



July 25, 2019

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PUBLIC UTILITIES  
COMMISSION

The Honorable Chair and Members  
of the Hawai'i Public Utilities Commission  
Kekuanaoa Building, 1st Floor  
465 South King Street  
Honolulu, Hawai'i 96813

Dear Commissioners:

Subject: Docket No. 2011-0206  
Reliability Standards Working Group  
Monthly Report

In accordance with Ordering Paragraph 3 of Order No. 30371, filed May 4, 2012 in the subject proceeding, enclosed as Exhibit A is the Hawaiian Electric Companies'<sup>1</sup> monthly report for June 2019 on: (1) system frequency control performance during month; (2) significant system events during month; and (3) curtailment of non-dispatchable renewable resources.

An electronic copy of each report is also included with this filing, as the files are voluminous, and therefore are being provided on a compact disc ("CD") to both the Commission and the Consumer Advocate. Any party to this proceeding may obtain a copy of this CD by emailing Marisa Chun at [marisa.chun@hawaiianelectric.com](mailto:marisa.chun@hawaiianelectric.com).

Sincerely,

for Kevin M. Katsura  
Director  
Regulatory Non-Rate Proceedings

Enclosure

c: Service List

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<sup>1</sup> Hawaiian Electric Company, Inc., Hawai'i Electric Light Company, Inc., and Maui Electric Company, Limited are collectively referred to as the "Hawaiian Electric Companies" or "Companies."

**The Commission's Order No. 30371 (Docket No 2011-0206 – Relating To Various Matters in RSWG Process), filed May 4, 2012, ordered the following information for each island grid:**

- (1) System frequency control performance during month:
  - a) Frequency duration plot based on the highest resolution SCADA data available for the month detailing how many seconds each power system operated at frequencies above 60 hertz and at frequencies below 60 Hz.
  - b) Tabulation of the number, magnitude and duration of frequency excursions (high and low) outside normal frequency control range (59.95 to 60.05 Hz).

The following provides information with respect to items 1a) through 1b) – (all statements are current as of the month ending June 30, 2019):

**1a) Frequency duration plot based on the highest resolution SCADA data available for the month detailing how many seconds each power system operated at frequencies above 60 hertz and at frequencies below 60 Hz:**

The frequency duration plots for Hawaiian Electric, Maui Electric (Maui Division) and Hawai'i Electric Light based on two-second data are provided in Attachment 1, and the enclosed Excel files. Refer to the electronic files for the individual data points because the information is voluminous and does not translate well to a hard copy.

**1b) Tabulation of the number, magnitude and duration of frequency excursions (high and low) outside normal frequency control range (59.95 to 60.05 Hz):**

Tabulation of the number, magnitude and duration of frequency excursions outside of the frequency range of 59.95 Hz to 60.05 Hz for Hawaiian Electric, Maui Electric (Maui Division) and Hawai'i Electric Light are provided in Attachment 2, and the enclosed Excel files. Refer to the electronic files for the individual data points because the information is voluminous and does not translate well to a hard copy.

- (2) Significant system events during month:
  - a) Tabulation of contingency reserve activations including date and time, MW magnitude, duration, and triggering event.
  - b) Tabulation of under frequency load shed activations including date and time, triggering frequency, MW magnitude, duration, and triggering event.
  - c) Tabulation of demand response activations for system events, including date and time, MW magnitude, duration, and triggering event, (excluding demand response utilization for unit commitment deferral or system operations economics.)

The following provides information with respect to items 2a) through 2c) – (all statements are current as of the month ending June 30, 2019):

**2a) Tabulation of contingency reserve activations including date and time, MW magnitude, duration, and triggering event:**

Hawaiian Electric's contingency reserve activations are provided in Attachment 3. Maui Electric and Hawai'i Electric Light do not operate with contingency reserve requirements.

**2b) Tabulation of under frequency load shed activations including date and time, triggering frequency, MW magnitude, duration, and triggering event:**

Maui Electric's under frequency load shed activations are provided in Attachment 4. Hawaiian Electric and Hawai'i Electric Light did not have any under frequency load shed activations for the month of June.

**2c) Tabulation of demand response activations for system events, including date and time, MW magnitude, duration, and triggering event, (excluding demand response utilization for unit commitment deferral or system operations economics.)**

Hawaiian Electric's demand response activations for system events are provided in Attachment 5. Hawai'i Electric Light currently does not have a demand response program. Maui Electric has implemented the Fast Demand Response pilot program on a limited basis. Hawai'i Electric Light plans to use the findings of Maui Electric's pilot program to help in the evaluation and development of future demand response programs. Maui Electric executes a weekly testing protocol which measures customer participation. This program is not currently used in response to actual system events. Therefore, Attachment 5 is not being provided for this reporting period.

- (3) Curtailment of non-dispatchable renewable resources:
- (a) Tabulation of each curtailment event for each resource including the starting date and time, duration, megawatt hours curtailed, peak MW curtailed, and reason for curtailment.
  - (b) Total MWh of non-dispatchable renewable resources curtailed for the month.

