

October 15, 2018

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

> California Independent System Operator Corporation Docket Nos. ER08-1178- and EL08-88-August 2018 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 2018.

Respectfully submitted,

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

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# **Exceptional Dispatch Report**

Table 1: August 2018

**CAISO Market Quality and Renewable Integration** 

October 15, 2018

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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 2018.

## 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 2018 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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<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: 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 August 2018, 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 372 exceptional dispatches in August 2018, as compared to 348 exceptional dispatches in July 2018. Exceptional dispatches issued for the following reasons accounted for approximately 61 percent of the total exceptional dispatches during the reporting period: planned transmission outages; software limitations; load forecast uncertainty; and operating procedure number 7110 (along with 6410, 7230, 7430, 7450, 7630, 7720, 7750, 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 2018** 

## California Independent System Operator Corporation Exceptional Dispatch Report October 15, 2018

# Chart 1: Table of Exceptional Dispatches for Period 01/August/2018 - 31/August/2018

	Mar ket						Co mm				
Num ber	Typ e	Reason	Locatio n	Local Reliability Area	Trade Date	MW	itm ent	INC_ DEC	Hou rs	Begin Time	End Time
1	RT	Bridging Schedules	SCE	LA Basin	8/9/2018	10- 270	Yes	INC	2	22:00	23:59
2	RT	Contingency Dispatch	PG&E	Bay Area	8/2/2018	360	No	INC	1	0:19	1:09
3	RT	Contingency Dispatch	PG&E	Fresno	8/5/2018	83	No	DEC	1	20:30	20:59
4	RT	Contingency Dispatch	PG&E	Fresno	8/5/2018	83- 166	No	INC	1	20:10	20:59
5	RT	Contingency Dispatch	PG&E	N/A	8/2/2018	400- 800	No	INC	3	0:40	2:44
6	RT	Contingency Dispatch	PG&E	Stockton	8/2/2018	258- 323	No	INC	3	0:35	2:59
7	RT	Contingency Dispatch	SCE	LA Basin	8/2/2018	45	No	INC	1	0:19	1:09
8	RT	Contingency Dispatch	SCE	LA Basin	8/5/2018	182	No	INC	1	20:10	20:59
9	RT	Fast Start Unit Management	PG&E	Bay Area	8/7/2018	24	No	DEC	9	12:45	20:59
10	RT	Fast Start Unit Management	PG&E	Bay Area	8/8/2018	24- 404	No	DEC	15	6:55	21:29
11	RT	Fast Start Unit Management	PG&E	Fresno	8/5/2018	0	No	INC	1	21:15	22:14
12	RT	Fast Start Unit Management	PG&E	Fresno	8/6/2018	0	No	INC	1	20:30	21:29
13	RT	Fast Start Unit Management	SCE	Big Creek- Ventura	8/1/2018	0	No	INC	1	6:30	7:29
14	RT	Fast Start Unit Management	SCE	LA Basin	8/5/2018	0	No	INC	1	1:00	1:59
15	RT	Fast Start Unit Management	SCE	LA Basin	8/18/2018	0	No	INC	1	22:30	23:29
16	RT	Fast Start Unit Management	SDG&E	San Diego-IV	8/1/2018	0	No	DEC	1	15:40	16:09
17	RT	Fast Start Unit Management	SDG&E	San Diego-IV	8/7/2018	25	No	DEC	11	10:45	20:59
18	RT	Fast Start Unit Management	SDG&E	San Diego-IV	8/7/2018	25	No	INC	11	10:45	20:59

	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
19	RT	Incomplete or Inaccurate Transmission	PG&E	Stockton	8/20/2018	80- 85	No	DEC	2	6:40	8:14
20	RT	Incomplete or Inaccurate Transmission	PG&E	Stockton	8/20/2018	80	No	INC	2	7:05	8:14
21	RT	Load Forecast Uncertainty	Intertie	N/A	8/9/2018	412	No	INC	1	19:00	19:59
22	RT	Load Forecast Uncertainty	Intertie	N/A	8/12/2018	500	No	INC	1	17:00	17:59
23	RT	Load Forecast Uncertainty	PG&E	Bay Area	8/8/2018	20	No	DEC	1	17:50	17:54
24	RT	Load Forecast Uncertainty	PG&E	Bay Area	8/9/2018	240	No	DEC	14	7:55	20:59
25	RT	Load Forecast Uncertainty	PG&E	Bay Area	8/13/2018	120	No	DEC	6	15:30	20:59
26	RT	Load Forecast Uncertainty	PG&E	Bay Area	8/14/2018	300	No	DEC	1	16:25	16:59
27	RT	Load Forecast Uncertainty	PG&E	Fresno	8/5/2018	14- 250	No	INC	1	19:53	20:43
28	RT	Load Forecast Uncertainty	PG&E	Fresno	8/9/2018	83- 166	No	DEC	8	13:20	20:59
29	RT	Load Forecast Uncertainty	PG&E	Fresno	8/9/2018	49- 400	No	INC	9	12:55	20:59
30	RT	Load Forecast Uncertainty	PG&E	Fresno	8/10/2018	23- 101	No	DEC	9	11:40	19:59
31	RT	Load Forecast Uncertainty	PG&E	Fresno	8/14/2018	14	No	INC	1	16:50	16:59
32	RT	Load Forecast Uncertainty	PG&E	N/A	8/13/2018	130	No	INC	7	15:00	21:59
33	RT	Load Forecast Uncertainty	PG&E	N/A	8/14/2018	76	No	DEC	4	16:30	19:59
34	RT	Load Forecast Uncertainty	PG&E	N/A	8/17/2018	47	No	DEC	11	10:55	21:14
35	RT	Load Forecast Uncertainty	PG&E	N/A	8/17/2018	47	No	INC	11	10:55	21:14
				Big Creek-							
36	RT	Load Forecast Uncertainty	SCE	Ventura	8/5/2018	50	No	INC	12	12:00	23:59
07	БТ	Land Farrance I language inte	005	Big Creek-	0/0/0040	50 450	NI-	INIC	4.5	0.00	44.50
37	RT	Load Forecast Uncertainty	SCE	Ventura Big Creek-	8/6/2018	50- 150	No	INC	15	0:00	14:59
38	RT	Load Forecast Uncertainty	SCE	Ventura	8/7/2018	100	No	INC	2	22:00	23:59
- 00	101	Load Foresast Shortainty	001	Big Creek-	0/1/2010	100	110			22.00	20.00
39	RT	Load Forecast Uncertainty	SCE	Ventura	8/8/2018	100	No	INC	2	22:00	23:59
		·		Big Creek-							
40	RT	Load Forecast Uncertainty	SCE	Ventura	8/9/2018	74	No	DEC	2	18:30	19:44
		[ <u></u>		Big Creek-		100-					
41	RT	Load Forecast Uncertainty	SCE	Ventura	8/9/2018	430	No	INC	22	0:00	21:29

