Exceptional Dispatch Report

Table 1: July 2021

CAISO Market Analysis and Forecasting **September 15, 2021**

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TABLE OF CONTENTS

LIST OF TABLES AND FIGURES

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 2021.

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 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 2021 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

[1] 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 2021, which are self explanatory.

The data in Table 1 is based on a template specified in the September 2009 order.[3] 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 395 exceptional dispatches in July 2021, as compared to 322 exceptional dispatches in June 2021. Exceptional dispatches issued for the following reasons accounted for approximately 80 percent of 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 the reporting period.

total exceptional dispatches during the reporting period: planned transmission outages, reliability assement, ramping capacity, and load forecast uncertainty. Exceptional dispatches with the reason “Reliability Assessment” were due to Real Time Contingency Analysis, Voltage Stability Analysis, and operating procedure number 7110 (along with 7230, 7430, 7450, and 7720). Reliability Assessment is the reason as explained in the operator procedure 2330C[4] 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) [4] The operator procedure 2330C - **http://www.caiso.com/Documents/2330C.pdf**

Table 1: Exceptional Dispatches in July 2021

California Independent System Operator Corporation
Exceptional Dispatch Report
September 15, 2021

Chart 1: Table of Exceptional Dispatches for Period 01/July/2021 - 31/July/2021

Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time
1	RT	Bridging Schedules	PGAE	Fresno	7/29/2021	83	No	INC	1	0:00	0:30
2	RT	Bridging Schedules	SCE	Big Creek-Ventura	7/15/2021	50	No	INC	4	20:00	0:00
3	RT	Bridging Schedules	SCE	Big Creek-Ventura	7/16/2021	50	No	INC	17	0:00	16:30
4	RT	Bridging Schedules	SCE	Big Creek-Ventura	7/17/2021	50	No	INC	18	6:20	0:00
5	RT	Bridging Schedules	SCE	Big Creek-Ventura	7/18/2021	50	No	INC	16	0:00	16:00
6	RT	Bridging Schedules	SCE	Big Creek-Ventura	7/21/2021	50 - 100	No	INC	2	22:00	0:00
7	RT	Bridging Schedules	SCE	Big Creek-Ventura	7/27/2021	50 - 100	No	INC	24	0:00	0:00
8	RT	Bridging Schedules	SCE	Big Creek-Ventura	7/31/2021	50	No	INC	2	22:00	0:00
9	RT	Bridging Schedules	SCE	LA Basin	7/13/2021	10 - 70	Yes	INC	2	22:00	0:00
10	RT	Bridging Schedules	SCE	LA Basin	7/15/2021	20	Yes	INC	1	23:00	0:00
11	RT	Bridging Schedules	SCE	LA Basin	7/16/2021	20	No	INC	1	23:00	0:00
12	RT	Bridging Schedules	SCE	LA Basin	7/18/2021	10	No	INC	1	23:00	0:00
13	RT	Bridging Schedules	SCE	LA Basin	7/19/2021	10 - 20	No	INC	24	0:00	0:00
14	RT	Bridging Schedules	SCE	LA Basin	7/20/2021	20	No	INC	2	22:00	0:00
15	RT	Bridging Schedules	SCE	LA Basin	7/21/2021	10 - 70	Yes	INC	1	23:00	0:00

Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time
16	RT	Bridging Schedules	SCE	LA Basin	7/22/2021	10	Yes	INC	1	23:00	0:00
17	RT	Bridging Schedules	SCE	LA Basin	7/25/2021	10	No	INC	1	23:00	0:00
18	RT	Bridging Schedules	SCE	LA Basin	7/26/2021	10	Yes	INC	1	23:00	0:00
19	RT	Bridging Schedules	SCE	LA Basin	7/27/2021	10 - 20	No	INC	2	22:00	0:00
20	RT	Bridging Schedules	SCE	LA Basin	7/28/2021	10	Yes	INC	1	23:00	0:00
21	RT	Bridging Schedules	SCE	LA Basin	7/29/2021	10	Yes	INC	1	23:00	0:00
22	RT	Bridging Schedules	SCE	LA Basin	7/30/2021	10	No	INC	1	23:00	0:00
23	RT	Bridging Schedules	SCE	LA Basin	7/31/2021	10	No	INC	1	23:00	0:00
24	RT	Conditions beyond the control of the CAISO	PGAE	NA	7/14/2021	5 - 10	No	DEC	1	10:30	11:30
25	RT	Conditions beyond the control of the CAISO	PGAE	NA	7/14/2021	5	No	INC	1	10:45	11:30
26	RT	Conditions beyond the control of the CAISO	SCE	Big Creek-Ventura	7/13/2021	50	No	INC	15	0:00	15:00
27	RT	Conditions beyond the control of the CAISO	SCE	Big Creek-Ventura	7/22/2021	50 - 100	No	INC	14	0:00	14:00
28	RT	Conditions beyond the control of the CAISO	SCE	Big Creek-Ventura	7/23/2021	100	No	INC	14	0:00	14:00
29	RT	Conditions beyond the control of the CAISO	SCE	LA Basin	7/4/2021	251	No	INC	1	17:00	18:00
30	RT	Conditions beyond the control of the CAISO	SCE	LA Basin	7/22/2021	20	No	INC	24	0:00	0:00
31	RT	Conditions beyond the control of the CAISO	SDGE	San Diego-IV	7/4/2021	310	No	INC	2	16:15	18:00
32	RT	Fast Start Unit Management	PGAE	Fresno	7/13/2021	83	No	DEC	3	17:00	20:00
33	RT	Fast Start Unit Management	PGAE	Fresno	7/13/2021	83	No	INC	1	16:50	17:00
34	RT	Fast Start Unit Management	PGAE	Fresno	7/31/2021	0	No	INC	1	16:30	16:55
35	RT	Fast Start Unit Management	SCE	Fresno	7/29/2021	0	No	INC	11	10:25	21:00
36	RT	Fast Start Unit Management	SCE	LA Basin	7/12/2021	0	No	INC	3	8:15	10:50
37	RT	Fast Start Unit Management	SCE	LA Basin	7/29/2021	0	No	INC	11	10:25	21:00
38	RT	Gas Limitations	SDGE	San Diego-IV	7/25/2021	96	No	INC	1	23:30	0:00
39	RT	Gas Limitations	SDGE	San Diego-IV	7/26/2021	96	No	INC	24	0:00	0:00
40	RT	Gas Limitations	SDGE	San Diego-IV	7/27/2021	96	No	INC	24	0:00	0:00
41	RT	Gas Limitations	SDGE	San Diego-IV	7/28/2021	96	No	INC	8	0:00	8:00

Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time
42	RT	Incomplete or Inaccurate Transmission	PGAE	Kern	7/15/2021	32	No	INC	4	15:45	19:15
43	RT	Incomplete or Inaccurate Transmission	PGAE	Sierra	7/2/2021	15	No	DEC	1	18:00	18:45
44	RT	Incomplete or Inaccurate Transmission	PGAE	Sierra	7/2/2021	5 - 40	No	INC	7	15:45	22:00
45	RT	Incomplete or Inaccurate Transmission	PGAE	Sierra	7/3/2021	38 - 42	No	DEC	5	17:00	22:00
46	RT	Incomplete or Inaccurate Transmission	PGAE	Sierra	7/3/2021	20 - 42	No	INC	15	9:55	0:00
47	RT	Incomplete or Inaccurate Transmission	PGAE	Sierra	7/4/2021	20	No	DEC	2	19:00	21:00
48	RT	Incomplete or Inaccurate Transmission	PGAE	Sierra	7/4/2021	20 - 42	No	INC	23	0:00	23:00
49	RT	Load Forecast Uncertainty	Intertie	CAISO Import	7/9/2021	231	No	INC	1	17:10	18:00
50	RT	Load Forecast Uncertainty	Intertie	NA	7/29/2021	70 - 286	No	INC	2	18:00	20:00
51	RT	Load Forecast Uncertainty	Intertie	NA	7/30/2021	160 - 197	No	INC	2	18:00	20:00
52	RT	Load Forecast Uncertainty	PGAE	Bay Area	7/10/2021	114.8	No	INC	6	16:00	22:00
53	RT	Load Forecast Uncertainty	PGAE	Bay Area	7/11/2021	114.8	No	INC	6	16:00	22:00
54	RT	Load Forecast Uncertainty	PGAE	Bay Area	7/12/2021	114.8	No	INC	6	16:00	22:00
55	RT	Load Forecast Uncertainty	PGAE	Bay Area	7/19/2021	20 - 95	No	INC	4	10:00	14:00
56	RT	Load Forecast Uncertainty	PGAE	Big Creek-Ventura	7/10/2021	62	No	INC	11	1:00	12:00
57	RT	Load Forecast Uncertainty	PGAE	Fresno	7/9/2021	103	No	INC	4	18:50	22:00
58	RT	Load Forecast Uncertainty	PGAE	Fresno	7/10/2021	21	No	DEC	4	18:00	22:00
59	RT	Load Forecast Uncertainty	PGAE	Fresno	7/10/2021	21	No	INC	5	13:55	18:00
60	RT	Load Forecast Uncertainty	PGAE	Fresno	7/11/2021	20	No	DEC	4	18:00	22:00
61	RT	Load Forecast Uncertainty	PGAE	Fresno	7/11/2021	20	No	INC	10	8:45	18:00
62	RT	Load Forecast Uncertainty	PGAE	Fresno	7/19/2021	22	No	INC	2	11:00	13:00
63	RT	Load Forecast Uncertainty	PGAE	Fresno	7/30/2021	20	No	DEC	2	18:00	20:00
64	RT	Load Forecast Uncertainty	PGAE	Fresno	7/30/2021	20	No	INC	12	6:30	18:00
65	RT	Load Forecast Uncertainty	PGAE	Humboldt	7/16/2021	30	No	DEC	4	19:00	23:00
66	RT	Load Forecast Uncertainty	PGAE	Humboldt	7/16/2021	30	No	INC	1	23:00	0:00
67	RT	Load Forecast Uncertainty	PGAE	Humboldt	7/17/2021	30	No	DEC	2	14:00	15:15
68	RT	Load Forecast Uncertainty	PGAE	Humboldt	7/17/2021	30	No	INC	14	0:00	14:00

Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time
69	RT	Load Forecast Uncertainty	PGAE	NA	7/9/2021	197.61 - 339	No	INC	8	14:00	21:45
70	RT	Load Forecast Uncertainty	PGAE	NA	7/10/2021	110.31 - 300	No	INC	23	1:00	0:00
71	RT	Load Forecast Uncertainty	PGAE	NA	7/11/2021	110.31	No	INC	11	13:00	0:00
72	RT	Load Forecast Uncertainty	PGAE	NA	7/27/2021	50	No	INC	1	16:00	17:00
73	RT	Load Forecast Uncertainty	PGAE	NA	7/28/2021	48.95	No	DEC	7	15:45	22:00
74	RT	Load Forecast Uncertainty	SCE	Big Creek-Ventura	7/7/2021	50	No	INC	13	11:00	0:00
75	RT	Load Forecast Uncertainty	SCE	Big Creek-Ventura	7/8/2021	-100	No	DEC	2	15:45	17:30
76	RT	Load Forecast Uncertainty	SCE	Big Creek-Ventura	7/8/2021	100	No	INC	21	3:00	0:00
77	RT	Load Forecast Uncertainty	SCE	Big Creek-Ventura	7/9/2021	43 - 663	No	INC	22	0:00	22:00
78	RT	Load Forecast Uncertainty	SCE	Big Creek-Ventura	7/10/2021	50 - 80	No	INC	21	0:00	21:00
79	RT	Load Forecast Uncertainty	SCE	Big Creek-Ventura	7/11/2021	50 - 80	No	INC	8	16:00	0:00
80	RT	Load Forecast Uncertainty	SCE	Big Creek-Ventura	7/12/2021	70 - 80	No	INC	6	16:00	22:00
81	RT	Load Forecast Uncertainty	SCE	Big Creek-Ventura	7/16/2021	50	No	INC	8	16:20	0:00
82	RT	Load Forecast Uncertainty	SCE	Big Creek-Ventura	7/17/2021	50 - 100	No	INC	24	0:00	0:00
83	RT	Load Forecast Uncertainty	SCE	Big Creek-Ventura	7/18/2021	100	No	INC	14	0:00	14:00
84	RT	Load Forecast Uncertainty	SCE	Big Creek-Ventura	7/20/2021	50 - 100	No	INC	24	0:00	0:00
85	RT	Load Forecast Uncertainty	SCE	Big Creek-Ventura	7/24/2021	100	No	INC	24	0:00	0:00

Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time
86	RT	Load Forecast Uncertainty	SCE	Big Creek-Ventura	7/25/2021	100	No	INC	24	0:00	0:00
87	RT	Load Forecast Uncertainty	SCE	Big Creek-Ventura	7/26/2021	50 - 100	No	INC	15	0:00	15:00
88	RT	Load Forecast Uncertainty	SCE	LA Basin	7/1/2021	20	No	INC	1	23:00	0:00
89	RT	Load Forecast Uncertainty	SCE	LA Basin	7/8/2021	-100	No	DEC	3	15:10	18:00
90	RT	Load Forecast Uncertainty	SCE	LA Basin	7/8/2021	10 - 133	No	INC	17	7:00	0:00
91	RT	Load Forecast Uncertainty	SCE	LA Basin	7/9/2021	248	No	DEC	2	18:00	20:00
92	RT	Load Forecast Uncertainty	SCE	LA Basin	7/9/2021	10 - 416	Yes	INC	24	0:00	0:00
93	RT	Load Forecast Uncertainty	SCE	LA Basin	7/10/2021	10 - 416.6	Yes	INC	24	0:00	0:00
94	RT	Load Forecast Uncertainty	SCE	LA Basin	7/11/2021	10 - 416.6	No	INC	24	0:00	0:00
95	RT	Load Forecast Uncertainty	SCE	LA Basin	7/12/2021	10 - 416.6	No	INC	8	16:00	0:00
96	RT	Load Forecast Uncertainty	SCE	LA Basin	7/14/2021	10	No	INC	2	22:00	0:00
97	RT	Load Forecast Uncertainty	SCE	LA Basin	7/15/2021	10	Yes	INC	24	0:00	0:00
98	RT	Load Forecast Uncertainty	SCE	LA Basin	7/16/2021	10	No	INC	2	22:00	0:00
99	RT	Load Forecast Uncertainty	SCE	LA Basin	7/17/2021	10 - 70	Yes	INC	7	17:00	0:00
100	RT	Load Forecast Uncertainty	SCE	LA Basin	7/18/2021	10	No	DEC	1	19:00	20:00
101	RT	Load Forecast Uncertainty	SCE	LA Basin	7/18/2021	10 - 130	No	INC	22	0:00	22:00
102	RT	Load Forecast Uncertainty	SCE	LA Basin	7/19/2021	147	No	DEC	7	15:50	22:00
103	RT	Load Forecast Uncertainty	SCE	LA Basin	7/19/2021	140	No	INC	7	16:30	23:00
104	RT	Load Forecast Uncertainty	SCE	LA Basin	7/20/2021	10 - 70	No	INC	24	0:00	0:00
105	RT	Load Forecast Uncertainty	SCE	LA Basin	7/21/2021	147.1	No	DEC	9	13:30	22:00
106	RT	Load Forecast Uncertainty	SCE	LA Basin	7/21/2021	140 - 160	No	INC	9	13:30	22:00
107	RT	Load Forecast Uncertainty	SCE	LA Basin	7/24/2021	10 - 130	No	INC	22	2:00	0:00
108	RT	Load Forecast Uncertainty	SCE	LA Basin	7/25/2021	130	No	INC	24	0:00	0:00
109	RT	Load Forecast Uncertainty	SCE	LA Basin	7/26/2021	70	No	INC	12	12:00	0:00

Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time
110	RT	Load Forecast Uncertainty	SCE	LA Basin	7/31/2021	130	No	INC	22	2:00	0:00
111	RT	Load Forecast Uncertainty	SCE	NA	7/8/2021	-115	No	DEC	1	15:35	15:40
112	RT	Load Forecast Uncertainty	SCE	NA	7/10/2021	0	No	INC	2	20:10	22:00
113	RT	Load Forecast Uncertainty	SDGE	San Diego-IV	7/8/2021	-184	No	DEC	2	15:55	17:00
114	RT	Load Forecast Uncertainty	SDGE	San Diego-IV	7/9/2021	30	No	INC	2	20:15	22:00
115	RT	Load Forecast Uncertainty	SDGE	San Diego-IV	7/10/2021	225	No	INC	13	11:00	0:00
116	RT	Load Forecast Uncertainty	SDGE	San Diego-IV	7/28/2021	225	No	INC	12	12:00	0:00
117	RT	Market Disruption	PGAE	Fresno	7/17/2021	400	No	INC	1	20:05	20:10
118	RT	Other Reliability Requirement	SCE	LA Basin	7/31/2021	140 - 455	No	INC	6	16:30	22:00
119	RT	Planned Transmission Outage	PGAE	Bay Area	7/18/2021	200	No	DEC	1	12:00	12:10
120	RT	Planned Transmission Outage	PGAE	Bay Area	7/19/2021	22	No	DEC	3	18:00	21:00
121	RT	Planned Transmission Outage	PGAE	Bay Area	7/19/2021	22	No	INC	9	14:45	23:00
122	RT	Planned Transmission Outage	PGAE	Fresno	7/1/2021	83	No	INC	5	0:00	4:30
123	RT	Planned Transmission Outage	PGAE	Fresno	7/4/2021	20	No	DEC	2	21:30	23:00
124	RT	Planned Transmission Outage	PGAE	Fresno	7/16/2021	26	No	INC	5	11:00	15:30
125	RT	Planned Transmission Outage	PGAE	Humboldt	7/1/2021	30 - 60	No	DEC	4	18:00	22:00
126	RT	Planned Transmission Outage	PGAE	Humboldt	7/1/2021	30 - 60	No	INC	18	0:00	18:00
127	RT	Planned Transmission Outage	PGAE	Humboldt	7/5/2021	15 - 30	No	DEC	17	6:30	23:00
128	RT	Planned Transmission Outage	PGAE	Humboldt	7/5/2021	15 - 30	No	INC	18	6:25	0:00
129	RT	Planned Transmission Outage	PGAE	Humboldt	7/6/2021	15 - 30	No	DEC	23	0:00	23:00
130	RT	Planned Transmission Outage	PGAE	Humboldt	7/6/2021	15 - 30	No	INC	24	0:00	0:00
131	RT	Planned Transmission Outage	PGAE	Humboldt	7/7/2021	15 - 30	No	DEC	10	13:00	23:00
132	RT	Planned Transmission Outage	PGAE	Humboldt	7/7/2021	15 - 30	No	INC	24	0:00	0:00
133	RT	Planned Transmission Outage	PGAE	Humboldt	7/8/2021	15 - 58	No	DEC	12	11:00	23:00
134	RT	Planned Transmission Outage	PGAE	Humboldt	7/8/2021	15 - 30	No	INC	24	0:00	0:00
135	RT	Planned Transmission Outage	PGAE	Humboldt	7/9/2021	15 - 30	No	DEC	23	0:00	23:00
136	RT	Planned Transmission Outage	PGAE	Humboldt	7/9/2021	30	No	INC	24	0:00	0:00
137	RT	Planned Transmission Outage	PGAE	Humboldt	7/10/2021	15 - 45	No	DEC	23	0:00	23:00

Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time
138	RT	Planned Transmission Outage	PGAE	Humboldt	7/10/2021	30 - 45	No	INC	24	0:00	0:00
139	RT	Planned Transmission Outage	PGAE	Humboldt	7/11/2021	15 - 45	No	DEC	24	0:00	0:00
140	RT	Planned Transmission Outage	PGAE	Humboldt	7/11/2021	15 - 45	No	INC	11	0:00	11:00
141	RT	Planned Transmission Outage	PGAE	Humboldt	7/12/2021	15 - 30	No	DEC	24	0:00	0:00
142	RT	Planned Transmission Outage	PGAE	Humboldt	7/13/2021	15 - 30	No	DEC	23	0:00	23:00
143	RT	Planned Transmission Outage	PGAE	Humboldt	7/13/2021	30	No	INC	1	23:00	0:00
144	RT	Planned Transmission Outage	PGAE	Humboldt	7/14/2021	30	No	DEC	24	0:00	0:00
145	RT	Planned Transmission Outage	PGAE	Humboldt	7/15/2021	30	No	DEC	22	0:00	22:00
146	RT	Planned Transmission Outage	PGAE	Humboldt	7/15/2021	30	No	INC	24	0:00	0:00
147	RT	Planned Transmission Outage	PGAE	Humboldt	7/16/2021	30	No	DEC	23	0:00	23:00
148	RT	Planned Transmission Outage	PGAE	Humboldt	7/16/2021	30	No	INC	16	8:00	0:00
149	RT	Planned Transmission Outage	PGAE	Humboldt	7/17/2021	30 - 60	No	DEC	8	14:55	22:00
150	RT	Planned Transmission Outage	PGAE	Humboldt	7/17/2021	30 - 60	No	INC	24	0:00	0:00
151	RT	Planned Transmission Outage	PGAE	Humboldt	7/18/2021	30 - 45	No	DEC	14	10:40	0:00
152	RT	Planned Transmission Outage	PGAE	Humboldt	7/18/2021	30 - 58	No	INC	24	0:00	0:00
153	RT	Planned Transmission Outage	PGAE	Humboldt	7/19/2021	30 - 45	No	DEC	15	8:00	23:00
154	RT	Planned Transmission Outage	PGAE	Humboldt	7/19/2021	30 - 45	No	INC	24	0:00	0:00
155	RT	Planned Transmission Outage	PGAE	Humboldt	7/20/2021	30 - 45	No	DEC	24	0:00	0:00
156	RT	Planned Transmission Outage	PGAE	Humboldt	7/20/2021	45	No	INC	24	0:00	0:00
157	RT	Planned Transmission Outage	PGAE	Humboldt	7/21/2021	30 - 45	No	DEC	22	0:00	22:00
158	RT	Planned Transmission Outage	PGAE	Humboldt	7/21/2021	30 - 45	No	INC	8	2:00	10:00
159	RT	Planned Transmission Outage	PGAE	NA	7/19/2021	5	No	INC	2	22:45	0:00
160	RT	Planned Transmission Outage	PGAE	NA	7/27/2021	10 - 32	No	DEC	3	16:50	19:00
161	RT	Planned Transmission Outage	PGAE	NA	7/27/2021	10 - 32	No	INC	2	17:15	19:00
162	RT	Planned Transmission Outage	PGAE	NCNB	7/6/2021	35 - 70	No	DEC	14	10:35	0:00
163	RT	Planned Transmission Outage	PGAE	NCNB	7/6/2021	35 - 70	No	INC	3	19:00	22:00
164	RT	Planned Transmission Outage	PGAE	NCNB	7/7/2021	35 - 50	No	DEC	8	0:00	7:30
165	RT	Planned Transmission Outage	PGAE	NCNB	7/22/2021	67	No	DEC	9	7:10	15:15
166	RT	Planned Transmission Outage	PGAE	Sierra	7/1/2021	20 - 49	No	INC	15	9:00	0:00

Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time
167	RT	Planned Transmission Outage	PGAE	Sierra	7/2/2021	42 - 47	No	INC	1	0:00	1:00
168	RT	Planned Transmission Outage	PGAE	Sierra	7/5/2021	20	No	DEC	3	18:00	21:00
169	RT	Planned Transmission Outage	PGAE	Sierra	7/5/2021	20	No	INC	18	5:40	23:00
170	RT	Planned Transmission Outage	PGAE	Sierra	7/9/2021	10 - 40	No	DEC	5	16:00	21:00
171	RT	Planned Transmission Outage	PGAE	Sierra	7/9/2021	10 - 40	No	INC	10	14:20	0:00
172	RT	Planned Transmission Outage	PGAE	Sierra	7/10/2021	10 - 20	No	DEC	7	15:10	22:00
173	RT	Planned Transmission Outage	PGAE	Sierra	7/10/2021	10 - 42	No	INC	23	0:00	23:00
174	RT	Planned Transmission Outage	PGAE	Sierra	7/15/2021	8 - 25	No	INC	3	8:30	11:15
175	RT	Planned Transmission Outage	PGAE	Sierra	7/27/2021	20 - 42	No	INC	6	9:45	15:00
176	RT	Planned Transmission Outage	PGAE	Stockton	7/5/2021	30	No	INC	2	18:40	20:00
177	RT	Planned Transmission Outage	PGAE	Stockton	7/7/2021	32	No	INC	1	16:35	17:15
178	RT	Planned Transmission Outage	PGAE	Stockton	7/12/2021	100	No	DEC	10	3:15	13:00
179	RT	Planned Transmission Outage	PGAE	Stockton	7/30/2021	60	No	INC	5	17:40	22:00
180	RT	Planned Transmission Outage	SDGE	San Diego-IV	7/18/2021	51	No	INC	2	19:30	21:00
181	RT	Planned Transmission Outage	SDGE	San Diego-IV	7/20/2021	18.2 - 38.38	No	DEC	2	19:35	21:00
182	RT	Planned Transmission Outage	SDGE	San Diego-IV	7/20/2021	18.2 - 38.38	No	INC	3	20:00	23:00
183	RT	Ramping Capacity	PGAE	Fresno	7/29/2021	96	No	INC	5	16:40	21:00
184	RT	Ramping Capacity	PGAE	Fresno	7/30/2021	21	No	DEC	6	16:50	22:00
185	RT	Ramping Capacity	PGAE	Kern	7/18/2021	32	No	DEC	8	15:00	23:00
186	RT	Ramping Capacity	PGAE	Kern	7/18/2021	32	No	INC	1	14:45	15:00
187	RT	Ramping Capacity	PGAE	NA	7/28/2021	-182.5	No	DEC	4	14:15	18:00
188	RT	Ramping Capacity	PGAE	NA	7/29/2021	-138.84 - 390	No	DEC	9	12:40	21:00
189	RT	Ramping Capacity	PGAE	NA	7/29/2021	390	No	INC	1	16:00	17:00
190	RT	Ramping Capacity	PGAE	Sierra	7/6/2021	49	No	INC	1	14:40	14:45
191	RT	Ramping Capacity	PGAE	Sierra	7/14/2021	20	No	DEC	8	15:50	23:00
192	RT	Ramping Capacity	PGAE	Sierra	7/14/2021	20 - 47	No	INC	8	16:10	0:00

Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time
193	RT	Ramping Capacity	PGAE	Sierra	7/15/2021	20	Yes	INC	5	0:00	5:00
194	RT	Ramping Capacity	PGAE	Sierra	7/16/2021	20	No	DEC	2	19:00	21:00
195	RT	Ramping Capacity	PGAE	Sierra	7/16/2021	20	No	INC	4	18:00	22:00
196	RT	Ramping Capacity	PGAE	Sierra	7/17/2021	20	No	INC	1	15:10	15:30
197	RT	Ramping Capacity	PGAE	Stockton	7/11/2021	30	No	DEC	1	19:55	20:00
198	RT	Ramping Capacity	PGAE	Stockton	7/11/2021	20 - 35	No	INC	3	20:00	23:00
199	RT	Ramping Capacity	SCE	Big Creek-Ventura	7/10/2021	401	No	INC	6	16:05	22:00
200	RT	Ramping Capacity	SCE	Big Creek-Ventura	7/11/2021	405	No	INC	5	17:00	22:00
201	RT	Ramping Capacity	SCE	Big Creek-Ventura	7/12/2021	400.1	No	DEC	4	17:00	21:00
202	RT	Ramping Capacity	SCE	Big Creek-Ventura	7/12/2021	400.1	No	INC	7	15:00	22:00
203	RT	Ramping Capacity	SCE	Big Creek-Ventura	7/13/2021	400.1	No	INC	6	15:00	21:00
204	RT	Ramping Capacity	SCE	Big Creek-Ventura	7/16/2021	400.1	No	INC	7	16:30	23:00
205	RT	Ramping Capacity	SCE	Big Creek-Ventura	7/18/2021	401	No	INC	6	16:00	22:00
206	RT	Ramping Capacity	SCE	Big Creek-Ventura	7/20/2021	400.1	No	INC	7	15:00	22:00
207	RT	Ramping Capacity	SCE	Big Creek-Ventura	7/21/2021	400.1	No	INC	6	16:00	22:00
208	RT	Ramping Capacity	SCE	Big Creek-Ventura	7/22/2021	400.1	No	INC	6	15:00	21:00
209	RT	Ramping Capacity	SCE	Big Creek-Ventura	7/23/2021	400.1	No	INC	5	17:00	22:00
210	RT	Ramping Capacity	SCE	Big Creek-Ventura	7/26/2021	401	No	INC	6	16:00	22:00
211	RT	Ramping Capacity	SCE	Big Creek-Ventura	7/27/2021	410	No	INC	6	16:00	22:00

Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time
212	RT	Ramping Capacity	SCE	Big Creek-Ventura	7/28/2021	410	No	INC	6	16:00	22:00
213	RT	Ramping Capacity	SCE	Big Creek-Ventura	7/29/2021	400.1	No	DEC	2	18:00	20:00
214	RT	Ramping Capacity	SCE	Big Creek-Ventura	7/29/2021	400.1	No	INC	6	15:00	21:00
215	RT	Ramping Capacity	SCE	Big Creek-Ventura	7/30/2021	-98.33	No	DEC	2	16:50	18:00
216	RT	Ramping Capacity	SCE	LA Basin	7/7/2021	194 - 240	No	INC	6	16:40	22:00
217	RT	Ramping Capacity	SCE	LA Basin	7/10/2021	310	No	DEC	5	16:00	21:00
218	RT	Ramping Capacity	SCE	LA Basin	7/10/2021	180 - 310	No	INC	7	15:25	22:00
219	RT	Ramping Capacity	SCE	LA Basin	7/11/2021	194 - 245	No	DEC	5	17:00	22:00
220	RT	Ramping Capacity	SCE	LA Basin	7/11/2021	180	No	INC	5	17:00	22:00
221	RT	Ramping Capacity	SCE	LA Basin	7/12/2021	194 - 240.1	No	DEC	6	16:00	22:00
222	RT	Ramping Capacity	SCE	LA Basin	7/12/2021	180 - 240.1	No	INC	7	15:30	22:30
223	RT	Ramping Capacity	SCE	LA Basin	7/13/2021	194	No	DEC	5	16:00	21:00
224	RT	Ramping Capacity	SCE	LA Basin	7/13/2021	180 - 241	No	INC	6	15:00	21:00
225	RT	Ramping Capacity	SCE	LA Basin	7/18/2021	190 - 240	No	INC	6	16:00	22:00
226	RT	Ramping Capacity	SCE	LA Basin	7/19/2021	190 - 240	No	DEC	6	16:00	22:00
227	RT	Ramping Capacity	SCE	LA Basin	7/19/2021	190 - 194	No	INC	1	21:00	22:00
228	RT	Ramping Capacity	SCE	LA Basin	7/20/2021	100 - 240	No	INC	7	15:00	22:00
229	RT	Ramping Capacity	SCE	LA Basin	7/21/2021	194	No	DEC	5	16:00	21:00

Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time
230	RT	Ramping Capacity	SCE	LA Basin	7/21/2021	190 - 240	No	INC	6	16:00	22:00
231	RT	Ramping Capacity	SCE	LA Basin	7/22/2021	241	No	INC	6	15:00	21:00
232	RT	Ramping Capacity	SCE	LA Basin	7/23/2021	240	No	INC	6	16:45	22:00
233	RT	Ramping Capacity	SCE	LA Basin	7/26/2021	240	No	INC	6	16:00	22:00
234	RT	Ramping Capacity	SCE	LA Basin	7/27/2021	190 - 240	No	INC	7	15:00	22:00
235	RT	Ramping Capacity	SCE	LA Basin	7/28/2021	-10 - 240	No	DEC	8	14:15	22:00
236	RT	Ramping Capacity	SCE	LA Basin	7/28/2021	190	No	INC	1	21:00	22:00
237	RT	Ramping Capacity	SCE	LA Basin	7/29/2021	147.1	No	DEC	6	15:15	21:00
238	RT	Ramping Capacity	SCE	LA Basin	7/29/2021	140 - 225	No	INC	6	15:00	21:00
239	RT	Ramping Capacity	SCE	LA Basin	7/30/2021	247.1	No	DEC	7	15:00	22:00
240	RT	Ramping Capacity	SCE	LA Basin	7/30/2021	140 - 247.1	No	INC	7	15:00	22:00
241	RT	Ramping Capacity	SCE	NA	7/28/2021	-88	No	DEC	4	14:05	18:00
242	RT	Ramping Capacity	SCE	NA	7/29/2021	-79.94 - -8.37	No	DEC	2	12:35	13:45
243	RT	Reliability Assessment	PGAE	Fresno	7/2/2021	6 - 15	No	DEC	23	0:15	23:00
244	RT	Reliability Assessment	PGAE	Fresno	7/2/2021	15	No	INC	1	23:00	0:00
245	RT	Reliability Assessment	PGAE	Fresno	7/3/2021	300	No	DEC	1	21:00	21:30
246	RT	Reliability Assessment	PGAE	Fresno	7/3/2021	300	No	INC	1	20:30	21:00
247	RT	Reliability Assessment	PGAE	Fresno	7/6/2021	5.6	No	DEC	3	21:55	0:00
248	RT	Reliability Assessment	PGAE	Fresno	7/11/2021	6 - 20	No	DEC	6	18:15	0:00
249	RT	Reliability Assessment	PGAE	Fresno	7/12/2021	6	No	DEC	7	0:00	7:00
250	RT	Reliability Assessment	PGAE	Fresno	7/12/2021	6	No	INC	3	7:00	10:00
251	RT	Reliability Assessment	PGAE	Fresno	7/13/2021	20	No	INC	2	2:05	4:00
252	RT	Reliability Assessment	PGAE	Fresno	7/23/2021	69 - 80	No	INC	1	23:00	0:00
253	RT	Reliability Assessment	PGAE	Fresno	7/24/2021	69	No	INC	1	0:00	1:00
254	RT	Reliability Assessment	PGAE	Fresno	7/25/2021	83	No	INC	2	21:30	23:00

Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time
255	RT	Reliability Assessment	PGAE	Fresno	7/26/2021	6	No	DEC	7	1:00	8:00
256	RT	Reliability Assessment	PGAE	Fresno	7/28/2021	0 - 83	No	INC	14	10:45	0:00
257	RT	Reliability Assessment	PGAE	Fresno	7/29/2021	65 - 68	No	INC	1	0:00	1:00
258	RT	Reliability Assessment	PGAE	Fresno	7/30/2021	5.6	No	DEC	5	17:15	22:00
259	RT	Reliability Assessment	PGAE	Fresno	7/31/2021	60	No	INC	1	0:30	1:00
260	RT	Reliability Assessment	PGAE	Humboldt	7/1/2021	30 - 60	No	DEC	2	22:55	0:00
261	RT	Reliability Assessment	PGAE	Humboldt	7/2/2021	15 - 45	No	DEC	11	13:00	0:00
262	RT	Reliability Assessment	PGAE	Humboldt	7/2/2021	15 - 60	No	INC	24	0:00	0:00
263	RT	Reliability Assessment	PGAE	Humboldt	7/3/2021	15 - 30	No	DEC	24	0:00	0:00
264	RT	Reliability Assessment	PGAE	Humboldt	7/3/2021	15	No	INC	3	21:00	0:00
265	RT	Reliability Assessment	PGAE	Humboldt	7/4/2021	15	No	DEC	24	0:00	0:00
266	RT	Reliability Assessment	PGAE	Humboldt	7/4/2021	15	No	INC	3	0:00	2:45
267	RT	Reliability Assessment	PGAE	Humboldt	7/5/2021	15	No	DEC	7	0:00	6:45
268	RT	Reliability Assessment	PGAE	Humboldt	7/6/2021	13	No	DEC	1	14:50	15:45
269	RT	Reliability Assessment	PGAE	Humboldt	7/9/2021	45	No	DEC	5	13:55	18:00
270	RT	Reliability Assessment	PGAE	Humboldt	7/18/2021	30	No	DEC	2	9:00	11:00
271	RT	Reliability Assessment	PGAE	Humboldt	7/18/2021	30	No	INC	7	4:35	11:00
272	RT	Reliability Assessment	PGAE	Humboldt	7/21/2021	30	No	DEC	1	22:00	23:00
273	RT	Reliability Assessment	PGAE	Humboldt	7/21/2021	15 - 30	No	INC	2	22:00	0:00
274	RT	Reliability Assessment	PGAE	Humboldt	7/22/2021	15 - 30	No	DEC	23	0:00	23:00
275	RT	Reliability Assessment	PGAE	Humboldt	7/22/2021	15 - 30	No	INC	2	22:00	0:00
276	RT	Reliability Assessment	PGAE	Humboldt	7/23/2021	15 - 30	No	DEC	12	11:00	23:00
277	RT	Reliability Assessment	PGAE	Humboldt	7/23/2021	15 - 30	No	INC	24	0:00	0:00
278	RT	Reliability Assessment	PGAE	Humboldt	7/24/2021	15	No	DEC	24	0:00	0:00
279	RT	Reliability Assessment	PGAE	Humboldt	7/24/2021	15 - 30	No	INC	22	0:00	22:00
280	RT	Reliability Assessment	PGAE	Humboldt	7/25/2021	15 - 32	No	DEC	24	0:00	0:00
281	RT	Reliability Assessment	PGAE	Humboldt	7/25/2021	30	No	INC	3	8:35	11:00
282	RT	Reliability Assessment	PGAE	Humboldt	7/26/2021	15 - 32	No	DEC	24	0:00	0:00
283	RT	Reliability Assessment	PGAE	Humboldt	7/26/2021	30	No	INC	1	23:00	0:00

Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time
284	RT	Reliability Assessment	PGAE	Humboldt	7/27/2021	30	No	DEC	23	0:00	23:00
285	RT	Reliability Assessment	PGAE	Humboldt	7/27/2021	30 - 45	No	INC	24	0:00	0:00
286	RT	Reliability Assessment	PGAE	Humboldt	7/28/2021	30 - 45	No	DEC	22	0:00	22:00
287	RT	Reliability Assessment	PGAE	Humboldt	7/28/2021	30 - 45	No	INC	11	0:00	11:00
288	RT	Reliability Assessment	PGAE	Humboldt	7/29/2021	30 - 45	No	DEC	24	0:25	0:00
289	RT	Reliability Assessment	PGAE	Humboldt	7/29/2021	30	No	INC	8	0:25	8:00
290	RT	Reliability Assessment	PGAE	Humboldt	7/30/2021	15 - 48	No	DEC	22	0:00	22:00
291	RT	Reliability Assessment	PGAE	Humboldt	7/30/2021	32 - 45	No	INC	4	0:00	3:45
292	RT	Reliability Assessment	PGAE	Humboldt	7/31/2021	15 - 42	No	DEC	20	4:30	0:00
293	RT	Reliability Assessment	PGAE	Humboldt	7/31/2021	42 - 56	No	INC	21	3:30	0:00
294	RT	Reliability Assessment	PGAE	Kern	7/1/2021	32	No	INC	9	15:00	23:30
295	RT	Reliability Assessment	PGAE	Kern	7/2/2021	32	No	INC	10	14:20	0:00
296	RT	Reliability Assessment	PGAE	Kern	7/6/2021	32 - 46	No	INC	7	16:00	23:00
297	RT	Reliability Assessment	PGAE	Kern	7/7/2021	32	No	INC	7	16:00	23:00
298	RT	Reliability Assessment	PGAE	Kern	7/8/2021	32	No	DEC	7	15:20	22:00
299	RT	Reliability Assessment	PGAE	Kern	7/11/2021	32	No	INC	2	13:30	15:00
300	RT	Reliability Assessment	PGAE	Kern	7/14/2021	32	No	INC	2	22:30	0:00
301	RT	Reliability Assessment	PGAE	Kern	7/15/2021	32	No	INC	3	15:45	18:45
302	RT	Reliability Assessment	PGAE	Kern	7/16/2021	32	No	INC	9	15:45	0:00
303	RT	Reliability Assessment	PGAE	Kern	7/20/2021	32	No	INC	6	14:30	20:00
304	RT	Reliability Assessment	PGAE	Kern	7/21/2021	32	No	INC	3	15:00	18:00
305	RT	Reliability Assessment	PGAE	Sierra	7/1/2021	20 - 47	Yes	INC	22	0:00	22:00
306	RT	Reliability Assessment	PGAE	Sierra	7/2/2021	20	No	DEC	3	18:10	20:45
307	RT	Reliability Assessment	PGAE	Sierra	7/2/2021	5 - 40	No	INC	16	0:30	16:10
308	RT	Reliability Assessment	PGAE	Sierra	7/5/2021	9 - 29	No	INC	3	18:20	20:45
309	RT	Reliability Assessment	PGAE	Sierra	7/6/2021	20	No	DEC	3	18:05	21:00
310	RT	Reliability Assessment	PGAE	Sierra	7/6/2021	20 - 46	No	INC	9	15:00	0:00
311	RT	Reliability Assessment	PGAE	Sierra	7/7/2021	20	No	DEC	5	17:00	22:00
312	RT	Reliability Assessment	PGAE	Sierra	7/7/2021	8 - 42	No	INC	22	0:00	22:00

Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time
313	RT	Reliability Assessment	PGAE	Sierra	7/8/2021	15 - 30	No	DEC	2	18:00	20:00
314	RT	Reliability Assessment	PGAE	Sierra	7/8/2021	5 - 40	No	INC	9	15:40	0:00
315	RT	Reliability Assessment	PGAE	Sierra	7/9/2021	20	No	INC	2	0:00	1:30
316	RT	Reliability Assessment	PGAE	Sierra	7/11/2021	20	No	DEC	9	14:45	23:00
317	RT	Reliability Assessment	PGAE	Sierra	7/11/2021	20	No	INC	1	23:00	0:00
318	RT	Reliability Assessment	PGAE	Sierra	7/12/2021	20	No	DEC	12	11:00	23:00
319	RT	Reliability Assessment	PGAE	Sierra	7/12/2021	20	No	INC	24	0:00	0:00
320	RT	Reliability Assessment	PGAE	Sierra	7/13/2021	20 - 40	No	DEC	6	16:30	22:00
321	RT	Reliability Assessment	PGAE	Sierra	7/14/2021	20	No	DEC	7	15:20	22:00
322	RT	Reliability Assessment	PGAE	Sierra	7/14/2021	20 - 49	No	INC	19	5:05	0:00
323	RT	Reliability Assessment	PGAE	Sierra	7/15/2021	20	No	DEC	3	19:00	22:00
324	RT	Reliability Assessment	PGAE	Sierra	7/15/2021	20	No	INC	24	0:00	0:00
325	RT	Reliability Assessment	PGAE	Sierra	7/16/2021	20	No	DEC	2	19:00	21:00
326	RT	Reliability Assessment	PGAE	Sierra	7/16/2021	20	No	INC	22	0:00	22:00
327	RT	Reliability Assessment	PGAE	Sierra	7/17/2021	9 - 47	No	INC	9	15:10	0:00
328	RT	Reliability Assessment	PGAE	Sierra	7/18/2021	20	No	DEC	3	18:00	21:00
329	RT	Reliability Assessment	PGAE	Sierra	7/18/2021	5 - 38	No	INC	24	0:00	0:00
330	RT	Reliability Assessment	PGAE	Sierra	7/19/2021	20	No	DEC	7	15:00	22:00
331	RT	Reliability Assessment	PGAE	Sierra	7/19/2021	20	No	INC	15	9:55	0:00
332	RT	Reliability Assessment	PGAE	Sierra	7/20/2021	20 - 45	No	DEC	7	15:55	22:00
333	RT	Reliability Assessment	PGAE	Sierra	7/20/2021	20	No	INC	1	16:10	17:00
334	RT	Reliability Assessment	PGAE	Sierra	7/21/2021	20	No	DEC	4	18:00	22:00
335	RT	Reliability Assessment	PGAE	Sierra	7/21/2021	20 - 42	No	INC	22	1:55	23:00
336	RT	Reliability Assessment	PGAE	Sierra	7/22/2021	10 - 40	No	DEC	5	17:00	22:00
337	RT	Reliability Assessment	PGAE	Sierra	7/22/2021	7 - 42	No	INC	11	10:45	21:00
338	RT	Reliability Assessment	PGAE	Sierra	7/23/2021	20 - 40	No	DEC	4	18:05	22:00
339	RT	Reliability Assessment	PGAE	Sierra	7/23/2021	10 - 42	No	INC	23	1:25	0:00
340	RT	Reliability Assessment	PGAE	Sierra	7/24/2021	20 - 40	No	DEC	3	18:00	21:00
341	RT	Reliability Assessment	PGAE	Sierra	7/24/2021	20 - 42	No	INC	23	0:00	23:00

Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time
342	RT	Reliability Assessment	PGAE	Sierra	7/25/2021	8 - 38	No	DEC	4	18:00	22:00
343	RT	Reliability Assessment	PGAE	Sierra	7/25/2021	8 - 42	No	INC	10	13:55	23:30
344	RT	Reliability Assessment	PGAE	Sierra	7/26/2021	20	No	DEC	6	16:30	22:00
345	RT	Reliability Assessment	PGAE	Sierra	7/26/2021	20 - 42	Yes	INC	11	11:40	22:00
346	RT	Reliability Assessment	PGAE	Sierra	7/27/2021	20	No	DEC	3	19:45	22:00
347	RT	Reliability Assessment	PGAE	Sierra	7/27/2021	20	No	INC	1	22:00	23:00
348	RT	Reliability Assessment	PGAE	Sierra	7/28/2021	20	No	DEC	7	15:45	22:00
349	RT	Reliability Assessment	PGAE	Sierra	7/28/2021	20 - 42	No	INC	21	3:00	0:00
350	RT	Reliability Assessment	PGAE	Sierra	7/29/2021	10 - 47	No	DEC	11	13:00	0:00
351	RT	Reliability Assessment	PGAE	Sierra	7/29/2021	10 - 47	No	INC	24	0:00	0:00
352	RT	Reliability Assessment	PGAE	Sierra	7/30/2021	20 - 46	No	DEC	7	15:00	22:00
353	RT	Reliability Assessment	PGAE	Sierra	7/30/2021	20 - 47	No	INC	24	0:00	0:00
354	RT	Reliability Assessment	PGAE	Sierra	7/31/2021	20 - 45	No	DEC	7	15:00	22:00
355	RT	Reliability Assessment	PGAE	Sierra	7/31/2021	20 - 40	No	INC	24	0:25	0:00
356	RT	Reliability Assessment	PGAE	Stockton	7/1/2021	20 - 35	No	INC	5	17:10	22:00
357	RT	Reliability Assessment	PGAE	Stockton	7/7/2021	40	No	INC	6	16:50	22:00
358	RT	Reliability Assessment	PGAE	Stockton	7/9/2021	50	No	INC	5	15:30	20:00
359	RT	Reliability Assessment	PGAE	Stockton	7/10/2021	140 - 193	No	DEC	5	19:45	0:00
360	RT	Reliability Assessment	PGAE	Stockton	7/12/2021	20 - 30	No	INC	5	16:55	21:00
361	RT	Reliability Assessment	PGAE	Stockton	7/14/2021	30	No	INC	6	17:05	23:00
362	RT	Reliability Assessment	PGAE	Stockton	7/18/2021	30	No	INC	3	18:25	21:00
363	RT	Reliability Assessment	PGAE	Stockton	7/25/2021	20	No	DEC	4	18:00	22:00
364	RT	Reliability Assessment	PGAE	Stockton	7/25/2021	20	No	INC	5	16:50	21:00
365	RT	Reliability Assessment	PGAE	Stockton	7/28/2021	20 - 50	No	INC	6	18:25	0:00
366	RT	Reliability Assessment	PGAE	Stockton	7/29/2021	25 - 50	No	INC	22	0:00	22:00
367	RT	Reliability Assessment	SCE	NA	7/16/2021	410	No	DEC	1	23:20	0:00
368	RT	Reliability Assessment	SCE	NA	7/17/2021	410	No	DEC	5	0:00	5:00
369	RT	Reliability Assessment	SCE	NA	7/17/2021	410	No	INC	1	3:00	4:00

Number	Market Type	Reason	Location	Local Reliability Area	Trade Date	MW	Commitment	INC_DEC	Hours	Begin Time	End Time
370	RT	Software Limitation	PGAE	Bay Area	7/10/2021	0	No	INC	2	5:45	6:50
371	RT	Software Limitation	PGAE	Fresno	7/9/2021	35 - 44.93	No	INC	1	15:55	16:45
372	RT	Software Limitation	PGAE	Fresno	7/10/2021	0	No	INC	16	0:45	16:25
373	RT	Software Limitation	PGAE	Fresno	7/28/2021	-303	No	DEC	1	5:25	6:15
374	RT	Software Limitation	PGAE	Fresno	7/28/2021	0 - 83	No	INC	1	0:20	1:15
375	RT	Software Limitation	PGAE	NA	7/7/2021	48.95	No	DEC	1	17:00	17:30
376	RT	Software Limitation	SCE	LA Basin	7/8/2021	70	No	INC	1	2:00	2:20
377	RT	Software Limitation	SCE	LA Basin	7/9/2021	5 - 42.42	No	INC	1	15:55	16:45
378	RT	Software Limitation	SCE	LA Basin	7/12/2021	5 - 90.58	No	INC	1	6:05	6:55
379	RT	Software Limitation	SCE	NA	7/7/2021	0	No	INC	1	1:30	2:00
380	RT	Software Limitation	SDGE	San Diego-IV	7/22/2021	0	No	INC	1	19:00	20:00
381	RT	Software Limitation	SDGE	San Diego-IV	7/25/2021	0	No	INC	1	2:30	3:30
382	RT	Software Limitation	SDGE	San Diego-IV	7/27/2021	0	No	DEC	7	0:00	7:00
383	RT	Unit Testing	PGAE	Fresno	7/13/2021	121.83	No	INC	1	16:20	16:50
384	RT	Unit Testing	PGAE	Fresno	7/16/2021	49	No	INC	1	1:10	2:00
385	RT	Unit Testing	PGAE	Fresno	7/28/2021	49	No	INC	1	10:50	11:15
386	RT	Unit Testing	PGAE	Fresno	7/31/2021	39	No	INC	1	1:20	2:00
387	RT	Unit Testing	PGAE	NA	7/7/2021	48.95	No	INC	1	16:35	17:00
388	RT	Unit Testing	PGAE	Stockton	7/9/2021	30 - 50	No	INC	3	21:20	0:00
389	RT	Unit Testing	PGAE	Stockton	7/10/2021	30 - 40	No	INC	2	0:00	2:00
390	RT	Unit Testing	SCE	LA Basin	7/7/2021	18.8	No	INC	1	20:45	21:15
391	RT	Unit Testing	SDGE	San Diego-IV	7/13/2021	32 - 54.88	No	INC	5	17:15	22:00
392	RT	Unit Testing	SDGE	San Diego-IV	7/14/2021	46 - 105	No	INC	5	18:15	23:00
393	RT	Unit Testing	SDGE	San Diego-IV	7/20/2021	44 - 103	No	INC	6	16:25	22:00
394	RT	Unplanned Outage	PGAE	Fresno	7/10/2021	0	No	INC	1	11:45	12:45
395	RT	Voltage Support	PGAE	Fresno	7/19/2021	-303	No	DEC	3	4:50	7:00

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	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