

Exceptional Dispatch Report

Table 1: July 2023

CAISO Market Analysis and Forecasting

September 15, 2023

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Introduction

This report is filed pursuant to FERC's September 2, 2009, and May 4, 2010, orders in Docket No. ER08-1178. These orders require two monthly Exceptional Dispatch reports—one issued on the 15th of each month and one originally issued on the 30th of each month. Both Table 1 and Table 2 reports will be issued on the 15th of each month due to the availability of necessary data. This report provides data on the frequency and reasons for Exceptional Dispatches issued in July 2023.

The Nature of Exceptional Dispatch

The CAISO can issue exceptional dispatch instructions for a resource as a preday-ahead unit commitment, which may also include a post-day-ahead unit commitment, or a real-time exceptional dispatch.¹ 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.²

The following reason for exceptional dispatch instructions in July 2023 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

The CAISO can issue exceptional dispatch instructions subject to authority of the CAISO Tariff Section 34.11 and in accordance with CAISO Operating Procedure 2330 (formerly M-402).

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

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 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. Interconnection Reliability Operating Limits (IROL) are system operating limits that are established to prevent instability, uncontrolled separation or cascading as described in operating procedure 3100. System Operating Limit (SOL) are the facility ratings, system voltage limits, transient stability limits, and voltage stability limits that are used in the operating horizon – any of which can be the most restrictive limit at any point in time, pre – or post – contingency. Control Point (CP) are imposed to protect the area transmission network against N – 1 contingencies. There were a few other reasons used to explain exceptional dispatch instructions in July 2023, which are self explanatory.

The data in Table 1 is based on a template specified in the September 2009 order. 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 column specifies if there was an incremental dispatch or a decremental dispatch from the IFM schedule. 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 302 exceptional dispatches in July 2023, as compared to 168 exceptional dispatches in June 2023. There were no exceptional dispatches issued as a pre-day-ahead commitment.

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 the reporting period.

Exceptional dispatches issued for the following reasons accounted for approximately 47 percent of the total exceptional dispatches during the reporting period: market disruption, planned transmission outages, reliability assessment and voltage support. Exceptional dispatches with the reason "Reliability Assessment" were due to Real Time Contingency Analysis, Voltage Stability Analysis, and operating procedure number 7110. Reliability Assessment is the reason as explained in the operator procedure 2330C⁴ that encompasses Control Point (CP), Interconnection Reliability Operating Limit (IROL), System Operating Limit (SOL) and congestion related EDs. This reason is used to mitigate reliability issues identified through the real – time assessment tools such as Real Time Contingency Analysis (RTCA), Voltage Stability Analysis (VSA), Dynamic Stability Analysis (DSA) and/or Operating Procedure (OP) or offline study.

^{1) &}lt;sup>4</sup> The operator procedure 2330C - http://www.caiso.com/Documents/2330C.pdf

Table 1: Exceptional Dispatches in July 2023

California Independent System Operator Corporation Exceptional Dispatch Report September 15, 2023

Chart 1: Table of Exceptional Dispatches for Period 01/July/2023 – 31/July/2023

	Mar						Со				
Num	ket Typ		Locatio	Local Reliability			itm	INC_	Hou	Begin	End
ber	e	Reason	n	Area	Trade Date	MW	ent	DEC	rs	Time	Time
1	RT	Bridging Schedules	SCE	Big Creek-Ventura	7/18/2023	50	No	INC	1	23:00	0:00
2	RT	Bridging Schedules	SCE	Big Creek-Ventura	7/19/2023	50	No	INC	13	0:00	13:00
3	RT	Bridging Schedules	SCE	Big Creek-Ventura	7/29/2023	50	No	INC	3	21:00	0:00
4	RT	Bridging Schedules	SCE	Big Creek-Ventura	7/30/2023	50	No	INC	13	0:00	13:00
5	RT	Bridging Schedules	SCE	Big Creek-Ventura	7/31/2023	50	No	INC	2	22:00	0:00
6	RT	Bridging Schedules	SCE	LA Basin	7/16/2023	70	No	INC	1	23:00	0:00
7	RT	Bridging Schedules	SCE	LA Basin	7/24/2023	10	No	INC	1	23:00	0:00
8	RT	Bridging Schedules	SCE	LA Basin	7/25/2023	10	No	INC	1	23:00	0:00
9	RT	Bridging Schedules	SCE	LA Basin	7/26/2023	20	No	INC	1	23:00	0:00
10	RT	Bridging Schedules	SCE	LA Basin	7/31/2023	10	Yes	INC	1	23:00	0:00
11	RT	Conditions beyond the control of the CAISO	SDGE	San Diego-IV	7/10/2023	24 - 317	No	DEC	2	18:00	19:30
12	RT	Conditions beyond the control of the CAISO	SDGE	San Diego-IV	7/10/2023	24 - 317	No	INC	3	16:45	19:00
13	RT	Fast Start Unit Management	SCE	LA Basin	7/5/2023	0	No	INC	1	23:45	0:00
14	RT	Fast Start Unit Management	SCE	LA Basin	7/6/2023	0	No	INC	1	0:00	0:50
15	RT	Fast Start Unit Management	SCE	LA Basin	7/29/2023	0	No	INC	1	0:55	1:55
16	RT	Incomplete or Inaccurate Transmission	PGAE	Fresno	7/18/2023	83	No	DEC	1	21:45	22:00
17	RT	Incomplete or Inaccurate Transmission	PGAE	Fresno	7/18/2023	83	No	INC	1	22:00	23:00
18	RT	Incomplete or Inaccurate Transmission	PGAE	Fresno	7/19/2023	83	No	DEC	1	20:45	21:00
19	RT	Incomplete or Inaccurate Transmission	PGAE	Fresno	7/19/2023	83	No	INC	3	21:00	0:00
20	RT	Incomplete or Inaccurate Transmission	PGAE	Fresno	7/20/2023	83	No	INC	24	0:00	23:45

