

January 15, 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-\_\_\_
November 2012 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 November 2012.

Respectfully submitted,

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# **Exceptional Dispatch Report**

**Table 1: November 2012** 

**ISO Market Quality and Renewable Integration** 

**January 15, 2012** 

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#### Introduction

This report is filed pursuant to FERC's September 2, 2009 and May 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 November 2012.

## 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 reason codes starting with "G" refer to an ISO operating procedure for generation requirements and reason codes starting with "T" refer to an ISO operating procedure for transmission facilities. Most of the generation procedures are internal to the ISO and not available on the ISO website. All of the transmission procedures are available on the CAISO website<sup>2</sup>.

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<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).

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

In November 2012, the ISO issued exceptional dispatches for the following transmission management requirements: (1) 6510, Southern California import transmission (SCIT) nomogram; (2) 7110, transmission facilities in Humboldt area; (3) 7720, Julian Hinds-Mirage 230 kV line overload mitigation & Eagle Mountain bank emergency mitigation; (4) 8710, Hoodoo Wash-N.Gila 500 kV line flow mitigation; and (5) other transmission outages in PG&E, SCE and SDG&E area.

The following additional reasons for exceptional dispatch instructions in November 2012 were not related to specific generation or transmission operating procedures: (1) 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; and (2) Market Disruption, when the exceptional dispatch instructions were issued due to HASP failures. There were a few other reasons used to explain exceptional dispatch instructions in November, 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

available when the CAISO files the Table 2 report for the reporting period.

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<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

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 171 exceptional dispatches in November 2012, decreasing by 134 as compared to the December 14, 2012 report for October 2012. Exceptional dispatches issued for the following reasons accounted for approximately 71 percent of the total exceptional dispatches during the reporting period: Software Limitation, Transmission Outage PG&E, System Load, and 6510.

**Table 1: Exceptional Dispatches in November 2012** 

#### California Independent System Operator Corporation Exceptional Dispatch Report January 15, 2012

### Chart 1: Table of Exceptional Dispatches for Period 01/November /2012 – 30/ November /2012

Num	Market			Local Reliability			Commit			Begin	End
ber	Туре	Reason	Location	Area	Trade Date	MW	ment	INC_DEC	Hours	Time	Time
1	RT	6510	SCE	Big Creek- Ventura	5-Nov-12	100	Yes	INC	13	9:30	21:59
2	RT	6510	SCE	Big Creek- Ventura	8-Nov-12	140	Yes	DEC	9	13:55	21:59
3	RT	6510	SCE	Big Creek- Ventura	8-Nov-12	30- 100	Yes	INC	11	12:36	22:59
4	RT	6510	SCE	Big Creek- Ventura	10-Nov-12	100	Yes	INC	17	6:20	22:59
5	RT	6510	SCE	Big Creek- Ventura	11-Nov-12	50	Yes	INC	14	6:10	19:49
6	RT	6510	SCE	LA Basin	2-Nov-12	42- 221	No	DEC	18	4:00	21:59
7	RT	6510	SCE	LA Basin	2-Nov-12	70- 285	No	INC	18	4:00	21:59
8	RT	6510	SCE	LA Basin	5-Nov-12	30- 530	No	DEC	15	8:55	22:59
9	RT	6510	SCE	LA Basin	5-Nov-12	311	Yes	INC	16	8:55	23:19
10	RT	6510	SCE	LA Basin	6-Nov-12	150- 949	No	DEC	15	7:20	21:59
11	RT	6510	SCE	LA Basin	6-Nov-12	360- 509	Yes	INC	15	7:20	21:59
12	RT	6510	SCE	LA Basin	7-Nov-12	33- 388	No	DEC	16	6:00	21:59
13	RT	6510	SCE	LA Basin	7-Nov-12	90- 330	Yes	INC	16	6:00	21:59
14	RT	6510	SCE	LA Basin	8-Nov-12	48- 417	No	DEC	16	6:00	21:59
15	RT	6510	SCE	LA Basin	8-Nov-12	30- 70	No	INC	16	6:00	21:59
16	RT	6510	SCE	LA Basin	16-Nov-12	0- 70	No	DEC	7	16:00	22:59
17	RT	6510	SCE	LA Basin	17-Nov-12	56- 120	No	DEC	15	7:00	21:59