The following provides information with respect to items 3a) through 3b) – (all statements are current as of the month ending June 30, 2019):

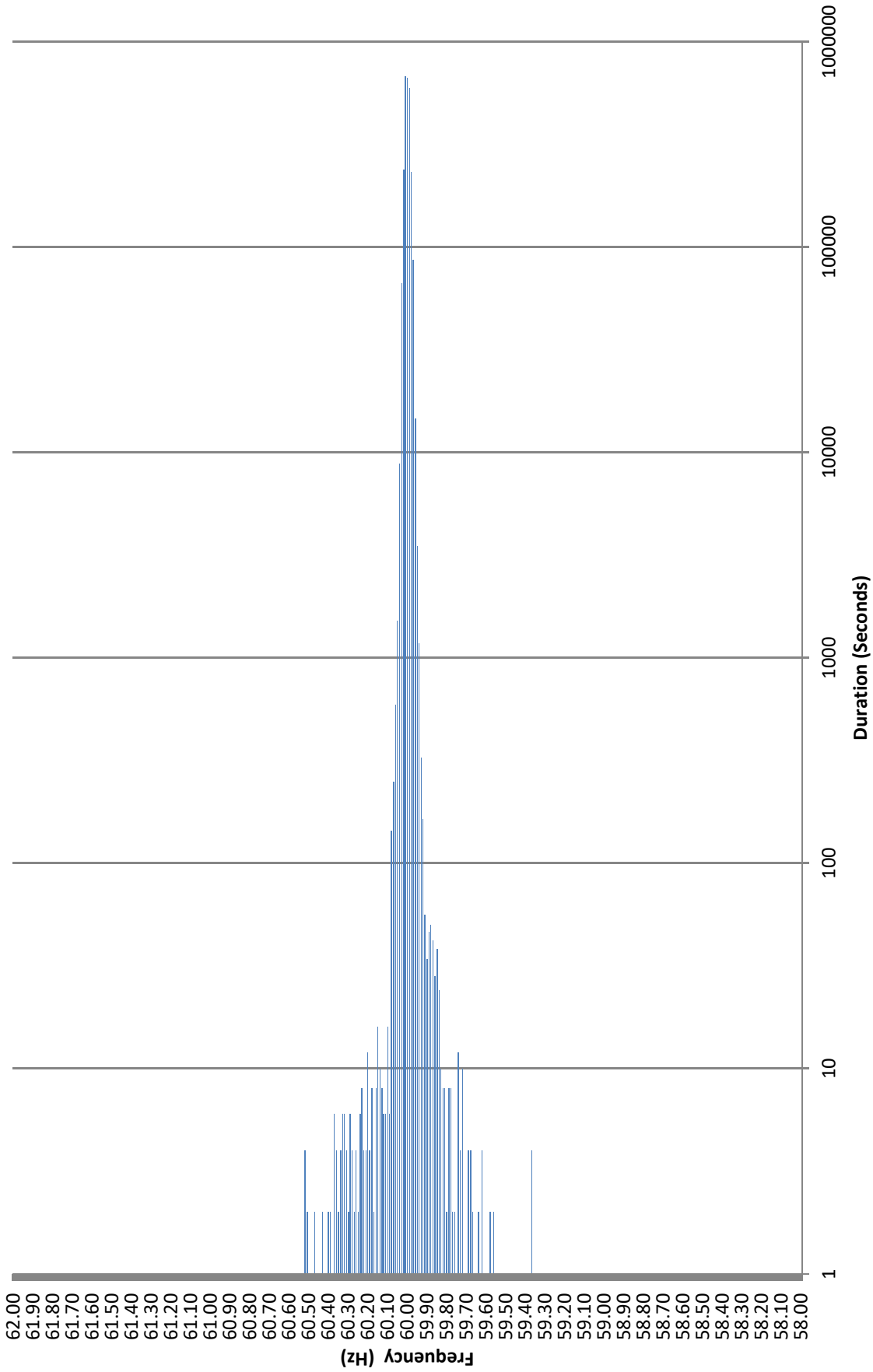
**3a) Tabulation of each curtailment event for each resource including the starting date and time, duration, megawatt hours curtailed, peak MW curtailed, and reason for curtailment:**

The tabulation of each curtailment event for each resource is provided in Attachment 6.