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Num ber	Typ e	Reason	Locatio n	Local Reliability Area	Trade Date	MW	itm ent	INC_ DEC	Hou rs	Begin Time	End Time
21	RT	Incomplete or Inaccurate Transmission	PGAE	NA	7/26/2023	29	No	DEC	1	21:00	22:00
22	RT	Incomplete or Inaccurate Transmission	PGAE	NA	7/26/2023	29 - 35	No	INC	2	19:55	21:00
23	RT	Incomplete or Inaccurate Transmission	SCE	NA	7/1/2023	50	No	DEC	24	0:00	23:05
24	RT	Incomplete or Inaccurate Transmission	SCE	NA	7/1/2023	55	No	INC	1	23:05	0:00
25	RT	Incomplete or Inaccurate Transmission	SCE	NA	7/2/2023	55	No	INC	22	0:00	22:00
26	RT	Incomplete or Inaccurate Transmission	SCE	NA	7/3/2023	55	No	INC	18	4:15	22:00
27	RT	Incomplete or Inaccurate Transmission	SCE	NA	7/4/2023	50 - 54	No	DEC	22	0:05	22:00
28	RT	Incomplete or Inaccurate Transmission	SCE	NA	7/5/2023	50 - 54	No	DEC	6	6:25	11:45
29	RT	Incomplete or Inaccurate Transmission	SCE	NA	7/18/2023	20 - 40	No	DEC	1	23:40	0:00
30	RT	Incomplete or Inaccurate Transmission	SCE	NA	7/19/2023	20 - 50	No	DEC	24	0:00	0:00
31	RT	Incomplete or Inaccurate Transmission	SCE	NA	7/20/2023	40	No	DEC	24	0:00	0:00
32	RT	Incomplete or Inaccurate Transmission	SCE	NA	7/21/2023	40	No	DEC	8	0:00	8:00
33	RT	Incomplete or Inaccurate Transmission	SCE	NA	7/22/2023	50	No	DEC	4	5:00	9:00
34	RT	Incomplete or Inaccurate Transmission	SCE	NA	7/27/2023	1 - 10	No	DEC	5	5:50	10:00
35	RT	Load Forecast Uncertainty	PGAE	Bay Area	7/25/2023	100	No	DEC	2	19:00	21:00
36	RT	Load Forecast Uncertainty	PGAE	Bay Area	7/25/2023	100	No	INC	1	18:55	19:00
37	RT	Load Forecast Uncertainty	PGAE	Fresno	7/25/2023	20 - 100	No	DEC	3	19:05	22:00
38	RT	Load Forecast Uncertainty	PGAE	Fresno	7/25/2023	20 - 100	No	INC	5	19:20	0:00
39	RT	Load Forecast Uncertainty	PGAE	Fresno	7/26/2023	83	No	INC	3	19:45	22:00
40	RT	Load Forecast Uncertainty	PGAE	NA	7/25/2023	50	No	DEC	2	21:15	22:30
41	RT	Load Forecast Uncertainty	PGAE	NA	7/25/2023	21	No	INC	2	16:50	18:00
42	RT	Load Forecast Uncertainty	SCE	Big Creek-Ventura	7/25/2023	400	No	DEC	1	21:00	21:45
43	RT	Load Forecast Uncertainty	SCE	Big Creek-Ventura	7/25/2023	740	No	INC	5	16:15	21:00
44	RT	Load Forecast Uncertainty	SCE	LA Basin	7/14/2023	70	No	INC	8	16:30	0:00
45	RT	Load Forecast Uncertainty	SCE	LA Basin	7/16/2023	130	No	INC	3	16:00	18:30
46	RT	Load Forecast Uncertainty	SCE	LA Basin	7/21/2023	151 - 160	No	INC	3	18:00	21:00
47	RT	Load Forecast Uncertainty	SCE	LA Basin	7/22/2023	151 - 160	No	INC	2	18:00	20:00
48	RT	Load Forecast Uncertainty	SCE	LA Basin	7/23/2023	151 - 160	No	INC	3	18:00	21:00
49	RT	Load Forecast Uncertainty	SCE	LA Basin	7/24/2023	151 - 160	No	INC	3	18:00	21:00