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	ket						mm				
Num	Тур	_	Locatio	Local Reliability			itm	INC_	Hou	Begin	End
ber	е	Reason	n	Area	Trade Date	MW	ent	DEC	rs	Time	Time
40	БТ	Land Farrant Hannets into	005	Big Creek-	0/40/0040	100-	NI-	INIC	44	40.45	00.50
42	RT	Load Forecast Uncertainty	SCE	Ventura	8/10/2018	860 250-	No	INC	11	13:15	23:59
43	RT	Load Forecast Uncertainty	SCE	LA Basin	8/1/2018	250- 650	No	DEC	5	15:00	19:59
44	RT	Load Forecast Uncertainty	SCE	LA Basin	8/1/2018	80- 910	Yes	INC	24	0:00	23:59
45	RT	Load Forecast Uncertainty	SCE	LA Basin	8/2/2018	384	No	DEC	9	13:55	21:59
46	RT	Load Forecast Uncertainty	SCE	LA Basin	8/2/2018	20- 644	Yes	INC	24	0:00	23:59
					0, 4, 40, 10	520-					
47	RT	Load Forecast Uncertainty	SCE	LA Basin	8/3/2018	904	No	DEC	8	15:00	22:14
48	RT	Load Forecast Uncertainty	SCE	LA Basin	8/3/2018	80- 894	No	INC	24	0:00	23:59
49	RT	Load Forecast Uncertainty	SCE	LA Basin	8/4/2018	70- 80	Yes	INC	24	0:00	23:59
50	RT	Load Forecast Uncertainty	SCE	LA Basin	8/5/2018	80- 501	Yes	INC	24	0:00	23:59
51	RT	Load Forecast Uncertainty	SCE	LA Basin	8/6/2018	294	No	DEC	5	15:10	19:59
						130-					
52	RT	Load Forecast Uncertainty	SCE	LA Basin	8/6/2018	1645	Yes	INC	24	0:00	23:59
			005		0/7/0040	270-					
53	RT	Load Forecast Uncertainty	SCE	LA Basin	8/7/2018	330	Yes	INC	24	0:00	23:59
54	RT	Load Forecast Uncertainty	SCE	LA Basin	8/8/2018	60- 200	Yes	INC	24	0:00	23:59
55	рт	Lood Coroccet Uncorteint	SCE	I A Doois	0/0/2040	520- 1294	No	DEC	7	45.00	24.50
55	RT	Load Forecast Uncertainty	SCE	LA Basin	8/9/2018	140-	INO	DEC	/	15:00	21:59
56	RT	Load Forecast Uncertainty	SCE	LA Basin	8/9/2018	2276	No	INC	24	0:00	23:59
- 00	1 1 1	Load Forecast Officertainty	002	L/ C Dasin	0/3/2010	410-	140	1110	24	0.00	20.00
57	RT	Load Forecast Uncertainty	SCE	LA Basin	8/10/2018	2826	Yes	INC	24	0:00	23:59
		,				514-					
58	RT	Load Forecast Uncertainty	SCE	LA Basin	8/11/2018	1024	No	INC	7	15:00	21:59
59	RT	Load Forecast Uncertainty	SCE	LA Basin	8/12/2018	514	No	INC	9	13:35	21:59
60	RT	Load Forecast Uncertainty	SCE	LA Basin	8/13/2018	10- 30	No	INC	9	13:00	21:59
						251-					
61	RT	Load Forecast Uncertainty	SCE	LA Basin	8/14/2018	502	No	DEC	4	17:00	20:44
62	RT	Load Forecast Uncertainty	SCE	LA Basin	8/14/2018	10- 50	No	INC	13	11:50	23:59

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Num	ket Typ		Locatio	Local Reliability			mm itm	INC	Hou	Begin	End
ber	i yp	Reason	n	Area	Trade Date	MW	ent	DEC_	rs	Time	Time
63	RT	Load Forecast Uncertainty	SCE	LA Basin	8/15/2018	20- 727	No	INC	24	0:00	23:59
64	RT	Load Forecast Uncertainty	SCE	LA Basin	8/16/2018	30- 973	Yes	INC	24	0:00	23:59
65	RT	Load Forecast Uncertainty	SCE	LA Basin	8/17/2018	20- 620	No	INC	15	9:25	23:59
66	RT	Load Forecast Uncertainty	SCE	LA Basin	8/18/2018	10- 30	No	INC	24	0:00	23:59
67	RT	Load Forecast Uncertainty	SCE	LA Basin	8/19/2018	10- 394	Yes	INC	24	0:00	23:59
		•				370-					
68	RT	Load Forecast Uncertainty	SCE	LA Basin	8/20/2018	890	No	DEC	7	14:00	20:59
69	RT	Load Forecast Uncertainty	SCE	LA Basin	8/20/2018	10- 960	No	INC	21	0:00	20:59
70	RT	Load Forecast Uncertainty	SCE	LA Basin	8/21/2018	260	No	DEC	7	14:00	20:59
						190-					
71	RT	Load Forecast Uncertainty	SCE	LA Basin	8/21/2018	650	No	INC	8	14:00	21:29
72	RT	Load Forecast Uncertainty	SCE	LA Basin	8/22/2018	15	No	DEC	7	14:00	20:59
73	RT	Load Forecast Uncertainty	SCE	LA Basin	8/22/2018	765	No	INC	7	14:00	20:59
74	RT	Load Forecast Uncertainty	SCE	LA Basin	8/25/2018	251	No	INC	3	18:00	20:59
75	RT	Load Forecast Uncertainty	SCE	LA Basin	8/27/2018	255	No	INC	7	15:30	21:59
76	RT	Load Forecast Uncertainty	SCE	LA Basin	8/30/2018	514	No	INC	6	15:00	20:59
77	RT	Load Forecast Uncertainty	SCE	LA Basin	8/31/2018	449	No	INC	7	14:00	20:59
78	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	8/1/2018	70	No	DEC	5	15:00	19:59
79	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	8/5/2018	20	No	INC	7	9:00	15:59
80	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	8/6/2018	300	No	DEC	1	18:00	18:59
81	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	8/6/2018	20- 40	Yes	INC	22	2:00	23:59
82	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	8/7/2018	20	Yes	INC	24	0:00	23:59
83	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	8/9/2018	131	No	DEC	7	15:00	21:59
84	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	8/9/2018	20- 131	Yes	INC	9	15:00	23:59
85	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	8/10/2018	40- 428	Yes	INC	24	0:00	23:59
86	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	8/12/2018	68	No	INC	9	13:40	21:59
87	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	8/13/2018	20	No	INC	11	11:00	21:59
88	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	8/14/2018	20	No	INC	22	2:00	23:59
89	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	8/15/2018	22	No	DEC	3	17:15	20:14

