



# Exceptional Dispatch Report

## Table 1: November 2009

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## Introduction

This report is filed pursuant to the FERC September 2<sup>nd</sup> order in ER08-1175, which prescribed a particular format for all exceptional dispatch reporting. This report follows that format as modified by the ISO's request for clarification filed on September 14, 2009.

## The Nature of Exceptional Dispatch

The ISO can issue exceptional dispatch instructions for a resource as a pre-day-ahead unit commitment, 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 operation 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>1</sup> The ISO can issue exceptional dispatch instruction subject to authority of the ISO Tariff Section 34.9 and in accordance with ISO Operating Procedure 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>

In November, the ISO issued exceptional dispatches for following local area generation requirements: (1) G-217, South of Lugo generation requirements; and (2) G-219, SCE area generation requirements; Exceptional dispatch instructions were also issued for following transmission management requirements: (1) T-103, Southern California import transmission (SCIT) nomogram; (2) T-132, transmission facilities in San Diego and Imperial Valley area; (3) T-135, Lugo – Victorville 500 kV Line and Sylmar Transformer Banks Operation; (4) T-138, transmission facilities in Humboldt area; (5) T-153, Path 26 contingency RAS; and (6) other transmission outages in PG&E, SCE and SDG&E area.

The following additional reasons for exceptional dispatch instructions in November were not related to specific generation or transmission operating procedures: (1) Intertie emergency assistance, when CAISO was providing assistance to its neighboring control area; (2) 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.); (3) Market Disruption, when the exceptional dispatch instructions were issued due to HASP failures; and (4) Ramp Rate, when exceptional dispatch instructions were issued to dispatch a resource above its physical minimum to a level where the resource has significantly higher ramp rate capability. For example, a resource could have a ramp rate of 2 MW/min at its physical minimum of 100 MW, but a significantly higher ramp rate of 10 MW/min at 250 MW. The operators could issue an exceptional dispatch for this resource to be dispatched to 250 MW, so that the resource could respond to the anticipated steep load ramp or to a potential contingency. 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

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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 October.

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 hours column is the difference of 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.

As Table 1 indicates, there were a total of 239 exceptional dispatches in November, decreasing by 89 compared to the 328 exceptional dispatches reported in the December report. Real-time exceptional dispatches in November accounted for approximately 82 percent of all exceptional dispatches categorized by date and reason. Exceptional dispatches issued for the following reasons accounted for approximately 58 percent of the total exceptional dispatches during the reporting period: Software Limitation, SP26 Capacity, transmission management for Humboldt area (T-138), and Transmission Outage in PG&E area. In day-ahead market, approximately 67 percent of the exceptional dispatches were issued for SP26 Capacity. In real-time market, approximately 64 percent of the exceptional dispatches were issued for Software Limitation, transmission management for Humboldt area (T-138), Transmission Outage in PG&E area, and Ramp Rate.

