1	23:00	23:59				

Num ber	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_ DEC	Hours	Begin Time	End Time
18	RT	Bridging Schedules	SCE	LA Basin	9-Dec-13	20	Yes	INC	1	22:00	22:39
19	RT	Bridging Schedules	SCE	LA Basin	10-Dec-13	25	Yes	INC	2	22:00	23:59
20	RT	Bridging Schedules	SCE	LA Basin	11-Dec-13	20	No	INC	2	22:00	23:59
21	RT	Communication Outage	PG&E	N/A	17-Dec-13	52	No	INC	19	5:00	23:59
22	RT	Fast Start Unit Management	SCE	LA Basin	22-Dec-13	0	Yes	INC	2	21:30	22:29
23	RT	Gas/Fuel Supply Limitations	PG&E	Fresno	10-Dec-13	308- 391	Yes	DEC	3	21:37	23:59
24	RT	Gas/Fuel Supply Limitations	PG&E	Fresno	10-Dec-13	0	Yes	INC	2	20:55	21:36
25	RT	Gas/Fuel Supply Limitations	PG&E	Fresno	11-Dec-13	308	No	DEC	5	0:00	4:59
26	RT	Gas/Fuel Supply Limitations	PG&E	Fresno	11-Dec-13	14	No	INC	5	0:00	4:59
27	RT	Gas/Fuel Supply Limitations	PG&E	Fresno	12-Dec-13	324	Yes	DEC	4	0:30	3:59
28	RT	Gas/Fuel Supply Limitations	PG&E	Fresno	12-Dec-13	0	No	INC	3	0:30	2:35
29	RT	Gas/Fuel Supply Limitations	SCE	Big Creek- Ventura	9-Dec-13	914- 925	Yes	DEC	2	22:50	23:59
30	RT	Gas/Fuel Supply Limitations	SCE	Big Creek- Ventura	9-Dec-13	54	Yes	INC	2	18:35	19:09
31	RT	Gas/Fuel Supply Limitations	SCE	Big Creek- Ventura	10-Dec-13	214- 435	Yes	DEC	5	0:00	4:59
32	RT	Gas/Fuel Supply Limitations	SCE	Big Creek- Ventura	10-Dec-13	0- 837	Yes	INC	24	0:00	23:59
33	RT	Gas/Fuel Supply Limitations	SCE	Big Creek- Ventura	11-Dec-13	20- 457	Yes	INC	24	0:00	23:59
34	RT	Gas/Fuel Supply Limitations	SCE	LA Basin	9-Dec-13	46-1536	Yes	DEC	22	2:35	23:59
35	RT	Gas/Fuel Supply Limitations	SCE	LA Basin	9-Dec-13	20- 561	Yes	INC	20	4:55	23:59
36	RT	Gas/Fuel Supply Limitations	SCE	LA Basin	10-Dec-13	91-1173	Yes	DEC	24	0:00	23:59
37	RT	Gas/Fuel Supply Limitations	SCE	LA Basin	10-Dec-13	80- 275	Yes	INC	24	0:00	23:59
38	RT	Gas/Fuel Supply Limitations	SCE	LA Basin	11-Dec-13	64- 155	No	DEC	20	0:00	19:59
39	RT	Gas/Fuel Supply Limitations	SCE	LA Basin	11-Dec-13	105- 222	Yes	INC	24	0:00	23:59
40	RT	Gas/Fuel Supply Limitations	SCE	N/A	9-Dec-13	406- 459	No	DEC	2	22:55	23:59

