

Exceptional Dispatch Report

Table 1: October 2017

CAISO Market Quality and Renewable Integration

December 15, 2017

TABLE OF CONTENTS

Introduction	3
The Nature of Exceptional Dispatch	
Appendix A: Explanation by Example	
Example 1: Exceptional Dispatch Instructions Prior to DAM	
Example 2: Incremental Exceptional Dispatch Instructions in RTM	23
Example 3: Decremental Exceptional Dispatch Instructions in RTM	25
LIST OF TABLES AND FIGURES	
Table 1: Exceptional Dispatches in October 2017	5
Table 2: Instructions Prior to Day-Ahead Market	22
Table 3: FERC Summary of Instructions Prior to DAM	
Table 4: Incremental Exceptional Dispatch Instructions in RTM	23
Table 5: FERC Summary of ED Instructions in RTM	
Table 6: Decremental Exceptional Dispatch Instructions in RTM	25
Table 7: FERC Summary of Decremental ED Instructions in RTM	25

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 15th of each month and one issued on the 30th of each month. This report provides data on the frequency and reasons for Exceptional Dispatches issued in October 2017.

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 an indicative exceptional dispatch energy schedule, 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 October 2017 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

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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

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. There were a few other reasons used to explain exceptional dispatch instructions in October 2017, 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 335 exceptional dispatches in October 2017, as compared to 357 exceptional dispatches in September 2017. Exceptional dispatches issued for the following reasons accounted for approximately 45 percent of the total exceptional dispatches during the reporting period: planned transmission outages, software limitations, and operating procedure number 7110 (along with 6610, 7230, and 7720). Many of the exceptional dispatches with the reason "Other Reliability Requirement" were due to Real Time Contingency Analysis.

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 October 2017

California Independent System Operator Corporation Exceptional Dispatch Report December 15, 2017

Chart 1: Table of Exceptional Dispatches for Period 01/October/2017 - 31/October/2017

	Mar ket						Co				
Num	Тур		Locatio	Local Reliability			mm itm	INC	Hou	Begin	End
ber	é	Reason	n	Area	Trade Date	MW	ent	DEC	rs	Time	Time
1	RT	Bridging Schedules	PG&E	Fresno	10/18/2017	22	No	INC	7	10:30	16:59
2	RT	Bridging Schedules	PG&E	N/A	10/18/2017	47	No	DEC	6	10:45	15:59
				Big Creek-							
3	RT	Bridging Schedules	SCE	Ventura	10/24/2017	100	No	INC	2	22:00	23:59
4	RT	Conditions beyond the control of the CAISO	PG&E	N/A	10/27/2017	47	No	DEC	3	8:10	10:29
5	RT	Conditions beyond the control of the CAISO	PG&E	N/A	10/27/2017	47	No	INC	3	8:10	10:29
6	RT	Contingency Dispatch	SCE	LA Basin	10/24/2017	96- 280	No	INC	3	18:04	20:59
7	RT	Contingency Dispatch	SDG&E	San Diego-IV	10/23/2017	104	No	INC	1	10:08	10:19
8	RT	Contingency Dispatch	SCE	LA Basin	10/24/2017	46	No	INC	1	19:30	19:59
9	RT	Fast Start Unit Management	SCE	LA Basin	10/23/2017	0	No	INC	2	21:05	23:04
10	RT	Fast Start Unit Management	SCE	LA Basin	10/24/2017	0	No	DEC	1	23:30	23:59
11	RT	Fast Start Unit Management	SCE	LA Basin	10/24/2017	0	No	INC	2	22:00	23:59
12	RT	Fast Start Unit Management	SCE	LA Basin	10/25/2017	0	No	DEC	1	0:00	0:09
13	RT	Fast Start Unit Management	SCE	LA Basin	10/25/2017	0	No	INC	21	0:00	20:29
14	RT	Fast Start Unit Management	SDG&E	San Diego-IV	10/23/2017	0	No	INC	1	21:45	22:14
15	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/1/2017	5- 31	No	DEC	24	0:00	23:59
16	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/1/2017	9- 40	No	INC	24	0:00	23:59
17	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/2/2017	10- 36	No	DEC	18	6:40	23:59
18	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/2/2017	4- 40	No	INC	18	6:25	23:59
19	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/3/2017	5- 36	No	DEC	24	0:00	23:59
20	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/3/2017	4- 40	No	INC	24	0:00	23:59

	Mar						Со				
Mirro	ket		Locatio	Lead Deliability			mm	INC	Ua	Dogin	End
Num ber	Typ e	Reason	Locatio	Local Reliability Area	Trade Date	MW	itm ent	INC_ DEC	Hou rs	Begin Time	End Time
21	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/4/2017	5- 36	No	DEC	24	0:00	23:59
22	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/4/2017	4- 40	No	INC	24	0:00	23:59
23	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/5/2017	5- 36	No	DEC	24	0:00	23:59
24	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/5/2017	4- 40	No	INC	24	0:00	23:59
25	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/6/2017	13- 31	No	DEC	24	0:00	23:59
26	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/6/2017	9- 40	No	INC	24	0:00	23:59
27	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/7/2017	5- 31	No	DEC	24	0:00	23:59
28	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/7/2017	9- 40	No	INC	24	0:00	23:59
29	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/8/2017	5- 24	No	DEC	24	0:00	23:59
30	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/8/2017	16- 40	No	INC	24	0:00	23:59
31	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/9/2017	10	No	DEC	24	0:00	23:59
32	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/9/2017	30- 40	No	INC	24	0:00	23:59
33	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/10/2017	5- 24	No	DEC	24	0:00	23:59
34	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/10/2017	16- 40	No	INC	24	0:00	23:59
35	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/11/2017	5	No	DEC	24	0:00	23:59
36	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/11/2017	35- 40	No	INC	24	0:00	23:59
37	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/12/2017	13- 24	No	DEC	24	0:00	23:59
38	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/12/2017	16- 40	No	INC	24	0:00	23:59
39	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/13/2017	5- 18	No	DEC	24	0:00	23:59
40	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/13/2017	22- 40	No	INC	24	0:00	23:59
41	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/14/2017	5- 36	No	DEC	24	0:00	23:59
42	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/14/2017	4- 40	No	INC	24	0:00	23:59
43	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/15/2017	5- 26	No	DEC	24	0:00	23:59
44	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/15/2017	14- 40	No	INC	24	0:00	23:59
45	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/16/2017	40	No	INC	24	0:00	23:59
46	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/17/2017	40	No	INC	24	0:00	23:59
47	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/18/2017	40	No	INC	24	0:00	23:59
48	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/19/2017	40	No	INC	24	0:00	23:59
49	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/20/2017	4	No	DEC	24	0:00	23:59

