



Exceptional Dispatch Report

Table 1: December 2009

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Introduction

This report is filed pursuant to the FERC September 2nd 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 dispatch¹. 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 website².

¹ 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.

² 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 December, the ISO issued exceptional dispatches for following local area generation requirements: (1) G-206, San Diego area generation requirements; (2) G-217, South of Lugo generation requirements; and (3) 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-138, transmission facilities in Humboldt area; and (4) other transmission outages in PG&E, SCE and SDG&E area.

The following additional reasons for exceptional dispatch instructions in December 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; (4) Thermal Margin, when the exceptional dispatch instructions were issued due to load forecast uncertainty; and (5) 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 December, which are self explanatory.

As mentioned earlier, the data shown in Table 1 is based on a template specified in the September 2009 order³. 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

³ 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 column hours 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 shown in Table 1, there were a total of 207 exceptional dispatches in December, decreasing by 32 compared to the 239 exceptional dispatches reported in the January 2010 report. Real-time exceptional dispatches in December accounted for approximately 74 percent of all exceptional dispatches categorized by date and reason. Exceptional dispatches issued for the following reasons accounted for approximately 67 percent of the total exceptional dispatches during the reporting period: Software Limitation, Transmission Outage in SCE area, SP26 Capacity, System Energy, and Transmission Outage in PG&E area. In day-ahead market, approximately 96 percent of the exceptional dispatches were issued for SP26 Capacity and Transmission Outage in SCE area. In real-time market, approximately 65 percent of the exceptional dispatches were issued for Software Limitation, System Energy, Transmission Outage in PG&E area, Ramp Rate, and Transmission Outage in SCE area.

Table 1: Exceptional Dispatches in December 2009

California Independent System Operator Corporation Exceptional Dispatch Report February 16, 2010											
Chart 1: Table of Exceptional Dispatches for Period 01/Dec/2009 - 31/Dec/2009											
Num ber	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commit ment	INC_DEC	Hours	Begin Time	End Time
1	DA	G-206	SDGE	San Diego	10-Dec-09	20	Yes	N/A	24	0:00	23:00
2	DA	SP26 Capacity	SDGE	San Diego	1-Dec-09	20	Yes	N/A	24	0:00	23:00
3	DA	SP26 Capacity	SDGE	San Diego	2-Dec-09	20	Yes	N/A	24	0:00	23:00
4	DA	SP26 Capacity	SDGE	San Diego	3-Dec-09	20	Yes	N/A	24	0:00	23:00
5	DA	SP26 Capacity	SDGE	San Diego	4-Dec-09	20	Yes	N/A	24	0:00	23:00
6	DA	SP26 Capacity	SDGE	San Diego	5-Dec-09	20	Yes	N/A	24	0:00	23:00
7	DA	SP26 Capacity	SDGE	San Diego	6-Dec-09	20	Yes	N/A	24	0:00	23:00
8	DA	SP26 Capacity	SDGE	San Diego	7-Dec-09	20	Yes	N/A	24	0:00	23:00
9	DA	SP26 Capacity	SDGE	San Diego	8-Dec-09	20	Yes	N/A	24	0:00	23:00
10	DA	SP26 Capacity	SDGE	San Diego	10-Dec-09	20	Yes	N/A	24	0:00	23:00
11	DA	SP26 Capacity	SDGE	San Diego	11-Dec-09	20	Yes	N/A	24	0:00	23:00
12	DA	SP26 Capacity	SDGE	San Diego	12-Dec-09	20	Yes	N/A	24	0:00	23:00
13	DA	SP26 Capacity	SDGE	San Diego	13-Dec-09	20	Yes	N/A	24	0:00	23:00
14	DA	SP26 Capacity	SDGE	San Diego	14-Dec-09	20	Yes	N/A	24	0:00	23:00
15	DA	SP26 Capacity	SDGE	San Diego	15-Dec-09	20	Yes	N/A	24	0:00	23:00
16	DA	SP26 Capacity	SDGE	San Diego	16-Dec-09	20	Yes	N/A	24	0:00	23:00
17	DA	SP26 Capacity	SDGE	San Diego	17-Dec-09	20	Yes	N/A	24	0:00	23:00
18	DA	SP26 Capacity	SDGE	San Diego	18-Dec-09	20	Yes	N/A	24	0:00	23:00
19	DA	SP26 Capacity	SDGE	San Diego	19-Dec-09	20	Yes	N/A	24	0:00	23:00
20	DA	SP26 Capacity	SDGE	San Diego	20-Dec-09	20	Yes	N/A	24	0:00	23:00
21	DA	SP26 Capacity	SDGE	San Diego	21-Dec-09	20	Yes	N/A	24	0:00	23:00

