California Independent System Operator Corporation



October 16, 2017

The Honorable Kimberly D. Bose Secretary Federal Energy Regulatory Commission 888 Frist Street, NE Washington, DC 20426

#### Re: California Independent System Operator Corporation Docket Nos. ER08-1178-\_\_\_\_ and EL08-88-\_\_\_\_ August 2017 Exceptional Dispatch Report (Chart 1 data)

Dear Secretary Bose:

Pursuant to the Federal Energy Regulatory Commission's (Commission) September 2, 2009 (September 2 order), and May 4, 2010 (May 4 order) orders in the above-referenced dockets, the California Independent System Operator Corporation (CAISO) submits the attached report for filing. The attached report provides details concerning Exceptional Dispatches the Commission directed to be included in "Chart 1" as set forth in Appendix A of the September 2 order, as modified by the CAISO's September 14, 2009 motion for clarification, which the Commission granted in its May 4 order. The attached report provides Chart 1 data for the month of August 2017.

Respectfully submitted,

#### By: /s/ Sidney L. Mannheim

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# **Exceptional Dispatch Report**

# Table 1: August 2017

CAISO Market Quality and Renewable Integration

October 16, 2017

CAISO 250 Outcropping Way Folsom, California 95630 (916) 351-4400

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# Introduction

This report is filed pursuant to FERC's September 2, 2009 and July 4, 2010 orders in ER08-1178. These orders require two monthly Exceptional Dispatch reports—one issued on the 15<sup>th</sup> of each month and one issued on the 30<sup>th</sup> of each month. This report provides data on the frequency and reasons for Exceptional Dispatches issued in August 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.<sup>1</sup> A pre-day-ahead commitment is an exceptional dispatch instruction that commits a resource at or above its physical minimum operating level in the day-ahead market. A post-day-ahead market commitment is an exceptional dispatch instruction that commits a resource at or above its physical minimum operating level in the real-time market. A real-time exceptional dispatch instruction is a dispatch of a resource at or above its physical minimum operating point. A real-time exceptional dispatch above the resource day-ahead award is an incremental exceptional dispatch instruction and an exceptional dispatch below the day-ahead award is a decremental dispatch instruction.

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

Many of the exceptional dispatches listed below in Table 1, were to satisfy either a local area or system reliability requirements, and are classified into local generation requirements, transmission management requirements, non-modeled transmission outages or other non-modeled constraints or requirements and intertie emergency assistance. All of the transmission procedures are available on the CAISO website.<sup>2</sup>

The following reason for exceptional dispatch instructions in August 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

<sup>&</sup>lt;sup>1</sup> 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).

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

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 August 2017, which are self explanatory.

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

The MW column shows the range of exceptional dispatch instructions in MW for the classification. The Commitment column specifies if there was a unit commitment for the classification. The INC/DEC 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 336 exceptional dispatches in August 2017, as compared to 318 exceptional dispatches in July 2017. Exceptional dispatches issued for the following reasons accounted for approximately 35 percent of the total exceptional dispatches during the reporting period: planned transmission outages, software limitations, and operating procedure number 7110 (along with 6310, 7230, 7430, and 7820). Many of the exceptional dispatches with the reason "Other Reliability Requirement" were due to Real Time Contingency Analysis.

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

# Table 1: Exceptional Dispatches in August 2017

	California Independent System Operator Corporation Exceptional Dispatch Report October 16, 2017													
	Chart 1: Table of Exceptional Dispatches for Period 01/August/2017 - 31/August/2017													
Num ber	Mar ket Typ e	Reason	Locatio n	Local Reliability Area	Trade Date	MW	Co mm itm ent	INC_ DEC	Hou rs	Begin Time	End Time			
1	RT	Bridging Schedules	PG&E	N/A	8/30/2017	50	No	DEC	6	4:55	9:59			
2	RT	Bridging Schedules	PG&E	N/A	8/30/2017	50	No	INC	6	4:55	9:59			
3	RT	Bridging Schedules	SCE	Big Creek- Ventura	8/27/2017	100	No	INC	1	23:00	23:59			
4	RT	Bridging Schedules	SCE	Big Creek- Ventura	8/31/2017	100	No	INC	2	22:00	23:59			
5	RT	Bridging Schedules	SCE	LA Basin	8/2/2017	10	Yes	INC	1	23:00	23:59			
6	RT	Bridging Schedules	SCE	LA Basin	8/30/2017	70	No	INC	1	23:00	23:59			
7	RT	Bridging Schedules	SCE	LA Basin	8/31/2017	70	No	INC	16	0:00	15:59			
8	RT	Bridging Schedules	SDG&E	San Diego-IV	8/10/2017	20	Yes	INC	2	22:00	23:59			
9	RT	Conditions beyond the control of the CAISO	PG&E	N/A	8/29/2017	897- 1130	No	DEC	4	10:45	14:44			
10	RT	Conditions beyond the control of the CAISO	PG&E	N/A	8/29/2017	182- 410	No	INC	2	10:45	12:14			
11	RT	Conditions beyond the control of the CAISO	SCE	Big Creek- Ventura	8/29/2017	452- 559	No	DEC	5	10:45	14:59			
12	RT	Conditions beyond the control of the CAISO	SCE	N/A	8/29/2017	495- 581	No	DEC	4	10:45	14:44			
13	RT	Fast Start Unit Management	PG&E	Bay Area	8/13/2017	0	No	INC	2	0:00	1:09			
14	RT	Fast Start Unit Management	SCE	Big Creek- Ventura	8/1/2017	0	No	INC	1	0:50	1:44			
15	RT	Incomplete or Inaccurate Transmission	PG&E	Bay Area	8/16/2017	500	No	DEC	2	22:40	23:59			