**Table 1: Exceptional Dispatches in November 2009**

California Independent System Operator Corporation Exceptional Dispatch Report January 15, 2010											
Chart 1: Table of Exceptional Dispatches for Period 01/Nov/2009 - 30/Nov/2009											
Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time
1	DA	SP26 Capacity	SDG&E	San Diego	11/2/2009	20	Yes	N/A	24	0:00	23:00
2	DA	SP26 Capacity	SDG&E	San Diego	11/3/2009	40	Yes	N/A	24	0:00	23:00
3	DA	SP26 Capacity	SDG&E	San Diego	11/4/2009	20	Yes	N/A	24	0:00	23:00
4	DA	SP26 Capacity	SDG&E	San Diego	11/5/2009	20	Yes	N/A	24	0:00	23:00
5	DA	SP26 Capacity	SDG&E	San Diego	11/6/2009	20	Yes	N/A	24	0:00	23:00
6	DA	SP26 Capacity	SDG&E	San Diego	11/7/2009	20	Yes	N/A	24	0:00	23:00
7	DA	SP26 Capacity	SDG&E	San Diego	11/8/2009	20	Yes	N/A	24	0:00	23:00
8	DA	SP26 Capacity	SDG&E	San Diego	11/9/2009	20	Yes	N/A	24	0:00	23:00
9	DA	SP26 Capacity	SDG&E	San Diego	11/10/2009	20	Yes	N/A	24	0:00	23:00
10	DA	SP26 Capacity	SDG&E	San Diego	11/11/2009	20	Yes	N/A	24	0:00	23:00
11	DA	SP26 Capacity	SDG&E	San Diego	11/12/2009	20	Yes	N/A	24	0:00	23:00
12	DA	SP26 Capacity	SDG&E	San Diego	11/13/2009	20	Yes	N/A	24	0:00	23:00
13	DA	SP26 Capacity	SDG&E	San Diego	11/14/2009	20	Yes	N/A	24	0:00	23:00
14	DA	SP26 Capacity	SDG&E	San Diego	11/15/2009	20	Yes	N/A	24	0:00	23:00
15	DA	SP26 Capacity	SDG&E	San Diego	11/16/2009	20	Yes	N/A	24	0:00	23:00
16	DA	SP26 Capacity	SDG&E	San Diego	11/17/2009	20	Yes	N/A	24	0:00	23:00
17	DA	SP26 Capacity	SDG&E	San Diego	11/18/2009	20	Yes	N/A	24	0:00	23:00
18	DA	SP26 Capacity	SDG&E	San Diego	11/20/2009	20	Yes	N/A	24	0:00	23:00
19	DA	SP26 Capacity	SDG&E	San Diego	11/21/2009	20	Yes	N/A	24	0:00	23:00
20	DA	SP26 Capacity	SDG&E	San Diego	11/22/2009	20	Yes	N/A	24	0:00	23:00
21	DA	SP26 Capacity	SDG&E	San Diego	11/23/2009	20	Yes	N/A	24	0:00	23:00

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Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time
22	DA	SP26 Capacity	SDG&E	San Diego	11/24/2009	20	Yes	N/A	24	0:00	23:00
23	DA	SP26 Capacity	SDG&E	San Diego	11/25/2009	20	Yes	N/A	24	0:00	23:00
24	DA	SP26 Capacity	SDG&E	San Diego	11/26/2009	20	Yes	N/A	24	0:00	23:00
25	DA	SP26 Capacity	SDG&E	San Diego	11/27/2009	20	Yes	N/A	24	0:00	23:00
26	DA	SP26 Capacity	SDG&E	San Diego	11/28/2009	20	Yes	N/A	24	0:00	23:00
27	DA	SP26 Capacity	SDG&E	San Diego	11/29/2009	20	Yes	N/A	24	0:00	23:00
28	DA	SP26 Capacity	SDG&E	San Diego	11/30/2009	20	Yes	N/A	24	0:00	23:00
29	DA	Transmission Outage Other	SCE	LA Basin	11/8/2009	20	Yes	N/A	13	0:00	12:00
30	DA	Transmission Outage Other	SDG&E	San Diego	11/8/2009	20 - 220	Yes	N/A	24	0:00	23:00
31	DA	Transmission Outage SCE	SCE	Big Creek-Ventura	11/15/2009	40	Yes	N/A	8	4:00	11:00
32	DA	Transmission Outage SCE	SCE	LA Basin	11/17/2009	20	Yes	N/A	24	0:00	23:00
33	DA	Transmission Outage SCE	SCE	LA Basin	11/23/2009	40	Yes	N/A	21	3:00	23:00
34	DA	Transmission Outage SCE	SCE	LA Basin	11/24/2009	40	Yes	N/A	24	0:00	23:00
35	DA	Transmission Outage SCE	SCE	LA Basin	11/25/2009	40	Yes	N/A	22	0:00	21:00
36	DA	Transmission Outage SCE	SCE	LA Basin	11/27/2009	20	Yes	N/A	21	3:00	23:00
37	DA	Transmission Outage SCE	SCE	LA Basin	11/30/2009	320	Yes	N/A	21	3:00	23:00
38	DA	Transmission Outage SCE	SCE	N/A	11/4/2009	80	Yes	N/A	12	6:00	17:00
39	DA	Transmission Outage SCE	SCE	N/A	11/5/2009	80	Yes	N/A	12	6:00	17:00
40	DA	Transmission Outage SCE	SCE	N/A	11/6/2009	80	Yes	N/A	11	5:00	15:00
41	DA	Transmission Outage SCE	SCE	N/A	11/14/2009	40 - 80	Yes	N/A	7	12:00	18:00
42	DA	Transmission Outage SDG&E	SDG&E	San Diego	11/4/2009	20	Yes	N/A	24	0:00	23:00
43	RT	G-217	SCE	LA Basin	11/9/2009	25	Yes	INC	15	9:00	23:59
44	RT	G-219	SCE	LA Basin	11/8/2009	20	Yes	INC	11	13:00	23:59
45	RT	G-219	SCE	LA Basin	11/10/2009	10	Yes	INC	19	5:00	23:59
46	RT	Incorrect Bid	PG&E	Fresno	11/14/2009	308	No	DEC	7	0:15	6:59
47	RT	Incorrect Bid	PG&E	Fresno	11/14/2009	0	No	INC	7	0:15	6:59
48	RT	Intertie Emergency	N/A	N/A	11/14/2009	100	No	INC	1	11:15	11:59