Num ber	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_ DEC	Hours	Begin Time	End Time
41	RT	Gas/Fuel Supply Limitations	SCE	N/A	9-Dec-13	352	No	INC	2	22:40	23:59
42	RT	Gas/Fuel Supply Limitations	SCE	N/A	10-Dec-13	170	No	DEC	5	0:00	4:59
43	RT	Gas/Fuel Supply Limitations	SCE	N/A	10-Dec-13	352	No	INC	12	0:00	11:59
44	RT	Gas/Fuel Supply Limitations	SCE	N/A	11-Dec-13	352	No	INC	5	0:30	4:09
45	RT	Gas/Fuel Supply Limitations	SDG&E	San Diego-IV	9-Dec-13	38- 245	No	DEC	19	5:05	23:59
46	RT	Gas/Fuel Supply Limitations	SDG&E	San Diego-IV	9-Dec-13	680	No	INC	20	4:55	23:59
47	RT	Gas/Fuel Supply Limitations	SDG&E	San Diego-IV	10-Dec-13	38- 233	No	DEC	24	0:00	23:59
48	RT	Gas/Fuel Supply Limitations	SDG&E	San Diego-IV	10-Dec-13	20- 611	No	INC	24	0:00	23:59
49	RT	Gas/Fuel Supply Limitations	SDG&E	San Diego-IV	11-Dec-13	40- 611	Yes	INC	5	0:00	4:59
50	RT	Generation Outage	SCE	LA Basin	2-Dec-13	25	Yes	INC	16	8:00	23:59
51	RT	Generation Outage	SCE	N/A	2-Dec-13	172	No	INC	18	6:00	23:59
52	RT	Generation Outage	SDG&E	San Diego-IV	2-Dec-13	20	No	INC	17	7:00	23:59
53	RT	Intertie Emergency Assistance	Intertie	N/A	12-Dec-13	70	No	INC	1	2:28	2:59
54	RT	Load Forecast Uncertainty	SCE	LA Basin	5-Dec-13	10	Yes	INC	24	0:00	23:59
55	RT	Load Forecast Uncertainty	SCE	LA Basin	6-Dec-13	20	Yes	INC	11	9:30	19:59
56	RT	Load Forecast Uncertainty	SCE	LA Basin	7-Dec-13	10- 30	Yes	INC	11	13:30	23:59
57	RT	Load Forecast Uncertainty	SCE	LA Basin	8-Dec-13	71	Yes	INC	5	15:20	19:59
58	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	7-Dec-13	20	No	INC	2	12:30	13:59
59	RT	Load Pull	PG&E	Fresno	1-Dec-13	0	Yes	INC	1	14:00	14:59
60	RT	Load Pull	SCE	LA Basin	29-Dec-13	190- 260	No	INC	6	15:00	20:59
61	RT	Operating Procedure Number and Constraint	SCE	LA Basin	23-Dec-13	300	No	INC	1	23:00	23:59
62	RT	Operating Procedure Number and Constraint	SCE	LA Basin	24-Dec-13	300	No	INC	24	0:00	23:59
63	RT	Planned Transmission Outage and Constraint	PG&E	Bay Area	31-Dec-13	69	No	DEC 4		18:10	21:09
64	RT	Planned Transmission Outage and Constraint	PG&E	Fresno	21-Dec-13	40	No	INC	2	3:18	4:59

Num ber	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_ DEC	Hours	Begin Time	End Time
0.5		Planned Transmission	5005		10 5 10	00 50			_	47.04	00.50
65	RT	Outage and Constraint	PG&E	Humboldt	19-Dec-13	29-59	No	INC	7	17:24	23:59
66	RT	Planned Transmission Outage and Constraint	PG&E	Humboldt	20-Dec-13	29-44	No	INC	24	0:00	23:59
		Planned Transmission	1.002	Transolat	20 200 10	20 11				0.00	20.00
67	RT	Outage and Constraint	SDG&E	San Diego-IV	22-Dec-13	718	Yes	INC	12	6:00	17:29
				Big Creek-							
68	RT	SP26 Capacity	SCE	Ventura	11-Dec-13	46- 100	Yes	INC	24	0:00	23:59
69	RT	Shutdown	SCE	LA Basin	30-Dec-13	0	Yes	INC	2	21:45	22:14
70	RT	Software Limitation	PG&E	Bay Area	4-Dec-13	45	Yes	INC	8	16:00	23:59
71	RT	Software Limitation	PG&E	Bay Area	9-Dec-13	120	Yes	INC	2	18:35	19:09
72	RT	Software Limitation	PG&E	Fresno	3-Dec-13	40	Yes	INC	5	14:55	18:59
73	RT	Software Limitation	PG&E	Fresno	9-Dec-13	35	Yes	INC	2	18:35	19:09
74	RT	Software Limitation	PG&E	Fresno	13-Dec-13	0	Yes	INC	2	0:55	1:54
75	RT	Software Limitation	PG&E	Fresno	18-Dec-13	4	Yes	DEC	8	10:40	17:59
76	RT	Software Limitation	PG&E	Fresno	18-Dec-13	45	Yes	INC	8	10:40	17:59
77	RT	Software Limitation	PG&E	Humboldt	12-Dec-13	0	No	INC	1	5:00	5:59
78	RT	Software Limitation	PG&E	Humboldt	15-Dec-13	44	No	INC	3	21:30	23:58
79	RT	Software Limitation	PG&E	Humboldt	16-Dec-13	44	No	INC	24	0:00	23:58
80	RT	Software Limitation	PG&E	Humboldt	21-Dec-13	30-44	No	INC	13	11:15	23:59
81	RT	Software Limitation	PG&E	Humboldt	22-Dec-13	44	No	INC	1	0:00	0:59
82	RT	Software Limitation	PG&E	N/A	9-Dec-13	52-400	No	INC	21	3:00	23:59
83	RT	Software Limitation	PG&E	N/A	16-Dec-13	0	No	INC	20	4:00	23:59
84	RT	Software Limitation	PG&E	Stockton	5-Dec-13	0	No	INC	2	2:07	3:24
	_			Big Creek-	_						
85	RT	Software Limitation	SCE	Ventura	4-Dec-13	20- 40	Yes	INC	3	16:00	18:59
86	RT	Software Limitation	SCE	Big Creek- Ventura	8-Dec-13	0	Yes	INC	2	1:30	2:29
87	RT	Software Limitation	SCE	Big Creek- Ventura	9-Dec-13	0-47	No	DEC	6	14:00	19:09