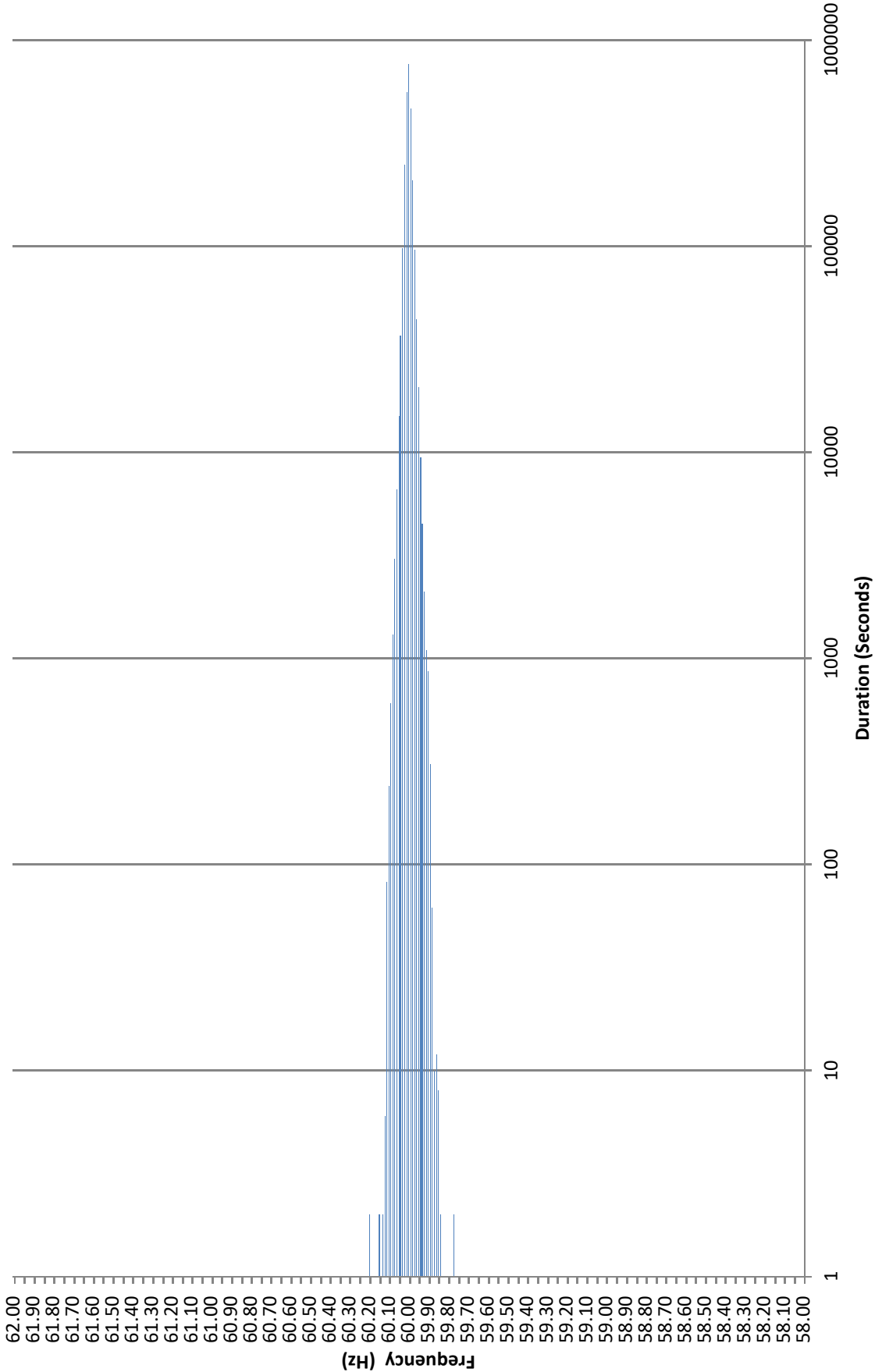
**3b) Total MWh of non-dispatchable renewable resources curtailed for the month:**

Curtailed MWh from non-dispatchable resources are difficult to determine due to the variability of the resource during curtailment periods. In some cases, the curtailed MWh estimates were provided by the IPPs under curtailment. The Hawaiian Electric Companies do not make any representations as to the accuracy of the curtailed MWh. The estimated MWh of non-dispatchable resources curtailed for the month are provided in Attachment 6, corresponding to each curtailment event.

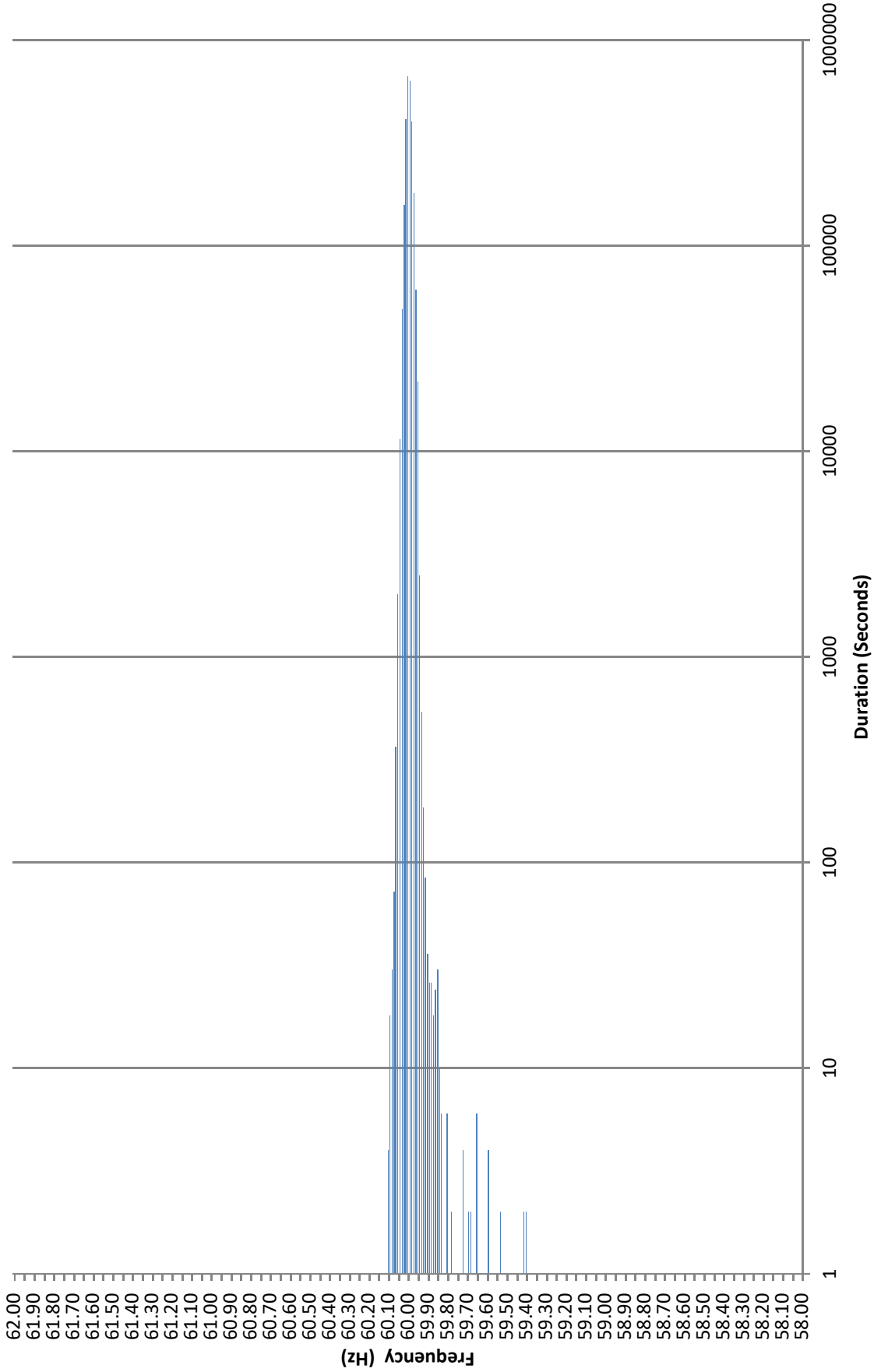
# Frequency Distribution Plot - Hawaiian Electric June 2019