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Num ber	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commit ment	INC_DEC	Hours	Begin Time	End Time
22	DA	SP26 Capacity	SDGE	San Diego	22-Dec-09	20	Yes	N/A	24	0:00	23:00
23	DA	SP26 Capacity	SDGE	San Diego	23-Dec-09	20	Yes	N/A	24	0:00	23:00
24	DA	SP26 Capacity	SDGE	San Diego	24-Dec-09	20	Yes	N/A	24	0:00	23:00
25	DA	SP26 Capacity	SDGE	San Diego	25-Dec-09	20	Yes	N/A	24	0:00	23:00
26	DA	SP26 Capacity	SDGE	San Diego	26-Dec-09	20	Yes	N/A	24	0:00	23:00
27	DA	SP26 Capacity	SDGE	San Diego	27-Dec-09	20	Yes	N/A	24	0:00	23:00
28	DA	SP26 Capacity	SDGE	San Diego	28-Dec-09	20	Yes	N/A	24	0:00	23:00
29	DA	SP26 Capacity	SDGE	San Diego	29-Dec-09	20	Yes	N/A	24	0:00	23:00
30	DA	SP26 Capacity	SDGE	San Diego	30-Dec-09	20	Yes	N/A	24	0:00	23:00
31	DA	SP26 Capacity	SDGE	San Diego	31-Dec-09	20	Yes	N/A	24	0:00	23:00
32	DA	Transmission Outage SCE	SCE	Big Creek- Ventura	15-Dec-09	20	Yes	N/A	7	16:00	22:00
33	DA	Transmission Outage SCE	SCE	Big Creek- Ventura	16-Dec-09	20	Yes	N/A	6	17:00	22:00
34	DA	Transmission Outage SCE	SCE	LA Basin	1-Dec-09	20	Yes	N/A	24	0:00	23:00
35	DA	Transmission Outage SCE	SCE	LA Basin	6-Dec-09	20	Yes	N/A	24	0:00	23:00
36	DA	Transmission Outage SCE	SCE	LA Basin	10-Dec-09	20	Yes	N/A	24	0:00	23:00
37	DA	Transmission Outage SCE	SCE	LA Basin	11-Dec-09	20	Yes	N/A	24	0:00	23:00
38	DA	Transmission Outage SCE	SCE	LA Basin	12-Dec-09	20	Yes	N/A	24	0:00	23:00
39	DA	Transmission Outage SCE	SCE	LA Basin	13-Dec-09	20	Yes	N/A	24	0:00	23:00
40	DA	Transmission Outage SCE	SCE	LA Basin	14-Dec-09	40	Yes	N/A	24	0:00	23:00
41	DA	Transmission Outage SCE	SCE	LA Basin	15-Dec-09	40	Yes	N/A	24	0:00	23:00
42	DA	Transmission Outage SCE	SCE	LA Basin	16-Dec-09	40	Yes	N/A	24	0:00	23:00
43	DA	Transmission Outage SCE	SCE	LA Basin	17-Dec-09	40	Yes	N/A	24	0:00	23:00
44	DA	Transmission Outage SCE	SCE	LA Basin	18-Dec-09	40	Yes	N/A	24	0:00	23:00
45	DA	Transmission Outage SCE	SCE	LA Basin	20-Dec-09	20	Yes	N/A	18	6:00	23:00
46	DA	Transmission Outage SCE	SCE	LA Basin	21-Dec-09	20 - 40	Yes	N/A	24	0:00	23:00
47	DA	Transmission Outage SCE	SCE	LA Basin	22-Dec-09	40	Yes	N/A	24	0:00	23:00
48	DA	Transmission Outage SCE	SCE	LA Basin	23-Dec-09	40	Yes	N/A	24	0:00	23:00