	Mar						Со				
Num	ket		Locatio	Local Reliability			mm itm	INC	Hou	Pogin	End
ber	Typ e	Reason	n	Area	Trade Date	MW	ent	DEC_	rs	Begin Time	Time
50	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/20/2017	36- 40	No	INC	24	0:00	23:59
51	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/21/2017	4	No	DEC	24	0:00	23:59
52	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/21/2017	36- 40	No	INC	24	0:00	23:59
53	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/22/2017	5	No	DEC	24	0:00	23:59
54	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/22/2017	35- 40	No	INC	24	0:00	23:59
55	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/23/2017	5- 22	No	DEC	24	0:00	23:59
56	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/23/2017	18- 40	No	INC	24	0:00	23:59
57	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/24/2017	9- 22	No	DEC	24	0:00	23:59
58	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/24/2017	18- 40	No	INC	24	0:00	23:59
59	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/25/2017	5- 22	No	DEC	24	0:00	23:59
60	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/25/2017	18- 40	No	INC	24	0:00	23:59
61	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/26/2017	5- 22	No	DEC	24	0:00	23:59
62	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/26/2017	18- 40	No	INC	24	0:00	23:59
63	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/27/2017	4- 17	No	DEC	24	0:00	23:59
64	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/27/2017	23- 40	No	INC	24	0:00	23:59
65	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/28/2017	5- 9	No	DEC	24	0:00	23:59
66	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/28/2017	31- 40	No	INC	24	0:00	23:59
67	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/29/2017	9- 14	No	DEC	24	0:00	23:59
68	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/29/2017	26- 40	No	INC	24	0:00	23:59
69	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/30/2017	40	No	INC	24	0:00	23:59
70	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	10/31/2017	40	No	INC	24	0:00	23:59
71	RT	Incomplete or Inaccurate Transmission	PG&E	NCNB	10/4/2017	143	No	DEC	1	7:10	7:44
						188-					
72	RT	Incomplete or Inaccurate Transmission	PG&E	NCNB	10/11/2017	220	No	DEC	14	10:58	23:59
73	RT	Incomplete or Inaccurate Transmission	PG&E	NCNB	10/11/2017	166	No	INC	14	10:58	23:59
74	RT	Incomplete or Inaccurate Transmission	SCE	LA Basin	10/23/2017	130	No	DEC	2	10:20	11:59
75	RT	Incomplete or Inaccurate Transmission	SCE	LA Basin	10/23/2017	130	No	INC	2	10:20	11:59
76	RT	Incomplete or Inaccurate Transmission	SDG&E	San Diego-IV	10/23/2017	48	No	INC	1	10:20	10:59
77	RT	Load Forecast Uncertainty	Intertie	N/A	10/23/2017	44- 385	No	INC	2	17:00	18:59

	Mar						Со				
Mirros	ket		Lacatio	Local Daliability			mm	INIC		Donin	□ al
Num ber	Typ e	Reason	Locatio	Local Reliability Area	Trade Date	MW	itm ent	INC_ DEC	Hou rs	Begin Time	End Time
Dei		i i i i i i i i i i i i i i i i i i i	- "	Alta	Trade Date	126-	CIIL	DLC	13	Tille	Tille
78	RT	Load Forecast Uncertainty	Intertie	N/A	10/24/2017	341	No	INC	6	15:00	20:59
79	RT	Load Forecast Uncertainty	Intertie	N/A	10/25/2017	91- 216	No	INC	3	16:00	18:59
80	RT	Load Forecast Uncertainty	PG&E	Bay Area	10/23/2017	120	No	INC	1	10:35	11:01
81	RT	Load Forecast Uncertainty	PG&E	Bay Area	10/24/2017	20- 232	No	DEC	8	14:18	21:59
						138-					
82	RT	Load Forecast Uncertainty	PG&E	Bay Area	10/25/2017	188	No	DEC	9	12:00	20:59
83	RT	Load Forecast Uncertainty	PG&E	Bay Area	10/25/2017	98	No	INC	2	12:00	13:59
84	RT	Load Forecast Uncertainty	PG&E	N/A	10/23/2017	47	No	DEC	4	16:20	19:59
85	RT	Load Forecast Uncertainty	PG&E	N/A	10/24/2017	380	No	DEC	8	14:29	21:59
86	RT	Load Forecast Uncertainty	PG&E	N/A	10/25/2017	182	No	DEC	5	15:05	19:59
87	RT	Load Forecast Uncertainty	PG&E	N/A	10/26/2017	47	No	DEC	14	6:15	19:59
88	RT	Load Forecast Uncertainty	PG&E	N/A	10/26/2017	47	No	INC	14	6:15	19:59
				Big Creek-							
89	RT	Load Forecast Uncertainty	SCE	Ventura	10/24/2017	11	No	INC	2	17:31	19:29
00	БТ	Lander of the second	005	Big Creek-	40/05/0047	400	NI.	INIO	0.4	0.00	00.50
90	RT	Load Forecast Uncertainty	SCE	Ventura	10/25/2017	100	No	INC	24	0:00	23:59
91	RT	Load Forecast Uncertainty	SCE	LA Basin	10/16/2017	20	No	INC INC	16	8:00	23:59
92	RT	Load Forecast Uncertainty	SCE	LA Basin	10/17/2017	20- 70	Yes		22	0:00	21:59
93	RT	Load Forecast Uncertainty	SCE	LA Basin	10/18/2017	20- 45	Yes	INC	17	7:00	23:59
94	RT	Load Forecast Uncertainty	SCE	LA Basin	10/20/2017	10	No	INC	11	13:00	23:59
95	RT	Load Forecast Uncertainty	SCE	LA Basin	10/21/2017	20	Yes	INC	24	0:00	23:59
96	RT	Load Forecast Uncertainty	SCE	LA Basin	10/22/2017	20	Yes	INC	24	0:00	23:59
97	RT	Load Forecast Uncertainty	SCE	LA Basin	10/23/2017	49	No	DEC	6	14:15	19:59
98	RT	Load Forecast Uncertainty	SCE	LA Basin	10/23/2017	10- 336	No	INC	14	10:35	23:59
99	RT	Load Forecast Uncertainty	SCE	LA Basin	10/24/2017	10- 70	No	INC	24	0:00	23:59
100	RT	Load Forecast Uncertainty	SCE	LA Basin	10/25/2017	71	No	DEC	1	13:15	13:44
101	RT	Load Forecast Uncertainty	SCE	LA Basin	10/25/2017	71	No	INC	1	13:30	13:44
						240-					
102	RT	Load Forecast Uncertainty	SCE	LA Basin	10/26/2017	265	Yes	INC	24	0:00	23:59