Num ber	Mar ket Typ e	Reason	Locatio n	Local Reliability Area	Trade Date	MW	Co mm itm ent	INC_ DEC	Hou rs	Begin Time	End Time
50	RT	Load Forecast Uncertainty	SCE	LA Basin	7/25/2023	33	No	DEC	2	19:35	21:00
51	RT	Load Forecast Uncertainty	SCE	LA Basin	7/25/2023	33 - 455	No	INC	6	16:15	22:00
52	RT	Load Forecast Uncertainty	SDGE	San Diego-IV	7/16/2023	155	No	INC	9	15:00	0:00
53	RT	Load Forecast Uncertainty	SDGE	San Diego-IV	7/21/2023	21 - 25	No	DEC	3	18:50	21:00
54	RT	Load Forecast Uncertainty	SDGE	San Diego-IV	7/21/2023	21 - 25	No	INC	1	21:00	22:00
55	RT	Market Disruption	PGAE	Bay Area	7/12/2023	0	No	DEC	2	22:10	0:00
56	RT	Market Disruption	PGAE	Bay Area	7/13/2023	0	No	DEC	2	0:00	2:00
57	RT	Market Disruption	PGAE	Bay Area	7/13/2023	0	No	INC	2	2:00	3:15
58	RT	Market Disruption	PGAE	Fresno	7/12/2023	83	No	DEC	2	21:55	23:00
59	RT	Market Disruption	SCE	LA Basin	7/12/2023	0 - 300	No	DEC	2	21:50	23:00
60	RT	Market Disruption	SCE	LA Basin	7/12/2023	0	No	INC	2	22:00	23:05
61	RT	Market Disruption	SCE	NA	7/12/2023	0	No	INC	2	22:05	23:30
62	RT	Market Disruption	SDGE	San Diego-IV	7/12/2023	0	No	INC	1	22:10	22:40
63	RT	Other Reliability Requirement	PGAE	Fresno	7/14/2023	-59.05	No	DEC	3	14:55	17:20
64	RT	Other Reliability Requirement	PGAE	Fresno	7/14/2023	0	No	INC	1	17:20	18:00
65	RT	Other Reliability Requirement	PGAE	Fresno	7/22/2023	98	No	DEC	1	19:00	20:00
66	RT	Other Reliability Requirement	PGAE	Fresno	7/22/2023	49 - 98	No	INC	2	18:25	20:00
67	RT	Other Reliability Requirement	PGAE	NA	7/22/2023	200	No	DEC	3	18:35	21:00
68	RT	Other Reliability Requirement	PGAE	NA	7/22/2023	60	No	INC	2	18:35	20:00
69	RT	Other Reliability Requirement	SCE	LA Basin	7/22/2023	150	No	DEC	3	18:50	21:00
70	RT	Other Reliability Requirement	SDGE	San Diego-IV	7/22/2023	46 - 51	No	DEC	3	18:45	21:00
71	RT	Planned Transmission Outage	PGAE	Bay Area	7/19/2023	54	No	DEC	12	8:05	20:00
72	RT	Planned Transmission Outage	PGAE	Bay Area	7/20/2023	54	No	DEC	13	7:20	20:00
73	RT	Planned Transmission Outage	PGAE	Fresno	7/26/2023	120	No	INC	2	16:25	17:45
74	RT	Planned Transmission Outage	PGAE	Fresno	7/29/2023	0	No	INC	2	14:20	16:10
75	RT	Planned Transmission Outage	PGAE	Humboldt	7/5/2023	15	No	DEC	6	18:10	0:00
76	RT	Planned Transmission Outage	PGAE	Humboldt	7/6/2023	15	No	DEC	7	0:00	6:15
77	RT	Planned Transmission Outage	PGAE	Humboldt	7/6/2023	30	No	INC	18	6:30	0:00
78	RT	Planned Transmission Outage	PGAE	Humboldt	7/7/2023	30	No	INC	10	0:00	10:00

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Num	Тур		Locatio	Local Reliability			itm	INC_	Hou	Begin	End
ber	е	Reason	n	Area	Trade Date	MW	ent	DEC	rs	Time	Time
79	RT	Planned Transmission Outage	PGAE	Humboldt	7/9/2023	30	No	INC	2	22:30	0:00
80	RT	Planned Transmission Outage	PGAE	Humboldt	7/10/2023	45	No	DEC	5	15:00	20:00
81	RT	Planned Transmission Outage	PGAE	Humboldt	7/10/2023	30 - 45	No	INC	15	0:00	15:00
82	RT	Planned Transmission Outage	PGAE	Humboldt	7/14/2023	45	No	DEC	8	15:05	23:00
83	RT	Planned Transmission Outage	PGAE	Humboldt	7/14/2023	45	No	INC	1	23:00	0:00
84	RT	Planned Transmission Outage	PGAE	Humboldt	7/15/2023	15 - 62	No	DEC	24	0:00	0:00
85	RT	Planned Transmission Outage	PGAE	Humboldt	7/16/2023	15 - 30	No	DEC	24	0:00	0:00
86	RT	Planned Transmission Outage	PGAE	Humboldt	7/16/2023	30	No	INC	6	6:55	12:00
87	RT	Planned Transmission Outage	PGAE	Humboldt	7/17/2023	30	No	DEC	24	0:00	0:00
88	RT	Planned Transmission Outage	PGAE	Humboldt	7/17/2023	30	No	INC	12	1:00	13:00
89	RT	Planned Transmission Outage	PGAE	Humboldt	7/18/2023	30	No	DEC	24	0:00	0:00
90	RT	Planned Transmission Outage	PGAE	Humboldt	7/19/2023	15 - 30	No	DEC	24	0:00	0:00
91	RT	Planned Transmission Outage	PGAE	Humboldt	7/20/2023	15 - 81	No	DEC	24	0:00	0:00
92	RT	Planned Transmission Outage	PGAE	Humboldt	7/20/2023	81	No	INC	1	18:05	19:00
93	RT	Planned Transmission Outage	PGAE	Humboldt	7/21/2023	15	No	DEC	24	0:00	0:00
94	RT	Planned Transmission Outage	PGAE	Humboldt	7/22/2023	15 - 45	No	DEC	24	0:00	0:00
95	RT	Planned Transmission Outage	PGAE	Humboldt	7/22/2023	15	No	INC	10	1:00	11:00
96	RT	Planned Transmission Outage	PGAE	Humboldt	7/23/2023	0 - 60	No	DEC	24	0:00	0:00
97	RT	Planned Transmission Outage	PGAE	Humboldt	7/24/2023	30	No	DEC	24	0:00	0:00
98	RT	Planned Transmission Outage	PGAE	Humboldt	7/25/2023	30 - 75	No	DEC	10	14:00	0:00
99	RT	Planned Transmission Outage	PGAE	Humboldt	7/25/2023	30	No	INC	14	0:00	14:00
100	RT	Planned Transmission Outage	PGAE	Humboldt	7/26/2023	45 - 75	No	DEC	24	0:00	0:00
101	RT	Planned Transmission Outage	PGAE	Humboldt	7/26/2023	75	No	INC	10	0:00	10:00
102	RT	Planned Transmission Outage	PGAE	Humboldt	7/27/2023	45	No	DEC	24	0:00	0:00
103	RT	Planned Transmission Outage	PGAE	Humboldt	7/28/2023	45	No	DEC	1	13:00	13:30
104	RT	Planned Transmission Outage	PGAE	Humboldt	7/28/2023	45	No	INC	13	0:00	13:00
105	RT	Planned Transmission Outage	PGAE	Sierra	7/26/2023	20	No	INC	1	21:30	22:30
106	RT	Planned Transmission Outage	PGAE	NA	7/7/2023	30	No	DEC	7	13:45	20:00
107	RT	Planned Transmission Outage	PGAE	NA	7/7/2023	30	No	INC	2	15:00	17:00