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Num ber	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commit ment	INC_DEC	Hours	Begin Time	End Time
49	DA	Transmission Outage SCE	SCE	LA Basin	27-Dec-09	20	Yes	N/A	18	6:00	23:00
50	DA	Transmission Outage SCE	SCE	LA Basin	28-Dec-09	10	Yes	N/A	18	6:00	23:00
51	DA	Transmission Outage SCE	SCE	LA Basin	29-Dec-09	30	Yes	N/A	24	0:00	23:00
52	DA	Transmission Outage SCE	SCE	LA Basin	30-Dec-09	20 - 40	Yes	N/A	24	0:00	23:00
53	DA	Transmission Outage SCE	SCE	LA Basin	31-Dec-09	40	Yes	N/A	22	0:00	21:00
54	DA	Transmission Outage SDGE	SCE	Big Creek- Ventura	9-Dec-09	40	Yes	N/A	24	0:00	23:00
55	RT	G-217	SCE	LA Basin	4-Dec-09	20	Yes	INC	9	15:00	23:59
56	RT	G-217	SCE	LA Basin	12-Dec-09	20 - 65	Yes	INC	21	3:20	23:59
57	RT	G-217	SCE	LA Basin	13-Dec-09	20	No	INC	1	11:00	11:59
58	RT	G-219	SCE	LA Basin	3-Dec-09	20	Yes	INC	24	0:00	23:59
59	RT	G-219	SCE	LA Basin	11-Dec-09	20	Yes	INC	23	1:00	23:59
60	RT	G-219	SCE	LA Basin	14-Dec-09	20	Yes	INC	16	8:00	23:59
61	RT	G-219	SCE	LA Basin	15-Dec-09	20	Yes	INC	16	8:00	23:59
62	RT	G-219	SCE	LA Basin	16-Dec-09	20	Yes	INC	24	0:00	23:59
63	RT	G-219	SCE	LA Basin	17-Dec-09	20	Yes	INC	24	0:00	23:59
64	RT	G-219	SCE	LA Basin	18-Dec-09	20	Yes	INC	24	0:00	23:59
65	RT	G-219	SCE	LA Basin	24-Dec-09	20	Yes	INC	24	0:00	23:59
66	RT	Generation Outage SP26	SCE	Big Creek- Ventura	12-Dec-09	40	Yes	INC	16	8:00	23:59
67	RT	Generation Outage SP26	SDGE	San Diego	9-Dec-09	20 - 40	Yes	INC	6	18:00	23:59
68	RT	Inclement Weather	PGAE	Bay Area	7-Dec-09	45	Yes	INC	14	10:00	23:59
69	RT	Intertie Emergency Assistance	N/A	N/A	7-Dec-09	100	No	INC	1	20:00	20:59
70	RT	Intertie Emergency Assistance	N/A	N/A	8-Dec-09	200	No	INC	1	3:45	3:59
71	RT	Intertie Emergency Assistance	N/A	N/A	12-Dec-09	100	No	INC	2	5:42	6:59
72	RT	Intertie Emergency Assistance	N/A	N/A	21-Dec-09	80	No	INC	2	8:35	9:59