	Mar						Со				
Num	ket Typ		Locatio	Local Reliability			mm itm	INC	Hou	Begin	End
ber	e	Reason	n	Area	Trade Date	MW	ent	DEC	rs	Time	Time
103	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	10/23/2017	40	No	DEC	2	14:40	15:44
104	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	10/25/2017	76	No	DEC	5	15:35	19:59
105	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	10/25/2017	76	No	INC	5	15:35	19:59
106	RT	Load Pull	PG&E	Bay Area	10/2/2017	300	No	DEC	5	16:20	20:59
107	RT	Load Pull	PG&E	Bay Area	10/2/2017	300	No	INC	5	16:20	20:59
108	RT	Load Pull	SCE	Big Creek- Ventura	10/23/2017	200	No	INC	3	17:40	19:59
109	RT	Load Pull	SCE	Big Creek- Ventura	10/24/2017	400	No	DEC	3	14:05	16:59
				Big Creek-		400-					
110	RT	Load Pull	SCE	Ventura	10/24/2017	700	No	INC	6	14:05	19:59
111	RT	Load Pull	SCE	Big Creek- Ventura	10/25/2017	400- 700	No	INC	8	13:50	20:59
						624-					
112	RT	Load Pull	SCE	LA Basin	10/23/2017	806	No	DEC	5	15:20	19:59
113	RT	Load Pull	SCE	LA Basin	10/23/2017	40- 222	No	INC	5	15:20	19:59
						336-					
114	RT	Load Pull	SCE	LA Basin	10/24/2017	526	No	DEC	11	11:15	21:59
115	RT	Load Pull	SCE	LA Basin	10/24/2017	142- 526	No	INC	11	11:15	21:59
116	RT	Load Pull	SCE	LA Basin	10/25/2017	71- 526	No	DEC	8	13:15	20:59
110	ΝI	Load Full	SUE	LA Dasiii	10/23/2017	194-	INO	DEC	0	13.13	20.59
117	RT	Load Pull	SCE	LA Basin	10/25/2017	455	No	INC	8	13:15	20:59
118	RT	Load Pull	SCE	LA Basin	10/31/2017	194	No	DEC	5	16:30	20:59
119	RT	Load Pull	SCE	LA Basin	10/31/2017	194	No	INC	5	16:30	20:59
120	RT	Load Pull	SCE	N/A	10/24/2017	460	No	DEC	3	17:55	20:19
121	RT	Load Pull	SDG&E	San Diego-IV	10/23/2017	23- 48	No	INC	4	16:25	19:59
122	RT	Load Pull	SDG&E	San Diego-IV	10/25/2017	68- 131	No	DEC	8	13:15	20:59
123	RT	Load Pull	SDG&E	San Diego-IV	10/25/2017	68	No	INC	8	13:15	20:59
124	RT	Load Pull	SCE	N/A	10/24/2017	460	No	DEC	2	19:15	20:44

	Mar						Со				
Num	ket Typ		Locatio	Local Reliability			mm itm	INC	Hou	Begin	End
ber	e	Reason	n	Area	Trade Date	MW	ent	DEC	rs	Time	Time
501		Operating Procedure Number and Constraint		Big Creek-	Trado Dato	10100	One	<u> </u>		111110	1 11110
125	RT	(6610)	SCE	Ventura	10/24/2017	425	No	INC	1	20:00	20:14
		Operating Procedure Number and Constraint		Big Creek-							
126	RT	(6610)	SCE	Ventura	10/24/2017	425	No	DEC	1	19:40	20:09
		Operating Procedure Number and Constraint		Big Creek-							
127	RT	(6610)	SCE	Ventura	10/24/2017	425	No	INC	1	19:40	20:09
		Operating Procedure Number and Constraint									
128	RT	(6610)	SCE	LA Basin	10/24/2017	360	No	INC	2	19:20	20:44
129	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	10/24/2017	46	No	DEC	13	9:05	21:44
129	K1	Operating Procedure Number and Constraint	PGQE	Hullibolat	10/24/2017	40	INO	DEC	13	9.05	21.44
130	RT	(7110)	PG&E	Humboldt	10/24/2017	46	No	INC	13	9:05	21:44
100	111	Operating Procedure Number and Constraint	1 Cal	Trambolat	10/2-7/2017	40	110		10	0.00	21.77
131	RT	(7110)	PG&E	Humboldt	10/27/2017	60	No	INC	1	23:00	23:59
		Operating Procedure Number and Constraint									
132	RT	(7110)	PG&E	Humboldt	10/28/2017	15	No	DEC	22	1:00	22:59
		Operating Procedure Number and Constraint									
133	RT	(7110)	PG&E	Humboldt	10/28/2017	15- 60	No	INC	23	0:00	22:59
		Operating Procedure Number and Constraint									
134	RT	(7230)	PG&E	Sierra	10/8/2017	42	Yes	INC	19	5:00	23:59
405	рт	Operating Procedure Number and Constraint	חכיים	Ciarra	40/47/2047	0	Nia	DEC		40.00	40.00
135	RT	(7230) Operating Procedure Number and Constraint	PG&E	Sierra	10/17/2017	0	No	DEC	1	18:30	19:29
136	RT	(7230)	PG&E	Sierra	10/18/2017	0	No	DEC	6	16:50	21:59
130	111	Operating Procedure Number and Constraint	1 Oal	Sierra	10/10/2017	0	110	DLC	- 0	10.50	21.00
137	RT	(7230)	PG&E	Sierra	10/18/2017	0	No	INC	6	16:50	21:59
		Operating Procedure Number and Constraint				-	_	_	_		
138	RT	(7230)	PG&E	Sierra	10/19/2017	0	No	INC	1	18:30	19:29
		Operating Procedure Number and Constraint									
139	RT	(7230)	PG&E	Sierra	10/23/2017	0	No	DEC	9	15:45	23:59
		Operating Procedure Number and Constraint				_			_		
140	RT	(7230)	PG&E	Sierra	10/23/2017	0	No	INC	9	15:45	23:59