# Frequency Distribution Plot - Maui Electric June 2019



# Frequency Distribution Plot - Hawai'i Electric Light June 2019



Hawaiian Electric Frequency Excursion Statistics June 2019		
Data Rounded to the nearest	<59.95 Hz	>60.05 Hz
Number of Excursions	281	125
Maximum Duration (sec)	158	514
Maximum Deviation (Hz)	59.365	60.519
Total Duration of Excursions (sec)	3140	1598

Maui Electric Frequency Excursion Statistics June 2019		
	<59.95 Hz	>60.05 Hz
Number of Excursions	4432	2821
Maximum Duration (sec)	194	340
Maximum Deviation (Hz)	59.773	60.202
Total Duration of Excursions (sec)	26786	17656



Hawai'i Electric Light Frequency Excursion Statistics June 2019		
	<59.95 Hz	>60.05 Hz
Number of Excursions	2462	236
Maximum Duration (sec)	160	50
Maximum Deviation (Hz)	59.403	60.096
Total Duration of Excursions (sec)	13522	1062

HAWAIIAN ELECTRIC COMPANY, INC.  
CONTINGENCY RESERVE ACTIVATION EVENTS  
June 2019

Event #	Date & Time	Frequency (Hz)			Spinning Reserve Shortfall (MW)	Duration (HH:MM)	Description
		Prior to Event	Nadir	Trigger			
1	6/15/2019 14:13	60.00	59.64	NA	0	0:00	KPLP CT2 tripped offline while generating ~58MW.
2	6/15/2019 15:31	59.97	59.62	NA	-25	0:51	KPLP CT2 tripped offline while generating ~66MW.
3	6/16/2019 22:06	60.14	59.62	NA	0	0:00	KPLP CT2 tripped offline while generating ~79MW
4	6/25/2019 23:32	60.02	59.37	NA	-42	0:56	KPLP CT1 tripped offline while generating ~70MW



HAWAIIAN ELECTRIC COMPANY, INC.  
DEMAND RESPONSE EVENTS  
June 2019

Event #	Date & Time	Frequency (Hz)			Load Shed (MW)	Duration (HH:MM)	Description
		Prior to Event	Nadir	Trigger			
1	6/15/2019 14:13	60.00	59.64	59.70	NA	0:01	KPLP CT2 tripped offline while generating ~58MW. RDLC activated.
2	6/15/2019 15:31	59.97	59.62	59.70	NA	0:01	KPLP CT2 tripped offline while generating ~66MW. RDLC activated.
3	6/16/2019 22:06	60.14	59.62	59.70	NA	0:01	KPLP CT2 tripped offline while generating ~79MW. RDLC activated.
4	6/25/2019 23:32	60.02	59.37	59.70	NA	0:01	KPLP CT1 tripped offline while generating ~70MW. RDLC/CIDLC activated.