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Num ber	Тур е	Reason	Locatio	Local Reliability Area	Trade Date	MW	itm ent	INC_ DEC	Hou rs	Begin Time	End Time
16	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/1/2017	40	No	INC	2	22:10	23:59
17	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/2/2017	28-40	No	DEC	18	6:55	23:59
18	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/2/2017	13- 40	No	INC	24	0:00	23:59
19	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/3/2017	28-40	No	DEC	24	0:00	23:59
20	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/3/2017	13- 40	No	INC	24	0:00	23:59
21	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/4/2017	10-40	No	DEC	24	0:00	23:59
22	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/4/2017	13- 40	No	INC	24	0:00	23:59
23	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/5/2017	10- 40	No	DEC	24	0:00	23:59
24	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/5/2017	4-40	No	INC	24	0:00	23:59
25	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/6/2017	10- 40	No	DEC	24	0:00	23:59
26	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/6/2017	4-40	No	INC	24	0:00	23:59
27	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/7/2017	10- 40	No	DEC	24	0:00	23:59
28	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/7/2017	4-40	No	INC	24	0:00	23:59
29	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/8/2017	10- 40	No	DEC	24	0:00	23:59
30	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/8/2017	4- 40	No	INC	24	0:00	23:59
31	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/9/2017	18- 40	No	DEC	24	0:00	23:59
32	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/9/2017	4-40	No	INC	24	0:00	23:59
33	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/10/2017	18- 40	No	DEC	24	0:00	23:59
34	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/10/2017	4-40	No	INC	24	0:00	23:59
35	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/11/2017	18- 40	No	DEC	24	0:00	23:59
36	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/11/2017	10- 40	No	INC	24	0:00	23:59
37	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/12/2017	18-40	No	DEC	24	0:00	23:59
38	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/12/2017	10- 40	No	INC	24	0:00	23:59
39	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/13/2017	5- 40	No	DEC	24	0:00	23:59
40	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/13/2017	10- 40	No	INC	24	0:00	23:59
41	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/14/2017	10- 40	No	DEC	24	0:00	23:59
42	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/14/2017	5- 40	No	INC	24	0:00	23:59
43	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/15/2017	22- 40	No	DEC	24	0:00	23:59
44	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/15/2017	10- 40	No	INC	24	0:00	23:59

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Num ber	Тур е	Reason	Locatio	Local Reliability Area	Trade Date	MW	itm ent	INC_ DEC	Hou rs	Begin Time	End Time
45	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/16/2017	30-40	No	DEC	24	0:00	23:59
46	RT	Incomplete of Inaccurate Transmission	PG&E	Fresno	8/16/2017	5- 40	No	INC	24	0:00	23:59
47	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/17/2017	30-40	No	DEC	24	0:00	23:59
48	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/17/2017	5-40	No	INC	24	0:00	23:59
49	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/18/2017	5-40	No	DEC	24	0:00	23:59
50	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/18/2017	10-40	No	INC	24	0:00	23:59
51	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/19/2017	10-40	No	DEC	24	0:00	23:59
52	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/19/2017	10- 40	No	INC	24	0:00	23:59
53	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/20/2017	10- 40	No	DEC	24	0:00	23:59
54	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/20/2017	5-40	No	INC	24	0:00	23:59
55	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/21/2017	5-40	No	DEC	24	0:00	23:59
56	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/21/2017	10- 40	No	INC	24	0:00	23:59
57	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/22/2017	5- 40	No	DEC	24	0:00	23:59
58	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/22/2017	10- 40	No	INC	24	0:00	23:59
59	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/23/2017	10- 40	No	DEC	24	0:00	23:59
60	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/23/2017	5- 40	No	INC	24	0:00	23:59
61	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/24/2017	10- 40	No	DEC	24	0:00	23:59
62	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/24/2017	5- 40	No	INC	24	0:00	23:59
63	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/25/2017	10- 40	No	DEC	24	0:00	23:59
64	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/25/2017	5- 40	No	INC	24	0:00	23:59
65	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/26/2017	10- 40	No	DEC	24	0:00	23:59
66	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/26/2017	5-40	No	INC	24	0:00	23:59
67	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/27/2017	10- 40	No	DEC	24	0:00	23:59
68	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/27/2017	30- 40	No	INC	24	0:00	23:59
69	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/28/2017	10- 40	No	DEC	24	0:00	23:59
70	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/28/2017	30- 40	No	INC	24	0:00	23:59
71	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/29/2017	10- 40	No	DEC	24	0:00	23:59
72	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/29/2017	30-40	No	INC	24	0:00	23:59
73	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/30/2017	10- 40	No	DEC	24	0:00	23:59