	Reason	Lacatic				mm				i
Opera	Peason	Locatio	Local Reliability			itm	INC	Hou	Begin	End
	I\Cason	n	Area	Trade Date	MW	ent	DEC	rs	Time	Time
- (-000)	ting Procedure Number and Constraint									
T (7230)		PG&E	Sierra	10/25/2017	0	No	DEC	3	17:00	19:59
	ting Procedure Number and Constraint									
		SCE	N/A	10/15/2017	470	No	DEC	6	16:00	21:59
/		SCE	N/A	10/16/2017	470	No	DEC	11	13:40	23:59
	•	005	21/2	40/40/004=	4=0	١			40.40	
/		SCE	N/A	10/16/2017	470	No	INC	11	13:40	23:59
		005	NI/A	40/47/2047	470	Na	DEC	4.5	0.05	22.50
/		SCE	IN/A	10/17/2017	470	INO	DEC	15	9:35	23:59
	•	SCE	NI/A	10/17/2017	470	No	INIC	15	0.25	23:59
		JOL	IN/ A	10/11/2011	470	INU	INC	13	9.55	23.39
		SCF	N/A	10/18/2017	470	No	DEC	13	7:40	19:59
		002	14/7	10/10/2011		1.10	520		7110	10.00
		SCE	N/A	10/18/2017	470	No	INC	13	7:40	19:59
					460-					
		SCE	N/A	10/23/2017	470	No	DEC	8	14:45	21:59
Opera	ting Procedure Number and Constraint				460-					
/		SCE	N/A	10/23/2017	470	No	INC	8	14:45	21:59
		SCE	N/A	10/24/2017		No	DEC	9	15:20	23:59
								_		
/		SCE	N/A	10/24/2017	470	No	INC	9	15:20	23:59
		005	NI/A	40/05/0047	405	N.	DEC	44	40.40	00.50
		SCE	N/A	10/25/2017	465	INO	DEC	11	13:10	23:59
	•	SCE	NI/A	10/25/2017	165	No	INIC	11	12:10	23:59
		SUE	IN/A	10/23/2017		INU	INC	11	13.10	23.59
	<u> </u>	SCF	N/A	10/26/2017		No	INC	22	0.00	21:59
		JOL	IN/ <i>I</i> A	10/20/2017	400	INU	IIIC		0.00	21.00
	•	SCF	N/A	10/28/2017	460	No	INC	3	18:35	20:59
	Opera (7720) Opera	Operating Procedure Number and Constraint (7720)	Operating Procedure Number and Constraint (7720) Operating Procedure Number and Constraint (7720)	Operating Procedure Number and Constraint (7720) SCE N/A Operating Procedure Number and Constraint (7720) SCE N/A	Operating Procedure Number and Constraint (7720)	Operating Procedure Number and Constraint (7720)	Operating Procedure Number and Constraint (7720) SCE N/A 10/16/2017 470 No	Operating Procedure Number and Constraint (7720) Operating Procedure Number and Constr	Operating Procedure Number and Constraint (7720) SCE N/A 10/16/2017 470 No DEC 11 Operating Procedure Number and Constraint (7720) SCE N/A 10/17/2017 470 No INC 11 Operating Procedure Number and Constraint (7720) SCE N/A 10/17/2017 470 No DEC 15 Operating Procedure Number and Constraint (7720) SCE N/A 10/17/2017 470 No INC 15 Operating Procedure Number and Constraint (7720) SCE N/A 10/18/2017 470 No DEC 13 Operating Procedure Number and Constraint (7720) SCE N/A 10/18/2017 470 No DEC 13 Operating Procedure Number and Constraint (7720) SCE N/A 10/18/2017 470 No DEC 13 Operating Procedure Number and Constraint (7720) SCE N/A 10/23/2017 470 No DEC 8 Operating Procedure Number and Constraint (7720) SCE N/A 10/23/2017 470 No DEC 8 Operating Procedure Number and Constraint (7720) SCE N/A 10/23/2017 470 No DEC 9 Operating Procedure Number and Constraint (7720) SCE N/A 10/24/2017 470 No DEC 9 Operating Procedure Number and Constraint (7720) SCE N/A 10/24/2017 470 No DEC 9 Operating Procedure Number and Constraint (7720) SCE N/A 10/24/2017 470 No INC 9 Operating Procedure Number and Constraint (7720) SCE N/A 10/25/2017 465 No DEC 11 Operating Procedure Number and Constraint (7720) SCE N/A 10/25/2017 465 No INC 11 Operating Procedure Number and Constraint (7720) SCE N/A 10/25/2017 465 No INC 22 Operating Procedure Number and Constraint (7720) SCE N/A 10/26/2017 485 No INC 22	Operating Procedure Number and Constraint (7720) SCE N/A 10/16/2017 470 No DEC 11 13:40

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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
157	RT	Other Reliability Requirement	Intertie	N/A	10/24/2017	61	No	INC	1	16:00	16:59
158	RT	Other Reliability Requirement	Intertie	N/A	10/25/2017	750	No	DEC	4	17:45	20:59
159	RT	Other Reliability Requirement	PG&E	Bay Area	10/23/2017	120	No	INC	1	10:11	11:01
160	RT	Other Reliability Requirement	PG&E	Fresno	10/12/2017	0	No	INC	3	13:50	16:49
						166-					
161	RT	Other Reliability Requirement	PG&E	Sierra	10/24/2017	266	No	DEC	5	17:30	22:09
162	RT	Other Reliability Requirement	PG&E	Sierra	10/24/2017	100	No	INC	5	17:30	21:59
						326-					
163	RT	Other Reliability Requirement	SCE	LA Basin	10/23/2017	332	No	INC	1	10:11	11:01
164	RT	Other Reliability Requirement	SDG&E	San Diego-IV	10/23/2017	0	No	INC	2	14:00	15:37
165	RT	Over Generation	SDG&E	San Diego-IV	10/23/2017	593	No	DEC	1	10:20	10:29
400	БТ	Planned Transmission Outage and		N 1/A	40/40/0047	200-	١	550		40.00	40.50
166	RT	Constraint	Intertie	N/A	10/19/2017	400	No	DEC	8	12:30	19:59
167	RT	Planned Transmission Outage and Constraint	Intertie	N/A	10/20/2017	400	No	INC	4	12:15	12:59
107	KI	Planned Transmission Outage and	intertie	IN/A	10/20/2017	400	INO	INC	ı	12.13	12.59
168	RT	Constraint	Intertie	N/A	10/20/2017	400	No	INC	3	13:00	15:59
100	- 1 1	Planned Transmission Outage and	ii itortio	14/7	10/20/2011	600-	110			10.00	10.00
169	RT	Constraint	Intertie	N/A	10/25/2017	750	No	DEC	7	11:10	17:59
		Planned Transmission Outage and									
170	RT	Constraint	Intertie	N/A	10/25/2017	600	No	INC	5	11:10	15:59
		Planned Transmission Outage and									
171	RT	Constraint	Intertie	N/A	10/26/2017	800	No	INC	3	12:05	14:59
470	БТ	Planned Transmission Outage and	DCOE	Гиосия	40/00/0047	2	Nia	INIC		40.50	22.50
172	RT	Constraint Planned Transmission Outage and	PG&E	Fresno	10/20/2017	3	No	INC	8	16:50	23:59
173	RT	Constraint	PG&E	Fresno	10/21/2017	3	No	DEC	24	0:00	23:59
175	111	Planned Transmission Outage and	1 Oak	1 103110	10/21/2017		140	DLO		0.00	20.00
174	RT	Constraint	PG&E	Fresno	10/22/2017	3	No	INC	6	0:00	5:59
		Planned Transmission Outage and					_				
175	RT	Constraint	PG&E	Humboldt	10/1/2017	15- 57	No	DEC	23	0:00	22:29