				Local							
Num	Market			Reliability			Commit			Begin	End
ber	Type	Reason	Location	Area	Trade Date	MW	ment	INC_DEC	Hours	Time	Time
18	RT	6510	SCE	LA Basin	17-Nov-12	50- 240	Yes	INC	16	6:00	21:59
19	RT	6510	SCE	LA Basin	18-Nov-12	56- 276	No	DEC	14	7:00	20:59
20	RT	6510	SCE	LA Basin	18-Nov-12	220	No	INC	14	7:00	20:59
21	RT	6510	SCE	LA Basin	19-Nov-12	6- 120	No	DEC	14	7:00	20:59
22	RT	6510	SCE	LA Basin	19-Nov-12	70- 240	Yes	INC	14	7:00	20:59
23	RT	6510	SCE	LA Basin	21-Nov-12	82	No	DEC	14	9:40	22:59
24	RT	6510	SCE	LA Basin	21-Nov-12	190- 240	Yes	INC	14	9:40	22:59
25	RT	6510	SCE	LA Basin	26-Nov-12	190	Yes	INC	16	7:40	22:59
26	RT	6510	SCE	LA Basin	27-Nov-12	190	Yes	INC	16	6:55	21:59
27	RT	6510	SDG&E	San Diego	2-Nov-12	63	No	INC	17	5:00	21:59
28	RT	6510	SDG&E	San Diego	6-Nov-12	63- 131	No	INC	16	7:00	22:59
29	RT	6510	SDG&E	San Diego	7-Nov-12	131	No	INC	15	7:00	21:59
30	RT	6510	SDG&E	San Diego	8-Nov-12	20- 131	No	INC	21	1:00	21:59
31	RT	6510	SDG&E	San Diego	9-Nov-12	131	No	INC	15	7:00	21:59
32	RT	6510	SDG&E	San Diego	13-Nov-12	63	No	INC	16	6:15	21:59
33	RT	7110	PG&E	Humboldt	7-Nov-12	32	No	INC	6	18:22	23:08
34	RT	7110	PG&E	Humboldt	18-Nov-12	29	No	INC	1	0:45	0:59
35	RT	7110	PG&E	Humboldt	19-Nov-12	58	No	INC	9	1:00	9:59
36	RT	7110	PG&E	Humboldt	29-Nov-12	44- 75	No	INC	-11	12:17	0:59
37	RT	7110	PG&E	Humboldt	30-Nov-12	3- 73	No	INC	23	1:00	23:37
38	RT	7720	SCE	N/A	20-Nov-12	196- 352	No	INC	14	9:40	22:59
39	RT	8710	SDG&E	San Diego	19-Nov-12	63	No	INC	14	7:00	20:59
40	RT	Bridging Schedules	PG&E	Bay Area	27-Nov-12	0	No	INC	1	0:20	0:59
41	RT	Bridging Schedules	SCE	LA Basin	14-Nov-12	0	No	INC	1	0:00	0:59
		Conditions beyond control of the									
42	RT	CAISO BA	PG&E	N/A	4-Nov-12	185	No	INC	1	0:00	0:59
40	D.T.	Conditions beyond control of the	D0.05	N1/A	40 NL 40	550	.,	IN CO		00.40	00.50
43	RT	CAISO BA	PG&E	N/A	10-Nov-12	550	No	INC	1	20:10	20:59
44	RT	Conditions beyond control of the	SDG&E	San Diego	2-Nov-12	20- 80	Yes	INC	22	2:00	23:59