	Mar ket						Co mm				
Num	Тур		Locatio	Local Reliability			itm	INC	Hou	Begin	End
ber	e	Reason	n	Area	Trade Date	MW	ent	DEC	rs	Time	Time
90	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	8/15/2018	20- 290	No	INC	24	0:00	23:59
91	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	8/16/2018	20- 136	No	INC	24	0:00	23:59
92	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	8/17/2018	22	No	INC	1	18:45	19:44
93	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	8/19/2018	68	No	INC	4	16:00	19:59
94	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	8/20/2018	131	No	DEC	7	14:00	20:59
95	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	8/20/2018	131	No	INC	7	14:00	20:59
96	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	8/21/2018	68	No	DEC	16	5:45	20:59
97	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	8/21/2018	68- 70	No	INC	16	5:45	20:59
98	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	8/22/2018	68	No	DEC	7	14:00	20:59
99	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	8/22/2018	68	No	INC	7	14:00	20:59
100	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	8/26/2018	63	No	INC	3	18:05	20:59
101	RT	Load Forecast Uncertainty	SDG&E	San Diego-IV	8/31/2018	68	No	INC	7	14:00	20:59
				Big Creek-							
102	RT	Load Pull	SCE	Ventura	8/4/2018	410	No	INC	9	14:00	22:29
400	БТ		005	Big Creek-	0/0/0040	400		11.10		40.00	04.00
103	RT	Load Pull	SCE	Ventura	8/6/2018	406	No	INC	11	10:30	21:29
104	RT	Load Pull	SCE	Big Creek- Ventura	8/7/2018	406	No	DEC	11	10:45	21:29
104	18.1	Load F dii	JUL	Big Creek-	0/1/2010	400	110	DLC	11	10.43	21.23
105	RT	Load Pull	SCE	Ventura	8/7/2018	406	No	INC	11	10:45	21:29
				Big Creek-							
106	RT	Load Pull	SCE	Ventura	8/8/2018	406	No	INC	11	10:40	20:59
107	RT	Load Pull	SCE	LA Basin	8/4/2018	255	No	DEC	5	17:45	21:59
						190-					
108	RT	Load Pull	SCE	LA Basin	8/4/2018	935	No	INC	9	14:00	22:14
109	RT	Load Pull	SCE	LA Basin	8/5/2018	510	No	DEC	7	16:00	22:29
440		1 1 D 11	005	LADesis	0/5/0040	190-	N. 1.	INIO	_	40.00	00.00
110	RT	Load Pull	SCE	LA Basin	8/5/2018	700	No	INC	7	16:00	22:29
111	RT	Load Pull	SCE	LA Basin	8/6/2018	251- 1126	No	DEC	11	11:10	21:14
	Γ	LUAU FUII	SUE	LA Dasiii	0/0/2010	1120	INO	DEC	11	11.10	∠1.14

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Nicona	ket			Local Ballability			mm	INIC		Danin	F., d
Num ber	Typ e	Reason	Locatio	Local Reliability Area	Trade Date	MW	itm ent	INC_ DEC	Hou rs	Begin Time	End Time
Dei	-	Neason	""	Alea	Trade Date	245-	CIIL	DLC	13	Tillie	Tillie
112	RT	Load Pull	SCE	LA Basin	8/6/2018	1360	No	INC	11	10:20	20:59
						255-					
113	RT	Load Pull	SCE	LA Basin	8/7/2018	1634	No	DEC	12	10:10	21:29
	5.7		0.05		0/7/0040	690-				40.40	04.00
114	RT	Load Pull	SCE	LA Basin	8/7/2018	1934	No	INC	12	10:10	21:29
115	RT	Load Pull	SCE	LA Basin	8/8/2018	251- 1467	No	DEC	12	10:20	21:59
115	N1	Load Full	SCE	LA Dasiii	0/0/2010	831-	INO	DEC	12	10.20	21.59
116	RT	Load Pull	SCE	LA Basin	8/8/2018	1617	No	INC	12	10:20	21:59
117	RT	Load Pull	SCE	LA Basin	8/10/2018	510	No	DEC	5	17:50	21:59
118	RT	Load Pull	SCE	LA Basin	8/13/2018	255	No	DEC	4	16:00	19:59
						514-					
119	RT	Load Pull	SCE	LA Basin	8/13/2018	769	No	INC	6	15:15	21:14
120	RT	Load Pull	SCE	LA Basin	8/14/2018	190	No	INC	5	15:15	19:59
121	RT	Load Pull	SCE	LA Basin	8/15/2018	384	No	INC	5	16:50	20:59
122	RT	Load Pull	SCE	LA Basin	8/17/2018	255	No	INC	8	14:10	21:14
						404-					
123	RT	Load Pull	SCE	LA Basin	8/18/2018	804	No	INC	6	15:00	20:29
124	RT	Load Pull	SCE	LA Basin	8/21/2018	190	No	INC	1	18:06	18:14
405	БТ	Local Dull	005	I A Dania	0/00/0040	639-	NI-	INIC		44.40	00.00
125	RT	Load Pull	SCE	LA Basin	8/23/2018	959	No	INC	9	14:10	22:29
126	RT	Load Pull	SCE	LA Basin	8/24/2018	65- 704 194-	No	INC	7	15:45	22:29
127	RT	Load Pull	SCE	LA Basin	8/25/2018	194- 384	No	INC	6	16:05	21:14
128	RT	Load Pull	SCE	LA Basin	8/26/2018	384	No	INC	6	15:30	20:59
120	111	Loud I dii	JOL	LA Dasili	0/20/2010	194-	110	1140		10.00	20.00
129	RT	Load Pull	SCE	LA Basin	8/27/2018	259	No	INC	8	14:30	22:14
						255-					
130	RT	Load Pull	SCE	LA Basin	8/28/2018	579	No	INC	8	14:20	22:14
131	RT	Load Pull	SCE	LA Basin	8/29/2018	194	No	INC	9	13:30	21:59