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Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time
		Assistance									
49	RT	Load Forecast Uncertainty	SCE	LA Basin	11/2/2009	20	Yes	INC	22	2:00	23:59
50	RT	Market Disruption	N/A	N/A	11/3/2009	41	Yes	INC	1	1:00	1:59
51	RT	Market Disruption	N/A	N/A	11/5/2009	134	No	DEC	1	16:00	16:59
52	RT	Market Disruption	N/A	N/A	11/5/2009	203	No	INC	1	16:00	16:59
53	RT	Market Disruption	N/A	N/A	11/10/2009	100 - 145	No	DEC	9	10:00	18:59
54	RT	Market Disruption	N/A	N/A	11/10/2009	250 - 300	No	INC	2	9:00	10:59
55	RT	Market Disruption	N/A	N/A	11/11/2009	150	No	DEC	1	18:00	18:59
56	RT	Market Disruption	N/A	N/A	11/11/2009	100 - 165	No	INC	6	2:00	7:59
57	RT	Market Disruption	N/A	N/A	11/12/2009	1 - 302	Yes	INC	7	17:00	23:59
58	RT	Market Disruption	N/A	N/A	11/13/2009	6 - 417	Yes	INC	3	0:00	2:59
59	RT	Market Disruption	N/A	N/A	11/14/2009	260	Yes	INC	1	16:00	16:59
60	RT	Market Disruption	N/A	N/A	11/15/2009	3	No	DEC	1	22:00	22:59
61	RT	Over Generation	N/A	N/A	11/12/2009	170	No	DEC	1	23:49	23:59
62	RT	Over Generation	N/A	N/A	11/13/2009	170	No	DEC	1	0:00	0:59
63	RT	Over Generation	PG&E	Fresno	11/21/2009	-308	Yes	INC	2	5:35	6:29
64	RT	Over Generation	SCE	Big Creek-Ventura	11/13/2009	190	No	DEC	4	0:00	3:59
65	RT	Over Generation	SCE	LA Basin	11/12/2009	166	No	DEC	1	23:49	23:59
66	RT	Over Generation	SCE	LA Basin	11/13/2009	60 - 166	No	DEC	4	0:00	3:59
67	RT	Over Generation	SCE	LA Basin	11/17/2009	0	Yes	INC	1	1:10	1:59
68	RT	Path 26	PG&E	Fresno	11/1/2009	70	No	INC	6	6:04	11:59
69	RT	Path 26	PG&E	Fresno	11/4/2009	0	Yes	INC	5	2:30	6:59
70	RT	Path 26	SCE	Big Creek-Ventura	11/1/2009	236	No	INC	3	6:38	8:59
71	RT	Path 26	SCE	Big Creek-Ventura	11/10/2009	150	No	DEC	1	7:04	7:29