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Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time
73	RT	Intertie Emergency Assistance	N/A	N/A	30-Dec-09	100 - 300	No	INC	3	10:56	12:59
74	RT	Load Forecast Uncertainty	PGAE	Bay Area	8-Dec-09	45 - 90	Yes	INC	21	3:25	23:59
75	RT	Load Forecast Uncertainty	PGAE	Fresno	8-Dec-09	83 - 600	Yes	INC	9	0:00	8:19
76	RT	Load Forecast Uncertainty	SCE	LA Basin	8-Dec-09	20 - 75	Yes	INC	19	5:00	23:59
77	RT	Load Forecast Uncertainty	SCE	N/A	8-Dec-09	40 - 80	Yes	INC	10	11:00	20:59
78	RT	Load Forecast Uncertainty	SDGE	San Diego	8-Dec-09	45	No	INC	2	3:25	4:59
79	RT	Loss of Unit	SCE	N/A	7-Dec-09	40	Yes	INC	7	13:00	19:59
80	RT	Market Disruption	N/A	N/A	7-Dec-09	1345	Yes	INC	1	20:00	20:59
81	RT	Market Disruption	N/A	N/A	16-Dec-09	55 - 148	Yes	INC	3	21:00	23:59
82	RT	Market Disruption	N/A	N/A	21-Dec-09	479	Yes	INC	1	19:00	19:59
83	RT	Ramp Rate	PGAE	Bay Area	8-Dec-09	60	Yes	INC	5	16:05	20:59
84	RT	Ramp Rate	SCE	Big Creek-Ventura	8-Dec-09	26 - 126	Yes	DEC	8	10:15	17:59
85	RT	Ramp Rate	SCE	Big Creek-Ventura	8-Dec-09	50 - 100	Yes	INC	8	10:15	17:59
86	RT	Ramp Rate	SCE	LA Basin	3-Dec-09	190	Yes	INC	7	15:30	21:59
87	RT	Ramp Rate	SCE	LA Basin	4-Dec-09	190	No	INC	2	16:07	17:59
88	RT	Ramp Rate	SCE	LA Basin	8-Dec-09	71 - 451	Yes	INC	7	13:05	19:59
89	RT	Ramp Rate	SCE	LA Basin	12-Dec-09	71 - 261	Yes	INC	18	3:35	20:39
90	RT	Ramp Rate	SCE	LA Basin	17-Dec-09	65	Yes	INC	4	16:10	19:59
91	RT	Ramp Rate	SCE	N/A	8-Dec-09	100 - 200	Yes	INC	7	13:40	19:59
92	RT	Ramp Rate	SDGE	San Diego	19-Dec-09	107 - 172	No	DEC	6	16:35	21:59
93	RT	Ramp Rate	SDGE	San Diego	19-Dec-09	48	No	INC	6	16:35	21:59
94	RT	Ramp Rate	SDGE	San Diego	20-Dec-09	132 -	No	DEC	8	14:40	21:59

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Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time
						198					
95	RT	Ramp Rate	SDGE	San Diego	20-Dec-09	48	No	INC	8	14:40	21:59
96	RT	SCE Imports	SCE	LA Basin	23-Dec-09	50 - 100	No	INC	2	16:30	17:29
97	RT	SDGE Capacity	SDGE	San Diego	23-Dec-09	200	Yes	INC	7	0:00	6:59
98	RT	Software Limitation	PGAE	Bay Area	8-Dec-09	200 - 345	Yes	DEC	14	1:00	14:59
99	RT	Software Limitation	PGAE	Bay Area	8-Dec-09	0	Yes	INC	5	1:00	5:19
100	RT	Software Limitation	PGAE	Bay Area	9-Dec-09	45	Yes	INC	1	23:00	23:59
101	RT	Software Limitation	PGAE	Fresno	6-Dec-09	79 - 81	Yes	DEC	2	17:30	18:14
102	RT	Software Limitation	PGAE	Fresno	8-Dec-09	0	Yes	INC	2	9:30	10:29
103	RT	Software Limitation	PGAE	Fresno	9-Dec-09	0	Yes	INC	2	11:30	12:29
104	RT	Software Limitation	PGAE	Fresno	11-Dec-09	94	Yes	INC	3	16:45	18:14
105	RT	Software Limitation	PGAE	Fresno	12-Dec-09	0	Yes	INC	2	3:30	4:59
106	RT	Software Limitation	PGAE	Fresno	17-Dec-09	0	No	INC	3	3:40	5:59
107	RT	Software Limitation	PGAE	Fresno	26-Dec-09	0	Yes	INC	7	1:55	7:59
108	RT	Software Limitation	PGAE	Fresno	30-Dec-09	0	No	INC	5	19:00	23:59
109	RT	Software Limitation	PGAE	Humboldt	10-Dec-09	15	No	DEC	1	21:25	21:54
110	RT	Software Limitation	PGAE	Humboldt	15-Dec-09	0	Yes	INC	2	22:45	23:59
111	RT	Software Limitation	PGAE	N/A	30-Dec-09	0	Yes	INC	5	19:00	23:59
112	RT	Software Limitation	PGAE	Sierra	16-Dec-09	0	Yes	INC	6	0:25	5:59
113	RT	Software Limitation	SCE	Big Creek-Ventura	8-Dec-09	156	Yes	DEC	1	18:00	18:34
114	RT	Software Limitation	SCE	Big Creek-Ventura	8-Dec-09	20 - 40	Yes	INC	18	6:55	23:59
115	RT	Software Limitation	SCE	Big Creek-Ventura	10-Dec-09	0	Yes	INC	3	0:30	2:39
116	RT	Software Limitation	SCE	Big Creek-Ventura	30-Dec-09	0	No	INC	5	19:00	23:59
117	RT	Software Limitation	SCE	LA Basin	3-Dec-09	20	Yes	INC	3	21:00	23:59