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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
132	RT	Load Pull	SDG&E	San Diego-IV	8/6/2018	68	No	DEC	8	14:30	21:59
133	RT	Load Pull	SDG&E	San Diego-IV	8/6/2018	68	No	INC	8	14:30	21:59
134	RT	Load Pull	SDG&E	San Diego-IV	8/8/2018	104	No	INC	2	18:00	19:59
135	RT	Load Pull	SDG&E	San Diego-IV	8/14/2018	68	No	INC	5	15:30	19:59
136	RT	Load Pull	SDG&E	San Diego-IV	8/16/2018	63	No	INC	5	16:45	21:14
137	RT	Load Pull	SDG&E	San Diego-IV	8/18/2018	68	No	INC	6	15:00	20:29
138	RT	Market Disruption	PG&E	Bay Area	8/14/2018	600	No	DEC	1	16:14	16:44
139	RT	Market Disruption	PG&E	Fresno	8/14/2018	166	No	INC	1	16:07	16:54
140	RT	Market Disruption	PG&E	N/A	8/14/2018	300	No	DEC	1	16:07	16:54
				Big Creek-							
141	RT	Market Disruption	SCE	Ventura	8/23/2018	904	No	DEC	1	0:02	0:59
142	RT	Market Disruption	SCE	LA Basin	8/2/2018	10	No	INC	11	1:00	11:59
143	RT	Market Disruption	SCE	LA Basin	8/8/2018	1050	No	INC	1	14:42	14:54
144	RT	Market Disruption	SCE	LA Basin	8/14/2018	350	No	INC	1	16:00	16:39
145	RT	Market Disruption	SDG&E	San Diego-IV	8/14/2018	300	No	DEC	1	16:11	16:29
				Big Creek-							
146	RT	Operating Procedure Number and Constraint	SCE	Ventura	8/9/2018	0	No	DEC	1	23:25	23:59
147	RT	Operating Presedure Number and Constraint	SCE	Big Creek- Ventura	8/10/2018	0	No	INC	1	0:00	0:24
147	KI	Operating Procedure Number and Constraint Operating Procedure Number and Constraint	SUE	Big Creek-	0/10/2010	U	INO	INC	ı	0.00	0.24
148	RT	(6410)	SCE	Ventura	8/7/2018	700	No	INC	1	19:35	20:29
		Operating Procedure Number and Constraint			5, 1, 2, 1				_	10100	
149	RT	(7110)	PG&E	Humboldt	8/8/2018	32	No	DEC	1	16:00	16:04
		Operating Procedure Number and Constraint									
150	RT	(7110)	PG&E	Humboldt	8/16/2018	65	No	DEC	3	17:00	19:59
		Operating Procedure Number and Constraint	5005		0/4=/0040	40 470		550		4- 40	
151	RT	(7110)	PG&E	Humboldt	8/17/2018	48- 176	No	DEC	6	17:40	22:59
152	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/17/2018	14	No	INC	1	23:00	23:59
		Operating Procedure Number and Constraint			5,, _ 0 . 0				· ·		
153	RT	(7110)	PG&E	Humboldt	8/18/2018	65- 113	No	DEC	10	14:38	23:59

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Num	Тур	Reason	Locatio	Local Reliability Area	Trade Date	MW	itm	INC_ DEC	Hou	Begin	End Time
ber	е	Operating Procedure Number and Constraint	n	Area	Trade Date	IVIVV	ent	DEC	rs	Time	Time
154	RT	(7110)	PG&E	Humboldt	8/18/2018	48	No	INC	10	14:38	23:59
155	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/19/2018	14- 15	No	INC	1	22:00	22:44
156	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/20/2018	15- 30	No	DEC	13	7:00	19:59
157	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/20/2018	15	No	INC	13	7:00	19:59
158	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/21/2018	15- 30	No	DEC	13	7:35	19:59
159	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/21/2018	15	No	INC	13	7:35	19:59
160	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/22/2018	16	No	DEC	2	22:25	23:59
161	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/23/2018	16	No	DEC	23	0:00	22:59
162	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/28/2018	16- 32	No	INC	18	6:18	23:59
163	RT	Operating Procedure Number and Constraint (7110)	PG&E	Humboldt	8/29/2018	16- 30	No	INC	19	0:00	18:59
164	RT	Operating Procedure Number and Constraint (7230)	PG&E	Sierra	8/8/2018	0	No	INC	1	23:00	23:59
165	RT	Operating Procedure Number and Constraint (7430)	PG&E	Fresno	8/10/2018	72- 75	No	INC	4	1:55	5:14
166	RT	Operating Procedure Number and Constraint (7430)	PG&E	Fresno	8/16/2018	83	No	INC	2	21:00	22:59
167	RT	Operating Procedure Number and Constraint (7430)	PG&E	Fresno	8/25/2018	70	No	INC	5	0:15	4:59
168	RT	Operating Procedure Number and Constraint (7430)	PG&E	Fresno	8/28/2018	75	No	DEC	9	15:15	23:59
169	RT	Operating Procedure Number and Constraint (7430)	PG&E	Fresno	8/28/2018	75	No	INC	9	15:15	23:59

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Num	Тур		Locatio	Local Reliability			mm itm	INC	Hou	Begin	End
ber	e	Reason	n	Area	Trade Date	MW	ent	DEC	rs	Time	Time
		Operating Procedure Number and Constraint									
170	RT	(7450)	PG&E	Kern	8/10/2018	32	No	INC	4	18:00	21:59
171	RT	Operating Procedure Number and Constraint (7630)	SCE	LA Basin	8/13/2018	190- 237	No	INC	7	14:00	20:59
		Operating Procedure Number and Constraint				430-					
172	RT	(7720)	SCE	N/A	8/16/2018	460	No	DEC	6	15:05	20:59
173	RT	Operating Procedure Number and Constraint (7720)	SCE	N/A	8/16/2018	475	No	INC	2	14:05	15:29
		Operating Procedure Number and Constraint				476-					
174	RT	(7720)	SCE	N/A	8/25/2018	478	No	DEC	6	16:50	21:59
175	RT	Operating Procedure Number and Constraint (7720)	SCE	N/A	8/25/2018	478	No	INC	1	16:50	17:44
		Operating Procedure Number and Constraint				410-					
176	RT	(7750)	SCE	N/A	8/17/2018	475	No	DEC	10	10:45	19:59
177	RT	Operating Procedure Number and Constraint (7750)	SCE	N/A	8/17/2018	450	No	INC	7	10:45	17:29
178	RT	Operating Procedure Number and Constraint (7750)	SCE	N/A	8/18/2018	450	No	DEC	9	12:40	20:59
170	111	Operating Procedure Number and Constraint	OOL	IN//A	0/10/2010	430	140	DLO		12.40	20.00
179	RT	(7750)	SCE	N/A	8/18/2018	450	No	INC	9	12:40	20:59
180	RT	Operating Procedure Number and Constraint (7750)	SCE	N/A	8/19/2018	470	No	DEC	5	16:30	20:59
100	18.1	Operating Procedure Number and Constraint	JOL	IN/A	0/19/2010	470	INO	DLC	3	10.50	20.33
181	RT	(7820)	SDG&E	San Diego-IV	8/10/2018	25	No	DEC	6	14:25	19:59
182	RT	Operating Procedure Number and Constraint (7820)	SDG&E	San Diego-IV	8/11/2018	40- 262	No	INC	22	2:00	23:59
183	RT	Other Reliability Requirement	Intertie	N/A	8/9/2018	200	No	INC	1	19:00	19:59
184	RT	Other Reliability Requirement	PG&E	Fresno	8/8/2018	22	No	INC	1	19:30	20:29
185	RT	Other Reliability Requirement	PG&E	Fresno	8/30/2018	10	No	DEC	7	11:05	17:59
186	RT	Other Reliability Requirement	PG&E	Fresno	8/30/2018	10	No	INC	7	11:05	17:59
187	RT	Other Reliability Requirement	PG&E	Humboldt	8/10/2018	80- 97	No	DEC	15	9:50	23:59
188	RT	Other Reliability Requirement	PG&E	Humboldt	8/11/2018	32- 80	No	DEC	24	0:00	23:59
100	111	Other Meliability Mequilefficial	IIOQL	i iuiiiboiut	0/11/2010	JZ- UU	INU		۷4	0.00	20.08