Num ber	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_ DEC	Hours	Begin Time	End Time
				Big Creek-	_						
88	RT	Software Limitation	SCE	Ventura	13-Dec-13	0	Yes	INC	2	0:45	1:44
89	RT	Software Limitation	SCE	LA Basin	1-Dec-13	45	Yes	INC	7	16:30	22:54
90	RT	Software Limitation	SCE	LA Basin	3-Dec-13	10	Yes	INC	24	0:00	23:59
91	RT	Software Limitation	SCE	LA Basin	4-Dec-13	30- 50	Yes	INC	24	0:00	23:59
92	RT	Software Limitation	SCE	LA Basin	6-Dec-13	337	Yes	DEC	2	20:00	21:04
93	RT	Software Limitation	SCE	LA Basin	6-Dec-13	0	Yes	INC	8	14:05	21:04
94	RT	Software Limitation	SCE	LA Basin	7-Dec-13	92	No	DEC	2	22:45	23:44
95	RT	Software Limitation	SCE	LA Basin	7-Dec-13	0	No	INC	2	22:45	23:44
96	RT	Software Limitation	SCE	LA Basin	8-Dec-13	185	No	DEC	2	3:45	4:44
97	RT	Software Limitation	SCE	LA Basin	8-Dec-13	0	Yes	INC	23	1:30	23:59
98	RT	Software Limitation	SCE	LA Basin	9-Dec-13	3- 138	No	DEC	6	2:20	7:59
99	RT	Software Limitation	SCE	LA Basin	9-Dec-13	10	Yes	INC	16	0:00	15:59
100	RT	Software Limitation	SCE	LA Basin	10-Dec-13	0	No	INC	5	0:00	4:59
101	RT	Software Limitation	SCE	LA Basin	11-Dec-13	58-92	No	DEC	2	20:13	21:24
102	RT	Software Limitation	SCE	LA Basin	11-Dec-13	0	Yes	INC	1	23:40	23:59
103	RT	Software Limitation	SCE	LA Basin	12-Dec-13	0	Yes	INC	15	0:00	14:59
104	RT	Software Limitation	SCE	LA Basin	13-Dec-13	47	No	DEC	4	18:25	21:59
105	RT	Software Limitation	SCE	LA Basin	13-Dec-13	0	Yes	INC	2	0:45	1:44
106	RT	Software Limitation	SCE	LA Basin	14-Dec-13	47	Yes	DEC	4	18:55	21:59
107	RT	Software Limitation	SCE	LA Basin	14-Dec-13	0	Yes	INC	3	19:00	21:59
108	RT	Software Limitation	SCE	LA Basin	17-Dec-13	0	Yes	INC	1	23:00	23:29
109	RT	Software Limitation	SCE	LA Basin	18-Dec-13	0	Yes	INC	2	22:35	23:04
110	RT	Software Limitation	SDG&E	San Diego-IV	14-Dec-13	38	Yes	DEC	2	19:05	20:59
111	RT	Software Limitation	SDG&E	San Diego-IV	16-Dec-13		No	INC	2	1:45	2:59
						108-					
112	RT	System Energy	Intertie	N/A	2-Dec-13	515	No	INC	8	8:00	15:59
113	RT	System Energy	Intertie	N/A	3-Dec-13	400	No	INC	1	14:00	14:59
114	RT	System Energy	Intertie	N/A	4-Dec-13	425-	No	INC	4	6:00	9:59