Hawaiian Electric Curtailment Report June 2019

Start Date/Time	Curtailment Set Point	MW output prior to start of curtailment	End Date/Time	MW output after curtailment released	Estimated MWh of curtailed energy during event (1)	IPP	Reason for Curtailment
05/31/19 16:42	22.5	0.00	06/03/19 06:44	0	9.29	KWF	Facility Requested
06/02/19 06:31	0.0	0.10	06/03/19 07:32	0	*	KREP	System Constraints
06/02/19 07:38	0.0	3.60	06/02/19 07:55	0	*	KLS2	System Constraints
06/02/19 14:34	0.0	4.00	06/02/19 15:09	0	*	KLS2	System Constraints
06/03/19 06:44	0.0	6.40	06/03/19 07:45	0	5.30	KWF	System Constraints
06/03/19 06:48	0.0	1.50	06/03/19 07:42	0	*	Makai	System Constraints
06/03/19 15:21	0.0	4.80	06/03/19 16:12	0	8.75	KWF	System Constraints
06/03/19 15:29	0.0	9.20	06/03/19 16:02	0	*	Makai	System Constraints
06/03/19 16:52	0.0	1.00	06/03/19 17:31	0	*	KREP	System Constraints
06/04/19 05:25	0.0	7.80	06/04/19 07:49	0	20.18	KWF	System Constraints
06/04/19 05:28	0.0	1.40	06/04/19 07:47	0	*	Makai	System Constraints
06/04/19 14:55	0.0	11.80	06/04/19 15:41	0	9.28	KWF	System Constraints
06/04/19 15:01	0.0	5.40	06/04/19 15:26	0	*	Makai	System Constraints
06/07/19 03:00	0.0	0.00	06/07/19 07:02	0	*	Waianae	System Constraints
06/07/19 03:03	0.0	0.00	06/07/19 03:15	0	*	Aloha1	System Constraints
06/07/19 04:01	0.0	0.00	06/07/19 04:42	0	*	Aloha1	System Constraints
06/15/19 06:54	0.0	0.00	06/15/19 07:22	0	*	KREP	System Constraints
06/15/19 12:13	0.0	4.00	06/15/19 12:54	0	*	KREP	System Constraints
06/17/19 06:35	0.0	4.80	06/17/19 07:42	0	4.65	KWF	System Constraints
06/17/19 06:38	0.0	2.00	06/17/19 07:44	0	*	Makai	System Constraints
06/17/19 14:30	0.0	2.80	06/17/19 14:53	0	*	Makai	System Constraints
06/17/19 14:34	0.0	7.40	06/17/19 14:50	0	1.76	KWF	System Constraints
06/19/19 06:40	0.0	9.50	06/19/19 07:33	0	9.23	KWF	System Constraints
06/19/19 06:47	0.0	4.30	06/19/19 07:30	0	*	Makai	System Constraints
06/19/19 13:59	0.0	9.60	06/19/19 14:47	0	*	Makai	System Constraints
06/19/19 14:00	0.0	14.10	06/19/19 15:07	0	12.74	KWF	System Constraints
06/19/19 18:43	0.0	0.20	06/19/19 19:23	0	*	KREP	System Constraints
06/20/19 05:25	0.0	0.00	06/20/19 05:59	0	*	KREP	System Constraints
06/21/19 06:22	0.0	2.10	06/21/19 06:43	0	*	Makai	System Constraints
06/21/19 06:23	0.0	4.30	06/21/19 06:50	0	3.04	KWF	System Constraints
06/21/19 15:51	0.0	0.00	06/21/19 16:12	0	*	Makai	System Constraints
06/21/19 15:51	0.0	0.00	06/21/19 16:16	0	0.00	KWF	System Constraints
06/22/19 06:50	0.0	0.10	06/22/19 07:11	0	*	KREP	System Constraints
06/22/19 15:05	0.0	2.00	06/22/19 15:22	0	*	KREP	System Constraints
06/24/19 20:35	0.0	0.00	06/24/19 21:13	0	*	KREP	System Constraints
06/27/19 06:11	0.0	8.00	06/27/19 08:06	0	16.38	KWF	System Constraints
06/27/19 06:10	0.0	0.00	06/27/19 07:53	0	*	Makai	System Constraints
06/27/19 13:04	5.0	0.50	06/27/19 19:12	0	1.87	KWF	Facility Requested
06/27/19 19:12	0.0	5.60	06/27/19 19:40	0	4.23	KWF	System Constraints
06/27/19 19:15	0.0	0.70	06/27/19 19:36	0	*	Makai	System Constraints
06/27/19 19:40	5.0	0.00	06/27/19 23:43	0	4.31	KWF	Facility Requested
06/28/19 06:45	0.0	0.00	06/29/19 07:56	0	*	KREP	System Constraints
06/28/19 14:20	0.0	1.30	06/28/19 14:51	0	*	Aloha1	System Constraints

Aloha1 = Aloha Solar 1 PV Farm  
KLS2 = Kalaehouli Solar 2 PV Farm  
KREP = Kalaehouli Renewable Energy Park  
KWF = Kahuku Wind Farm  
Makai = Kawailoa Makai Wind Farm  
Mauka = Kawailoa Mauka Wind Farm  
North = Waihonu North PV Farm  
South = Waihonu South PV Farm  
Waianae = Waianae Solar PV Farm

(1) The estimated MWh of energy curtailed during the event is supplied by Kahuku Wind Farm and/or Kawailoa Wind Farm, and HECO does not make any representations as to its accuracy.

\* Data has not been provided by IPP.