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Num	Тур	D	Locatio	Local Reliability	Too In Date	8.4547	itm	INC_	Hou	Begin	End
ber	е	Reason	n	Area	Trade Date	MW	ent	DEC	rs	Time	Time
189	RT	Other Reliability Requirement	PG&E	Humboldt	8/12/2018	32- 80	No	DEC	24	0:00	23:59
190	RT	Other Reliability Requirement	PG&E	Humboldt	8/12/2018	32- 77	No	INC	24	0:00	23:59
191	RT	Other Reliability Requirement	PG&E	Humboldt	8/13/2018	28- 72	No	DEC	18	6:45	23:59
192	RT	Other Reliability Requirement	PG&E	Humboldt	8/13/2018	44- 80	No	INC	24	0:00	23:59
193	RT	Other Reliability Requirement	PG&E	Humboldt	8/14/2018	16- 73	No	DEC	24	0:00	23:59
194	RT	Other Reliability Requirement	PG&E	Humboldt	8/14/2018	28- 72	No	INC	24	0:00	23:59
195	RT	Other Reliability Requirement	PG&E	Humboldt	8/15/2018	28- 73	No	DEC	18	6:50	23:59
196	RT	Other Reliability Requirement	PG&E	Humboldt	8/15/2018	28- 75	No	INC	24	0:00	23:59
197	RT	Other Reliability Requirement	PG&E	Humboldt	8/16/2018	86- 88	No	DEC	9	7:50	16:14
198	RT	Other Reliability Requirement	PG&E	Humboldt	8/16/2018	42- 130	No	INC	17	0:00	16:14
199	RT	Other Reliability Requirement	PG&E	Kern	8/3/2018	32	No	INC	7	16:20	22:29
200	RT	Other Reliability Requirement	PG&E	N/A	8/7/2018	17- 25	No	DEC	13	11:30	23:59
201	RT	Other Reliability Requirement	PG&E	N/A	8/7/2018	17	No	INC	8	16:05	23:59
202	RT	Other Reliability Requirement	PG&E	N/A	8/8/2018	17	No	DEC	9	15:15	23:59
203	RT	Other Reliability Requirement	PG&E	N/A	8/8/2018	12	No	INC	9	15:35	23:59
204	RT	Other Reliability Requirement	PG&E	N/A	8/9/2018	5	No	DEC	7	1:35	7:59
205	RT	Other Reliability Requirement	PG&E	N/A	8/9/2018	26	No	INC	9	0:00	8:14
206	RT	Other Reliability Requirement	PG&E	Sierra	8/7/2018	50	No	DEC	7	16:45	22:59
207	RT	Other Reliability Requirement	PG&E	Sierra	8/7/2018	70- 95	No	INC	5	16:50	20:59
						200-					
208	RT	Other Reliability Requirement	SCE	LA Basin	8/1/2018	260	No	INC	3	19:05	21:59
209	RT	Other Reliability Requirement	SCE	LA Basin	8/17/2018	240	No	DEC	1	12:00	12:59
210	RT	Other Reliability Requirement	SCE	LA Basin	8/17/2018	120	No	INC	10	12:00	21:29
211	RT	Other Reliability Requirement	SCE	N/A	8/17/2018	380	No	DEC	2	11:20	12:59
212	RT	Other Reliability Requirement	SDG&E	San Diego-IV	8/1/2018	19	No	DEC	13	7:50	19:59
213	RT	Other Reliability Requirement	SDG&E	San Diego-IV	8/1/2018	19	No	INC	13	7:50	19:59
214	RT	Other Reliability Requirement	SDG&E	San Diego-IV	8/2/2018	25	No	DEC	4	16:45	19:59
215	RT	Other Reliability Requirement	SDG&E	San Diego-IV	8/2/2018	18- 65	No	INC	10	10:45	19:59
216	RT	Other Reliability Requirement	SDG&E	San Diego-IV	8/7/2018	21- 108	No	DEC	14	7:00	20:59