Num	Mar ket Typ		Locatio	Local Reliability			Co mm itm	INC_	Hou	Begin	End
ber	e	Reason	n	Area	Trade Date	MW	ent	DEC	rs	Time	Time
74	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/30/2017	30- 40	No	INC	24	0:00	23:59
75	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/31/2017	10- 40	No	DEC	24	0:00	23:59
76	RT	Incomplete or Inaccurate Transmission	PG&E	Fresno	8/31/2017	30- 40	No	INC	24	0:00	23:59
77	RT	Incomplete or Inaccurate Transmission	SCE	N/A	8/11/2017	411- 460	No	INC	5	14:55	18:59
78	RT	Incomplete or Inaccurate Transmission	SDG&E	San Diego-IV	8/7/2017	94- 188	No	INC	3	11:15	13:44
79	RT	Incomplete or Inaccurate Transmission	SDG&E	San Diego-IV	8/29/2017	25	No	DEC	6	14:30	19:59
80	RT	Load Forecast Uncertainty	PG&E	Bay Area	8/1/2017	480	No	DEC	7	14:30	20:59
81	RT	Load Forecast Uncertainty	PG&E	Bay Area	8/4/2017	117	No	INC	7	6:00	12:14
82	RT	Load Forecast Uncertainty	PG&E	Bay Area	8/21/2017	54	No	INC	3	9:00	11:59
83	RT	Load Forecast Uncertainty	PG&E	Fresno	8/26/2017	200	No	INC	1	13:15	13:19
84	RT	Load Forecast Uncertainty	PG&E	Fresno	8/28/2017	900	No	INC	1	17:48	17:59
85	RT	Load Forecast Uncertainty	PG&E	N/A	8/28/2017	182	No	DEC	5	17:15	21:59
86	RT	Load Forecast Uncertainty	PG&E	N/A	8/31/2017	47	No	DEC	13	8:35	20:59
87	RT	Load Forecast Uncertainty	PG&E	Sierra	8/21/2017	166	Yes	INC	3	9:00	11:59
88	RT	Load Forecast Uncertainty	SCE	Big Creek- Ventura	8/3/2017	50	No	INC	2	22:00	23:59
89	RT	Load Forecast Uncertainty	SCE	Big Creek- Ventura	8/4/2017	50	No	INC	24	0:00	23:59
90	RT	Load Forecast Uncertainty	SCE	Big Creek- Ventura	8/27/2017	50	No	INC	7	17:00	23:59
91	RT	Load Forecast Uncertainty	SCE	Big Creek- Ventura	8/30/2017	100	No	INC	22	2:00	23:59
92	RT	Load Forecast Uncertainty	SCE	LA Basin	8/1/2017	130	No	INC	5	9:45	13:59
93	RT	Load Forecast Uncertainty	SCE	LA Basin	8/2/2017	130	No	DEC	8	16:00	23:58
94	RT	Load Forecast Uncertainty	SCE	LA Basin	8/2/2017	20	No	INC	12	12:00	23:59
95	RT	Load Forecast Uncertainty	SCE	LA Basin	8/3/2017	10	Yes	INC	24	0:00	23:59
96	RT	Load Forecast Uncertainty	SCE	LA Basin	8/7/2017	20- 570	No	INC	10	14:00	23:59
97	RT	Load Forecast Uncertainty	SCE	LA Basin	8/14/2017	190- 194	No	DEC	6	15:35	20:59

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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
98	RT	Load Forecast Uncertainty	SCE	LA Basin	8/14/2017	194	No	INC	6	15:40	20:59
99	RT	Load Forecast Uncertainty	SCE	LA Basin	8/16/2017	194	No	DEC	7	14:05	20:59
100	RT	Load Forecast Uncertainty	SCE	LA Basin	8/16/2017	194	No	INC	7	14:05	20:59
101	RT	Load Forecast Uncertainty	SCE	LA Basin	8/21/2017	20- 388	No	INC	16	8:00	23:59
						195-					
102	RT	Load Forecast Uncertainty	SCE	LA Basin	8/24/2017	390	No	DEC	6	15:00	20:59
103	RT	Load Forecast Uncertainty	SCE	LA Basin	8/24/2017	195	No	INC	6	15:00	20:59
104	RT	Load Forecast Uncertainty	SCE	LA Basin	8/25/2017	10	No	INC	11	13:00	23:59
105	RT	Load Forecast Uncertainty	SCE	LA Basin	8/27/2017	390	No	DEC	7	14:15	20:59
106	RT	Load Forecast Uncertainty	SCE	LA Basin	8/28/2017	70	No	INC	12	12:10	23:59
107	RT	Load Forecast Uncertainty	SCE	LA Basin	8/30/2017	70	No	INC	1	23:00	23:59
108	RT	Load Forecast Uncertainty	SCE	LA Basin	8/31/2017	70	No	INC	24	0:00	23:59
109	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	8/3/2017	20	No	INC	3	21:25	23:59
110	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	8/4/2017	20- 40	Yes	INC	24	0:00	23:59
111	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	8/7/2017	20	No	INC	10	14:00	23:59
112	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	8/8/2017	20- 146	No	INC	24	0:00	23:59
113	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	8/9/2017	20- 40	Yes	INC	11	13:00	23:59
114	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	8/10/2017	20	No	INC	22	2:00	23:59
115	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	8/15/2017	63- 131	No	INC	5	16:45	20:59
116	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	8/16/2017	68	No	INC	4	17:00	20:59
117	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	8/21/2017	20- 321	Yes	INC	14	8:00	21:59
118	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	8/25/2017	63	No	INC	4	16:45	19:59
119	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	8/27/2017	63	No	DEC	6	15:15	20:59
120	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	8/27/2017	63	No	INC	6	15:15	20:59
121	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	8/28/2017	11	No	DEC	2	15:45	16:59
122	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	8/29/2017	20	Yes	INC	3	21:00	23:59
123	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	8/30/2017	20- 40	Yes	INC	24	0:00	23:59
124	RT	Load Pull	PG&E	Bay Area	8/1/2017	141	No	INC	1	12:37	13:14