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Num ber	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commit ment	INC_DEC	Hours	Begin Time	End Time
118	RT	Software Limitation	SCE	LA Basin	4-Dec-09	20	Yes	INC	3	21:00	23:59
119	RT	Software Limitation	SCE	LA Basin	5-Dec-09	20	Yes	INC	10	14:00	23:59
120	RT	Software Limitation	SCE	LA Basin	7-Dec-09	46 - 139	Yes	DEC	2	11:55	12:24
121	RT	Software Limitation	SCE	LA Basin	7-Dec-09	0	Yes	INC	1	23:40	23:59
122	RT	Software Limitation	SCE	LA Basin	8-Dec-09	40	Yes	INC	24	0:00	23:59
123	RT	Software Limitation	SCE	LA Basin	12-Dec-09	20	Yes	INC	3	21:57	23:59
124	RT	Software Limitation	SCE	LA Basin	17-Dec-09	0	Yes	INC	2	21:40	22:09
125	RT	Software Limitation	SCE	LA Basin	28-Dec-09	20	No	INC	3	21:00	23:59
126	RT	Software Limitation	SCE	LA Basin	30-Dec-09	0	Yes	INC	10	14:25	23:59
127	RT	Software Limitation	SCE	N/A	8-Dec-09	0	Yes	INC	7	2:30	8:29
128	RT	Software Limitation	SCE	N/A	30-Dec-09	0	No	INC	5	19:00	23:59
129	RT	Software Limitation	SDGE	N/A	30-Dec-09	0	Yes	INC	5	19:00	23:59
130	RT	Software Limitation	SDGE	San Diego	7-Dec-09	330	Yes	DEC	2	21:40	22:59
131	RT	Software Limitation	SDGE	San Diego	8-Dec-09	1 - 75	Yes	DEC	14	10:55	23:59
132	RT	Software Limitation	SDGE	San Diego	8-Dec-09	30	Yes	INC	24	0:15	23:59
133	RT	Software Limitation	SDGE	San Diego	16-Dec-09	0	Yes	INC	10	14:15	23:54
134	RT	Software Limitation	SDGE	San Diego	17-Dec-09	0	Yes	INC	1	22:15	22:44
135	RT	Software Limitation	SDGE	San Diego	30-Dec-09	0	No	INC	5	19:00	23:59
136	RT	Spin Procurement	PGAE	Fresno	9-Dec-09	83	Yes	INC	3	9:45	11:14
137	RT	System Energy	N/A	N/A	3-Dec-09	375	Yes	INC	1	16:00	16:59
138	RT	System Energy	N/A	N/A	9-Dec-09	100	No	DEC	1	6:00	6:59
139	RT	System Energy	N/A	N/A	9-Dec-09	350	Yes	INC	1	6:00	6:59
140	RT	System Energy	N/A	N/A	10-Dec-09	268	Yes	INC	1	6:00	6:59
141	RT	System Energy	N/A	N/A	11-Dec-09	300	Yes	INC	1	6:00	6:59
142	RT	System Energy	N/A	N/A	16-Dec-09	630	Yes	INC	1	16:00	16:59
143	RT	System Energy	N/A	N/A	23-Dec-09	607	Yes	INC	1	16:00	16:59
144	RT	System Energy	PGAE	Fresno	7-Dec-09	83 - 934	Yes	INC	7	17:58	23:59