**Maui Curtailment Report**

June 2019

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
6/1/2019 8:13	0:01	SMRR	-0.000296	1.297000	System constraint
6/1/2019 8:13	0:01	KS	0.000356	0.443000	System constraint
6/1/2019 8:13	0:01	SMRR	-0.000289	1.307000	System constraint
6/1/2019 8:14	0:01	KS	0.000489	0.357000	System constraint
6/1/2019 8:14	0:01	SMRR	0.003334	0.899000	System constraint
6/1/2019 8:15	0:04	5A	Data is not available	Data is not available	System constraint
6/1/2019 8:15	0:04	BS250	Data is not available	Data is not available	System constraint
6/1/2019 8:15	0:04	ESA	Data is not available	Data is not available	System constraint
6/1/2019 8:15	0:04	ESB	Data is not available	Data is not available	System constraint
6/1/2019 8:15	0:04	SMRR	0.039734	0.450000	System constraint
6/1/2019 8:15	0:03	KS	0.036571	0.030000	System constraint
6/1/2019 8:16	0:03	KWPPII	0.03263514	5.51769495	System constraint
6/1/2019 8:18	0:01	KS	0.009232	0.037000	System constraint
6/1/2019 8:19	0:01	SMRR	0.007981	0.043000	System constraint
6/1/2019 8:19	0:01	KS	0.009232	0.112000	System constraint
6/1/2019 8:20	0:01	SMRR	0.007808	0.128000	System constraint
6/1/2019 8:20	0:01	KS	0.009232	0.144000	System constraint
6/1/2019 8:20	0:01	SMRR	0.007981	0.141000	System constraint
6/1/2019 8:21	0:01	KS	0.009232	0.159000	System constraint
6/1/2019 8:21	0:01	SMRR	0.007808	0.156000	System constraint
6/1/2019 8:45	0:01	SMRR	0.014843	1.662000	System constraint
6/1/2019 8:45	0:01	KS	0.015040	1.463000	System constraint
6/1/2019 8:45	0:01	SMRR	0.015172	1.675000	System constraint
6/1/2019 8:46	0:01	KS	0.014461	0.657000	System constraint
6/1/2019 8:46	0:01	SMRR	0.015172	1.681000	System constraint
6/1/2019 8:47	0:01	SMRR	0.014843	0.907000	System constraint
6/1/2019 8:47	0:01	KS	0.015040	0.316000	System constraint
6/1/2019 8:48	0:03	5A	Data is not available	Data is not available	System constraint
6/1/2019 8:48	0:03	BS250	Data is not available	Data is not available	System constraint
6/1/2019 8:48	0:03	ESA	Data is not available	Data is not available	System constraint
6/1/2019 8:48	0:03	ESB	Data is not available	Data is not available	System constraint
6/1/2019 8:48	0:03	SMRR	0.060360	0.964000	System constraint
6/1/2019 8:48	0:03	KS	0.060159	0.130000	System constraint
6/1/2019 8:49	0:03	KWPPII	0.028806527	12.11617565	System constraint
6/1/2019 8:51	0:01	SMRR	0.014843	0.016000	System constraint
6/1/2019 8:51	0:01	KS	0.015040	0.071000	System constraint
6/1/2019 8:51	0:01	SMRR	0.015172	0.103000	System constraint
6/1/2019 8:52	0:03	KS	0.045120	0.029000	System constraint
6/1/2019 8:52	0:02	SMRR	0.045187	0.007000	System constraint
6/1/2019 8:53	0:02	5A	Data is not available	Data is not available	System constraint
6/1/2019 8:53	0:02	BS250	Data is not available	Data is not available	System constraint
6/1/2019 8:53	0:02	ESA	Data is not available	Data is not available	System constraint
6/1/2019 8:53	0:02	ESB	Data is not available	Data is not available	System constraint
6/1/2019 8:53	0:02	KWPPII	0.022911278	9.931651115	System constraint
6/1/2019 8:55	0:01	SMRR	0.015172	0.007000	System constraint
6/1/2019 8:55	0:01	KS	0.015040	0.135000	System constraint
6/1/2019 8:55	0:01	SMRR	0.014843	0.230000	System constraint
6/1/2019 8:56	0:01	KS	0.014751	0.451000	System constraint
6/1/2019 8:56	0:01	SMRR	0.015502	0.297000	System constraint
6/1/2019 8:57	0:01	KS	0.015040	0.444000	System constraint
6/1/2019 8:57	0:01	SMRR	0.015172	0.714000	System constraint
6/1/2019 8:57	0:01	KS	0.015040	0.538000	System constraint
6/1/2019 8:58	0:04	5A	Data is not available	Data is not available	System constraint
6/1/2019 8:58	0:04	BS250	Data is not available	Data is not available	System constraint
6/1/2019 8:58	0:04	ESA	Data is not available	Data is not available	System constraint
6/1/2019 8:58	0:04	ESB	Data is not available	Data is not available	System constraint
6/1/2019 8:58	0:05	SMRR	0.102377	0.403000	System constraint
6/1/2019 8:58	0:03	KS	0.066312	0.003000	System constraint
6/1/2019 8:59	0:04	KWPPII	0.080898213	9.012534142	System constraint
6/1/2019 9:02	0:01	KS	0.018271	0.011000	System constraint
6/1/2019 9:02	0:01	SMRR	0.018610	0.074000	System constraint
6/1/2019 9:03	0:01	KS	0.018271	0.112000	System constraint
6/1/2019 9:03	0:01	SMRR	0.019437	0.115000	System constraint
6/1/2019 9:03	0:01	KS	0.018271	0.151000	System constraint
6/1/2019 9:04	0:01	SMRR	0.019023	0.134000	System constraint
6/1/2019 9:04	0:01	KS	0.018271	0.165000	System constraint
6/1/2019 9:04	0:01	SMRR	0.018610	0.181000	System constraint
6/1/2019 9:05	0:01	KS	0.018271	0.408000	System constraint
6/1/2019 9:05	0:01	SMRR	0.019023	0.546000	System constraint
6/1/2019 9:06	0:01	SMRR	0.019023	0.857000	System constraint
6/1/2019 9:06	0:01	KS	0.018271	0.745000	System constraint
6/1/2019 9:07	0:01	SMRR	0.019023	1.189000	System constraint
6/1/2019 9:07	0:01	KS	0.018271	0.931000	System constraint