Num	Mar ket Typ		Locatio	Local Reliability			Co mm itm	INC	Hou	Begin	End
ber	e	Reason	n	Area	Trade Date	MW	ent	DEC	rs	Time	Time
						120-					
125	RT	Load Pull	PG&E	Bay Area	8/2/2017	360	No	DEC	7	14:45	20:59
126	RT	Load Pull	PG&E	Bay Area	8/31/2017	74-96	No	DEC	7	14:00	20:29
					_ / . /	194-					
127	RT	Load Pull	SCE	LA Basin	8/1/2017	526	No	DEC	10	11:55	20:59
128	RT	Load Pull	SCE	LA Basin	8/1/2017	71	No	INC	10	11:55	20:59
129	RT	Load Pull	SCE	LA Basin	8/2/2017	194	No	DEC	4	17:25	20:59
130	RT	Load Pull	SCE	LA Basin	8/2/2017	190	No	INC	4	17:25	20:59
131	RT	Load Pull	SCE	LA Basin	8/10/2017	194	No	DEC	8	13:50	20:59
132	RT	Load Pull	SCE	LA Basin	8/11/2017	384	No	DEC	6	14:45	19:59
133	RT	Load Pull	SCE	LA Basin	8/12/2017	384	No	DEC	5	15:50	19:59
134	RT	Load Pull	SCE	LA Basin	8/22/2017	384	No	DEC	5	16:20	20:59
135	RT	Load Pull	SCE	LA Basin	8/22/2017	240	No	INC	1	16:25	16:59
136	RT	Load Pull	SCE	LA Basin	8/28/2017	384	No	DEC	9	13:20	21:59
137	RT	Load Pull	SCE	LA Basin	8/28/2017	240	No	INC	9	13:15	21:59
138	RT	Load Pull	SCE	LA Basin	8/29/2017	384	No	DEC	7	14:45	20:59
139	RT	Load Pull	SCE	LA Basin	8/30/2017	384	No	DEC	7	14:05	20:59
140	RT	Load Pull	SCE	LA Basin	8/31/2017	250	No	DEC	5	16:30	20:59
						220-					
141	RT	Load Pull	SCE	LA Basin	8/31/2017	500	No	INC	6	15:20	20:59
142	RT	Load Pull	SDG&E	San Diego-IV	8/9/2017	63	No	INC	6	16:12	21:59
143	RT	Load Pull	SDG&E	San Diego-IV	8/13/2017	63	No	INC	4	16:15	19:59
	_	Operating Procedure Number and Constraint									
144	RT	(7110)	PG&E	Humboldt	8/1/2017	38	No	DEC	2	22:50	23:59
4.45	БТ	Operating Procedure Number and Constraint	DOAE		0/4/0047	40.00	N		47	7 6 6	00.50
145	RT	(7110) Operating Procedure Number and Constraint	PG&E	Humboldt	8/1/2017	13- 38	No	INC	17	7:55	23:59
146	RT	(7110)	PG&E	Humboldt	8/2/2017	13- 38	No	INC	11	0:00	10:04
147	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/3/2017	16	No	DEC	18	6:50	23:59

Num ber	Mar ket Typ e	Reason	Locatio n	Local Reliability Area	Trade Date	MW	Co mm itm ent	INC_ DEC	Hou	Begin Time	End Time
	•	Operating Procedure Number and Constraint		71100			ont	520			
148	RT	(7110)	PG&E	Humboldt	8/3/2017	16	No	INC	18	6:50	23:59
149	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/4/2017	13	No	DEC	13	7:40	19:59
150	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/4/2017	13- 16	No	INC	20	0:00	19:59
151	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/5/2017	13	No	INC	8	16:50	23:59
152	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/6/2017	16- 32	No	DEC	9	15:55	23:59
153	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/6/2017	16- 61	No	INC	9	15:55	23:59
154	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/7/2017	25	No	DEC	13	7:35	19:59
155	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/7/2017	16- 92	No	INC	24	0:00	23:59
156	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/8/2017	25	No	DEC	15	3:45	18:14
157	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/8/2017	25-62	No	INC	19	0:00	18:14
158	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/9/2017	13	No	DEC	12	6:39	17:59
159	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/9/2017	13- 43	No	INC	17	6:39	22:59
160	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/10/2017	25	No	DEC	9	8:50	17:14
161	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/10/2017	25- 32	No	INC	16	8:50	23:59
162	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/11/2017	13- 26	No	DEC	23	1:50	23:59
163	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/11/2017	13- 32	No	INC	24	0:00	23:59

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
164	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/12/2017	13	No	DEC	14	0:00	13:59
165	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/12/2017	13- 32	No	INC	24	0:00	23:59
166	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/13/2017	13- 26	No	INC	24	0:00	23:44
167	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/14/2017	13- 75	No	INC	15	8:00	22:59
168	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/15/2017	26	No	INC	15	6:55	21:54
169	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/16/2017	13- 39	No	INC	18	6:20	23:44
170	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/17/2017	16- 32	No	DEC	11	12:40	23:29
171	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/17/2017	15- 76	No	INC	16	7:34	23:29
172	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/18/2017	30	No	DEC	17	7:25	23:59
173	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/18/2017	30- 45	No	INC	17	7:25	23:59
174	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/19/2017	30	No	INC	2	0:00	1:59
175	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/20/2017	27- 30	No	DEC	6	17:00	22:59
176	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/20/2017	16- 31	No	INC	7	17:00	23:59
177	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/21/2017	28	No	DEC	13	9:40	21:59
178	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/21/2017	15- 56	No	INC	24	0:00	23:59
179	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/22/2017	15- 43	No	INC	8	0:00	7:14