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Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time
72	RT	Path 26	SCE	Big Creek-Ventura	11/26/2009	25	No	INC	1	4:17	4:18
73	RT	Ramp Rate	SCE	Big Creek-Ventura	11/4/2009	30 - 50	Yes	INC	3	16:00	18:59
74	RT	Ramp Rate	SCE	Big Creek-Ventura	11/5/2009	50	Yes	INC	3	6:55	8:54
75	RT	Ramp Rate	SCE	LA Basin	11/1/2009	190	No	INC	7	15:00	21:59
76	RT	Ramp Rate	SCE	LA Basin	11/2/2009	190	Yes	INC	7	14:30	20:59
77	RT	Ramp Rate	SCE	LA Basin	11/5/2009	191	No	INC	6	16:25	21:59
78	RT	Ramp Rate	SCE	LA Basin	11/6/2009	190	No	INC	7	15:45	21:59
79	RT	Ramp Rate	SCE	LA Basin	11/7/2009	190	Yes	INC	7	14:00	20:59
80	RT	Ramp Rate	SCE	LA Basin	11/8/2009	190	Yes	INC	7	14:35	20:59
81	RT	Ramp Rate	SCE	LA Basin	11/9/2009	71	Yes	INC	14	8:40	21:59
82	RT	Ramp Rate	SCE	LA Basin	11/10/2009	190	No	INC	6	16:15	21:59
83	RT	Ramp Rate	SCE	N/A	11/5/2009	20	Yes	INC	2	6:55	7:44
84	RT	Ramp Rate	SDG&E	San Diego	11/14/2009	35 - 55	No	DEC	5	15:45	19:59
85	RT	Ramp Rate	SDG&E	San Diego	11/14/2009	48	No	INC	5	15:45	19:59
86	RT	Ramp Rate	SDG&E	San Diego	11/15/2009	132 - 173	No	DEC	5	15:35	19:59
87	RT	Ramp Rate	SDG&E	San Diego	11/15/2009	48	No	INC	5	15:35	19:59
88	RT	Ramp Rate	SDG&E	San Diego	11/24/2009	42 - 47	No	DEC	5	15:30	19:59
89	RT	Ramp Rate	SDG&E	San Diego	11/24/2009	48	No	INC	5	15:30	19:59
90	RT	SCE Import Limit	SCE	LA Basin	11/9/2009	190	No	INC	14	8:25	21:59
91	RT	SCE Import Limit	SCE	LA Basin	11/10/2009	160 - 300	Yes	INC	10	12:50	21:59
92	RT	SCE Import Limit	SCE	LA Basin	11/11/2009	39 - 142	No	DEC	16	6:15	21:59
93	RT	SCE Import Limit	SCE	LA Basin	11/11/2009	100 - 174	No	INC	14	8:40	21:59
94	RT	SCE Import Limit	SCE	LA Basin	11/12/2009	175 - 270	No	DEC	3	10:25	12:09

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Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time
95	RT	SP26 Capacity	SDG&E	San Diego	11/19/2009	20	Yes	INC	3	21:00	23:59
96	RT	Software Limitation	PG&E	Bay Area	11/5/2009	50	No	DEC	4	7:55	10:14
97	RT	Software Limitation	PG&E	Bay Area	11/5/2009	0	No	INC	1	10:15	10:39
98	RT	Software Limitation	PG&E	Bay Area	11/15/2009	0	Yes	INC	1	23:15	23:59
99	RT	Software Limitation	PG&E	Bay Area	11/16/2009	170	Yes	DEC	6	0:00	5:14
100	RT	Software Limitation	PG&E	Bay Area	11/16/2009	0	Yes	INC	6	0:00	5:14
101	RT	Software Limitation	PG&E	Bay Area	11/17/2009	0	Yes	INC	1	23:30	23:59
102	RT	Software Limitation	PG&E	Bay Area	11/18/2009	170	No	DEC	6	0:00	5:29
103	RT	Software Limitation	PG&E	Bay Area	11/18/2009	0	Yes	INC	19	0:00	18:29
104	RT	Software Limitation	PG&E	Bay Area	11/21/2009	130	Yes	DEC	6	7:05	12:59
105	RT	Software Limitation	PG&E	Fresno	11/1/2009	0	No	INC	1	23:00	23:59
106	RT	Software Limitation	PG&E	Fresno	11/2/2009	0	Yes	INC	6	0:00	5:59
107	RT	Software Limitation	PG&E	Fresno	11/3/2009	308	Yes	DEC	2	0:15	1:59
108	RT	Software Limitation	PG&E	Fresno	11/3/2009	0	No	INC	8	0:20	7:59
109	RT	Software Limitation	PG&E	Fresno	11/7/2009	308	No	DEC	1	1:07	1:29
110	RT	Software Limitation	PG&E	Fresno	11/7/2009	0	No	INC	1	7:12	7:59
111	RT	Software Limitation	PG&E	Fresno	11/8/2009	230	Yes	DEC	6	3:05	8:04
112	RT	Software Limitation	PG&E	Fresno	11/8/2009	0	Yes	INC	6	3:05	8:04
113	RT	Software Limitation	PG&E	Fresno	11/11/2009	0	Yes	INC	17	7:45	23:29
114	RT	Software Limitation	PG&E	Fresno	11/13/2009	0	Yes	INC	21	3:45	23:59
115	RT	Software Limitation	PG&E	Fresno	11/14/2009	150 - 155	Yes	DEC	3	17:35	19:19
116	RT	Software Limitation	PG&E	Fresno	11/14/2009	308	No	INC	8	0:00	7:59
117	RT	Software Limitation	PG&E	Fresno	11/16/2009	0	Yes	INC	1	10:15	10:59
118	RT	Software Limitation	PG&E	Fresno	11/30/2009	0	No	INC	2	3:40	4:39
119	RT	Software Limitation	PG&E	Humboldt	11/10/2009	0	Yes	INC	1	15:15	15:44
120	RT	Software Limitation	PG&E	Humboldt	11/13/2009	15	Yes	DEC	1	22:15	22:44
121	RT	Software Limitation	PG&E	Humboldt	11/14/2009	0	Yes	INC	1	22:25	22:54
122	RT	Software Limitation	PG&E	N/A	11/10/2009	327 -	Yes	DEC	2	5:20	6:04