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Num	Тур		Locatio	Local Reliability			itm	INC	Hou	Begin	End
ber	e	Reason	n	Area	Trade Date	MW	ent	DEC	rs	Time	Time
108	RT	Planned Transmission Outage	PGAE	NA	7/14/2023	15 - 240	No	DEC	4	15:10	19:00
109	RT	Planned Transmission Outage	PGAE	NA	7/14/2023	15 - 240	No	INC	3	17:00	20:00
110	RT	Planned Transmission Outage	PGAE	NA	7/28/2023	18	No	DEC	4	3:35	7:00
111	RT	Planned Transmission Outage	SDGE	San Diego-IV	7/11/2023	21	No	INC	1	23:05	0:00
112	RT	Planned Transmission Outage	SDGE	San Diego-IV	7/12/2023	21	No	INC	8	0:00	8:00
113	RT	Ramping Capacity	PGAE	Bay Area	7/23/2023	177	No	DEC	3	18:30	21:00
114	RT	Ramping Capacity	PGAE	Bay Area	7/26/2023	22	No	INC	4	17:10	21:00
115	RT	Ramping Capacity	SCE	Big Creek-Ventura	7/14/2023	400	No	INC	5	16:00	21:00
116	RT	Ramping Capacity	SCE	Big Creek-Ventura	7/15/2023	400	No	DEC	4	17:00	21:00
117	RT	Ramping Capacity	SCE	Big Creek-Ventura	7/15/2023	400	No	INC	1	16:00	17:00
118	RT	Ramping Capacity	SCE	Big Creek-Ventura	7/17/2023	401	No	DEC	6	16:00	22:00
119	RT	Ramping Capacity	SCE	Big Creek-Ventura	7/17/2023	401	No	INC	1	22:00	23:00
120	RT	Ramping Capacity	SCE	Big Creek-Ventura	7/18/2023	401	No	INC	5	16:00	21:00
121	RT	Ramping Capacity	SCE	Big Creek-Ventura	7/19/2023	401	No	INC	5	16:00	21:00
122	RT	Ramping Capacity	SCE	Big Creek-Ventura	7/24/2023	50	No	INC	5	19:00	0:00
123	RT	Ramping Capacity	SCE	Big Creek-Ventura	7/25/2023	50 - 400	No	DEC	7	15:00	22:00
124	RT	Ramping Capacity	SCE	Big Creek-Ventura	7/25/2023	50 - 401	No	INC	24	0:00	0:00
125	RT	Ramping Capacity	SCE	Big Creek-Ventura	7/26/2023	400.1	No	DEC	3	18:00	21:00
126	RT	Ramping Capacity	SCE	Big Creek-Ventura	7/26/2023	400.1	No	INC	6	16:00	22:00
127	RT	Ramping Capacity	SCE	Big Creek-Ventura	7/27/2023	401	No	DEC	4	17:00	21:00
128	RT	Ramping Capacity	SCE	Big Creek-Ventura	7/27/2023	401	No	INC	1	16:00	17:00
129	RT	Ramping Capacity	SCE	Big Creek-Ventura	7/29/2023	401	No	INC	5	16:00	21:00
130	RT	Ramping Capacity	SCE	Big Creek-Ventura	7/30/2023	401	No	INC	5	16:00	21:00
131	RT	Ramping Capacity	SCE	Big Creek-Ventura	7/31/2023	400	No	INC	5	16:00	21:00
132	RT	Ramping Capacity	SCE	LA Basin	7/3/2023	65 - 194	No	INC	5	17:00	22:00
133	RT	Ramping Capacity	SCE	LA Basin	7/13/2023	190 - 194	No	INC	5	16:00	21:00
134	RT	Ramping Capacity	SCE	LA Basin	7/14/2023	190 - 194	No	DEC	5	16:00	21:00
135	RT	Ramping Capacity	SCE	LA Basin	7/14/2023	240	No	INC	3	18:30	21:00
136	RT	Ramping Capacity	SCE	LA Basin	7/15/2023	190 - 240	No	DEC	5	16:00	21:00

