

May 16, 2016

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-\_\_\_\_  
March 2016 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 March 2016.

Respectfully submitted,

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# **Exceptional Dispatch Report**

## **Table 1: March 2016**

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## Introduction

This report is filed pursuant to FERC's September 2, 2009 and July 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 March 2016

## The Nature of Exceptional Dispatch

The CAISO 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. A real-time exceptional dispatch above the resource day-ahead award is an incremental exceptional dispatch instruction and an exceptional dispatch below the day-ahead award is a decremental dispatch instruction.

The CAISO issues exceptional dispatch instructions to maintain the reliability of the grid when the market software cannot do so. Whenever the CAISO issues an exceptional dispatch instruction, the operator logs the dispatch and the associated reason.

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 non-modeled constraints or requirements and intertie emergency assistance. All of the transmission procedures are available on the CAISO website<sup>2</sup>.

The following reason for exceptional dispatch instructions in March 2016 was not related to generation or transmission operating procedures: Software Limitation, when an exceptional dispatch instruction was used to bridge schedules across days for resources with a minimum down time of 24 hours, as the CAISO 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

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

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

day, then the CAISO issues an exceptional dispatch to commit this resource in 2400 so it can be dispatched economically in the following day. Software limitation reason was also used for exceptional dispatches to manually issue shut down instructions to a resource because of a temporary Automatic Dispatch System (“ADS”) failure, or similar issues. There were a few other reasons used to explain exceptional dispatch instructions in March 2016, which are self explanatory.

The data in Table 1 is based on a template specified in the September 2009 order<sup>3</sup>. Each entry in Attachment A is a summary of exceptional dispatches classified by (1) the reason for the exceptional dispatch; (2) the location of the resource by Participating Transmission Owner (“PTO”) service area; (3) the Local Reliability Area (“LRA”) where applicable; (4) the market in which the exceptional dispatch occurred (day-ahead vs. real-time); and (5) the date of the exceptional dispatch. For each classification the following information is provided: (1) Megawatts (MW); (2) Commitment (3) Inc or Dec (4) Hours; (5) Begin Time; and (6) End Time.

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

Table 1 indicates there were 171 exceptional dispatches in March 2016, as compared to 130 exceptional dispatches in February 2016. Exceptional dispatches issued for the following reasons accounted for approximately 68 percent of the total exceptional dispatches during the reporting period: planned transmission outages, software limitations, and operating procedure number 7110 (along with 7820).

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

**Table 1: Exceptional Dispatches in March 2016**

**California Independent System Operator Corporation  
Exceptional Dispatch Report  
May 13, 2016**

**Chart 1: Table of Exceptional Dispatches for Period 01/March/2016 - 31/March/2016**

Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time
1	RT	Conditions beyond the control of the CAISO	PG&E	Bay Area	12Mar2016	180	No	INC	7	17:35	23:59
2	RT	Conditions beyond the control of the CAISO	PG&E	Fresno	31Mar2016	404	No	INC	3	18:50	20:59
3	RT	Conditions beyond the control of the CAISO	PG&E	N/A	12Mar2016	140	No	INC	2	1:23	2:59
4	RT	Conditions beyond the control of the CAISO	PG&E	Stockton	12Mar2016	89- 191	No	INC	7	7:00	13:59
5	RT	Fast Start Unit Management	PG&E	Bay Area	22Mar2016	0	No	INC	1	8:20	8:29
6	RT	Fast Start Unit Management	SCE	Big Creek-Ventura	29Mar2016	0	No	INC	1	4:05	4:59
7	RT	Fast Start Unit Management	SCE	LA Basin	05Mar2016	0	No	INC	1	6:45	7:44
8	RT	Fast Start Unit Management	SCE	LA Basin	15Mar2016	0	No	INC	1	22:35	23:29
9	RT	Fast Start Unit Management	SCE	LA Basin	18Mar2016	0	No	INC	1	1:45	2:44
10	RT	Fast Start Unit Management	SCE	LA Basin	22Mar2016	0	No	INC	1	3:00	3:59
11	RT	Incomplete or Inaccurate Transmission	N/A	N/A	20Mar2016	35	No	INC	24	21:25	21:24
12	RT	Operating Procedure Number and Constraint	N/A	N/A	22Mar2016	12- 84	No	INC	18	2:45	19:59
13	RT	Operating Procedure Number and Constraint (7110)	N/A	N/A	01Mar2016	15	No	INC	18	6:16	23:59
14	RT	Operating Procedure Number and Constraint (7110)	N/A	N/A	02Mar2016	15- 32	No	INC	19	5:50	23:59
15	RT	Operating Procedure Number and Constraint (7110)	N/A	N/A	03Mar2016	15- 32	No	INC	18	6:05	23:59
16	RT	Operating Procedure Number and Constraint (7110)	N/A	N/A	04Mar2016	15	No	INC	10	9:20	18:44

Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time
17	RT	Operating Procedure Number and Constraint (7110)	N/A	N/A	05Mar2016	30- 64	No	INC	16	8:05	23:44
18	RT	Operating Procedure Number and Constraint (7110)	N/A	N/A	06Mar2016	15- 62	No	INC	22	3:05	0:44
19	RT	Operating Procedure Number and Constraint (7110)	N/A	N/A	07Mar2016	16- 48	No	INC	8	0:25	7:59
20	RT	Operating Procedure Number and Constraint (7110)	N/A	N/A	08Mar2016	16	No	INC	10	7:14	16:59
21	RT	Operating Procedure Number and Constraint (7110)	N/A	N/A	09Mar2016	24- 30	No	INC	12	6:15	17:29
22	RT	Operating Procedure Number and Constraint (7110)	N/A	N/A	10Mar2016	20- 25	No	INC	3	21:00	23:59
23	RT	Operating Procedure Number and Constraint (7110)	N/A	N/A	11Mar2016	15- 20	No	INC	21	0:00	20:59
24	RT	Operating Procedure Number and Constraint (7110)	N/A	N/A	12Mar2016	15	No	INC	1	1:15	1:29
25	RT	Operating Procedure Number and Constraint (7110)	N/A	N/A	13Mar2016	16- 24	No	INC	12	8:50	19:59
26	RT	Operating Procedure Number and Constraint (7110)	N/A	N/A	14Mar2016	28- 46	No	INC	3	21:15	23:59
27	RT	Operating Procedure Number and Constraint (7110)	N/A	N/A	15Mar2016	10- 32	No	INC	19	2:50	20:59
28	RT	Operating Procedure Number and Constraint (7110)	N/A	N/A	16Mar2016	15- 20	No	INC	18	7:55	0:59
29	RT	Operating Procedure Number and Constraint (7110)	N/A	N/A	17Mar2016	16- 35	No	INC	16	8:40	23:59
30	RT	Operating Procedure Number and Constraint (7110)	N/A	N/A	18Mar2016	24- 28	No	INC	18	6:20	23:59
31	RT	Operating Procedure Number and Constraint (7110)	N/A	N/A	19Mar2016	12- 20	No	INC	4	21:00	0:29
32	RT	Operating Procedure Number and Constraint (7110)	N/A	N/A	21Mar2016	24- 42	No	INC	18	6:50	23:59

Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time
33	RT	Operating Procedure Number and Constraint (7110)	N/A	N/A	23Mar2016	24- 30	No	INC	7	17:10	23:59
34	RT	Operating Procedure Number and Constraint (7110)	N/A	N/A	24Mar2016	30	No	INC	18	6:55	23:59
35	RT	Operating Procedure Number and Constraint (7110)	N/A	N/A	25Mar2016	15- 30	No	INC	24	0:00	23:59
36	RT	Operating Procedure Number and Constraint (7110)	N/A	N/A	26Mar2016	12- 24	No	INC	15	9:35	0:19
37	RT	Operating Procedure Number and Constraint (7110)	N/A	N/A	28Mar2016	15- 28	No	INC	11	12:35	22:59
38	RT	Operating Procedure Number and Constraint (7110)	N/A	N/A	29Mar2016	10- 30	No	INC	18	6:10	23:59
39	RT	Operating Procedure Number and Constraint (7110)	N/A	N/A	31Mar2016	14- 30	No	INC	4	20:20	23:59
40	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	01Mar2016	10- 28	No	INC	23	1:35	23:59
41	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	02Mar2016	15	No	INC	3	7:20	9:59
42	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	03Mar2016	10	No	INC	4	20:00	23:59
43	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	04Mar2016	10- 24	No	INC	23	0:00	22:59
44	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	05Mar2016	16- 48	No	INC	22	1:45	23:44
45	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	06Mar2016	15- 58	No	INC	7	3:05	9:44
46	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	07Mar2016	10- 16	No	INC	23	1:00	23:59
47	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	08Mar2016	15- 16	No	INC	18	7:45	0:59
48	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	09Mar2016	15	No	INC	18	0:15	17:29



Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time
49	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	10Mar2016	10- 15	No	INC	2	21:00	22:29
50	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	11Mar2016	10- 30	No	INC	19	5:41	23:59
51	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	12Mar2016	10- 16	No	INC	20	0:00	19:59
52	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	13Mar2016	24	No	INC	2	22:30	23:59
53	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	14Mar2016	15- 25	No	INC	10	9:30	19:29
54	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	16Mar2016	15	No	INC	15	7:55	21:59
55	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	17Mar2016	16	No	INC	11	8:40	18:59
56	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	19Mar2016	10	No	INC	2	21:00	22:59
57	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	23Mar2016	15- 30	No	INC	6	17:10	22:59
58	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	26Mar2016	12- 20	No	INC	4	21:00	0:44
59	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	27Mar2016	20	No	INC	2	21:30	23:29
60	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	28Mar2016	12- 15	No	INC	15	5:50	19:59
61	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	29Mar2016	10- 15	No	INC	15	9:15	23:29
62	RT	Operating Procedure Number and Constraint (7820)	SDG&E	San Diego-IV	08Mar2016	290-580	No	INC	12	10:30	21:59
63	RT	Other Reliability Requirement	PG&E	Bay Area	14Mar2016	80	No	INC	5	11:07	15:44
64	RT	Other Reliability Requirement	PG&E	Fresno	07Mar2016	9	No	INC	12	12:11	23:59
65	RT	Other Reliability Requirement	PG&E	Sierra	06Mar2016	46- 91	No	INC	2	3:38	4:59

Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time
66	RT	Other Reliability Requirement	SCE	Big Creek-Ventura	10Mar2016	0	No	INC	1	10:35	11:34
67	RT	Other Reliability Requirement	SDG&E	San Diego-IV	07Mar2016	63- 126	No	INC	19	5:15	23:59
68	RT	Other Reliability Requirement	SDG&E	San Diego-IV	14Mar2016	23	No	INC	2	10:00	11:44
69	RT	Other Reliability Requirement	SDG&E	San Diego-IV	25Mar2016	18- 36	Yes	INC	7	8:35	14:59
70	RT	Planned Transmission Outage and Constraint	N/A	N/A	22Mar2016	12- 45	No	INC	5	19:40	23:59
71	RT	Planned Transmission Outage and Constraint	N/A	N/A	23Mar2016	15- 33	No	INC	13	4:30	17:29
72	RT	Planned Transmission Outage and Constraint	N/A	N/A	27Mar2016	12	No	INC	12	7:30	18:59
73	RT	Planned Transmission Outage and Constraint	N/A	N/A	30Mar2016	24	No	INC	19	5:50	0:29
74	RT	Planned Transmission Outage and Constraint	N/A	N/A	31Mar2016	15- 30	No	INC	19	0:15	18:59
75	RT	Planned Transmission Outage and Constraint	PG&E	Bay Area	14Mar2016	80	No	INC	3	15:15	17:59
76	RT	Planned Transmission Outage and Constraint	PG&E	Bay Area	15Mar2016	70	No	INC	13	7:30	19:59
77	RT	Planned Transmission Outage and Constraint	PG&E	Bay Area	25Mar2016	68	No	INC	6	10:25	15:29
78	RT	Planned Transmission Outage and Constraint	PG&E	Bay Area	26Mar2016	180	No	INC	3	17:50	19:59
79	RT	Planned Transmission Outage and Constraint	PG&E	Fresno	22Mar2016	7	No	INC	7	11:35	17:44
80	RT	Planned Transmission Outage and Constraint	PG&E	Humboldt	09Mar2016	32	No	INC	4	21:25	0:44
81	RT	Planned Transmission Outage and Constraint	PG&E	Humboldt	10Mar2016	10- 22	No	INC	12	6:00	17:44
82	RT	Planned Transmission Outage and Constraint	PG&E	Humboldt	22Mar2016	20- 32	No	INC	18	6:30	23:59

Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time
83	RT	Planned Transmission Outage and Constraint	PG&E	Humboldt	23Mar2016	22- 33	No	INC	13	4:30	17:29
84	RT	Planned Transmission Outage and Constraint	PG&E	Humboldt	30Mar2016	24- 34	No	INC	16	8:40	23:59
85	RT	Planned Transmission Outage and Constraint	PG&E	Humboldt	31Mar2016	12- 30	No	INC	17	2:20	18:59
86	RT	Planned Transmission Outage and Constraint	PG&E	N/A	03Mar2016	580	No	INC	2	15:15	16:59
87	RT	Planned Transmission Outage and Constraint	PG&E	N/A	16Mar2016	790-820	No	INC	11	7:00	17:29
88	RT	Planned Transmission Outage and Constraint	PG&E	Sierra	05Mar2016	22	No	INC	3	6:28	8:39
89	RT	Planned Transmission Outage and Constraint	PG&E	Sierra	16Mar2016	126	Yes	INC	13	7:50	19:59
90	RT	Planned Transmission Outage and Constraint	PG&E	Sierra	17Mar2016	42- 84	Yes	INC	13	8:00	20:59
91	RT	Planned Transmission Outage and Constraint	PG&E	Sierra	18Mar2016	42	No	INC	5	8:00	12:29
92	RT	Planned Transmission Outage and Constraint	PG&E	Sierra	20Mar2016	46	No	INC	4	16:30	19:59
93	RT	Planned Transmission Outage and Constraint	PG&E	Sierra	21Mar2016	6	No	INC	4	10:11	13:59
94	RT	Planned Transmission Outage and Constraint	PG&E	Sierra	22Mar2016	120-150	No	INC	22	2:45	23:59
95	RT	Planned Transmission Outage and Constraint	PG&E	Sierra	23Mar2016	133-140	No	INC	23	1:05	23:59
96	RT	Planned Transmission Outage and Constraint	PG&E	Sierra	24Mar2016	120	No	INC	9	3:20	11:59
97	RT	Planned Transmission Outage and Constraint	PG&E	Sierra	28Mar2016	135-156	No	INC	15	7:50	21:59
98	RT	Planned Transmission Outage and Constraint	PG&E	Stockton	11Mar2016	77- 78	No	INC	5	5:05	9:59

Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time
99	RT	Planned Transmission Outage and Constraint	PG&E	Stockton	14Mar2016	85	No	INC	3	17:06	19:59
100	RT	Planned Transmission Outage and Constraint	PG&E	Stockton	15Mar2016	75- 80	No	INC	19	5:00	23:59
101	RT	Planned Transmission Outage and Constraint	PG&E	Stockton	16Mar2016	75- 80	No	INC	15	5:05	19:59
102	RT	Planned Transmission Outage and Constraint	PG&E	Stockton	17Mar2016	75- 85	No	INC	18	5:17	22:59
103	RT	Planned Transmission Outage and Constraint	PG&E	Stockton	18Mar2016	65	No	INC	13	3:20	15:44
104	RT	Planned Transmission Outage and Constraint	SCE	Big Creek-Ventura	22Mar2016	280	No	INC	8	9:25	16:59
105	RT	Planned Transmission Outage and Constraint	SCE	LA Basin	14Mar2016	0	No	INC	2	15:08	16:09
106	RT	Planned Transmission Outage and Constraint	SCE	LA Basin	31Mar2016	190-194	No	INC	11	4:15	14:59
107	RT	Planned Transmission Outage and Constraint	SDG&E	San Diego-IV	07Mar2016	20	No	INC	10	5:00	14:44
108	RT	Planned Transmission Outage and Constraint	SDG&E	San Diego-IV	11Mar2016	622	No	INC	4	8:05	11:49
109	RT	Planned Transmission Outage and Constraint	SDG&E	San Diego-IV	21Mar2016	270	No	INC	6	12:11	17:14
110	RT	Planned Transmission Outage and Constraint	SDG&E	San Diego-IV	25Mar2016	68- 83	No	INC	6	9:30	14:59
111	RT	Planned Transmission Outage and Constraint	SDG&E	San Diego-IV	31Mar2016	450-500	No	INC	4	20:15	23:29
112	RT	Pump Management	PG&E	Fresno	22Mar2016	0	No	INC	1	9:00	9:29
113	RT	Software Limitation	PG&E	Bay Area	07Mar2016	93	No	INC	2	7:15	8:44
114	RT	Software Limitation	PG&E	Bay Area	13Mar2016	380	No	INC	1	20:30	21:29
115	RT	Software Limitation	PG&E	Bay Area	14Mar2016	60	No	INC	1	5:15	5:59
116	RT	Software Limitation	PG&E	Bay Area	16Mar2016	370	No	INC	5	18:44	22:44
117	RT	Software Limitation	PG&E	Fresno	01Mar2016	0	No	INC	1	14:45	15:44

Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time
118	RT	Software Limitation	PG&E	Fresno	06Mar2016	0	No	INC	1	21:30	22:29
119	RT	Software Limitation	PG&E	Fresno	09Mar2016	0	No	INC	1	16:00	16:29
120	RT	Software Limitation	PG&E	Fresno	10Mar2016	0	No	INC	1	16:00	16:59
121	RT	Software Limitation	PG&E	Fresno	16Mar2016	83	No	INC	1	17:40	18:19
122	RT	Software Limitation	PG&E	Fresno	29Mar2016	480-560	No	INC	2	13:05	14:59
123	RT	Software Limitation	PG&E	Humboldt	11Mar2016	16	No	INC	1	23:20	23:59
124	RT	Software Limitation	PG&E	N/A	08Mar2016	103	No	INC	1	17:30	18:29
125	RT	Software Limitation	PG&E	Sierra	26Mar2016	0	No	INC	1	21:50	22:44
126	RT	Software Limitation	PG&E	Stockton	08Mar2016	237-474	No	INC	2	17:10	18:44
127	RT	Software Limitation	PG&E	Stockton	11Mar2016	191	No	INC	1	18:00	18:59
128	RT	Software Limitation	PG&E	Stockton	12Mar2016	89- 191	No	INC	2	5:25	6:59
129	RT	Software Limitation	SCE	LA Basin	11Mar2016	0	No	INC	2	20:30	21:34
130	RT	Software Limitation	SCE	LA Basin	12Mar2016	0	No	INC	2	20:30	21:59
131	RT	Software Limitation	SCE	LA Basin	15Mar2016	0	No	INC	12	11:30	23:04
132	RT	Software Limitation	SCE	N/A	18Mar2016	224	No	INC	2	1:55	2:59
133	RT	Software Limitation	SCE	N/A	29Mar2016	228-230	No	INC	2	13:20	14:59
134	RT	Software Limitation	SDG&E	San Diego-IV	08Mar2016	0	No	INC	1	14:00	14:59
135	RT	Software Limitation	SDG&E	San Diego-IV	19Mar2016	0	No	INC	3	2:30	4:59
136	RT	Software Limitation	SDG&E	San Diego-IV	20Mar2016	0	No	INC	3	1:45	4:14
137	RT	Software Limitation	SDG&E	San Diego-IV	30Mar2016	0	No	INC	1	14:15	15:14
138	RT	Start-Up Instructions	PG&E	Fresno	19Mar2016	0	No	INC	1	17:00	17:59
139	RT	Start-Up Instructions	PG&E	Humboldt	09Mar2016	10- 15	No	INC	10	8:00	17:29
140	RT	Unit Testing	PG&E	Bay Area	02Mar2016	146	No	INC	2	9:24	10:24
141	RT	Unit Testing	PG&E	Bay Area	08Mar2016	130	No	INC	1	23:03	23:59
142	RT	Unit Testing	PG&E	Bay Area	09Mar2016	130	No	INC	1	0:00	0:02

Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time
143	RT	Unit Testing	PG&E	Bay Area	24Mar2016	265-400	No	INC	12	8:15	19:29
144	RT	Unit Testing	PG&E	Bay Area	28Mar2016	75	No	INC	3	6:45	9:29
145	RT	Unit Testing	PG&E	Bay Area	31Mar2016	50	No	INC	4	5:00	8:59
146	RT	Unit Testing	SCE	Big Creek-Ventura	24Mar2016	250	No	INC	2	18:45	19:59
147	RT	Unit Testing	SCE	Big Creek-Ventura	29Mar2016	380	No	INC	1	18:55	19:29
148	RT	Unit Testing	SCE	LA Basin	01Mar2016	90	No	INC	1	8:41	8:59
149	RT	Unit Testing	SCE	LA Basin	01Mar2016	90- 186	No	INC	5	8:55	13:39
150	RT	Unit Testing	SCE	LA Basin	02Mar2016	35	No	INC	1	9:51	9:56
151	RT	Unit Testing	SCE	LA Basin	11Mar2016	274	No	INC	1	13:22	13:25
152	RT	Unit Testing	SCE	LA Basin	15Mar2016	72	No	INC	1	10:19	10:49
153	RT	Unit Testing	SCE	LA Basin	28Mar2016	48- 96	No	INC	7	10:20	16:29
154	RT	Unit Testing	SCE	LA Basin	29Mar2016	48	No	INC	11	5:00	15:44
155	RT	Unit Testing	SCE	LA Basin	30Mar2016	48	No	INC	9	5:00	13:59
156	RT	Unit Testing	SDG&E	San Diego-IV	24Mar2016	40- 120	Yes	INC	8	8:00	15:59
157	RT	Unplanned Outage	SCE	LA Basin	15Mar2016	47	No	INC	10	8:05	17:59
158	RT	Voltage Support	PG&E	Fresno	01Mar2016	-320	No	INC	5	1:00	5:29
159	RT	Voltage Support	PG&E	Fresno	02Mar2016	-320	No	INC	1	5:10	5:39
160	RT	Voltage Support	PG&E	Fresno	03Mar2016	-318	No	INC	5	1:40	5:44
161	RT	Voltage Support	PG&E	Fresno	04Mar2016	-321- 83	No	INC	22	2:45	23:59
162	RT	Voltage Support	PG&E	Fresno	06Mar2016	83	Yes	INC	1	0:00	0:29
163	RT	Voltage Support	PG&E	Fresno	07Mar2016	-324--318	No	INC	20	5:00	0:59
164	RT	Voltage Support	PG&E	Fresno	08Mar2016	-324	No	INC	2	4:00	5:29
165	RT	Voltage Support	PG&E	Fresno	09Mar2016	-324	No	INC	1	5:00	5:59
166	RT	Voltage Support	PG&E	Fresno	10Mar2016	-324	No	INC	2	4:00	5:59
167	RT	Voltage Support	PG&E	Fresno	12Mar2016	-320	No	INC	3	5:15	7:59

Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time
168	RT	Voltage Support	PG&E	Fresno	13Mar2016	-320	No	INC	8	1:00	8:59
169	RT	Voltage Support	PG&E	Fresno	14Mar2016	83	Yes	INC	1	5:00	5:59
170	RT	Voltage Support	PG&E	Fresno	16Mar2016	-317	No	INC	2	2:00	3:59
171	RT	Voltage Support	PG&E	Fresno	20Mar2016	-314	No	INC	2	23:30	0:59

## 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 CAISO 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 CAISO 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. Here the dispatch levels are all at minimum load.

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

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

This data is summarized as shown in Table 3, which is the prescribed format specified in the FERC order on September 02, 2009. This summary classifies the data by reason, resource location, local reliability area, and trade date. The MW column in Table 3 is the range of MW; in this case the minimum instruction MW is 20 MW for resource C which occurs from hours ending 21 through 23. The maximum instruction occurs in hour ending 10. In this hour resource A is committed at 50 MW, resource B is committed at 30 MW and resource C is committed at 20 MW. This adds up to 100 MW. The MW column shows the minimum and maximum of the overlaps of all the exceptional dispatch instructions. The Commitment column shows whether a resource was committed between the begin time and end time. Commitments are broken out separately from energy dispatches. In the day-ahead, however the exceptional dispatches are nearly always just commitments, as in this example. The Begin Time column shows hour ending 5 as this was the hour ending for first dispatch of the day, and the End Time column shows hour ending 23, as this was the hour with last dispatch. It is also possible that there might be 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 CAISO 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 had no day-ahead award in those hours. The CAISO issued another exceptional dispatch instruction to resource B, to be dispatched at 40 MW from hours ending 8 through 9 in real-time for the transmission procedure 7110. This resource had a day-ahead schedule of 20 MW from the day-ahead market, which implies that this exceptional dispatch instruction was an incremental instruction and the exceptional dispatch MW was 20 MW. Similarly, the details of exceptional dispatch (ED) instruction for resource C are shown in Table 4.

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

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

This data is summarized as shown in Table 5 and is classified by reason, resource location, local reliability area, and trade date. The MW column in Table 5 is the range of MW; in this case the minimum instruction MW is 0 MW for resource C which occurs from hours ending 13 through 15. The maximum instruction occurs in hours ending 8 & 9, as during these two hours both resources A and B have an ED MW of 30MW and 20MW, respectively. This adds up to 50 MW. 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 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 CAISO 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 CAISO issued additional exceptional dispatch instructions for resources B and C; details of those instructions are shown in Table 6.

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

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

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

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

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

## CERTIFICATE OF SERVICE

I hereby certify that I have served the foregoing document upon the parties listed on the official service lists in the above-referenced proceedings, in accordance with the requirements of Rule 2010 of the Commission's Rules of Practice and Procedure (18 C.F.R. § 385.2010).

Dated at Folsom, California this 16<sup>th</sup> day of May 2016.

*/s/ Anna Pascuzzo*  
Anna Pascuzzo