Num ber	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_ DEC	Hours	Begin Time	End Time
						500					
115	RT	System Energy	Intertie	N/A	6-Dec-13	109	No	DEC	1	16:00	16:59
116	RT	System Energy	Intertie	N/A	6-Dec-13	100	No	INC	1	16:00	16:59
117	RT	System Energy	Intertie	N/A	9-Dec-13	225- 750	No	INC	7	0:00	6:59
118	RT	System Energy	Intertie	N/A	10-Dec-13	100	No	DEC	1	7:00	7:59
119	RT	System Energy	Intertie	N/A	10-Dec-13	425- 1284	No	INC	4	4:00	7:59
120	RT	System Energy	Intertie	N/A	11-Dec-13	235	No	INC	1	21:00	21:59
121	RT	System Energy	Intertie	N/A	18-Dec-13	650	No	INC	1	8:00	8:59
122	RT	System Energy	Intertie	N/A	21-Dec-13	425	No	INC	1	16:00	16:59
123	RT	System Energy	Intertie	N/A	31-Dec-13	700	No	INC	1	17:00	17:59
124	RT	System Energy	SCE	LA Basin	5-Dec-13	20	Yes	INC	7	14:15	20:59
125	RT	System Energy	SCE	LA Basin	6-Dec-13	20	Yes	INC	5	12:00	16:59
126	RT	Thermal Margin	SCE	Big Creek- Ventura	18-Dec-13	50	Yes	INC	2	22:00	23:59
127	RT	Thermal Margin	SCE	Big Creek- Ventura	19-Dec-13	50	Yes	INC	24	0:00	23:59
128	RT	Thermal Margin	SCE	LA Basin	8-Dec-13	25-80	Yes	INC	24	0:00	23:59
129	RT	Thermal Margin	SCE	LA Basin	19-Dec-13	20	Yes	INC	23	1:00	23:59
130	RT	Thermal Margin	SDG&E	San Diego-IV	19-Dec-13	20	No	INC	9	15:00	23:59
131	RT	Transmission Mitigation	PG&E	N/A	17-Dec-13	540	No	INC	1	17:33	17:53
132	RT	Transmission Mitigation	SCE	Big Creek- Ventura	8-Dec-13	19- 21	No	DEC	4	18:00	21:02
133	RT	Transmission Mitigation	SCE	Big Creek- Ventura	8-Dec-13	314	Yes	INC	4	18:00	21:02
134	RT	Transmission Mitigation	SCE	Big Creek- Ventura	9-Dec-13	48	No	DEC	2	19:31	20:14
135	RT	Transmission Mitigation	SCE	Big Creek- Ventura	9-Dec-13	280	Yes	INC	2	19:31	20:14
136	RT	Transmission Mitigation	SCE	Big Creek-	10-Dec-13	0	Yes	INC	4	17:30	20:59