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Num	Тур		Locatio	Local Reliability			itm	INC_	Hou	Begin	End
ber	e	Reason	n	Area	Trade Date	MW	ent	DEC	rs	Time	Time
137	RT	Ramping Capacity	SCE	LA Basin	7/15/2023	190 - 194	No	INC	1	16:00	17:00
138	RT	Ramping Capacity	SCE	LA Basin	7/16/2023	190 - 194	No	DEC	5	16:00	21:00
139	RT	Ramping Capacity	SCE	LA Basin	7/16/2023	194 - 240	No	INC	5	16:00	21:00
140	RT	Ramping Capacity	SCE	LA Basin	7/17/2023	65 - 240	No	DEC	7	16:00	23:00
141	RT	Ramping Capacity	SCE	LA Basin	7/18/2023	190	No	DEC	5	16:00	21:00
142	RT	Ramping Capacity	SCE	LA Basin	7/18/2023	65 - 240	No	INC	5	16:00	21:00
143	RT	Ramping Capacity	SCE	LA Basin	7/19/2023	65 - 190	No	DEC	5	16:00	21:00
144	RT	Ramping Capacity	SCE	LA Basin	7/19/2023	194 - 240	No	INC	5	16:00	21:00
145	RT	Ramping Capacity	SCE	LA Basin	7/20/2023	65 - 194	No	DEC	5	16:00	21:00
146	RT	Ramping Capacity	SCE	LA Basin	7/20/2023	240 - 240.01	No	INC	5	16:00	21:00
147	RT	Ramping Capacity	SCE	LA Basin	7/21/2023	65 - 194	No	DEC	5	16:00	21:00
148	RT	Ramping Capacity	SCE	LA Basin	7/21/2023	240 - 240.01	No	INC	5	16:00	21:00
149	RT	Ramping Capacity	SCE	LA Basin	7/22/2023	65 - 240	No	DEC	5	16:00	21:00
150	RT	Ramping Capacity	SCE	LA Basin	7/22/2023	65 - 240.01	No	INC	5	16:00	21:00
151	RT	Ramping Capacity	SCE	LA Basin	7/23/2023	65 - 194	No	DEC	5	16:00	21:00
152	RT	Ramping Capacity	SCE	LA Basin	7/23/2023	240 - 240.01	No	INC	5	16:00	21:00
153	RT	Ramping Capacity	SCE	LA Basin	7/24/2023	65 - 240	No	DEC	5	16:00	21:00
154	RT	Ramping Capacity	SCE	LA Basin	7/25/2023	65 - 240	No	DEC	6	16:00	22:00
155	RT	Ramping Capacity	SCE	LA Basin	7/25/2023	190 - 194	No	INC	1	21:00	22:00
156	RT	Ramping Capacity	SCE	LA Basin	7/26/2023	65 - 240	No	DEC	6	16:00	22:00
157	RT	Ramping Capacity	SCE	LA Basin	7/26/2023	151 - 160	No	INC	5	16:00	21:00
158	RT	Ramping Capacity	SCE	LA Basin	7/27/2023	65 - 240	No	DEC	5	16:00	21:00
159	RT	Ramping Capacity	SCE	LA Basin	7/27/2023	151 - 160	No	INC	5	16:00	21:00
160	RT	Ramping Capacity	SCE	LA Basin	7/28/2023	190 - 240	No	DEC	5	16:00	21:00
161	RT	Ramping Capacity	SCE	LA Basin	7/28/2023	151 - 160	No	INC	5	16:00	21:00
162	RT	Ramping Capacity	SCE	LA Basin	7/29/2023	190	No	DEC	4	17:00	21:00
163	RT	Ramping Capacity	SCE	LA Basin	7/29/2023	151 - 240	No	INC	5	16:00	21:00
164	RT	Ramping Capacity	SCE	LA Basin	7/30/2023	65 - 240	No	INC	5	16:00	21:00
165	RT	Ramping Capacity	SCE	LA Basin	7/31/2023	180 - 194	No	INC	5	16:00	21:00

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Num	Тур		Locatio	Local Reliability			itm	INC_	Hou	Begin	End
ber	е	Reason	n	Area	Trade Date	MW	ent	DEC	rs	Time	Time
166	RT	Reliability Assessment	PGAE	Bay Area	7/14/2023	75 - 90	No	INC	3	19:55	22:00
167	RT	Reliability Assessment	PGAE	Bay Area	7/15/2023	60	No	DEC	2	19:30	21:00
168	RT	Reliability Assessment	PGAE	Bay Area	7/18/2023	200	No	DEC	9	12:45	21:00
169	RT	Reliability Assessment	PGAE	Bay Area	7/22/2023	290	No	DEC	6	15:55	21:00
170	RT	Reliability Assessment	PGAE	Fresno	7/1/2023	10	No	DEC	3	14:50	17:00
171	RT	Reliability Assessment	PGAE	Fresno	7/6/2023	0	No	DEC	10	10:55	20:00
172	RT	Reliability Assessment	PGAE	Fresno	7/8/2023	0	No	DEC	8	12:00	20:00
173	RT	Reliability Assessment	PGAE	Fresno	7/17/2023	200	No	INC	4	20:20	0:00
174	RT	Reliability Assessment	PGAE	Fresno	7/26/2023	83	No	INC	1	23:00	0:00
175	RT	Reliability Assessment	PGAE	Fresno	7/27/2023	83	No	DEC	2	19:00	21:00
176	RT	Reliability Assessment	PGAE	Fresno	7/27/2023	83	No	INC	23	0:00	22:15
177	RT	Reliability Assessment	PGAE	Humboldt	7/1/2023	30	No	DEC	11	13:00	0:00
178	RT	Reliability Assessment	PGAE	Humboldt	7/1/2023	30	No	INC	13	0:00	13:00
179	RT	Reliability Assessment	PGAE	Humboldt	7/2/2023	30	No	DEC	24	0:00	0:00
180	RT	Reliability Assessment	PGAE	Humboldt	7/2/2023	30	No	INC	11	1:00	11:15
181	RT	Reliability Assessment	PGAE	Humboldt	7/3/2023	30	No	DEC	24	0:00	0:00
182	RT	Reliability Assessment	PGAE	Humboldt	7/4/2023	30	No	DEC	1	0:00	1:00
183	RT	Reliability Assessment	PGAE	Humboldt	7/4/2023	30	No	INC	23	1:00	0:00
184	RT	Reliability Assessment	PGAE	Humboldt	7/5/2023	15	No	DEC	19	0:15	18:30
185	RT	Reliability Assessment	PGAE	Humboldt	7/5/2023	30	No	INC	1	0:00	0:15
186	RT	Reliability Assessment	PGAE	Humboldt	7/6/2023	15	No	DEC	1	5:50	6:30
187	RT	Reliability Assessment	PGAE	Humboldt	7/7/2023	15	No	DEC	3	21:45	0:00
188	RT	Reliability Assessment	PGAE	Humboldt	7/7/2023	30	No	INC	12	10:30	21:45
189	RT	Reliability Assessment	PGAE	Humboldt	7/8/2023	15	No	DEC	22	0:00	21:25
190	RT	Reliability Assessment	PGAE	Humboldt	7/8/2023	30	No	INC	3	21:25	0:00
191	RT	Reliability Assessment	PGAE	Humboldt	7/9/2023	30	No	INC	24	0:00	0:00
192	RT	Reliability Assessment	PGAE	Humboldt	7/10/2023	15 - 45	No	DEC	5	19:40	0:00
193	RT	Reliability Assessment	PGAE	Humboldt	7/10/2023	30	No	INC	9	0:00	8:35
194	RT	Reliability Assessment	PGAE	Humboldt	7/11/2023	15	No	INC	2	0:00	1:30