**Maui Curtailment Report**

June 2019

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
6/1/2019 9:07	0:01	SMRR	0.018610	1.647000	System constraint
6/1/2019 9:08	0:01	KS	0.018271	1.020000	System constraint
6/1/2019 9:08	0:01	SMRR	0.019023	0.961000	System constraint
6/1/2019 9:09	0:01	KS	0.018271	0.822000	System constraint
6/1/2019 9:09	0:03	SMRR	0.075680	0.428000	System constraint
6/1/2019 9:10	0:03	5A	Data is not available	Data is not available	System constraint
6/1/2019 9:10	0:03	BS250	Data is not available	Data is not available	System constraint
6/1/2019 9:10	0:03	KS	0.054112	0.205000	System constraint
6/1/2019 9:10	0:03	ESA	Data is not available	Data is not available	System constraint
6/1/2019 9:10	0:03	ESB	Data is not available	Data is not available	System constraint
6/1/2019 9:10	0:03	KWPPII	0.043966571	5.982741833	System constraint
6/1/2019 9:12	0:01	SMRR	0.018610	0.014000	System constraint
6/1/2019 9:12	0:01	KS	0.018271	0.072000	System constraint
6/1/2019 9:13	0:01	SMRR	0.019023	0.096000	System constraint
6/1/2019 9:14	0:01	KS	0.017216	0.696000	System constraint
6/1/2019 9:14	0:01	SMRR	0.016023	0.151000	System constraint
6/1/2019 9:15	0:01	KS	0.017301	0.806000	System constraint
6/1/2019 9:15	0:01	SMRR	0.016711	0.097000	System constraint
6/1/2019 9:16	0:01	KS	0.017301	0.183000	System constraint
6/1/2019 9:16	0:01	SMRR	0.017082	0.023000	System constraint
6/1/2019 9:16	0:01	KS	0.017301	0.049000	System constraint
6/1/2019 9:17	0:01	KWPPII	0.00285786	6.881899834	System constraint
6/1/2019 9:17	0:01	SMRR	0.017082	0.044000	System constraint
6/1/2019 9:17	0:01	KS	0.017301	0.138000	System constraint
6/1/2019 9:17	0:01	SMRR	0.016711	0.209000	System constraint
6/1/2019 9:18	0:01	KS	0.017301	0.679000	System constraint
6/1/2019 9:18	0:01	SMRR	0.017454	0.443000	System constraint
6/1/2019 9:19	0:01	SMRR	0.017082	0.759000	System constraint
6/1/2019 9:19	0:01	KS	0.017301	1.088000	System constraint
6/1/2019 9:20	0:01	SMRR	0.016711	1.001000	System constraint
6/1/2019 9:20	0:01	KS	0.017301	0.728000	System constraint
6/1/2019 9:21	0:01	KS	0.017301	0.833000	System constraint
6/1/2019 9:21	0:01	SMRR	0.017082	1.213000	System constraint
6/1/2019 9:22	0:01	KS	0.017301	1.420000	System constraint
6/1/2019 9:22	0:01	SMRR	0.016711	1.341000	System constraint
6/1/2019 9:22	0:01	KS	0.017301	1.478000	System constraint
6/1/2019 9:23	0:01	SMRR	0.017454	1.231000	System constraint
6/1/2019 9:23	0:01	KS	0.017301	1.192000	System constraint
6/1/2019 9:24	0:01	SMRR	0.016711	1.238000	System constraint
6/1/2019 9:24	0:01	KS	0.017301	1.437000	System constraint
6/1/2019 9:24	0:01	SMRR	0.017082	1.218000	System constraint
6/1/2019 9:25	0:01	SMRR	0.017082	1.087000	System constraint
6/1/2019 9:25	0:01	KS	0.017301	1.218000	System constraint
6/1/2019 9:26	0:01	SMRR	0.016711	0.727000	System constraint
6/1/2019 9:26	0:01	KS	0.017301	0.859000	System constraint
6/1/2019 9:27	0:01	SMRR	0.017082	0.476000	System constraint
6/1/2019 9:27	0:03	KS	0.077793	0.265000	System constraint
6/1/2019 9:27	0:03	SMRR	0.077976	0.047000	System constraint
6/1/2019 9:28	0:02	5A	Data is not available	Data is not available	System constraint
6/1/2019 9:28	0:02	BS250	Data is not available	Data is not available	System constraint
6/1/2019 9:28	0:02	ESA	Data is not available	Data is not available	System constraint
6/1/2019 9:28	0:02	ESB	Data is not available	Data is not available	System constraint
6/1/2019 9:28	0:03	KWPPII	0.026490108	8.049507141	System constraint
6/1/2019 9:30	0:01	KS	0.026537	0.071000	System constraint
6/1/2019 9:30	0:01	SMRR	0.025717	0.081000	System constraint
6/1/2019 9:31	0:01	SMRR	0.026289	0.131000	System constraint
6/1/2019 9:31	0:01	KS	0.025516	0.145000	System constraint
6/1/2019 9:32	0:01	SMRR	0.026289	0.161000	System constraint
6/1/2019 9:32	0:01	KS	0.026537	0.154000	System constraint
6/1/2019 9:33	1:03	5A	Data is not available	Data is not available	System constraint
6/1/2019 9:33	1:03	BS250	Data is not available	Data is not available	System constraint
6/1/2019 9:33	1:03	ESA	Data is not available	Data is not available	System constraint
6/1/2019 9:33	1:03	ESB	Data is not available	Data is not available	System constraint
6/1/2019 9:33	1:03	KWPPII	6.191503095	10.99746704	System constraint
6/1/2019 9:33	1:02	SMRR	2.338099	0.015000	System constraint
6/1/2019 9:33	1:02	KS	1.616661	0.023000	System constraint
6/1/2019 9:47	0:04	AWE	0.03305699	21	System constraint
6/1/2019 10:15	0:01	AWE	0.000408014	21	System constraint
6/1/2019 10:28	0:03	AWE	0.022726281	21	System constraint
6/1/2019 10:35	0:01	SMRR	0.032960	0.025000	System constraint
6/1/2019 10:35	0:01	KS	0.020576	0.101000	System constraint
6/1/2019 10:36	0:01	SMRR	0.032258	0.528000	System constraint
6/1/2019 10:36	0:01	KS	0.020576	0.436000	System constraint