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Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time
						343					
123	RT	Software Limitation	PG&E	NCNB	11/10/2009	30	Yes	INC	2	7:30	8:14
124	RT	Software Limitation	PG&E	NCNB	11/28/2009	3 - 6	No	INC	8	16:55	23:59
125	RT	Software Limitation	SCE	Big Creek-Ventura	11/3/2009	0	Yes	INC	1	17:25	17:54
126	RT	Software Limitation	SCE	LA Basin	11/2/2009	0	Yes	INC	2	22:40	23:09
127	RT	Software Limitation	SCE	LA Basin	11/3/2009	0	No	INC	5	0:25	4:59
128	RT	Software Limitation	SCE	LA Basin	11/9/2009	20	Yes	INC	2	8:35	9:19
129	RT	Software Limitation	SCE	LA Basin	11/10/2009	0	No	INC	2	10:00	11:59
130	RT	Software Limitation	SCE	LA Basin	11/11/2009	0	Yes	INC	1	2:00	2:59
131	RT	Software Limitation	SCE	LA Basin	11/12/2009	0	Yes	INC	2	14:45	15:44
132	RT	Software Limitation	SCE	LA Basin	11/14/2009	0	No	INC	2	18:40	19:59
133	RT	Software Limitation	SCE	LA Basin	11/15/2009	0	Yes	INC	10	14:50	23:59
134	RT	Software Limitation	SCE	LA Basin	11/16/2009	0	Yes	INC	4	0:00	3:59
135	RT	Software Limitation	SCE	LA Basin	11/18/2009	0	Yes	INC	2	0:20	1:19
136	RT	Software Limitation	SCE	LA Basin	11/30/2009	20	Yes	INC	15	9:00	23:59
137	RT	Software Limitation	SCE	N/A	11/5/2009	336	Yes	INC	10	14:45	23:59
138	RT	Software Limitation	SCE	N/A	11/6/2009	336	Yes	INC	5	0:00	4:59
139	RT	Software Limitation	SCE	N/A	11/17/2009	19	Yes	INC	1	23:00	23:44
140	RT	Software Limitation	SDG&E	N/A	11/8/2009	145	Yes	INC	5	16:00	20:59
141	RT	Software Limitation	SDG&E	N/A	11/10/2009	50	No	DEC	1	21:00	21:59
142	RT	Software Limitation	SDG&E	San Diego	11/2/2009	0	Yes	INC	3	3:45	5:49
143	RT	Software Limitation	SDG&E	San Diego	11/3/2009	81 - 207	Yes	DEC	2	16:50	17:34
144	RT	Software Limitation	SDG&E	San Diego	11/5/2009	0	Yes	INC	2	22:10	23:09
145	RT	Software Limitation	SDG&E	San Diego	11/12/2009	0	Yes	INC	2	22:55	23:59
146	RT	Software Limitation	SDG&E	San Diego	11/13/2009	0	No	INC	1	0:00	0:19
147	RT	T-103	SCE	LA Basin	11/1/2009	20	No	INC	24	0:00	23:59
148	RT	T-132	SDG&E	San Diego	11/5/2009	33	Yes	INC	8	13:16	20:09
149	RT	T-135	PG&E	Fresno	11/11/2009	142 -	Yes	INC	2	17:19	18:44