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Num ber	Тур	Reason	Locatio n	Local Reliability Area	Trade Date	MW	itm	INC_ DEC	Hou rs	Begin Time	End Time
195	RT	Reliability Assessment	PGAE	Humboldt	7/31/2023	30	No	DEC	11	12:00	23:00
196	RT	Reliability Assessment	PGAE	Humboldt	7/31/2023	30	No	INC	17	7:15	0:00
197	RT	Reliability Assessment	PGAE	Kern	7/1/2023	32	No	INC	3	21:45	0:00
198	RT	Reliability Assessment	PGAE	Kern	7/19/2023	32	No	INC	2	15:30	17:00
199	RT	Reliability Assessment	PGAE	Sierra	7/1/2023	20	No	DEC	2	19:00	21:00
200	RT	Reliability Assessment	PGAE	Sierra	7/1/2023	20 - 42	No	INC	7	17:55	0:00
201	RT	Reliability Assessment	PGAE	Sierra	7/2/2023	42	No	INC	7	15:00	22:00
202	RT	Reliability Assessment	PGAE	Sierra	7/3/2023	20	No	DEC	3	18:00	21:00
203	RT	Reliability Assessment	PGAE	Sierra	7/3/2023	20 - 35	No	INC	7	17:00	0:00
204	RT	Reliability Assessment	PGAE	Sierra	7/12/2023	20	No	INC	3	19:25	22:00
205	RT	Reliability Assessment	PGAE	Sierra	7/13/2023	20	No	DEC	1	20:15	21:00
206	RT	Reliability Assessment	PGAE	Sierra	7/13/2023	42	No	INC	2	19:00	21:00
207	RT	Reliability Assessment	PGAE	Sierra	7/14/2023	20	No	INC	2	21:40	23:00
208	RT	Reliability Assessment	PGAE	Sierra	7/20/2023	42	No	DEC	4	17:00	21:00
209	RT	Reliability Assessment	PGAE	Sierra	7/20/2023	42	No	INC	1	21:00	22:00
210	RT	Reliability Assessment	PGAE	Sierra	7/21/2023	42	No	DEC	6	16:00	22:00
211	RT	Reliability Assessment	PGAE	Sierra	7/25/2023	20	No	DEC	2	21:55	23:00
212	RT	Reliability Assessment	PGAE	Sierra	7/25/2023	20	No	INC	1	23:00	0:00
213	RT	Reliability Assessment	PGAE	Sierra	7/26/2023	20	No	INC	2	0:00	2:00
214	RT	Reliability Assessment	PGAE	Sierra	7/27/2023	42	No	INC	3	19:40	22:00
215	RT	Reliability Assessment	PGAE	Stockton	7/9/2023	45	No	DEC	2	22:55	0:00
216	RT	Reliability Assessment	PGAE	Stockton	7/10/2023	47	No	DEC	1	6:00	7:00
217	RT	Reliability Assessment	PGAE	Stockton	7/10/2023	45 - 65	No	INC	20	0:00	20:00
218	RT	Reliability Assessment	PGAE	Stockton	7/14/2023	236	No	DEC	4	19:25	23:00
219	RT	Reliability Assessment	PGAE	Stockton	7/15/2023	200	No	DEC	4	19:05	23:00
220	RT	Reliability Assessment	PGAE	Stockton	7/15/2023	70	No	INC	2	19:00	21:00
221	RT	Reliability Assessment	PGAE	Stockton	7/16/2023	110 - 192	No	DEC	2	18:50	20:00
222	RT	Reliability Assessment	PGAE	Stockton	7/20/2023	236	No	DEC	5	19:00	0:00
223	RT	Reliability Assessment	PGAE	Stockton	7/20/2023	236	No	INC	1	18:15	19:00