Num	Market			Local Reliability			Commit			Begin	End
ber	Type	Reason	Location	Area	Trade Date	MW	ment	INC DEC	Hours	Time	Time
20.	. , , , ,	CAISO BA	2004.011	700	Trade Date		1110111		110410	1	
		Conditions beyond control of the									
45	RT	CAISO BA	SDG&E	San Diego	15-Nov-12	20- 68	No	INC	13	9:00	21:59
		Conditions beyond control of the									
46	RT	CAISO BA	SDG&E	San Diego	21-Nov-12	63- 161	No	INC	13	9:05	21:59
47	RT	Generation Outage	PG&E	Bay Area	8-Nov-12	60	Yes	INC	10	13:57	22:59
48	RT	Intertie Emergency Assistance	Intertie	N/A	21-Nov-12	30- 50	Yes	INC	2	10:01	11:59
49	RT	Intertie Emergency Assistance	Intertie	N/A	26-Nov-12	50- 120	No	INC	3	9:58	11:59
50	RT	Over Generation	PG&E	Bay Area	14-Nov-12	250	No	DEC	2	14:54	15:08
51	RT	Over Generation	PG&E	Bay Area	14-Nov-12	600	No	INC	2	14:53	15:08
52	RT	Over Generation	PG&E	Fresno	14-Nov-12	320	No	INC	2	14:53	15:08
53	RT	Pumped-Storage	PG&E	Fresno	25-Nov-12	308	Yes	DEC	4	5:00	8:59
54	RT	Ramp Rate	SDG&E	San Diego	11-Nov-12	63	No	INC	15	7:25	21:59
55	RT	Ramp Rate	SDG&E	San Diego	16-Nov-12	63	No	INC	8	5:05	12:59
56	RT	Ramp Rate	SDG&E	San Diego	17-Nov-12	63	No	INC	16	6:30	21:59
57	RT	Software Limitation	N/A	N/A	12-Nov-12	10	No	INC	1	19:55	19:59
58	RT	Software Limitation	PG&E	Bay Area	20-Nov-12	85	No	DEC	1	20:50	20:59
59	RT	Software Limitation	PG&E	Bay Area	20-Nov-12	45	Yes	INC	-13	14:10	0:59
60	RT	Software Limitation	PG&E	Bay Area	21-Nov-12	45	Yes	INC	11	1:00	11:59
61	RT	Software Limitation	PG&E	Fresno	16-Nov-12	0	No	INC	1	0:45	0:58
62	RT	Software Limitation	PG&E	Fresno	17-Nov-12	0	No	INC	3	2:10	4:09
63	RT	Software Limitation	PG&E	Fresno	24-Nov-12	616	Yes	DEC	7	4:30	10:59
64	RT	Software Limitation	PG&E	Fresno	29-Nov-12	117	No	DEC	1	7:00	7:14
65	RT	Software Limitation	PG&E	Fresno	29-Nov-12	32	Yes	INC	11	7:00	17:59
66	RT	Software Limitation	PG&E	N/A	16-Nov-12	0	No	INC	1	0:45	0:58
67	RT	Software Limitation	PG&E	N/A	17-Nov-12	0	No	INC	3	2:10	4:09
68	RT	Software Limitation	PG&E	N/A	19-Nov-12	330	No	INC	2	5:45	6:59
69	RT	Software Limitation	SCE	Big Creek- Ventura	19-Nov-12	47	No	DEC	11	1:00	11:59