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Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time
						434					
150	RT	T-135	SCE	Big Creek-Ventura	11/7/2009	75 - 175	No	DEC	7	10:25	16:49
151	RT	T-135	SCE	Big Creek-Ventura	11/7/2009	25	No	INC	5	16:50	20:59
152	RT	T-135	SCE	Big Creek-Ventura	11/11/2009	50	No	DEC	1	17:09	17:29
153	RT	T-135	SCE	Big Creek-Ventura	11/11/2009	20	Yes	INC	4	17:25	20:29
154	RT	T-135	SCE	Big Creek-Ventura	11/12/2009	50 - 201	No	DEC	2	18:15	19:59
155	RT	T-135	SCE	N/A	11/12/2009	40 - 245	Yes	INC	17	6:00	22:59
156	RT	T-135	SCE	N/A	11/13/2009	40 - 100	Yes	INC	22	0:00	21:59
157	RT	T-135	SCE	N/A	11/14/2009	3	Yes	DEC	4	13:50	16:44
158	RT	T-135	SCE	N/A	11/14/2009	107 - 300	Yes	INC	9	13:50	21:59
159	RT	T-138	PG&E	Humboldt	11/1/2009	10	No	INC	3	17:30	19:59
160	RT	T-138	PG&E	Humboldt	11/2/2009	5 - 22	No	DEC	5	11:05	15:14
161	RT	T-138	PG&E	Humboldt	11/2/2009	5	No	INC	18	1:28	18:29
162	RT	T-138	PG&E	Humboldt	11/3/2009	16	No	INC	1	17:41	17:59
163	RT	T-138	PG&E	Humboldt	11/6/2009	25	No	INC	2	22:15	23:59
164	RT	T-138	PG&E	Humboldt	11/7/2009	15 - 25	No	INC	24	0:00	23:59
165	RT	T-138	PG&E	Humboldt	11/9/2009	5 - 15	Yes	DEC	17	6:30	22:49
166	RT	T-138	PG&E	Humboldt	11/9/2009	10	Yes	INC	16	7:50	22:09
167	RT	T-138	PG&E	Humboldt	11/10/2009	5 - 10	Yes	DEC	16	6:30	21:44
168	RT	T-138	PG&E	Humboldt	11/10/2009	0	Yes	INC	3	7:50	9:49
169	RT	T-138	PG&E	Humboldt	11/11/2009	5 - 10	Yes	DEC	16	7:50	22:59
170	RT	T-138	PG&E	Humboldt	11/11/2009	15	Yes	INC	17	7:50	23:54
171	RT	T-138	PG&E	Humboldt	11/12/2009	5 - 15	Yes	DEC	18	5:40	22:14
172	RT	T-138	PG&E	Humboldt	11/12/2009	25	Yes	INC	22	0:00	21:34