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Num ber	Typ e	Reason	Locatio n	Local Reliability Area	Trade Date	MW	itm ent	INC_ DEC	Hou rs	Begin Time	End Time
224	RT	Reliability Assessment	PGAE	Stockton	7/21/2023	236	No	DEC	2	0:00	2:00
225	RT	Reliability Assessment	PGAE	NA	7/3/2023	100	No	DEC	1	17:00	17:30
226	RT	Reliability Assessment	PGAE	NA	7/7/2023	37	No	DEC	1	13:15	14:00
227	RT	Reliability Assessment	PGAE	NA	7/13/2023	155	No	INC	4	16:10	19:30
228	RT	Reliability Assessment	PGAE	NA	7/17/2023	32	No	DEC	2	21:25	23:00
229	RT	Reliability Assessment	PGAE	NA	7/18/2023	32	No	DEC	14	7:10	21:00
230	RT	Reliability Assessment	PGAE	NA	7/28/2023	35	No	DEC	1	2:10	3:00
231	RT	Reliability Assessment	PGAE	NA	7/28/2023	35	No	INC	2	1:25	2:30
232	RT	Reliability Assessment	SCE	Big Creek-Ventura	7/7/2023	30 - 50	No	DEC	3	14:00	17:00
233	RT	Reliability Assessment	SCE	Big Creek-Ventura	7/7/2023	30	No	INC	3	17:00	20:00
234	RT	Reliability Assessment	SCE	Big Creek-Ventura	7/9/2023	60	No	DEC	3	12:45	15:00
235	RT	Reliability Assessment	SCE	Big Creek-Ventura	7/9/2023	60	No	INC	3	15:00	18:00
236	RT	Reliability Assessment	SCE	LA Basin	7/15/2023	251	No	INC	5	7:00	12:00
237	RT	Reliability Assessment	SCE	NA	7/7/2023	0 - 55	No	INC	17	7:05	0:00
238	RT	Reliability Assessment	SCE	NA	7/8/2023	6.5 - 54	No	DEC	21	1:45	22:00
239	RT	Reliability Assessment	SCE	NA	7/8/2023	0 - 55	No	INC	13	0:00	13:00
240	RT	Reliability Assessment	SCE	NA	7/9/2023	50	No	DEC	1	1:55	2:30
241	RT	Reliability Assessment	SCE	NA	7/10/2023	22 - 50	No	DEC	1	23:05	0:00
242	RT	Reliability Assessment	SCE	NA	7/11/2023	20 - 50	No	DEC	24	0:00	0:00
243	RT	Reliability Assessment	SCE	NA	7/12/2023	20 - 45	No	DEC	24	0:00	0:00
244	RT	Reliability Assessment	SCE	NA	7/13/2023	40 - 45	No	DEC	8	0:00	8:00
245	RT	Reliability Assessment	SCE	NA	7/14/2023	22 - 50	No	DEC	5	5:40	10:00
246	RT	Reliability Assessment	SCE	NA	7/14/2023	22	No	INC	4	6:00	10:00
247	RT	Reliability Assessment	SCE	NA	7/15/2023	20	No	DEC	9	0:50	9:00
248	RT	Reliability Assessment	SCE	NA	7/24/2023	40	No	DEC	3	7:45	10:00
249	RT	Reliability Assessment	SDGE	San Diego-IV	7/1/2023	0	No	DEC	2	19:40	21:00
250	RT	Reliability Assessment	SDGE	San Diego-IV	7/1/2023	0	No	INC	3	21:00	0:00
251	RT	Reliability Assessment	SDGE	NA	7/3/2023	20	No	DEC	1	16:55	17:30
252	RT	Software Limitation	PGAE	Fresno	7/17/2023	50.56 - 65	No	INC	3	19:20	22:00

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Num ber	Typ e	Reason	Locatio n	Local Reliability Area	Trade Date	MW	itm ent	INC_ DEC	Hou rs	Begin Time	End Time
253	RT	Software Limitation	PGAE	Kern	7/20/2023	0	No	INC	3	4:00	7:00
254	RT	Software Limitation	SCE	Big Creek-Ventura	7/14/2023	0	No	INC	9	15:00	0:00
255	RT	Software Limitation	SCE	Big Creek-Ventura	7/15/2023	0	No	INC	5	0:00	5:00
256	RT	Software Limitation	SCE	LA Basin	7/20/2023	0	No	INC	1	23:35	0:00
257	RT	Software Limitation	SCE	LA Basin	7/21/2023	0	No	INC	1	0:00	0:40
258	RT	System Emergency	PGAE	NA	7/20/2023	1.15 - 30.23	No	INC	5	19:45	0:00
259	RT	System Emergency	PGAE	NA	7/21/2023	1.15 - 30.23	No	INC	1	0:00	0:35
200	рт	Custom Emparage	COF	NIA	7/00/0000	0.64 -	Na	INC	_	10:45	0.00
260	RT	System Emergency	SCE	NA	7/20/2023	172.55 0.64 -	No	INC	5	19:45	0:00
261	RT	System Emergency	SCE	NA	7/21/2023	172.55	No	INC	1	0:00	0:35
262	RT	Unit Testing	PGAE	Fresno	7/20/2023	200	No	INC	1	15:15	16:00
263	RT	Unit Testing	PGAE	Fresno	7/26/2023	83	No	INC	3	15:00	18:00
264	RT	Unit Testing	PGAE	NA	7/11/2023	-2	No	DEC	6	14:00	20:00
265	RT	Unit Testing	PGAE	NA	7/11/2023	137	No	INC	2	11:20	13:00
266	RT	Unit Testing	SCE	LA Basin	7/1/2023	174 - 178	No	INC	2	20:30	22:15
267	RT	Unit Testing	SCE	LA Basin	7/20/2023	9.82	No	INC	1	14:40	15:25
268	RT	Unit Testing	SCE	LA Basin	7/26/2023	185	No	INC	1	6:55	7:15
269	RT	Unit Testing	SCE	NA	7/11/2023	60 - 292	No	INC	5	8:45	13:30
270	RT	Unit Testing	SCE	NA	7/12/2023	-325	No	DEC	7	7:10	14:00
271	RT	Unit Testing	SCE	NA	7/12/2023	65 - 325	No	INC	5	15:00	19:15
272	RT	Unit Testing	SCE	NA	7/15/2023	-250	No	DEC	4	7:35	11:00
273	RT	Unit Testing	SCE	NA	7/15/2023	75 - 325	No	INC	3	13:25	16:00
274	RT	Unit Testing	SCE	NA	7/21/2023	-60	No	DEC	1	15:30	16:30
275	RT	Unit Testing	VEA	NA	7/11/2023	107	No	INC	10	10:10	20:00
276	RT	Unit Testing	VEA	NA	7/12/2023	24.22 - 108	No	INC	11	8:05	19:00
277	RT	Unit Testing	VEA	NA	7/13/2023	65	No	INC	1	11:45	12:30
278	RT	Unplanned Outage	PGAE	Fresno	7/25/2023	83	No	DEC	2	18:00	20:00
279	RT	Unplanned Outage	PGAE	Fresno	7/25/2023	83	No	INC	2	16:50	18:00