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
180	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/23/2017	15	No	DEC	4	20:00	23:59
181	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/23/2017	15- 28	No	INC	4	20:00	23:59
182	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/24/2017	15	No	DEC	8	0:00	7:59
183	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/24/2017	15- 28	No	INC	24	0:00	23:59
184	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/25/2017	14- 42	No	DEC	10	13:30	23:29
185	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/25/2017	28- 42	No	INC	24	0:00	23:59
186	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/26/2017	48- 96	No	INC	1	22:15	23:14
187	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/27/2017	42-96	No	INC	2	21:30	22:39
188	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/28/2017	28- 57	No	DEC	13	7:25	19:59
189	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/28/2017	14- 28	No	INC	17	7:25	23:59
190	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/30/2017	16	No	INC	2	7:00	8:59
191	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/31/2017	30- 60	No	DEC	20	0:00	19:59
192	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/31/2017	30- 120	No	INC	20	0:00	19:59
193	RT	Operating Procedure Number and Constraint (7230)	PG&E	Sierra	8/12/2017	20- 30	No	INC	7	16:10	22:59
194	RT	Operating Procedure Number and Constraint (7230)	PG&E	Sierra	8/13/2017	20	No	INC	4	16:30	19:59
195	RT	Operating Procedure Number and Constraint (7230)	PG&E	Sierra	8/27/2017	16	No	INC	1	16:18	16:29

Num	Mar ket Typ	<b>D</b>	Locatio	Local Reliability	Trada Data		Co mm itm	INC_	Hou	Begin	End
ber	е	Reason	n	Area	Trade Date	MW	ent	DEC	rs	Time	Time
196	RT	Operating Procedure Number and Constraint (7230)	PG&E	Sierra	8/28/2017	35	No	INC	3	17:15	19:59
197	RT	Operating Procedure Number and Constraint (7430)	PG&E	Fresno	8/3/2017	16	No	INC	4	2:45	5:59
198	RT	Operating Procedure Number and Constraint (7430)	PG&E	Fresno	8/14/2017	83- 150	No	INC	3	19:40	21:59
199	RT	Operating Procedure Number and Constraint (7430)	PG&E	Fresno	8/23/2017	80	No	INC	2	15:35	16:59
200	RT	Operating Procedure Number and Constraint (7720)	SCE	N/A	8/4/2017	410	No	DEC	8	14:45	21:59
201	RT	Operating Procedure Number and Constraint (7720)	SCE	N/A	8/6/2017	410	No	DEC	7	16:40	22:59
202	RT	Operating Procedure Number and Constraint (7720)	SCE	N/A	8/8/2017	430	No	DEC	2	17:05	18:44
203	RT	Operating Procedure Number and Constraint (7720)	SCE	N/A	8/10/2017	450	No	DEC	5	17:30	21:59
204	RT	Operating Procedure Number and Constraint (7720)	SCE	N/A	8/10/2017	450	No	INC	5	17:30	21:59
205	RT	Operating Procedure Number and Constraint (7720)	SCE	N/A	8/29/2017	450	No	DEC	5	17:40	21:59
206	RT	Operating Procedure Number and Constraint (7720)	SCE	N/A	8/30/2017	470	No	INC	7	15:15	21:59
207	RT	Other Reliability Requirement	PG&E	Bay Area	8/12/2017	240	No	INC	1	21:10	21:59
208	RT	Other Reliability Requirement	PG&E	Fresno	8/28/2017	35-70	No	DEC	5	15:25	19:59
209	RT	Other Reliability Requirement	PG&E	N/A	8/30/2017	310	No	DEC	7	14:00	20:59
210	RT	Other Reliability Requirement	PG&E	N/A	8/31/2017	47	No	DEC	12	9:00	20:59
211	RT	Other Reliability Requirement	SCE	LA Basin	8/4/2017	384	No	DEC	3	18:50	20:59
212	RT	Other Reliability Requirement	SCE	LA Basin	8/12/2017	275- 279	No	INC	1	21:10	21:59
213	RT	Other Reliability Requirement	SCE	LA Basin	8/29/2017	300	No	DEC	10	11:00	20:59
214	RT	Other Reliability Requirement	SCE	LA Basin	8/29/2017	20	Yes	INC	2	22:00	23:59

	Mar ket						Co mm				
Num	Тур	B	Locatio	Local Reliability	The Is Defe	<b>5</b> <i>6</i> 347	itm	INC_	Hou	Begin	End
ber	e	Reason	n	Area	Trade Date	MW	ent	DEC	rs	Time	Time
215	RT	Other Reliability Requirement	SCE	LA Basin	8/30/2017	20	Yes	INC	3	0:00	2:59
216	RT	Other Reliability Requirement	SCE	N/A	8/1/2017	470	No	DEC	8	13:10	20:59
217	RT	Other Reliability Requirement	SDG&E	San Diego-IV	8/12/2017	30	No	INC	1	21:10	21:59
218	RT	Over Generation	PG&E	Fresno	8/3/2017	83	No	DEC	1	13:13	13:24
219	RT	Over Generation	PG&E	Fresno	8/3/2017	166	No	INC	1	13:13	13:24
220	RT	Over Generation	SCE	LA Basin	8/3/2017	420	No	DEC	1	13:15	13:24
221	RT	Over Generation	SDG&E	San Diego-IV	8/3/2017	465	No	DEC	1	13:17	13:29
		Planned Transmission Outage and									
222	RT	Constraint	PG&E	Bay Area	8/14/2017	450	No	DEC	2	20:25	22:14
		Planned Transmission Outage and									
223	RT	Constraint	PG&E	Bay Area	8/14/2017	450	No	INC	2	20:25	22:14
		Planned Transmission Outage and									
224	RT	Constraint	PG&E	Humboldt	8/8/2017	15-95	No	DEC	4	20:55	23:59
005	D.T.	Planned Transmission Outage and	5005		0/0/00/7					00 55	00.44
225	RT	Constraint	PG&E	Humboldt	8/8/2017	30- 80	No	INC	3	20:55	23:44
220	БТ	Planned Transmission Outage and		l luva halalt	0/0/2017	45	Na		~	0.00	4.50
226	RT	Constraint Planned Transmission Outage and	PG&E	Humboldt	8/9/2017	15	No	DEC	2	0:00	1:59
227	RT	Constraint	PG&E	Humboldt	8/9/2017	15	No	INC	1	0:00	0:44
221		Planned Transmission Outage and	TOQL	Turnbolut	0/3/2017	15		INC	1	0.00	0.44
228	RT	Constraint	PG&E	Humboldt	8/10/2017	13- 25	No	INC	2	7:50	9:14
		Planned Transmission Outage and			0, 10, 2011				_		••••
229	RT	Constraint	PG&E	Humboldt	8/11/2017	13- 26	No	DEC	15	7:05	21:59
		Planned Transmission Outage and									
230	RT	Constraint	PG&E	Humboldt	8/11/2017	13	No	INC	15	7:05	21:59
		Planned Transmission Outage and									
231	RT	Constraint	PG&E	Humboldt	8/22/2017	16-28	No	DEC	15	9:30	23:59
		Planned Transmission Outage and									
232	RT	Constraint	PG&E	Humboldt	8/22/2017	28- 184	No	INC	18	6:30	23:59
		Planned Transmission Outage and		<u>,</u>			<b>.</b> .				10
233	RT	Constraint	PG&E	Humboldt	8/23/2017	28- 42	No	INC	20	0:00	19:59