Num	Market			Local Reliability			Commit			Begin	End
ber	Type	Reason	Location	Area	Trade Date	MW	ment	INC_DEC	Hours	Time	Time
70	RT	Software Limitation	SCE	Big Creek- Ventura	26-Nov-12	50	Yes	INC	13	10:55	22:59
71	RT	Software Limitation	SCE	Big Creek- Ventura	27-Nov-12	0	No	INC	1	1:00	1:59
72	RT	Software Limitation	SCE	Big Creek- Ventura	30-Nov-12	0	Yes	INC	1	20:30	20:59
73	RT	Software Limitation	SCE	LA Basin	1-Nov-12	0	Yes	INC	1	22:00	22:59
74	RT	Software Limitation	SCE	LA Basin	3-Nov-12	0	Yes	INC	11	2:55	12:59
75	RT	Software Limitation	SCE	LA Basin	5-Nov-12	0	Yes	INC	1	21:43	21:58
76	RT	Software Limitation	SCE	LA Basin	13-Nov-12	0	Yes	INC	2	21:10	22:09
77	RT	Software Limitation	SCE	LA Basin	21-Nov-12	0	Yes	INC	1	1:00	1:39
78	RT	Software Limitation	SCE	LA Basin	26-Nov-12	71	Yes	INC	22	1:30	22:59
79	RT	Software Limitation	SCE	LA Basin	27-Nov-12	0	Yes	INC	0	1:00	0:59
80	RT	Software Limitation	SCE	LA Basin	28-Nov-12	0	No	INC	1	1:00	1:34
81	RT	Software Limitation	SCE	LA Basin	30-Nov-12	0	Yes	INC	1	23:00	23:59
82	RT	Software Limitation	SDG&E	N/A	9-Nov-12	0	Yes	INC	4	5:00	8:59
83	RT	Software Limitation	SDG&E	San Diego	16-Nov-12	63	No	INC	7	16:00	22:59
84	RT	Software Limitation	SDG&E	San Diego	19-Nov-12	0	Yes	INC	1	14:45	14:59
85	RT	Software Limitation	SDG&E	San Diego	26-Nov-12	0	No	INC	7	9:40	15:59
86	RT	System Energy	Intertie	N/A	2-Nov-12	200	Yes	INC	1	8:00	8:59
87	RT	System Energy	Intertie	N/A	11-Nov-12	450	Yes	INC	1	17:00	17:59
88	RT	System Energy	Intertie	N/A	15-Nov-12	800	Yes	INC	1	17:00	17:59
89	RT	System Energy	Intertie	N/A	20-Nov-12	200- 779	Yes	INC	4	16:00	19:59
90	RT	System Energy	Intertie	N/A	21-Nov-12	10	Yes	INC	3	16:00	18:59
91	RT	System Energy	Intertie	N/A	26-Nov-12	200	Yes	INC	1	0:00	0:59
92	RT	System Energy	Intertie	N/A	28-Nov-12	10	Yes	INC	1	23:00	23:59
93	RT	System Energy	Intertie	N/A	30-Nov-12	25	Yes	INC	1	17:00	17:59
94	RT	System Load	SCE	Big Creek- Ventura	1-Nov-12	50- 100	Yes	INC	6	16:00	21:59
95	RT	System Load	SCE	Big Creek-	12-Nov-12	100	Yes	INC	15	7:00	21:59

Num ber	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commit ment	INC_DEC	Hours	Begin Time	End Time
				Ventura							
96	RT	System Load	SCE	Big Creek- Ventura	13-Nov-12	50	Yes	INC	14	8:35	21:59
97	RT	System Load	SCE	Big Creek- Ventura	29-Nov-12	50	Yes	INC	5	17:15	21:59
98	RT	System Load	SCE	LA Basin	1-Nov-12	71	No	INC	6	16:00	21:59
99	RT	System Load	SCE	LA Basin	12-Nov-12	70	Yes	INC	15	7:00	21:59
100	RT	System Load	SCE	LA Basin	13-Nov-12	70	No	INC	4	18:15	21:59
101	RT	System Load	SCE	LA Basin	14-Nov-12	5- 326	No	DEC	15	6:05	20:59
102	RT	System Load	SCE	LA Basin	14-Nov-12	0- 50	No	INC	15	6:05	20:59
103	RT	System Load	SCE	LA Basin	16-Nov-12	56- 81	No	DEC	8	5:05	12:59
104	RT	System Load	SCE	LA Basin	16-Nov-12	66- 145	No	INC	8	5:05	12:59
105	RT	System Load	SCE	LA Basin	29-Nov-12	71	Yes	INC	5	17:15	21:59
106	RT	System Load	SDG&E	San Diego	1-Nov-12	68	No	INC	6	16:00	21:59
107	RT	System Load	SDG&E	San Diego	12-Nov-12	63	No	INC	15	7:00	21:59
108	RT	System Load	SDG&E	San Diego	18-Nov-12	63	No	INC	9	13:20	21:59
109	RT	System Reliability	PG&E	Fresno	10-Nov-12	311	Yes	DEC	1	2:00	2:59
110	RT	System Reliability	PG&E	Fresno	12-Nov-12	743	Yes	DEC	1	7:00	7:59
111	RT	Transmission Outage Other	Intertie	N/A	21-Nov-12	200	No	DEC	14	9:22	22:59
112	RT	Transmission Outage Other	PG&E	Bay Area	21-Nov-12	600	No	INC	9	12:45	20:59
113	RT	Transmission Outage PG&E	PG&E	Bay Area	5-Nov-12	100- 146	Yes	DEC	8	15:22	22:59
114	RT	Transmission Outage PG&E	PG&E	Bay Area	5-Nov-12	20- 37	Yes	INC	6	17:15	22:59
115	RT	Transmission Outage PG&E	PG&E	Fresno	3-Nov-12	0	No	INC	1	4:30	4:44
116	RT	Transmission Outage PG&E	PG&E	Fresno	5-Nov-12	65- 315	Yes	INC	7	13:25	19:59
117	RT	Transmission Outage PG&E	PG&E	Fresno	6-Nov-12	65	No	INC	1	16:00	16:59
118	RT	Transmission Outage PG&E	PG&E	Fresno	28-Nov-12	15	No	INC	2	4:42	5:59
119	RT	Transmission Outage PG&E	PG&E	Humboldt	6-Nov-12	60	No	INC	6	13:30	18:59
120	RT	Transmission Outage PG&E	PG&E	Humboldt	26-Nov-12	32- 64	No	INC	8	10:05	17:59
121	RT	Transmission Outage PG&E	PG&E	NCNB	6-Nov-12	15- 30	No	DEC	7	1:45	7:59