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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
217	RT	Other Reliability Requirement	SDG&E	San Diego-IV	8/7/2018	21- 129	No	INC	14	7:00	20:59
218	RT	Other Reliability Requirement	SDG&E	San Diego-IV	8/8/2018	68	No	DEC	10	10:00	19:59
219	RT	Other Reliability Requirement	SDG&E	San Diego-IV	8/8/2018	68	No	INC	10	10:00	19:59
220	RT	Other Reliability Requirement	SDG&E	San Diego-IV	8/10/2018	19- 131	No	DEC	14	9:40	22:59
221	RT	Other Reliability Requirement	SDG&E	San Diego-IV	8/10/2018	19- 58	No	INC	14	9:40	22:59
222	RT	Other Reliability Requirement	SDG&E	San Diego-IV	8/17/2018	45	No	INC	6	14:50	19:59
223	RT	Planned Transmission Outage	PG&E	Humboldt	8/1/2018	30- 77	No	DEC	24	0:00	23:59
224	RT	Planned Transmission Outage	PG&E	Humboldt	8/1/2018	45- 77	No	INC	24	0:00	23:59
225	RT	Planned Transmission Outage	PG&E	Humboldt	8/2/2018	77	No	DEC	24	0:00	23:59
226	RT	Planned Transmission Outage	PG&E	Humboldt	8/2/2018	77	No	INC	24	0:00	23:59
227	RT	Planned Transmission Outage	PG&E	Humboldt	8/3/2018	45- 90	No	DEC	24	0:00	23:59
228	RT	Planned Transmission Outage	PG&E	Humboldt	8/3/2018	45- 77	No	INC	24	0:00	23:59
229	RT	Planned Transmission Outage	PG&E	Humboldt	8/4/2018	30- 45	No	DEC	24	0:00	23:59
230	RT	Planned Transmission Outage	PG&E	Humboldt	8/4/2018	30- 75	No	INC	24	0:00	23:59
231	RT	Planned Transmission Outage	PG&E	Humboldt	8/5/2018	30- 90	No	DEC	19	5:10	23:59
232	RT	Planned Transmission Outage	PG&E	Humboldt	8/5/2018	30- 90	No	INC	24	0:00	23:59
233	RT	Planned Transmission Outage	PG&E	Humboldt	8/6/2018	30- 96	No	DEC	18	6:35	23:59
234	RT	Planned Transmission Outage	PG&E	Humboldt	8/6/2018	45- 90	No	INC	24	0:00	23:59
235	RT	Planned Transmission Outage	PG&E	Humboldt	8/7/2018	30- 78	No	DEC	18	6:20	23:59
236	RT	Planned Transmission Outage	PG&E	Humboldt	8/7/2018	16- 64	No	INC	24	0:00	23:59
237	RT	Planned Transmission Outage	PG&E	Humboldt	8/8/2018	32- 80	No	DEC	14	8:40	21:59
238	RT	Planned Transmission Outage	PG&E	Humboldt	8/8/2018	60- 64	No	INC	16	8:40	23:59
239	RT	Planned Transmission Outage	PG&E	Humboldt	8/9/2018	30- 75	No	DEC	24	0:00	23:59
240	RT	Planned Transmission Outage	PG&E	Humboldt	8/9/2018	30- 75	No	INC	24	0:00	23:59
241	RT	Planned Transmission Outage	PG&E	Humboldt	8/10/2018	32- 64	No	DEC	5	0:00	4:59
242	RT	Planned Transmission Outage	PG&E	Humboldt	8/10/2018	45	No	INC	1	0:00	0:29
243	RT	Planned Transmission Outage	PG&E	Humboldt	8/23/2018	30	No	INC	6	18:25	23:59
244	RT	Planned Transmission Outage	PG&E	Humboldt	8/24/2018	30	No	INC	1	0:00	0:59
245	RT	Planned Transmission Outage	PG&E	Humboldt	8/27/2018	16- 30	No	INC	18	6:50	23:59

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Num	Тур	Dancer	Locatio	Local Reliability Area	Trada Data	B#NA/	itm	INC_ DEC	Hou	Begin	End
<b>ber</b> 246	RT	Reason	PG&E	Humboldt	<b>Trade Date</b> 8/28/2018	<b>MW</b> 15- 30	ent No	INC	<b>rs</b> 5	<b>Time</b> 0:00	<b>Time</b> 4:29
		Planned Transmission Outage							_		
247	RT	Planned Transmission Outage	PG&E	Humboldt	8/29/2018	16- 46	No	INC	4	20:45	23:59
248	RT	Planned Transmission Outage	PG&E	Humboldt	8/30/2018	15- 30	No	INC	18	6:00	23:59
249	RT	Planned Transmission Outage	PG&E	Humboldt	8/31/2018	16	No	DEC	18	6:20	23:59
250	RT	Planned Transmission Outage	PG&E	Humboldt	8/31/2018	32- 48	No	INC	18	6:15	23:59
251	RT	Planned Transmission Outage	PG&E	Humboldt	9/1/2018	16- 32	No	INC	8	0:00	7:14
050	БТ	Diament Transmission Outside	D00F	NI/A	0/00/0040	175-	NI-	DEC		40.00	00.50
252	RT	Planned Transmission Outage	PG&E	N/A	8/26/2018	300 119-	No	DEC	3	18:20	20:59
253	RT	Planned Transmission Outage	PG&E	NCNB	8/21/2018	129	No	DEC	10	7:45	17:14
254	RT	Planned Transmission Outage	PG&E	NCNB	8/21/2018	59	No	INC	10	7:45	17:14
255	RT	Planned Transmission Outage	PG&E	Sierra	8/8/2018	2	No	DEC	3	2:13	4:29
256	RT	Planned Transmission Outage	PG&E	Sierra	8/13/2018	255	No	DEC	7	6:51	13:14
257	RT	Planned Transmission Outage	SCE	LA Basin	8/20/2018	20	No	INC	4	20:00	23:59
258	RT	Planned Transmission Outage	SCE	LA Basin	8/21/2018	40	No	INC	24	0:00	23:59
259	RT	Planned Transmission Outage	SCE	LA Basin	8/23/2018	151	No	INC	1	22:10	22:44
		<u> </u>				484-					
260	RT	Planned Transmission Outage	SCE	LA Basin	8/28/2018	743	No	INC	5	12:00	16:44
261	RT	Planned Transmission Outage	SCE	N/A	8/29/2018	465	No	DEC	2	20:30	21:59
262	RT	Planned Transmission Outage	SCE	N/A	8/29/2018	465	No	INC	2	20:30	21:59
263	RT	Planned Transmission Outage	SDG&E	San Diego-IV	8/2/2018	68- 270	No	DEC	13	7:00	19:59
264	RT	Planned Transmission Outage	SDG&E	San Diego-IV	8/2/2018	63- 355	No	INC	12	8:05	19:59
265	RT	Planned Transmission Outage	SDG&E	San Diego-IV	8/3/2018	40- 126	No	INC	15	6:00	20:59
266	RT	Planned Transmission Outage	SDG&E	San Diego-IV	8/4/2018	20	No	INC	13	6:00	18:59
267	RT	Planned Transmission Outage	SDG&E	San Diego-IV	8/7/2018	20	No	INC	3	8:00	10:59
268	RT	Planned Transmission Outage	SDG&E	San Diego-IV	8/8/2018	20	No	INC	6	7:00	12:59
269	RT	Planned Transmission Outage	SDG&E	San Diego-IV	8/9/2018	20- 100	No	INC	11	1:00	11:59
270	RT	Planned Transmission Outage	SDG&E	San Diego-IV	8/12/2018	68	No	INC	2	7:55	8:59
271	RT	Planned Transmission Outage	SDG&E	San Diego-IV	8/13/2018	21- 42	No	INC	2	7:36	8:59