Num	Mar ket Typ		Locatio	Local Reliability			Co mm itm	INC	Hou	Begin	End
ber	e	Reason	n	Area	Trade Date	MW	ent	DEC	rs	Time	Time
280	RT	Unplanned Outage	SCE	NA	7/9/2023	20 - 50	No	DEC	23	1:00	0:00
281	RT	Unplanned Outage	SCE	NA	7/10/2023	20 - 54	No	DEC	12	0:00	11:30
282	RT	Unplanned Outage	SCE	NA	7/11/2023	23 - 50	No	DEC	11	6:50	17:00
283	RT	Unplanned Outage	SCE	NA	7/11/2023	55	No	INC	1	7:20	8:00
284	RT	Unplanned Outage	SCE	NA	7/13/2023	0 - 50	No	DEC	8	16:55	0:00
285	RT	Unplanned Outage	SCE	NA	7/14/2023	0 - 50	No	DEC	3	0:00	2:30
286	RT	Unplanned Outage	SDGE	San Diego-IV	7/12/2023	0	No	DEC	2	19:15	21:00
287	RT	Unplanned Outage	SDGE	San Diego-IV	7/12/2023	0 - 30	No	INC	10	14:50	0:00
288	RT	Voltage Support	PGAE	Fresno	7/17/2023	21	No	DEC	2	19:00	21:00
289	RT	Voltage Support	PGAE	Fresno	7/17/2023	21	No	INC	1	18:30	19:00
290	RT	Voltage Support	PGAE	Humboldt	7/11/2023	30	No	DEC	7	17:00	0:00
291	RT	Voltage Support	PGAE	Humboldt	7/11/2023	30	No	INC	11	6:15	17:00
292	RT	Voltage Support	PGAE	Humboldt	7/12/2023	15	No	DEC	8	16:00	0:00
293	RT	Voltage Support	PGAE	Humboldt	7/12/2023	15 - 30	No	INC	16	0:00	16:00
294	RT	Voltage Support	PGAE	Humboldt	7/13/2023	30	No	DEC	8	16:00	0:00
295	RT	Voltage Support	PGAE	Humboldt	7/13/2023	15 - 30	No	INC	16	0:00	16:00
296	RT	Voltage Support	PGAE	Humboldt	7/14/2023	30	No	DEC	5	11:00	15:05
297	RT	Voltage Support	PGAE	Humboldt	7/14/2023	30	No	INC	11	0:00	11:00
298	RT	Voltage Support	PGAE	Humboldt	7/28/2023	15 - 30	No	DEC	11	13:30	0:00
299	RT	Voltage Support	PGAE	Humboldt	7/29/2023	30	No	DEC	24	0:00	0:00
300	RT	Voltage Support	PGAE	Humboldt	7/30/2023	30	No	INC	24	0:00	0:00
301	RT	Voltage Support	PGAE	Humboldt	7/31/2023	30	No	DEC	10	12:00	21:35
302	RT	Voltage Support	PGAE	Humboldt	7/31/2023	30	No	INC	12	0:00	12:00

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	Α	SCE	LA BASIN	05:00	10:00	50	7630
01-Jul-09	DA	В	SCE	LA BASIN	08:00	20:00	30	7630
01-Jul-09	DA	С	SCE	LA BASIN	09:00	23:00	20	7630

This data is summarized as shown in Table 3, which is the prescribed format specified in the FERC order on September 02, 2009. This summary classifies the data by reason, resource location, local reliability area, and trade date. The MW column in Table 3 is the range of MW; in this case the minimum instruction MW is 20 MW for resource C which occurs from hours ending 21 through 23. The maximum instruction occurs in hour ending 10. In this hour resource A is committed at 50 MW, resource B is committed at 30 MW and resource C is committed at 20 MW. This adds up to 100 MW. 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	Α	PG&E	Humboldt	06:00	11:00	30	0	Yes	INC	30	7110
01-Jul-09	RT	В	PG&E	Humboldt	07:00	09:00	40	20	No	INC	20	7110
01-Jul-09	RT	С	PG&E	Humboldt	12:00	15:00	50	50	No	INC	0	7110
01-Jul-09	RT	С	PG&E	Humboldt	16:00	20:00	50	40	No	INC	10	7110

This data is summarized as shown in Table 5 and is classified by reason, resource location, local reliability area, and trade date. The MW column in Table 5 is the range of MW; in this case the minimum instruction MW is 0 MW for resource C which occurs from hours ending 13 through 15. The maximum instruction occurs in hours ending 8 & 9, as during these two hours both resources A and B have an ED MW of 30MW and 20MW, respectively. This adds up to 50 MW. 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	Α	PG&E	Fresno	15:00	20:00	20	0	Yes	INC	20	7430
01-Jul-09	RT	В	PG&E	Fresno	07:00	09:00	40	60	No	DEC	20	7430
01-Jul-09	RT	С	PG&E	Fresno	10:00	14:00	40	50	No	DEC	10	7430

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