Num	Market			Local Reliability			Commit			Begin	End
ber	Type	Reason	Location	Area	Trade Date	MW	ment	INC DEC	Hours	Time	Time
122	RT	Transmission Outage PG&E	PG&E	NCNB	26-Nov-12	9- 51	No	DEC	12	8:19	19:29
123	RT	Transmission Outage PG&E	PG&E	Sierra	1-Nov-12	40- 242	No	DEC	18	5:37	22:59
124	RT	Transmission Outage PG&E	PG&E	Sierra	1-Nov-12	0- 81	Yes	INC	24	0:00	23:59
125	RT	Transmission Outage PG&E	PG&E	Sierra	2-Nov-12	25	No	DEC	2	18:24	19:54
126	RT	Transmission Outage PG&E	PG&E	Sierra	2-Nov-12	36	Yes	INC	24	0:00	23:58
127	RT	Transmission Outage PG&E	PG&E	Sierra	3-Nov-12	20- 35	Yes	INC	24	0:01	23:59
128	RT	Transmission Outage PG&E	PG&E	Sierra	4-Nov-12	20- 35	No	INC	21	0:00	20:59
129	RT	Transmission Outage PG&E	PG&E	Sierra	5-Nov-12	46	Yes	INC	22	1:00	22:59
130	RT	Transmission Outage PG&E	PG&E	Sierra	6-Nov-12	20	No	DEC	2	18:48	19:59
131	RT	Transmission Outage PG&E	PG&E	Sierra	6-Nov-12	62- 83	No	INC	5	18:48	22:59
132	RT	Transmission Outage PG&E	PG&E	Sierra	7-Nov-12	15	No	DEC	3	18:14	20:59
133	RT	Transmission Outage PG&E	PG&E	Sierra	7-Nov-12	16- 83	No	INC	4	18:25	21:23
134	RT	Transmission Outage PG&E	PG&E	Sierra	8-Nov-12	10- 40	No	DEC	7	15:35	21:32
135	RT	Transmission Outage PG&E	PG&E	Sierra	10-Nov-12	7- 32	Yes	DEC	6	18:05	23:59
136	RT	Transmission Outage PG&E	PG&E	Sierra	10-Nov-12	70	Yes	INC	7	17:35	23:59
137	RT	Transmission Outage PG&E	PG&E	Sierra	11-Nov-12	5- 13	No	DEC	6	18:19	23:59
138	RT	Transmission Outage PG&E	PG&E	Sierra	11-Nov-12	85	No	INC	13	11:05	23:59
139	RT	Transmission Outage PG&E	PG&E	Sierra	12-Nov-12	14	No	DEC	1	20:05	20:59
140	RT	Transmission Outage PG&E	PG&E	Sierra	12-Nov-12	20- 21	Yes	INC	0	1:00	0:59
141	RT	Transmission Outage PG&E	PG&E	Sierra	13-Nov-12	20	Yes	INC	9	1:00	9:59
142	RT	Transmission Outage PG&E	PG&E	Sierra	14-Nov-12	5- 20	No	DEC	1	8:00	8:36
143	RT	Transmission Outage PG&E	PG&E	Sierra	14-Nov-12	20	Yes	INC	11	2:50	12:59
144	RT	Transmission Outage PG&E	PG&E	Sierra	20-Nov-12	5	No	DEC	1	23:07	23:23
145	RT	Transmission Outage PG&E	PG&E	Sierra	30-Nov-12	0	Yes	INC	1	22:10	22:59
146	RT	Transmission Outage PG&E	SDG&E	San Diego	12-Nov-12	20	No	INC	6	1:00	6:59
147	RT	Transmission Outage SCE	SCE	LA Basin	3-Nov-12	158- 288	No	DEC	1	23:03	23:59
148	RT	Transmission Outage SCE	SCE	LA Basin	4-Nov-12	91- 170	No	DEC	12	0:00	11:59
149	RT	Transmission Outage SCE	SCE	LA Basin	4-Nov-12	30- 80	No	INC	9	0:00	8:34
150	RT	Transmission Outage SCE	SCE	LA Basin	5-Nov-12	160	No	INC	1	10:05	10:59