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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
272	RT	Planned Transmission Outage	SDG&E	San Diego-IV	8/17/2018	20- 40	No	INC	18	6:00	23:59
273	RT	Planned Transmission Outage	SDG&E	San Diego-IV	8/18/2018	20	No	INC	22	0:00	21:59
274	RT	Planned Transmission Outage	SDG&E	San Diego-IV	8/20/2018	20- 40	No	INC	6	6:00	11:59
275	RT	Planned Transmission Outage	SDG&E	San Diego-IV	8/21/2018	26- 225	No	INC	13	7:00	19:59
276	RT	Planned Transmission Outage	SDG&E	San Diego-IV	8/22/2018	25- 225	No	INC	23	1:45	23:59
277	RT	Planned Transmission Outage	SDG&E	San Diego-IV	8/23/2018	68	No	DEC	17	4:00	20:59
278	RT	Planned Transmission Outage	SDG&E	San Diego-IV	8/23/2018	40- 361	No	INC	21	0:00	20:59
279	RT	Planned Transmission Outage	SDG&E	San Diego-IV	8/24/2018	68	No	DEC	16	6:20	21:59
280	RT	Planned Transmission Outage	SDG&E	San Diego-IV	8/24/2018	20- 131	No	INC	18	4:00	21:59
281	RT	Planned Transmission Outage	SDG&E	San Diego-IV	8/26/2018	39	No	INC	1	11:00	11:59
282	RT	Planned Transmission Outage	SDG&E	San Diego-IV	8/28/2018	40- 321	No	INC	17	7:00	23:59
283	RT	Planned Transmission Outage	SDG&E	San Diego-IV	8/29/2018	20- 349	No	INC	24	0:00	23:59
284	RT	Software Limitation	PG&E	Bay Area	8/2/2018	0	No	INC	2	17:00	18:04
285	RT	Software Limitation	PG&E	Bay Area	8/10/2018	120	No	DEC	2	2:15	3:59
286	RT	Software Limitation	PG&E	Bay Area	8/13/2018	40	No	DEC	1	17:00	17:59
287	RT	Software Limitation	PG&E	Fresno	8/6/2018	0	No	INC	1	0:00	0:59
288	RT	Software Limitation	PG&E	Fresno	8/9/2018	0	No	DEC	3	15:00	17:59
289	RT	Software Limitation	PG&E	Fresno	8/9/2018	0	No	INC	3	15:00	17:59
290	RT	Software Limitation	PG&E	Fresno	8/10/2018	0	No	INC	1	9:00	9:54
291	RT	Software Limitation	PG&E	Fresno	8/11/2018	0	No	INC	3	5:45	7:59
292	RT	Software Limitation	PG&E	Fresno	8/12/2018	-1E3- 0	No	INC	12	1:15	12:59
293	RT	Software Limitation	PG&E	Fresno	8/13/2018	-316	No	DEC	2	4:10	5:29
294	RT	Software Limitation	PG&E	Fresno	8/13/2018	-316- 0	No	INC	17	1:30	17:59
295	RT	Software Limitation	PG&E	Fresno	8/14/2018	-316	No	DEC	2	8:30	10:29
296	RT	Software Limitation	PG&E	Fresno	8/14/2018	-317- 0	No	INC	11	0:20	10:59
297	RT	Software Limitation	PG&E	Fresno	8/15/2018	-318	No	INC	6	0:00	5:59
298	RT	Software Limitation	PG&E	Humboldt	8/8/2018	32	No	DEC	1	0:30	0:59
299	RT	Software Limitation	PG&E	Humboldt	8/16/2018	42	No	DEC	5	15:55	19:59
300	RT	Software Limitation	PG&E	Humboldt	8/16/2018	42	No	INC	5	15:55	19:59

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Mirror	ket		Lacatio	Local Daliability			mm	INIC	Han	Danin	<b>□</b> n d
Num ber	Typ e	Reason	Locatio	Local Reliability Area	Trade Date	MW	itm ent	INC_ DEC	Hou rs	Begin Time	End Time
301	RT	Software Limitation	PG&E	Humboldt	8/17/2018	16	No	INC	1	23:05	23:59
302	RT	Software Limitation	PG&E	Humboldt	8/30/2018	16	No	INC	1	22:45	23:44
303	RT	Software Limitation	PG&E	N/A	8/6/2018	22	No	INC	1	23:45	23:59
304	RT	Software Limitation	PG&E	N/A	8/7/2018	22	No	INC	4	0:00	3:59
305	RT	Software Limitation	PG&E	N/A	8/9/2018	0	No	INC	1	23:00	23:59
306	RT	Software Limitation	PG&E	N/A	8/10/2018	0	No	INC	2	0:00	1:44
307	RT	Software Limitation	PG&E	Sierra	8/7/2018	0	No	DEC	1	22:05	23:04
308	RT	Software Limitation	PG&E	Sierra	8/13/2018	0	No	DEC	6	18:15	23:59
309	RT	Software Limitation	PG&E	Sierra	8/13/2018	0	No	INC	6	18:15	23:59
310	RT	Software Limitation	PG&E	Sierra	8/14/2018	0	No	INC	1	0:00	0:14
				Big Creek-							
311	RT	Software Limitation	SCE	Ventura	8/6/2018	70	No	DEC	4	16:20	19:39
				Big Creek-	- / - /						
312	RT	Software Limitation	SCE	Ventura	8/6/2018	0	No	INC	1	0:00	0:59
313	RT	Software Limitation	SCE	Big Creek- Ventura	8/8/2018	0	No	INC	2	0:30	1:59
313	IXI	Software Elimitation	JOL	Big Creek-	0/0/2010	0	110	INC		0.30	1.59
314	RT	Software Limitation	SCE	Ventura	8/9/2018	0	No	DEC	1	23:05	23:59
				Big Creek-		-	_				
315	RT	Software Limitation	SCE	Ventura	8/10/2018	0	No	INC	1	0:00	0:04
				Big Creek-	- 4 - 4				_		
316	RT	Software Limitation	SCE	Ventura	8/12/2018	-177	No	INC	3	7:30	9:59
317	RT	Software Limitation	SCE	Big Creek- Ventura	0/42/2040	0	No	DEC	4	22:25	22.50
317	ΚI	Software Limitation	SCE	Big Creek-	8/13/2018	U	INO	DEC	I	22.23	22:59
318	RT	Software Limitation	SCE	Ventura	8/13/2018	-177- 0	No	INC	22	2:00	23:19
0.0		Contraro Emmanon		Big Creek-	3, 13, 2010	177	110			2.00	
319	RT	Software Limitation	SCE	Ventura	8/14/2018	-177	No	INC	3	2:00	4:59
320	RT	Software Limitation	SCE	LA Basin	8/6/2018	10	No	INC	24	0:00	23:59
321	RT	Software Limitation	SCE	LA Basin	8/10/2018	147	No	DEC	4	16:00	19:59
322	RT	Software Limitation	SCE	LA Basin	8/10/2018	0	No	INC	11	0:00	10:59