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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
		Planned Transmission Outage and									
176	RT	Constraint	PG&E	Humboldt	10/1/2017	15- 126	No	INC	24	0:00	23:59
		Planned Transmission Outage and									
177	RT	Constraint	PG&E	Humboldt	10/2/2017	62- 155	No	DEC	18	6:35	23:59
		Planned Transmission Outage and									
178	RT	Constraint	PG&E	Humboldt	10/2/2017	16- 77	No	INC	24	0:00	23:59
		Planned Transmission Outage and									
179	RT	Constraint	PG&E	Humboldt	10/3/2017	30- 60	No	DEC	24	0:15	23:59
		Planned Transmission Outage and									
180	RT	Constraint	PG&E	Humboldt	10/3/2017	30- 77	No	INC	24	0:00	23:59
		Planned Transmission Outage and									
181	RT	Constraint	PG&E	Humboldt	10/4/2017	45	No	DEC	24	0:00	23:59
400	БТ	Planned Transmission Outage and	D00E	11 1 16	40/4/0047	4.5		11.10	0.4	0.00	00.50
182	RT	Constraint	PG&E	Humboldt	10/4/2017	45	No	INC	24	0:00	23:59
400	БТ	Planned Transmission Outage and	DONE	11 1 -1 16	40/5/0047	00 70	N. 1.	DEO	40	0.00	00.50
183	RT	Constraint	PG&E	Humboldt	10/5/2017	28- 72	No	DEC	18	6:30	23:59
404	ОТ	Planned Transmission Outage and	DONE	l louada a lalt	40/5/0047	00 70	NI-	INIC	0.4	0.00	00.50
184	RT	Constraint Constraint Contains and	PG&E	Humboldt	10/5/2017	28- 72	No	INC	24	0:00	23:59
405	рт	Planned Transmission Outage and	PG&E	المام ما مدرا ا	40/0/0047	44 64	Nia	DEC	22	0.00	22.50
185	RT	Constraint	PG&E	Humboldt	10/6/2017	14- 61	No	DEC	22	2:00	23:59
186	RT	Planned Transmission Outage and Constraint	PG&E	Humboldt	10/6/2017	30- 60	No	INC	24	0:00	23:59
100	ΚI	Planned Transmission Outage and	PG&E	пиньони	10/6/2017	30- 60	INO	INC	24	0.00	23.39
187	RT	Constraint	PG&E	Humboldt	10/7/2017	15- 45	No	DEC	24	0:00	23:59
107	IXI	Planned Transmission Outage and	FGGL	Turribolat	10/1/2017	13- 43	INO	DLC	24	0.00	23.39
188	RT	Constraint	PG&E	Humboldt	10/7/2017	15- 60	No	INC	24	0:00	23:59
100	1 ()	Planned Transmission Outage and	1 Oak	Turribolat	10/1/2017	10 00	140	1140	27	0.00	20.00
189	RT	Constraint	PG&E	Humboldt	10/8/2017	15- 120	No	DEC	24	0:55	23:59
100	1 . 1	Planned Transmission Outage and	1 000	Tullibolat	10/0/2011	10 120	140	DE0	27	0.00	20.00
190	RT	Constraint	PG&E	Humboldt	10/8/2017	30- 147	No	INC	24	0:00	23:59
		Planned Transmission Outage and		. idilibolat	10,0,2011	00 117	. 10			0.00	20.00
191	RT	Constraint	PG&E	Humboldt	10/9/2017	30- 75	No	DEC	19	5:45	23:59

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	ket						mm				
Num	Тур	Dana.	Locatio	Local Reliability	Tuesda Data	B#NA/	itm	INC_	Hou	Begin	End
ber	е	Reason	n	Area	Trade Date	MW	ent	DEC	rs	Time	Time
192	RT	Planned Transmission Outage and Constraint	PG&E	Humboldt	10/9/2017	15 00	No	INC	24	0:00	23:59
192	ΚI	Planned Transmission Outage and	PG&E	Humbolat	10/9/2017	15- 90	INO	IIIC	24	0.00	23.59
193	RT	Constraint	PG&E	Humboldt	10/10/2017	30- 75	No	DEC	24	0:30	23:59
193	ΚI	Planned Transmission Outage and	PG&E	Humbolat	10/10/2017	30- 75	No	DEC	24	0.30	23.59
194	RT	Constraint	PG&E	Humboldt	10/10/2017	56- 135	No	INC	24	0:00	23:59
194	ΚI	Planned Transmission Outage and	PG&E	Humbolat	10/10/2017	30-133	INO	IIIC	24	0.00	23.59
195	RT	Constraint	PG&E	Humboldt	10/11/2017	64	No	DEC	18	6:45	23:59
195	ΚI	Planned Transmission Outage and	PG&E	пиниона	10/11/2017	04	No	DEC	10	0.40	23.59
196	RT	Constraint	PG&E	Humboldt	10/11/2017	42- 77	No	INC	24	0:00	23:59
130	IXI	Planned Transmission Outage and	FGGL	Tidifibolat	10/11/2017	42- 11	INO	IIVC	24	0.00	23.39
197	RT	Constraint	PG&E	Humboldt	10/12/2017	64	No	DEC	24	0:00	23:59
131	111	Planned Transmission Outage and	1 Oak	Tidifibolat	10/12/2017	04	110	DLC	24	0.00	20.00
198	RT	Constraint	PG&E	Humboldt	10/12/2017	32- 64	No	INC	24	0:00	23:59
100	1	Planned Transmission Outage and	1 002	Tidilibolat	10/12/2017	02 01	110			0.00	20.00
199	RT	Constraint	PG&E	Humboldt	10/13/2017	32- 64	No	DEC	21	0:00	20:59
		Planned Transmission Outage and				0_ 0.				0.00	
200	RT	Constraint	PG&E	Humboldt	10/13/2017	32- 128	No	INC	24	0:00	23:59
		Planned Transmission Outage and									
201	RT	Constraint	PG&E	Humboldt	10/14/2017	28- 64	No	DEC	17	7:40	23:59
		Planned Transmission Outage and									
202	RT	Constraint	PG&E	Humboldt	10/14/2017	64- 176	No	INC	24	0:00	23:59
		Planned Transmission Outage and									
203	RT	Constraint	PG&E	Humboldt	10/15/2017	32- 64	No	DEC	20	4:50	23:59
		Planned Transmission Outage and									
204	RT	Constraint	PG&E	Humboldt	10/15/2017	32- 238	No	INC	24	0:00	23:59
		Planned Transmission Outage and									
205	RT	Constraint	PG&E	Humboldt	10/16/2017	16- 56	No	DEC	24	0:00	23:59
		Planned Transmission Outage and									
206	RT	Constraint	PG&E	Humboldt	10/16/2017	32- 96	No	INC	24	0:00	23:59
		Planned Transmission Outage and									
207	RT	Constraint	PG&E	Humboldt	10/17/2017	28- 70	No	DEC	24	0:00	23:59