Num ber	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commit ment	INC_DEC	Hours	Begin Time	End Time
151	RT	Transmission Outage SCE	SCE	LA Basin	19-Nov-12	30	No	INC	4	7:25	10:59
152	RT	Transmission Outage SCE	SCE	LA Basin	20-Nov-12	1	No	DEC	10	8:43	17:59
153	RT	Transmission Outage SCE	SCE	LA Basin	20-Nov-12	0	No	INC	10	8:43	17:59
154	RT	Transmission Outage SCE	SCE	N/A	28-Nov-12	215	No	INC	5	17:20	21:59
155	RT	Transmission Outage SDG&E	SDG&E	San Diego	10-Nov-12	20- 83	Yes	INC	13	10:32	22:59
156	RT	Transmission Outage SDG&E	SDG&E	San Diego	14-Nov-12	22	No	INC	2	16:30	17:59
157	RT	Transmission Outage SDG&E	SDG&E	San Diego	16-Nov-12	48	Yes	INC	10	13:50	22:59
158	RT	Transmission Outage SDG&E	SDG&E	San Diego	19-Nov-12	12- 42	No	DEC	7	8:00	14:59
159	RT	Transmission Outage SDG&E	SDG&E	San Diego	19-Nov-12	2- 14	Yes	INC	6	9:15	14:59
160	RT	Transmission Outage SDG&E	SDG&E	San Diego	23-Nov-12	63	No	INC	15	7:15	21:59
161	RT	Transmission Outage SDG&E	SDG&E	San Diego	24-Nov-12	20- 63	No	INC	23	1:00	23:59
162	RT	Transmission Outage SDG&E	SDG&E	San Diego	25-Nov-12	20	No	INC	5	1:00	5:44
163	RT	Transmission Outage SDG&E	SDG&E	San Diego	26-Nov-12	68	No	INC	14	9:30	22:59
164	RT	Transmission Outage SDG&E	SDG&E	San Diego	29-Nov-12	30- 150	Yes	DEC	14	8:10	21:59
165	RT	Transmission Outage SDG&E	SDG&E	San Diego	29-Nov-12	110- 260	Yes	INC	14	8:10	21:59
166	RT	Unit Testing	N/A	N/A	8-Nov-12	200	Yes	INC	1	19:05	19:59
167	RT	Unit Testing	N/A	N/A	9-Nov-12	150	Yes	INC	7	1:00	7:59
168	RT	Unit Testing	PG&E	Bay Area	6-Nov-12	853	No	INC	1	9:35	9:44
169	RT	Voltage Support	PG&E	Fresno	23-Nov-12	308	Yes	DEC	5	2:45	6:59
170	RT	Voltage Support	PG&E	N/A	6-Nov-12	20	Yes	INC	2	22:49	23:59
171	RT	Voltage Support	PG&E	N/A	7-Nov-12	20	Yes	INC	8	1:00	8:59

## **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 dayahead 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	Α	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

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 dayahead, 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	Α	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

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	Α	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

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** 

Nu	mber	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 15<sup>th</sup> day of January 2013.

<u>(s/ Anna Pascuzzo</u> Anna Pascuzzo