Num ber	Mar ket Typ e	Reason	Locatio	Local Reliability Area	Trade Date	MW	Co mm itm ent	INC_ DEC	Hou	Begin Time	End Time
DCI	C	Planned Transmission Outage and		Αιτά	Trade Date		CIIC	DLU	13		
234	RT	Constraint	PG&E	N/A	8/8/2017	40- 54	No	INC	7	5:50	11:59
204		Planned Transmission Outage and	TOQL	IN/73	0/0/2011	-10 04	110		'	0.00	11.00
235	RT	Constraint	PG&E	N/A	8/9/2017	52-62	No	INC	4	20:50	23:59
200		Planned Transmission Outage and	1 002		0/0/2011	02 02	110		•	20.00	20.00
236	RT	Constraint	PG&E	N/A	8/10/2017	40- 116	No	INC	15	0:00	14:59
200		Planned Transmission Outage and			0,10,2011	10 110				0.00	1 1.00
237	RT	Constraint	SCE	LA Basin	8/15/2017	20	No	INC	17	7:15	23:59
		Planned Transmission Outage and									
238	RT	Constraint	SCE	LA Basin	8/16/2017	10- 30	Yes	INC	17	7:00	23:59
		Planned Transmission Outage and									
239	RT	Constraint	SCE	LA Basin	8/17/2017	20	No	INC	24	0:15	23:59
		Planned Transmission Outage and									
240	RT	Constraint	SCE	LA Basin	8/22/2017	10	No	INC	12	12:10	23:59
		Planned Transmission Outage and									
241	RT	Constraint	SCE	LA Basin	8/23/2017	10	Yes	INC	12	12:00	23:59
		Planned Transmission Outage and									
242	RT	Constraint	SDG&E	San Diego-IV	8/7/2017	68	No	INC	7	15:00	21:59
		Planned Transmission Outage and									
243	RT	Constraint	SDG&E	San Diego-IV	8/8/2017	68	No	INC	6	16:00	21:59
		Planned Transmission Outage and	00005					550			
244	RT	Constraint	SDG&E	San Diego-IV	8/9/2017	291	No	DEC	2	15:35	17:29
0.45	БТ	Planned Transmission Outage and	00005		0/0/0047	243-	NL			0.45	47.00
245	RT	Constraint	SDG&E	San Diego-IV	8/9/2017	350	No	INC	11	6:45	17:29
246	RT	Planned Transmission Outage and Constraint	SDG&E	Son Diago IV	8/11/2017	40 150	Yes	INC	24	0:00	23:59
240	RI		SDG&E	San Diego-IV	8/11/2017	40- 156	res	INC	24	0:00	23:59
247	RT	Planned Transmission Outage and Constraint	SDG&E	San Diego-IV	8/13/2017	20	No	INC	6	9:00	14:59
241		Planned Transmission Outage and	SDG&E	Jan Diego-iv	0/13/2017	20	INU		0	9.00	14.59
248	RT	Constraint	SDG&E	San Diego-IV	8/14/2017	40- 103	No	INC	16	6:30	21:59
240		Planned Transmission Outage and			0/14/2017	40-103			10	0.50	21.00
249	RT	Constraint	SDG&E	San Diego-IV	8/15/2017	20	No	INC	16	7:00	22:59
243	111	Constraint	ODOGL	Can Diego-IV	0/10/2011	20	110		10	7.00	22.00