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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
		Planned Transmission Outage and		7 11 000	77000 2 000						
208	RT	Constraint	PG&E	Humboldt	10/17/2017	14- 70	No	INC	24	0:00	23:59
		Planned Transmission Outage and									
209	RT	Constraint	PG&E	Humboldt	10/18/2017	28- 58	No	DEC	24	0:00	23:59
		Planned Transmission Outage and									
210	RT	Constraint	PG&E	Humboldt	10/18/2017	14- 58	No	INC	24	0:00	23:59
		Planned Transmission Outage and									
211	RT	Constraint	PG&E	Humboldt	10/19/2017	28- 70	No	DEC	24	0:00	23:59
		Planned Transmission Outage and									
212	RT	Constraint	PG&E	Humboldt	10/19/2017	28- 70	No	INC	24	0:00	23:59
		Planned Transmission Outage and									
213	RT	Constraint	PG&E	Humboldt	10/20/2017	14- 56	No	DEC	24	0:20	23:59
		Planned Transmission Outage and	5005		40/00/004						
214	RT	Constraint	PG&E	Humboldt	10/20/2017	28- 56	No	INC	24	0:00	23:59
0.45	БТ	Planned Transmission Outage and	5005	11 1 16	40/04/0047			550	4.0	0.05	00.50
215	RT	Constraint	PG&E	Humboldt	10/21/2017	56	No	DEC	18	6:05	23:59
040	БТ	Planned Transmission Outage and	DONE	11 1-16	40/04/0047	50		1110	0.4	0.00	00.50
216	RT	Constraint	PG&E	Humboldt	10/21/2017	56	No	INC	24	0:00	23:59
217	рт	Planned Transmission Outage and	PG&E	المسام ما ماد	40/00/0047	40 04	Nia	DEC	47	7.45	22.50
217	RT	Constraint	PG&E	Humboldt	10/22/2017	16- 84	No	DEC	17	7:45	23:59
218	RT	Planned Transmission Outage and Constraint	PG&E	Humboldt	10/22/2017	20 04	No	INC	24	0:00	23:59
210	K1	Planned Transmission Outage and	PG&E	пиньони	10/22/2017	28- 84	INO	IIIC	24	0.00	23.39
219	RT	Constraint	PG&E	Humboldt	10/23/2017	16- 48	No	DEC	19	0:00	18:59
219	18.1	Planned Transmission Outage and	FGaL	Turribolat	10/23/2017	10- 40	INU	DLC	13	0.00	10.59
220	RT	Constraint	PG&E	Humboldt	10/23/2017	16- 48	No	INC	19	0:00	18:59
220	111	Planned Transmission Outage and	1 Oak	Hambolat	10/20/2017	10 70	140	1140	15	0.00	10.00
221	RT	Constraint	PG&E	Humboldt	10/24/2017	30- 60	No	DEC	16	8:45	23:59
		Planned Transmission Outage and		Hambolat	10/2 1/2011	00 00	110	220		0.10	20.00
222	RT	Constraint	PG&E	Humboldt	10/24/2017	42- 62	No	INC	10	0:05	9:29
		Planned Transmission Outage and	. 362	11011100100	. 5/2 1/25 17	.2 02				0.00	0.20
223	RT	Constraint	PG&E	Humboldt	10/25/2017	42- 70	No	DEC	23	1:15	23:59

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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
		Planned Transmission Outage and									
224	RT	Constraint	PG&E	Humboldt	10/25/2017	28- 90	No	INC	24	0:00	23:59
		Planned Transmission Outage and									
225	RT	Constraint	PG&E	Humboldt	10/26/2017	14- 65	No	DEC	24	0:45	23:59
		Planned Transmission Outage and									
226	RT	Constraint	PG&E	Humboldt	10/26/2017	42- 56	No	INC	15	0:00	14:59
		Planned Transmission Outage and									
227	RT	Constraint	PG&E	Humboldt	10/27/2017	45- 59	No	DEC	18	2:35	19:59
		Planned Transmission Outage and									
228	RT	Constraint	PG&E	Humboldt	10/27/2017	14- 65	No	INC	20	0:00	19:59
		Planned Transmission Outage and									
229	RT	Constraint	PG&E	Humboldt	10/28/2017	32- 45	No	DEC	17	7:07	23:59
		Planned Transmission Outage and									
230	RT	Constraint	PG&E	Humboldt	10/28/2017	15- 60	No	INC	17	7:07	23:59
004		Planned Transmission Outage and	5005		40/00/004			550			
231	RT	Constraint	PG&E	Humboldt	10/29/2017	15- 57	No	DEC	18	6:45	23:59
000	БТ	Planned Transmission Outage and	D00E	11 1 16	40/00/0047	45 00			0.4	0.00	00.50
232	RT	Constraint	PG&E	Humboldt	10/29/2017	15- 63	No	INC	24	0:00	23:59
000	D.T.	Planned Transmission Outage and	DOOF	l louanh a lalt	40/00/0047	44 70	NI-	DEC	0.4	0.00	00.50
233	RT	Constraint	PG&E	Humboldt	10/30/2017	14- 79	No	DEC	24	0:00	23:59
234	RT	Planned Transmission Outage and Constraint	PG&E	Humboldt	10/30/2017	14 104	No	INC	24	0:00	23:59
234	KI	Planned Transmission Outage and	PG&E	Hullibolat	10/30/2017	14- 124	INO	INC	24	0.00	23.59
235	RT	Constraint	PG&E	Humboldt	10/31/2017	48	No	DEC	19	5:15	23:59
233	N1	Planned Transmission Outage and	FGGE	Hullibolut	10/31/2017	40	INO	DEC	19	5.15	23.59
236	RT	Constraint	PG&E	Humboldt	10/31/2017	14- 80	No	INC	24	0:00	23:59
230	111	Planned Transmission Outage and	1 Oak	Tidilibolat	10/31/2017	14- 00	110	1140	24	0.00	25.55
237	RT	Constraint	PG&E	Humboldt	11/1/2017	48	No	INC	1	0:00	0:39
201	111	Planned Transmission Outage and	1 Oak	Hambolat	11/1/2017	196-	140	1140	'	0.00	0.00
238	RT	Constraint	PG&E	NCNB	10/4/2017	213	No	DEC	17	7:10	23:59
	111	Planned Transmission Outage and		110115	10/1/2011	205-	110	220	.,	7.10	20.00
239	RT	Constraint	PG&E	NCNB	10/5/2017	213	No	DEC	24	0:00	23:59