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Num ber	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commit ment	INC_DEC	Hours	Begin Time	End Time
145	RT	System Energy	PGAE	Stockton	7-Dec-09	80 - 160	Yes	INC	3	17:31	19:59
146	RT	System Energy	SCE	Big Creek- Ventura	7-Dec-09	64	Yes	INC	2	18:14	19:09
147	RT	System Energy	SCE	LA Basin	7-Dec-09	305	Yes	DEC	1	18:10	18:59
148	RT	System Energy	SCE	LA Basin	7-Dec-09	20 - 310	Yes	INC	7	17:54	23:34
149	RT	System Energy	SCE	LA Basin	9-Dec-09	150	No	DEC	1	16:00	16:59
150	RT	System Energy	SCE	LA Basin	9-Dec-09	0	No	INC	1	15:25	15:29
151	RT	System Energy	SCE	LA Basin	13-Dec-09	20	Yes	INC	24	0:00	23:59
152	RT	System Energy	SCE	N/A	7-Dec-09	245	Yes	INC	4	20:30	23:59
153	RT	System Energy	SCE	N/A	8-Dec-09	245	Yes	INC	1	0:00	0:44
154	RT	System Energy	SDGE	San Diego	7-Dec-09	159	Yes	INC	4	18:03	21:59
155	RT	System Energy	SDGE	San Diego	8-Dec-09	46	Yes	INC	15	7:05	21:59
156	RT	T-103	SCE	LA Basin	9-Dec-09	30 - 50	Yes	INC	3	21:00	23:59
157	RT	T-103	SCE	LA Basin	11-Dec-09	91	Yes	INC	24	0:00	23:59
158	RT	T-103	SCE	LA Basin	12-Dec-09	20	Yes	INC	24	0:00	23:59
159	RT	T-103	SCE	LA Basin	20-Dec-09	20	Yes	INC	18	6:00	23:59
160	RT	T-132	SDGE	N/A	8-Dec-09	17 - 215	No	DEC	9	6:40	14:19
161	RT	T-132	SDGE	N/A	8-Dec-09	0	No	INC	3	6:40	8:09
162	RT	T-132	SDGE	San Diego	2-Dec-09	46	Yes	INC	2	17:30	18:59
163	RT	T-138	PGAE	Humboldt	7-Dec-09	5 - 25	No	DEC	18	6:45	23:54
164	RT	T-138	PGAE	Humboldt	7-Dec-09	10	No	INC	17	7:10	23:54
165	RT	T-138	PGAE	Humboldt	8-Dec-09	5 - 20	No	DEC	12	11:05	22:59
166	RT	T-138	PGAE	Humboldt	8-Dec-09	22	No	INC	18	4:25	21:59
167	RT	T-138	PGAE	Humboldt	10-Dec-09	10	No	DEC	3	19:35	21:09
168	RT	T-138	PGAE	Humboldt	13-Dec-09	0	No	INC	3	18:25	20:59
169	RT	T-138	PGAE	Humboldt	14-Dec-09	10	Yes	DEC	3	19:37	21:08
170	RT	T-138	PGAE	Humboldt	24-Dec-09	5	Yes	INC	2	22:00	23:59