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	ket						mm				
Num	Тур	Reason	Locatio	Local Reliability Area	Trade Date	MW	itm	INC_ DEC	Hou	Begin Time	End Time
<b>ber</b> 323	<b>e</b> RT	Software Limitation	SCE	LA Basin	8/11/2018	512	ent No	INC	<b>rs</b> 2	18:15	19:29
323	RT		SCE	LA Basin LA Basin	8/15/2018	151	No	DEC	2	12:00	13:29
<b>-</b>		Software Limitation	SCE	N/A				INC	1		
325	RT	Software Limitation		•	8/8/2018	471	No	INC	1	8:15	8:59
326	RT	Software Limitation	SDG&E	San Diego-IV	8/12/2018	-40	No		•	2:20	3:14
327	RT	Software Limitation	SDG&E	San Diego-IV	8/13/2018	-40	No	INC	3	2:00	4:59
328	RT	Software Limitation	SDG&E	San Diego-IV	8/14/2018	-8341	No	INC	11	0:00	10:59
329	RT	Software Limitation	SDG&E	San Diego-IV	8/21/2018	0	No	INC	1	12:20	13:14
330	RT	Software Limitation	SDG&E	San Diego-IV	8/24/2018	0	No	DEC	1	9:45	10:44
331	RT	Start-Up Instructions	SCE	Big Creek- Ventura	8/12/2018	0	No	INC	1	7:00	7:29
332	RT	Unit Testing	Intertie	N/A	8/1/2018	1	No	INC	1	5:15	5:59
333	RT	Unit Testing	Intertie	N/A	8/2/2018	15- 20	No	INC	12	6:00	17:59
334	RT	Unit Testing	Intertie	N/A	8/3/2018	5- 20	No	INC	13	5:00	17:59
335	RT	Unit Testing	Intertie	N/A	8/6/2018	5- 20	No	INC	13	5:00	17:59
336	RT	Unit Testing	Intertie	N/A	8/7/2018	20	Yes	INC	11	7:00	17:59
337	RT	Unit Testing	Intertie	N/A	8/8/2018	20	No	INC	11	7:00	17:59
338	RT	Unit Testing	Intertie	N/A	8/9/2018	20	Yes	INC	12	6:00	17:59
339	RT	Unit Testing	Intertie	N/A	8/10/2018	20	Yes	INC	12	6:00	17:59
340	RT	Unit Testing	Intertie	N/A	8/11/2018	10- 40	Yes	INC	13	6:00	18:59
341	RT	Unit Testing	Intertie	N/A	8/12/2018	10- 40	Yes	INC	13	6:00	18:59
342	RT	Unit Testing	Intertie	N/A	8/13/2018	10- 40	Yes	INC	13	6:00	18:59
343	RT	Unit Testing	Intertie	N/A	8/14/2018	10- 40	No	INC	13	6:00	18:59
344	RT	Unit Testing	Intertie	N/A	8/15/2018	10- 40	Yes	INC	13	6:00	18:59
345	RT	Unit Testing	Intertie	N/A	8/16/2018	10- 40	Yes	INC	13	6:00	18:59
346	RT	Unit Testing	Intertie	N/A	8/17/2018	1- 25	No	INC	16	6:00	21:59
347	RT	Unit Testing	Intertie	N/A	8/18/2018	1- 40	Yes	INC	16	6:00	21:59
348	RT	Unit Testing		N/A N/A	8/19/2018	1- 40	Yes	INC	16	6:00	21:59
348	RT		Intertie	N/A N/A	8/20/2018	1- 40	Yes	INC	16	6:00	21:59
		Unit Testing	Intertie								
350	RT	Unit Testing	Intertie	N/A	8/21/2018	10- 40	Yes	INC	13	6:00	18:59

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Num ber	Typ e	Reason	Locatio	Local Reliability Area	Trade Date	MW	itm ent	INC_ DEC	Hou rs	Begin Time	End Time
351	RT	Unit Testing	Intertie	N/A	8/22/2018	10- 40	Yes	INC	13	6:00	18:59
352	RT	Unit Testing	Intertie	N/A	8/23/2018	10- 40	Yes	INC	13	6:00	18:59
353	RT	Unit Testing	Intertie	N/A	8/24/2018	10- 40	Yes	INC	13	6:00	18:59
354	RT	Unit Testing	Intertie	N/A	8/25/2018	10- 20	No	INC	13	6:00	18:59
355	RT	Unit Testing	Intertie	N/A	8/26/2018	10- 40	Yes	INC	13	6:00	18:59
356	RT	Unit Testing	Intertie	N/A	8/27/2018	10- 40	Yes	INC	13	6:00	18:59
357	RT	Unit Testing	Intertie	N/A	8/28/2018	10- 40	Yes	INC	13	6:00	18:59
358	RT	Unit Testing	Intertie	N/A	8/29/2018	10- 40	Yes	INC	13	6:00	18:59
359	RT	Unit Testing	Intertie	N/A	8/30/2018	10- 40	Yes	INC	13	6:00	18:59
360	RT	Unit Testing	Intertie	N/A	8/31/2018	10- 40	Yes	INC	13	6:00	18:59
361	RT	Unit Testing	PG&E	Humboldt	8/17/2018	28- 42	No	DEC	12	7:35	19:14
362	RT	Unit Testing	PG&E	Humboldt	8/17/2018	16- 42	No	INC	13	7:10	19:14
363	RT	Unit Testing	PG&E	Stockton	8/22/2018	262	No	INC	12	0:00	11:59
				Big Creek-	0/11/10:0					0.00	
364	RT	Unit Testing	SCE	Ventura	8/16/2018	75	No	INC	1	14:10	14:49
365	RT	Unit Testing	SCE	LA Basin	8/16/2018	220	No	INC	10	6:20	15:59
366	RT	Unit Testing	SDG&E	N/A	8/30/2018	520	No	INC	4	8:35	11:59
367	RT	Unplanned Outage	PG&E	Bay Area	8/5/2018	583	No	DEC	1	20:50	21:44
						480-					
368	RT	Unplanned Outage	PG&E	Bay Area	8/5/2018	960	No	INC	1	19:53	20:49
369	RT	Unplanned Outage	PG&E	Fresno	8/5/2018	83	No	INC	2	20:00	21:59
270	рт	Linniano ed Outoro	COE	Big Creek-	0/5/2040	040	N <sub>a</sub>	DEC		10.57	04.44
370	RT	Unplanned Outage	SCE	Ventura	8/5/2018	616	No	DEC	2	19:57	21:44
371	RT	Unplanned Outage	SCE	LA Basin	8/5/2018	1101	No	INC	2	20:04	21:59
372	RT	Unplanned Outage	SDG&E	San Diego-IV	8/5/2018	548	No	INC	2	20:40	21:59

## **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 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

٠	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

### **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 15<sup>th</sup> day of October, 2018.

<u>Isl Anna Pascuyyo</u>
Anna Pascuzzo