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Num	ket		Locatio	Local Baliability			mm itm	INC	Hou	Booin	End
ber	Typ e	Reason	Locatio	Local Reliability Area	Trade Date	MW	ent	DEC_	rs	Begin Time	Time
DCI		Planned Transmission Outage and		Alea	Trade Date	192-	Citt	DLC	13	Tillie	Tillic
240	RT	Constraint	PG&E	NCNB	10/6/2017	216	No	DEC	19	0:00	18:59
		Planned Transmission Outage and			. 0, 0, 20	126-				0.00	
241	RT	Constraint	PG&E	NCNB	10/14/2017	260	No	DEC	3	10:05	12:14
		Planned Transmission Outage and									
242	RT	Constraint	PG&E	NCNB	10/14/2017	63- 130	No	INC	3	10:05	12:14
		Planned Transmission Outage and				143-					
243	RT	Constraint	PG&E	NCNB	10/18/2017	176	No	DEC	7	14:40	21:14
		Planned Transmission Outage and									
244	RT	Constraint	PG&E	NCNB	10/21/2017	150	No	DEC	16	8:15	23:59
		Planned Transmission Outage and									
245	RT	Constraint	PG&E	NCNB	10/21/2017	74	No	INC	16	8:15	23:59
		Planned Transmission Outage and							_		
246	RT	Constraint	PG&E	Sierra	10/24/2017	20	No	INC	2	8:15	9:59
0.47	БТ	Planned Transmission Outage and	D00E	0, 1,	40/0/0047	40 70		550	4.0	0.00	47.00
247	RT	Constraint	PG&E	Stockton	10/6/2017	40- 70	No	DEC	10	8:00	17:29
0.40	рт	Planned Transmission Outage and	DCOF	Cto alston	40/0/0047	50 70	Nia	INIC	40	0.00	47.00
248	RT	Constraint	PG&E	Stockton	10/6/2017	50- 70	No	INC	10	8:00	17:29
249	RT	Planned Transmission Outage and Constraint	SCE	LA Basin	10/9/2017	40	No	INC	20	4:00	23:59
249	K I	Planned Transmission Outage and	SCE	LA Dasili	10/9/2017	40	INO	INC	20	4.00	23.59
250	RT	Constraint	SCE	LA Basin	10/10/2017	20- 40	Yes	INC	24	0:00	23:59
230	111	Planned Transmission Outage and		LA Dasin	10/10/2017	20 40	103	1140	27	0.00	20.00
251	RT	Constraint	SCE	LA Basin	10/19/2017	20	No	INC	20	0:00	19:59
201	111	Planned Transmission Outage and	002	L/ (Dasiii	10/10/2017	20	140		20	0.00	10.00
252	RT	Constraint	SCE	N/A	10/9/2017	200	No	INC	7	8:00	14:59
		Planned Transmission Outage and							1		
253	RT	Constraint	SDG&E	San Diego-IV	10/2/2017	20	Yes	INC	4	17:00	20:59
		Planned Transmission Outage and		Ĭ							
254	RT	Constraint	SDG&E	San Diego-IV	10/3/2017	20- 110	No	INC	14	6:00	19:59
		Planned Transmission Outage and									
255	RT	Constraint	SDG&E	San Diego-IV	10/4/2017	63	No	INC	3	17:00	19:59

	Mar						Со				
Num	ket Typ		Locatio	Local Reliability			mm itm	INC	Hou	Begin	End
ber	e	Reason	n	Area	Trade Date	MW	ent	DEC_	rs	Time	Time
		Planned Transmission Outage and		71100	Trado Dato		0			1 11110	
256	RT	Constraint	SDG&E	San Diego-IV	10/12/2017	63	No	INC	13	8:50	20:59
		Planned Transmission Outage and									
257	RT	Constraint	SDG&E	San Diego-IV	10/12/2017	63	No	INC	2	8:00	9:14
		Planned Transmission Outage and									
258	RT	Constraint	SDG&E	San Diego-IV	10/13/2017	63- 243	No	DEC	14	7:15	20:59
050	БТ	Planned Transmission Outage and	00005	0 5: "	40/40/0047		١	13.10		7.45	00.50
259	RT	Constraint	SDG&E	San Diego-IV	10/13/2017	63- 306	No	INC	14	7:15	20:59
260	RT	Planned Transmission Outage and Constraint	SDG&E	San Diego-IV	10/15/2017	63	No	DEC	6	15:45	20:59
200	IXI	Planned Transmission Outage and	SDGQL	San Diego-iv	10/13/2017	0.5	INO	DLC	0	13.43	20.39
261	RT	Constraint	SDG&E	San Diego-IV	10/15/2017	63	No	INC	6	15:45	20:59
		Planned Transmission Outage and	020012	Jan Diege II	10/10/2011						
262	RT	Constraint	SDG&E	San Diego-IV	10/18/2017	63	No	DEC	15	5:20	19:59
		Planned Transmission Outage and									
263	RT	Constraint	SDG&E	San Diego-IV	10/18/2017	63	No	INC	15	5:20	19:59
		Planned Transmission Outage and									
264	RT	Constraint	SDG&E	San Diego-IV	10/19/2017	20	No	INC	4	16:15	19:59
005	БТ	Planned Transmission Outage and	00005	0 0' 11/	40/05/0047	00	N	1110	_	44.00	45.50
265	RT	Constraint	SDG&E	San Diego-IV	10/25/2017	39	No	INC	5	11:26	15:59
266	RT	Software Limitation	PG&E	Bay Area	10/6/2017	360	No	DEC	5	16:40	20:59
267	RT	Software Limitation	PG&E	Bay Area	10/24/2017	231	No	DEC	1	22:20	22:59
268	RT	Software Limitation	PG&E	Fresno	10/16/2017	0	No	DEC	3	21:00	23:59
269	RT	Software Limitation	PG&E	Fresno	10/16/2017	0	No	INC	3	21:00	23:59
270	RT	Software Limitation	PG&E	Humboldt	10/5/2017	16- 32	No	INC	3	21:45	23:59
271	RT	Software Limitation	PG&E	Humboldt	10/6/2017	16	No	DEC	1	2:00	2:29
272	RT	Software Limitation	PG&E	Humboldt	10/16/2017	32	No	INC	1	23:30	23:59
273	RT	Software Limitation	PG&E	Humboldt	10/17/2017	16	No	INC	1	1:15	1:44
274	RT	Software Limitation	PG&E	Humboldt	10/19/2017	32- 64	No	INC	2	22:45	23:59
275	RT	Software Limitation	PG&E	Humboldt	10/20/2017	16	No	INC	1	0:45	1:14
276	RT	Software Limitation	PG&E	Humboldt	10/29/2017	49	No	DEC	1	21:15	21:59