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Num ber	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commit ment	INC_DEC	Hours	Begin Time	End Time
171	RT	Thermal Margin	PGAE	Bay Area	10-Dec-09	45	Yes	INC	24	0:00	23:59
172	RT	Thermal Margin	SCE	LA Basin	10-Dec-09	25	Yes	INC	23	1:00	23:59
173	RT	Thermal Margin	SCE	LA Basin	11-Dec-09	25	Yes	INC	24	0:00	23:59
174	RT	Transmission Outage PGAE	PGAE	Bay Area	9-Dec-09	2 - 86	No	DEC	13	10:45	22:34
175	RT	Transmission Outage PGAE	PGAE	Bay Area	9-Dec-09	45	No	INC	7	10:45	16:19
176	RT	Transmission Outage PGAE	PGAE	Bay Area	10-Dec-09	20 - 81	No	DEC	11	11:10	21:44
177	RT	Transmission Outage PGAE	PGAE	Bay Area	10-Dec-09	1 - 6	No	INC	11	11:10	21:59
178	RT	Transmission Outage PGAE	PGAE	Bay Area	11-Dec-09	21 - 25	No	DEC	3	17:35	19:59
179	RT	Transmission Outage PGAE	PGAE	Bay Area	11-Dec-09	5	No	INC	3	17:35	19:59
180	RT	Transmission Outage PGAE	PGAE	Bay Area	22-Dec-09	147 - 170	No	INC	3	21:28	23:58
181	RT	Transmission Outage PGAE	PGAE	Bay Area	23-Dec-09	8 - 46	No	DEC	24	0:00	23:58
182	RT	Transmission Outage PGAE	PGAE	Bay Area	23-Dec-09	1 - 230	No	INC	24	0:00	23:58
183	RT	Transmission Outage PGAE	PGAE	Humboldt	5-Dec-09	5 - 10	No	DEC	3	14:10	16:04
184	RT	Transmission Outage PGAE	PGAE	Humboldt	5-Dec-09	35	Yes	INC	18	6:25	23:29
185	RT	Transmission Outage PGAE	PGAE	Humboldt	6-Dec-09	5	No	DEC	5	16:20	20:59
186	RT	Transmission Outage PGAE	PGAE	Humboldt	6-Dec-09	5 - 35	Yes	INC	15	6:20	20:59
187	RT	Transmission Outage PGAE	PGAE	NCNB	1-Dec-09	4 - 9	No	DEC	5	17:25	21:59
188	RT	Transmission Outage PGAE	PGAE	NCNB	2-Dec-09	5 - 22	No	DEC	6	16:46	21:59
189	RT	Transmission Outage PGAE	PGAE	NCNB	3-Dec-09	10	No	DEC	2	16:55	17:19
190	RT	Transmission Outage PGAE	PGAE	Sierra	8-Dec-09	15 - 50	No	DEC	13	9:45	21:49
191	RT	Transmission Outage PGAE	PGAE	Sierra	9-Dec-09	25	No	DEC	3	16:55	18:29
192	RT	Transmission Outage PGAE	PGAE	Sierra	15-Dec-09	20	No	INC	6	7:00	12:29
193	RT	Transmission Outage SCE	SCE	Big Creek- Ventura	2-Dec-09	130	Yes	INC	5	9:25	13:44
194	RT	Transmission Outage SCE	SCE	Big Creek- Ventura	3-Dec-09	20 - 215	Yes	INC	13	5:00	17:09
195	RT	Transmission Outage SCE	SCE	Big Creek- Ventura	16-Dec-09	20	No	INC	1	16:00	16:59
196	RT	Transmission Outage SCE	SCE	LA Basin	1-Dec-09	80 -	No	DEC	6	18:35	23:59

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Num ber	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commit ment	INC_DEC	Hours	Begin Time	End Time
						420					
197	RT	Transmission Outage SCE	SCE	LA Basin	1-Dec-09	200	No	INC	24	0:00	23:59
198	RT	Transmission Outage SCE	SCE	LA Basin	2-Dec-09	40 - 450	No	DEC	24	0:00	23:59
199	RT	Transmission Outage SCE	SCE	LA Basin	2-Dec-09	200	No	INC	24	0:00	23:59
200	RT	Transmission Outage SCE	SCE	LA Basin	4-Dec-09	121 - 450	No	DEC	24	0:00	23:59
201	RT	Transmission Outage SCE	SCE	LA Basin	4-Dec-09	206	No	INC	24	0:00	23:59
202	RT	Transmission Outage SCE	SCE	LA Basin	28-Dec-09	128 - 132	Yes	INC	5	8:30	12:09
203	RT	Transmission Outage SDGE	SDGE	San Diego	7-Dec-09	36 - 82	Yes	INC	5	15:00	19:59
204	RT	Transmission Outage SDGE	SDGE	San Diego	9-Dec-09	20 - 70	Yes	INC	17	7:00	23:59
205	RT	Transmission Outage SWPL	SCE	Big Creek- Ventura	8-Dec-09	20	Yes	INC	9	9:00	17:59
206	RT	Unit Testing	N/A	N/A	3-Dec-09	1	Yes	INC	1	15:00	15:09
207	RT	Unit Testing	PGAE	Bay Area	16-Dec-09	0	No	INC	7	9:45	15:04

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 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	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