Num ber	Market Type	Reason	Location	Local Reliability Area Ventura	Trade Date	MW	Commitment	INC_ DEC	Hours	Begin Time	End Time
				Big Creek-							
137	RT	Transmission Mitigation	SCE	Ventura	12-Dec-13	13- 18	No	DEC	3	16:53	18:59
				Big Creek-							
138	RT	Transmission Mitigation	SCE	Ventura	12-Dec-13	304	Yes	INC	3	16:53	18:59
139	RT	Transmission Outage PG&E	PG&E	Bay Area	7-Dec-13	26-31	Yes	DEC	3	17:35	19:59
140	RT	Transmission Outage PG&E	PG&E	Bay Area	7-Dec-13	20- 75	No	INC	3	18:28	20:59
141	RT	Transmission Outage PG&E	PG&E	Fresno	2-Dec-13	58	No	DEC	2	17:11	18:59
142	RT	Transmission Outage PG&E	PG&E	Fresno	2-Dec-13	324	Yes	INC	3	2:15	4:59
143	RT	Transmission Outage PG&E	PG&E	Fresno	10-Dec-13	70- 120	Yes	INC	3	21:26	23:59
144	RT	Transmission Outage PG&E	PG&E	Fresno	11-Dec-13	16-56	Yes	DEC	4	4:25	7:59
145	RT	Transmission Outage PG&E	PG&E	Fresno	11-Dec-13	15- 456	Yes	INC	24	0:00	23:58
146	RT	Transmission Outage PG&E	PG&E	Fresno	12-Dec-13	7	No	DEC	2	2:17	3:59
147	RT	Transmission Outage PG&E	PG&E	Fresno	12-Dec-13	6- 414	Yes	INC	4	0:00	3:59
148	RT	Transmission Outage PG&E	PG&E	Fresno	13-Dec-13	80- 126	No	INC	17	2:00	18:59
149	RT	Transmission Outage PG&E	PG&E	Fresno	14-Dec-13	40- 144	Yes	INC	22	1:20	22:59
150	RT	Transmission Outage PG&E	PG&E	Fresno	17-Dec-13	40	No	INC	6	11:21	16:59
151	RT	Transmission Outage PG&E	PG&E	Humboldt	6-Dec-13	57- 117	No	INC	8	13:49	20:59
152	RT	Transmission Outage PG&E	PG&E	N/A	19-Dec-13	47	No	INC	11	8:00	18:59
153	RT	Transmission Outage PG&E	PG&E	Sierra	2-Dec-13	0	Yes	DEC	15	4:30	18:59
154	RT	Transmission Outage PG&E	PG&E	Sierra	2-Dec-13	26-46	Yes	INC	15	4:30	18:59
155	RT	Transmission Outage PG&E	PG&E	Sierra	7-Dec-13	20	Yes	INC	6	8:40	13:59
156	RT	Transmission Outage SCE	SCE	LA Basin	3-Dec-13	20-85	Yes	INC	16	8:00	23:59
157	RT	Transmission Outage SCE	SCE	LA Basin	13-Dec-13	20	Yes	INC	18	0:00	17:59
158	RT	Transmission Outage SCE	SCE	LA Basin	18-Dec-13	20	Yes	INC	19	5:00	23:59
159	RT	Transmission Outage SCE	SCE	N/A	3-Dec-13	172	No	INC	3	12:00	14:59
160	RT	Transmission Outage SDG&E	SDG&E	San Diego-IV	12-Dec-13	250	No	INC	1	9:20	9:59
161	RT	Transmission Outage SDG&E	SDG&E	San Diego-IV	13-Dec-13	20- 220	No	INC	16	2:00	17:59

Num ber	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_ DEC	Hours	Begin Time	End Time
100	рт	Transmission Outage	0000		10 Dec 12	300-	Nia		2	44.50	12.50
162	RT	SDG&E	SDG&E	San Diego-IV	16-Dec-13	360	No	INC	3	11:53	13:59
163	RT	Transmission Outage SDG&E	SDG&E	San Diego-IV	18-Dec-13	0	No	INC	3	10:45	12:29
						120-					
164	RT	Unit Testing	PG&E	Bay Area	14-Dec-13	320	Yes	INC	7	7:30	13:59
165	RT	Unit Testing	PG&E	Bay Area	19-Dec-13	175	No	INC	4	14:58	17:59
						140-					
166	RT	Unit Testing	PG&E	N/A	19-Dec-13	250	Yes	INC	7	15:30	21:59
167	RT	Unit Testing	SDG&E	San Diego-IV	19-Dec-13	50- 160	Yes	INC	10	5:45	14:59
						324-					
168	RT	Voltage Support	PG&E	Fresno	29-Dec-13	648	No	DEC	7	1:55	7:39
169	RT	Voltage Support	PG&E	Sierra	9-Dec-13	20	Yes	INC	4	13:45	16:59
170	RT	Voltage Support	PG&E	Sierra	22-Dec-13	20	Yes	INC	2	14:55	15:34

## 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.

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	В	SCE	LA BASIN	08:00	20:00	30	7630
01-Jul-09	DA	С	SCE	LA BASIN	09:00	23:00	20	7630

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

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 and end time can include null hours with no dispatch.

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.

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	А	PG&E	Humboldt	06:00	11:00	30	0	Yes	INC	30	7110
01-Jul-09	RT	В	PG&E	Humboldt	07:00	09:00	40	20	No	INC	20	7110
01-Jul-09	RT	С	PG&E	Humboldt	12:00	15:00	50	50	No	INC	0	7110
01-Jul-09	RT	С	PG&E	Humboldt	16:00	20:00	50	40	No	INC	10	7110

## Table 4: Incremental Exceptional Dispatch Instructions in RTM

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.

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

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

## **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.

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	А	PG&E	Fresno	15:00	20:00	20	0	Yes	INC	20	7430
01-Jul-09	RT	В	PG&E	Fresno	07:00	09:00	40	60	No	DEC	20	7430
01-Jul-09	RT	С	PG&E	Fresno	10:00	14:00	40	50	No	DEC	10	7430

## Table 6: Decremental Exceptional Dispatch Instructions in RTM

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 February, 2014.

Isl Anna Pascuzzo

Anna Pascuzzo