NI	Mar ket		Lasstia	Less Deliability			Co mm			Devin	Find
Num ber	Тур е	Reason	Locatio n	Local Reliability Area	Trade Date	MW	itm ent	INC_ DEC	Hou rs	Begin Time	End Time
	•	Planned Transmission Outage and		71100				220			
250	RT	Constraint	SDG&E	San Diego-IV	8/16/2017	20	No	INC	15	7:00	21:59
		Planned Transmission Outage and									
251	RT	Constraint	SDG&E	San Diego-IV	8/17/2017	20	No	INC	16	6:00	21:59
		Planned Transmission Outage and			_ / /						
252	RT	Constraint	SDG&E	San Diego-IV	8/18/2017	155	No	DEC	4	14:45	18:29
050	БТ	Planned Transmission Outage and	00005		0/40/0047	455	Mar		10	0.00	40.00
253	RT	Constraint	SDG&E	San Diego-IV	8/18/2017	155	Yes	INC	13	6:00	18:29
254	RT	Planned Transmission Outage and Constraint	SDG&E	San Diego-IV	8/19/2017	155- 300	No	DEC	3	16:00	18:59
204		Planned Transmission Outage and	SDG&E	Sall Diego-IV	0/19/2017	155-	INU	DEC	3	10.00	10.59
255	RT	Constraint	SDG&E	San Diego-IV	8/19/2017	200	No	INC	2	16:00	17:29
200	111	Planned Transmission Outage and	ODOUL	Our Diego IV	0/10/2011	200	110		2	10.00	17.20
256	RT	Constraint	SDG&E	San Diego-IV	8/22/2017	20- 126	No	INC	18	6:30	23:59
		Planned Transmission Outage and							_		
257	RT	Constraint	SDG&E	San Diego-IV	8/23/2017	15- 35	Yes	INC	12	12:15	23:59
		Planned Transmission Outage and									
258	RT	Constraint	SDG&E	San Diego-IV	8/24/2017	20-900	No	INC	12	12:00	23:59
		Planned Transmission Outage and									
259	RT	Constraint	SDG&E	San Diego-IV	8/31/2017	25	No	DEC	3	17:45	19:59
260	RT	Software Limitation	PG&E	Bay Area	8/30/2017	0	No	INC	14	0:55	14:54
261	RT	Software Limitation	PG&E	Fresno	8/4/2017	83	No	INC	1	21:05	21:59
262	RT	Software Limitation	PG&E	Fresno	8/8/2017	20	No	DEC	1	18:20	18:44
263	RT	Software Limitation	PG&E	Fresno	8/14/2017	45	No	INC	1	10:15	10:44
264	RT	Software Limitation	PG&E	Humboldt	8/9/2017	16	No	DEC	1	22:15	22:59
265	RT	Software Limitation	PG&E	Humboldt	8/10/2017	0	No	DEC	3	21:50	23:59
266	RT	Software Limitation	PG&E	Humboldt	8/10/2017	0	No	INC	3	21:50	23:59
267	RT	Software Limitation	PG&E	Humboldt	8/11/2017	0	No	INC	8	0:00	7:44
268	RT	Software Limitation	PG&E	Humboldt	8/27/2017	48	No	INC	1	22:05	22:29
269	RT	Software Limitation	SCE	LA Basin	8/1/2017	5	No	DEC	3	17:25	19:59
270	RT	Software Limitation	SCE	LA Basin	8/1/2017	38- 42	No	INC	1	17:20	17:59

Num	Mar ket		Looptio	Less Polishility			Co mm itm	INC	Hou	Pagin	End
Num ber	Тур е	Reason	Locatio n	Local Reliability Area	Trade Date	MW	ent	INC_ DEC	rs	Begin Time	Time
271	RT	Software Limitation	SCE	LA Basin	8/4/2017	70	No	INC	2	1:00	2:59
272	RT	Software Limitation	SCE	LA Basin	8/7/2017	20	Yes	INC	6	10:00	15:59
273	RT	Software Limitation	SCE	LA Basin	8/10/2017	190	No	DEC	7	13:50	19:59
274	RT	Software Limitation	SCE	LA Basin	8/30/2017	0	No	INC	1	23:45	23:59
275	RT	Software Limitation	SCE	LA Basin	8/31/2017	0	No	INC	2	0:00	1:59
276	RT	Software Limitation	SDG&E	San Diego-IV	8/10/2017	68	No	INC	11	9:00	19:59
277	RT	Software Limitation	SDG&E	San Diego-IV	8/12/2017	63	No	INC	12	8:00	19:59
278	RT	Start-Up Instructions	PG&E	Stockton	8/14/2017	0	No	DEC	1	22:20	23:04
279	RT	Unit Testing	Intertie	N/A	8/1/2017	63	No	INC	24	0:00	23:59
280	RT	Unit Testing	Intertie	N/A	8/2/2017	63	No	INC	24	0:00	23:59
281	RT	Unit Testing	Intertie	N/A	8/3/2017	63	No	INC	24	0:00	23:59
282	RT	Unit Testing	Intertie	N/A	8/4/2017	63	No	INC	23	1:50	23:59
283	RT	Unit Testing	Intertie	N/A	8/5/2017	63	No	INC	24	0:00	23:59
284	RT	Unit Testing	Intertie	N/A	8/7/2017	63- 126	No	INC	17	7:00	23:59
285	RT	Unit Testing	Intertie	N/A	8/8/2017	63	No	INC	10	14:40	23:59
286	RT	Unit Testing	Intertie	N/A	8/9/2017	63	No	INC	24	0:00	23:59
287	RT	Unit Testing	Intertie	N/A	8/10/2017	63	No	INC	24	0:00	23:59
288	RT	Unit Testing	Intertie	N/A	8/11/2017	63	No	INC	24	0:00	23:59
289	RT	Unit Testing	Intertie	N/A	8/13/2017	63	No	INC	24	0:00	23:59
290	RT	Unit Testing	Intertie	N/A	8/14/2017	63	No	INC	24	0:00	23:59
291	RT	Unit Testing	Intertie	N/A	8/15/2017	63	No	INC	24	0:00	23:59
292	RT	Unit Testing	Intertie	N/A	8/16/2017	63	No	INC	24	0:00	23:59
293	RT	Unit Testing	Intertie	N/A	8/17/2017	63	No	INC	24	0:15	23:59
294	RT	Unit Testing	Intertie	N/A	8/18/2017	63	No	INC	23	1:20	23:59
295	RT	Unit Testing	Intertie	N/A	8/19/2017	100	No	INC	24	0:00	23:59
296	RT	Unit Testing	Intertie	N/A	8/20/2017	100	No	INC	24	0:00	23:59
297	RT	Unit Testing	Intertie	N/A	8/21/2017	100	No	INC	24	0:00	23:59
298	RT	Unit Testing	Intertie	N/A	8/22/2017	100	No	INC	24	0:00	23:59
299	RT	Unit Testing	Intertie	N/A	8/23/2017	100	No	INC	24	0:00	23:59