	Mar						Со				
Nivers	ket		Lassia	Local Daliability			mm	INIC		Danin	□ al
Num ber	Typ e	Reason	Locatio n	Local Reliability Area	Trade Date	MW	itm ent	INC_ DEC	Hou rs	Begin Time	End Time
277	RT	Software Limitation	PG&E	Humboldt	10/29/2017	33	No	INC	1	23:00	23:29
278	RT	Software Limitation	SCE	LA Basin	10/1/2017	500	No	INC	6	0:00	5:44
279	RT	Software Limitation	SCE	LA Basin	10/20/2017	0	No	INC	2	22:10	23:14
275	111	Contware Elimitation	001	LA Dasiii	10/20/2011	150-	110	1140		22.10	20.14
280	RT	Software Limitation	SCE	LA Basin	10/24/2017	240	No	DEC	7	15:50	21:59
						150-					
281	RT	Software Limitation	SCE	LA Basin	10/24/2017	241	No	INC	11	11:00	21:59
282	RT	Software Limitation	SDG&E	San Diego-IV	10/2/2017	0	No	INC	3	21:10	23:59
283	RT	Software Limitation	SDG&E	San Diego-IV	10/18/2017	0	No	INC	2	20:00	21:59
284	RT	Software Limitation	SDG&E	San Diego-IV	10/23/2017	0	No	INC	4	10:15	13:59
285	RT	Software Limitation	SDG&E	San Diego-IV	10/24/2017	100	Yes	INC	2	14:30	15:59
286	RT	Unit Testing	Intertie	N/A	10/1/2017	100	No	INC	24	0:00	23:59
287	RT	Unit Testing	Intertie	N/A	10/2/2017	100	No	INC	24	0:00	23:59
288	RT	Unit Testing	Intertie	N/A	10/3/2017	100	No	INC	24	0:00	23:59
289	RT	Unit Testing	Intertie	N/A	10/4/2017	100	No	INC	24	0:00	23:59
290	RT	Unit Testing	Intertie	N/A	10/5/2017	100	No	INC	24	0:00	23:59
291	RT	Unit Testing	Intertie	N/A	10/6/2017	100	No	INC	24	0:00	23:59
292	RT	Unit Testing	Intertie	N/A	10/7/2017	100	No	INC	24	0:00	23:59
293	RT	Unit Testing	Intertie	N/A	10/8/2017	100	No	INC	24	0:00	23:59
294	RT	Unit Testing	Intertie	N/A	10/9/2017	100	No	INC	24	0:00	23:59
295	RT	Unit Testing	Intertie	N/A	10/10/2017	100	No	INC	24	0:00	23:59
296	RT	Unit Testing	Intertie	N/A	10/11/2017	100	No	INC	24	0:00	23:59
297	RT	Unit Testing	Intertie	N/A	10/12/2017	100	No	INC	24	0:00	23:59
298	RT	Unit Testing	Intertie	N/A	10/13/2017	100	No	INC	24	0:00	23:59
299	RT	Unit Testing	Intertie	N/A	10/14/2017	100	No	INC	24	0:00	23:59
300	RT	Unit Testing	Intertie	N/A	10/15/2017	100	No	INC	24	0:00	23:59
301	RT	Unit Testing	Intertie	N/A	10/16/2017	100	No	INC	24	0:00	23:59
302	RT	Unit Testing	Intertie	N/A	10/17/2017	100	No	INC	24	0:00	23:59
303	RT	Unit Testing	Intertie	N/A	10/18/2017	100	No	INC	24	0:00	23:59

	Mar ket						Co mm				
Num	Тур		Locatio	Local Reliability			itm	INC	Hou	Begin	End
ber	ė	Reason	n	Area	Trade Date	MW	ent	DEC	rs	Time	Time
304	RT	Unit Testing	Intertie	N/A	10/19/2017	100	No	INC	24	0:00	23:59
305	RT	Unit Testing	Intertie	N/A	10/20/2017	100	No	INC	24	0:00	23:59
306	RT	Unit Testing	Intertie	N/A	10/21/2017	100	No	INC	24	0:00	23:59
307	RT	Unit Testing	Intertie	N/A	10/22/2017	100	No	INC	24	0:00	23:59
308	RT	Unit Testing	Intertie	N/A	10/23/2017	100	No	INC	24	0:00	23:59
309	RT	Unit Testing	Intertie	N/A	10/24/2017	100	No	INC	24	0:00	23:59
310	RT	Unit Testing	Intertie	N/A	10/25/2017	100	No	INC	24	0:00	23:59
311	RT	Unit Testing	Intertie	N/A	10/26/2017	100	No	INC	7	0:00	6:59
312	RT	Unit Testing	PG&E	Fresno	10/26/2017	45	No	INC	1	18:10	18:54
313	RT	Unit Testing	PG&E	N/A	10/11/2017	84	No	INC	1	23:12	23:59
314	RT	Unit Testing	PG&E	N/A	10/12/2017	84	No	INC	7	0:00	6:29
315	RT	Unit Testing	PG&E	N/A	10/17/2017	44	No	DEC	1	18:50	19:09
316	RT	Unit Testing	PG&E	N/A	10/17/2017	44	No	INC	1	18:50	19:09
317	RT	Unit Testing	PG&E	N/A	10/18/2017	44	No	INC	1	19:22	19:54
318	RT	Unit Testing	SCE	LA Basin	10/12/2017	44	No	INC	1	19:13	19:29
319	RT	Unit Testing	SCE	LA Basin	10/18/2017	42	No	INC	1	19:55	20:14
320	RT	Unit Testing	SDG&E	San Diego-IV	10/11/2017	96	No	INC	1	22:55	23:29
						177-					
321	RT	Unplanned Outage	PG&E	NCNB	10/10/2017	341	No	DEC	10	10:45	19:59
322	RT	Voltage Support	PG&E	Sierra	10/3/2017	20- 40	Yes	INC	10	1:40	10:59
323	RT	Voltage Support	PG&E	Sierra	10/4/2017	20	No	DEC	24	0:40	23:59
324	RT	Voltage Support	PG&E	Sierra	10/4/2017	20- 40	No	INC	24	0:40	23:59
325	RT	Voltage Support	PG&E	Sierra	10/5/2017	20- 40	Yes	INC	12	0:00	11:59
326	RT	Voltage Support	PG&E	Sierra	10/6/2017	20	No	INC	12	1:35	12:59
327	RT	Voltage Support	PG&E	Sierra	10/7/2017	20	No	INC	1	18:45	19:29
328	RT	Voltage Support	PG&E	Sierra	10/8/2017	20- 62	Yes	INC	11	3:15	13:59
329	RT	Voltage Support	PG&E	Sierra	10/9/2017	20	No	INC	8	3:10	10:59
330	RT	Voltage Support	PG&E	Sierra	10/14/2017	20	Yes	INC	11	5:15	15:59
331	RT	Voltage Support	PG&E	Sierra	10/15/2017	20	No	INC	14	2:15	15:59

Num	Mar ket Typ		Locatio	Local Reliability			Co mm itm	INC_	Hou	Begin	End
ber	е	Reason	n	Area	Trade Date	MW	ent	DEC	rs	Time	Time
332	RT	Voltage Support	PG&E	Sierra	10/22/2017	20	Yes	DEC	8	12:30	19:59
333	RT	Voltage Support	PG&E	Sierra	10/22/2017	20	Yes	INC	8	12:30	19:59
334	RT	Voltage Support	PG&E	Sierra	10/23/2017	20	Yes	INC	11	1:00	11:59
335	RT	Voltage Support	SCE	N/A	10/2/2017	125	Yes	INC	4	11:00	14:59

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	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