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Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time
173	RT	T-138	PG&E	Humboldt	11/13/2009	5 - 15	Yes	DEC	17	6:35	22:04
174	RT	T-138	PG&E	Humboldt	11/13/2009	0	Yes	INC	7	14:35	20:14
175	RT	T-138	PG&E	Humboldt	11/14/2009	5	Yes	DEC	3	19:00	21:39
176	RT	T-138	PG&E	Humboldt	11/14/2009	15	Yes	INC	6	17:15	22:14
177	RT	T-138	PG&E	Humboldt	11/15/2009	15	Yes	INC	6	17:15	22:19
178	RT	T-138	PG&E	Humboldt	11/16/2009	5 - 46	Yes	DEC	16	7:45	22:14
179	RT	T-138	PG&E	Humboldt	11/16/2009	15	Yes	INC	16	5:50	20:54
180	RT	T-138	PG&E	Humboldt	11/17/2009	15	No	DEC	2	10:45	11:14
181	RT	T-138	PG&E	Humboldt	11/17/2009	15	Yes	INC	17	6:00	22:54
182	RT	T-138	PG&E	Humboldt	11/18/2009	5 - 10	Yes	DEC	6	17:55	22:59
183	RT	T-138	PG&E	Humboldt	11/18/2009	15	Yes	INC	18	5:35	22:39
184	RT	T-138	PG&E	Humboldt	11/19/2009	5 - 15	Yes	DEC	17	5:00	21:54
185	RT	T-138	PG&E	Humboldt	11/19/2009	15	Yes	INC	19	5:00	23:49
186	RT	T-138	PG&E	Humboldt	11/20/2009	5 - 10	Yes	DEC	4	14:40	17:09
187	RT	T-138	PG&E	Humboldt	11/20/2009	65	Yes	INC	22	0:37	21:09
188	RT	T-153	SCE	Big Creek-Ventura	11/12/2009	150	No	DEC	2	22:28	23:09
189	RT	T-153	SCE	LA Basin	11/12/2009	66 - 80	No	DEC	2	22:29	23:11
190	RT	T-153	SDG&E	N/A	11/12/2009	200	No	DEC	2	22:30	23:11
191	RT	T-153	SDG&E	San Diego	11/12/2009	143 - 400	No	DEC	2	22:29	23:59
192	RT	T-153	SDG&E	San Diego	11/12/2009	110	No	INC	2	22:29	23:09
193	RT	Transmission Outage PG&E	PG&E	Bay Area	11/1/2009	257	No	INC	1	17:00	17:59
194	RT	Transmission Outage PG&E	PG&E	Bay Area	11/9/2009	21	No	DEC	3	16:35	18:49
195	RT	Transmission Outage PG&E	PG&E	Bay Area	11/9/2009	10 - 90	No	INC	12	7:40	18:49
196	RT	Transmission Outage PG&E	PG&E	Bay Area	11/12/2009	25	No	INC	10	7:10	16:14
197	RT	Transmission Outage PG&E	PG&E	Bay Area	11/19/2009	170 - 190	No	INC	1	14:40	14:59
198	RT	Transmission Outage PG&E	PG&E	Humboldt	11/2/2009	14 - 27	No	DEC	7	10:20	16:44

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Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time
199	RT	Transmission Outage PG&E	PG&E	Humboldt	11/2/2009	10 - 20	Yes	INC	6	11:40	16:44
200	RT	Transmission Outage PG&E	PG&E	Humboldt	11/4/2009	1 - 8	No	DEC	11	7:10	17:29
201	RT	Transmission Outage PG&E	PG&E	Humboldt	11/4/2009	26	No	INC	14	6:55	19:59
202	RT	Transmission Outage PG&E	PG&E	NCNB	11/30/2009	5	No	DEC	2	17:25	18:59
203	RT	Transmission Outage PG&E	PG&E	Sierra	11/1/2009	1 - 5	No	DEC	10	11:23	20:14
204	RT	Transmission Outage PG&E	PG&E	Sierra	11/1/2009	8	No	INC	1	20:00	20:14
205	RT	Transmission Outage PG&E	PG&E	Sierra	11/2/2009	5 - 15	Yes	DEC	9	10:39	18:09
206	RT	Transmission Outage PG&E	PG&E	Sierra	11/21/2009	20 - 80	No	DEC	11	10:10	20:59
207	RT	Transmission Outage PG&E	PG&E	Sierra	11/22/2009	10 - 50	No	DEC	14	7:50	20:59
208	RT	Transmission Outage PG&E	PG&E	Sierra	11/23/2009	5 - 56	No	DEC	10	10:20	19:59
209	RT	Transmission Outage PG&E	PG&E	Sierra	11/23/2009	25	No	INC	8	10:30	17:04
210	RT	Transmission Outage PG&E	PG&E	Sierra	11/25/2009	6 - 18	No	DEC	19	5:01	23:59
211	RT	Transmission Outage PG&E	PG&E	Sierra	11/25/2009	13	No	INC	5	18:20	22:14
212	RT	Transmission Outage PG&E	PG&E	Sierra	11/26/2009	10 - 24	No	DEC	19	0:00	18:59
213	RT	Transmission Outage PG&E	PG&E	Sierra	11/26/2009	5	No	INC	13	11:20	23:59
214	RT	Transmission Outage PG&E	PG&E	Sierra	11/27/2009	10 - 23	No	DEC	20	4:50	23:59
215	RT	Transmission Outage PG&E	PG&E	Sierra	11/27/2009	3 - 47	No	INC	24	0:00	23:14
216	RT	Transmission Outage PG&E	PG&E	Sierra	11/28/2009	10 - 40	No	DEC	24	0:00	23:59
217	RT	Transmission Outage PG&E	PG&E	Sierra	11/28/2009	5 - 15	No	INC	14	0:00	13:49
218	RT	Transmission Outage PG&E	PG&E	Sierra	11/29/2009	2 - 65	No	DEC	24	0:00	23:59
219	RT	Transmission Outage PG&E	PG&E	Sierra	11/29/2009	5 - 15	No	INC	23	0:00	22:14
220	RT	Transmission Outage PG&E	PG&E	Sierra	11/30/2009	2 - 25	No	DEC	8	0:00	7:59
221	RT	Transmission Outage PG&E	PG&E	Sierra	11/30/2009	20	No	INC	8	0:05	7:59
222	RT	Transmission Outage SCE	SCE	Big Creek-Ventura	11/4/2009	20	Yes	INC	7	17:00	23:59
223	RT	Transmission Outage SCE	SCE	Big Creek-Ventura	11/5/2009	20	Yes	INC	18	0:00	17:59
224	RT	Transmission Outage SCE	SCE	Big Creek-Ventura	11/17/2009	20	Yes	INC	2	12:00	13:59