	Mar ket						Co mm				
Num	Тур	<b>P</b>	Locatio	Local Reliability	Tas la Data		itm	INC_	Hou	Begin	End
ber	е	Reason	n	Area	Trade Date	MW	ent	DEC	rs	Time	Time
300	RT	Unit Testing	Intertie	N/A	8/24/2017	100	No	INC	24	0:00	23:59
301	RT	Unit Testing	Intertie	N/A	8/25/2017	100	No	INC	24	0:00	23:59
302	RT	Unit Testing	Intertie	N/A	8/26/2017	100	No	INC	24	0:00	23:59
303	RT	Unit Testing	Intertie	N/A	8/27/2017	100	No	INC	24	0:00	23:59
304	RT	Unit Testing	Intertie	N/A	8/28/2017	100	No	INC	24	0:00	23:59
305	RT	Unit Testing	Intertie	N/A	8/29/2017	100	No	INC	20	4:00	23:59
306	RT	Unit Testing	Intertie	N/A	8/30/2017	100	No	INC	24	0:00	23:59
307	RT	Unit Testing	Intertie	N/A	8/31/2017	100	No	INC	24	0:00	23:59
308	RT	Unit Testing	PG&E	Bay Area	8/3/2017	92	No	INC	1	15:21	15:44
309	RT	Unit Testing	PG&E	Bay Area	8/8/2017	148	No	INC	1	19:30	19:59
310	RT	Unit Testing	PG&E	Bay Area	8/25/2017	49	No	INC	1	19:45	19:49
311	RT	Unit Testing	PG&E	Bay Area	8/29/2017	144	No	INC	1	21:30	21:54
312	RT	Unit Testing	PG&E	Bay Area	8/30/2017	59-92	Yes	INC	2	18:25	19:59
313	RT	Unit Testing	PG&E	Bay Area	8/31/2017	535	No	INC	1	19:35	19:59
314	RT	Unit Testing	PG&E	Fresno	8/23/2017	45	No	INC	1	18:35	18:59
315	RT	Unit Testing	PG&E	Fresno	8/25/2017	27	No	INC	1	11:45	12:14
316	RT	Unit Testing	PG&E	N/A	8/9/2017	590	No	DEC	2	10:10	11:59
317	RT	Unit Testing	PG&E	N/A	8/16/2017	245	No	INC	1	19:07	19:34
318	RT	Unit Testing	PG&E	N/A	8/17/2017	15- 30	No	INC	3	11:45	14:44
		<u> </u>				275-					
319	RT	Unit Testing	PG&E	Stockton	8/22/2017	304	No	INC	11	7:00	17:59
320	RT	Unit Testing	PG&E	Stockton	8/23/2017	220	No	INC	11	6:45	17:14
				Big Creek-							
321	RT	Unit Testing	SCE	Ventura	8/11/2017	76	No	INC	1	15:45	15:59
			0.05	Big Creek-							
322	RT	Unit Testing	SCE	Ventura	8/31/2017	70	No	INC	1	20:40	20:59
323	RT	Unit Testing	SCE	LA Basin	8/1/2017	40-244	No	INC	2	4:01	5:49
324	RT	Unit Testing	SCE	LA Basin	8/3/2017	96- 204	No	INC	11	2:10	12:59
325	RT	Unit Testing	SCE	LA Basin	8/4/2017	36	No	INC	1	2:58	3:29

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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
326	RT	Unit Testing	SCE	LA Basin	8/6/2017	47	No	INC	1	7:17	7:34
327	RT	Unit Testing	SCE	LA Basin	8/8/2017	96	No	INC	2	22:40	23:59
328	RT	Unit Testing	SCE	LA Basin	8/9/2017	36	No	INC	1	1:11	1:59
329	RT	Voltage Support	PG&E	Humboldt	8/31/2017	70	No	DEC	1	23:45	23:59
330	RT	Voltage Support	PG&E	Humboldt	9/1/2017	28- 70	No	INC	2	0:00	1:59
331	RT	Voltage Support	PG&E	Sierra	8/18/2017	20	No	INC	1	23:20	23:59
332	RT	Voltage Support	PG&E	Sierra	8/19/2017	20	Yes	INC	24	0:00	23:59
333	RT	Voltage Support	PG&E	Sierra	8/20/2017	20- 40	Yes	INC	24	0:00	23:59
334	RT	Voltage Support	PG&E	Sierra	8/21/2017	20	No	INC	4	0:00	3:29
335	RT	Voltage Support	PG&E	Sierra	8/26/2017	20- 25	No	INC	16	8:15	23:59
336	RT	Voltage Support	PG&E	Sierra	8/27/2017	20- 46	No	INC	24	0:00	23:59

# **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.

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

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

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.

	Tap	Die 3: FERC Summary	of instruc	ctions	Prior to Daw			
Reason	Location	Local Reliability Area	Trade	MW	Commitment	INC/DEC	Hour	
		(LRA)	Date					1

1-Jul-09

20-

100

Yes

N/A

LA Basin

SCE

Number

1

Market

7630

Type DA

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.

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	А	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

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

Begin

Time

05:00

19

End

Time

23:00

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.

Num	ber 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

#### Table 5: FERC Summary of ED Instructions in RTM

# **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.

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	А	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

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

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

Table 7: FERC Summary of Decremental ED Instructions in RTM

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

# CERTIFICATE OF SERVICE

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

Dated at Folsom, California, this 16<sup>th</sup> day of October 2017.

1st Grace Clark Grace Clark