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Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time
225	RT	Transmission Outage SCE	SCE	LA Basin	11/16/2009	20 - 40	Yes	INC	20	4:00	23:59
226	RT	Transmission Outage SCE	SCE	LA Basin	11/17/2009	0	No	INC	1	4:05	4:24
227	RT	Transmission Outage SCE	SCE	LA Basin	11/29/2009	20	Yes	INC	6	18:47	23:59
228	RT	Transmission Outage SCE	SCE	LA Basin	11/30/2009	20 - 80	Yes	INC	24	0:00	23:59
229	RT	Transmission Outage SCE	SCE	N/A	11/3/2009	245	Yes	INC	3	17:35	19:59
230	RT	Transmission Outage SCE	SCE	N/A	11/4/2009	180 - 260	Yes	INC	12	12:45	23:59
231	RT	Transmission Outage SCE	SCE	N/A	11/5/2009	80 - 490	Yes	INC	24	0:00	23:59
232	RT	Transmission Outage SCE	SCE	N/A	11/6/2009	80 - 410	Yes	INC	8	0:00	7:49
233	RT	Transmission Outage SDG&E	SCE	LA Basin	11/7/2009	20	Yes	INC	24	0:00	23:59
234	RT	Transmission Outage SDG&E	SDG&E	San Diego	11/2/2009	6	Yes	DEC	6	12:35	17:29
235	RT	Transmission Outage SDG&E	SDG&E	San Diego	11/2/2009	35 - 125	Yes	INC	6	12:35	17:44
236	RT	Transmission Outage SDG&E	SDG&E	San Diego	11/14/2009	200	Yes	INC	1	7:00	7:59
237	RT	Transmission Outage SDG&E	SDG&E	San Diego	11/16/2009	37	Yes	INC	12	8:33	19:29
238	RT	Unit Testing	N/A	N/A	11/13/2009	200 - 800	No	INC	1	6:20	6:59
239	RT	Unit Testing	PG&E	N/A	11/12/2009	50 - 400	Yes	INC	3	9:24	11:55

## 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 G-206. 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	G-219
01-Jul-09	DA	B	SCE	LA BASIN	08:00	20:00	30	G-219
01-Jul-09	DA	C	SCE	LA BASIN	09:00	23:00	20	G-219.

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 shows hour ending 5 as this was the hour ending for first dispatch of the day, and the end time 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	G-219	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 T-138. 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 T-138. 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 is 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	t-138
01-Jul-09	RT	B	PG&E	Humboldt	07:00	09:00	40	20	No	INC	20	t-138
01-Jul-09	RT	C	PG&E	Humboldt	12:00	15:00	50	50	No	INC	0	t-138
01-Jul-09	RT	C	PG&E	Humboldt	16:00	20:00	50	40	No	INC	10	t-138

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 shows the time of the first dispatch of the day. This is a time not a range. Similarly the End Time 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	T-138	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 T-129. 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	t-129
01-Jul-09	RT	B	PG&E	Fresno	07:00	09:00	40	60	No	DEC	20	t-129
01-Jul-09	RT	C	PG&E	Fresno	10:00	14:00	40	50	No	DEC	10	t-129

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 incs and decs 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	T-129	PG&E	Fresno	1-Jul-09	20	Yes	INC	6	15:00	20:00
1	RT	T-129	PG&E	Fresno	1-Jul-09	10-20	Yes	DEC	8	07:00	14:00