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6/1/2019 10:36	0:01	SMRR	0.032960	0.668000	System constraint
6/1/2019 10:37	1:12	KS	2.492908	0.280000	System constraint
6/1/2019 10:37	1:11	SMRR	3.266907	0.190000	System constraint
6/1/2019 10:38	1:11	5A	Data is not available	Data is not available	System constraint
6/1/2019 10:38	1:11	BS250	Data is not available	Data is not available	System constraint
6/1/2019 10:38	1:11	ESA	Data is not available	Data is not available	System constraint
6/1/2019 10:38	1:11	ESB	Data is not available	Data is not available	System constraint
6/1/2019 10:38	1:13	KWP2	6.614129062	12.03134918	System constraint
6/1/2019 10:41	0:17	AWE	0.456007099	21	System constraint
6/1/2019 11:02	0:22	AWE	1.186013651	21	System constraint
6/1/2019 11:29	0:01	AWE	0.005573591	21	System constraint
6/1/2019 11:48	0:01	SMRR	0.035225	0.003000	System constraint
6/1/2019 11:49	0:01	KS	0.029305	0.006000	System constraint
6/1/2019 11:49	0:02	SMRR	0.072016	0.062000	System constraint
6/1/2019 11:49	0:02	KS	0.058611	0.037000	System constraint
6/1/2019 11:50	0:03	5A	Data is not available	Data is not available	System constraint
6/1/2019 11:50	0:03	BS250	Data is not available	Data is not available	System constraint
6/1/2019 11:50	0:03	ESA	Data is not available	Data is not available	System constraint
6/1/2019 11:50	0:03	ESB	Data is not available	Data is not available	System constraint
6/1/2019 11:51	0:02	SMRR	0.109589	0.089000	System constraint
6/1/2019 11:51	0:02	KS	0.058611	0.018000	System constraint
6/1/2019 11:52	0:06	KWP2	0.091966963	10.71504593	System constraint
6/1/2019 11:53	0:04	KS	0.146526	0.029000	System constraint
6/1/2019 11:53	0:04	SMRR	0.181604	0.115000	System constraint
6/1/2019 11:54	0:04	5A	Data is not available	Data is not available	System constraint
6/1/2019 11:54	0:04	BS250	Data is not available	Data is not available	System constraint
6/1/2019 11:54	0:04	ESA	Data is not available	Data is not available	System constraint
6/1/2019 11:54	0:04	ESB	Data is not available	Data is not available	System constraint
6/1/2019 11:57	0:01	SMRR	0.036791	0.004000	System constraint
6/1/2019 11:57	0:01	KS	0.029305	0.121000	System constraint
6/1/2019 11:58	0:01	SMRR	0.036008	0.340000	System constraint
6/1/2019 11:58	0:01	KS	0.029305	0.375000	System constraint
6/1/2019 11:58	0:01	SMRR	0.036791	0.470000	System constraint
6/1/2019 11:59	0:41	5A	Data is not available	Data is not available	System constraint
6/1/2019 11:59	0:41	BS250	Data is not available	Data is not available	System constraint
6/1/2019 11:59	0:41	ESA	Data is not available	Data is not available	System constraint
6/1/2019 11:59	0:41	ESB	Data is not available	Data is not available	System constraint
6/1/2019 11:59	1:19	KS	3.175740	0.015000	System constraint
6/1/2019 11:59	1:19	SMRR	3.466621	-0.003000	System constraint
6/1/2019 12:00	1:18	KWP2	4.317900274	12.61515236	System constraint
6/1/2019 12:41	0:13	5A	Data is not available	Data is not available	System constraint
6/1/2019 12:41	0:13	BS250	Data is not available	Data is not available	System constraint
6/1/2019 12:41	0:13	ESA	Data is not available	Data is not available	System constraint
6/1/2019 12:41	0:13	ESB	Data is not available	Data is not available	System constraint
6/1/2019 12:55	0:23	5A	Data is not available	Data is not available	System constraint
6/1/2019 12:55	0:23	BS250	Data is not available	Data is not available	System constraint
6/1/2019 12:55	0:23	ESA	Data is not available	Data is not available	System constraint
6/1/2019 12:55	0:23	ESB	Data is not available	Data is not available	System constraint
6/1/2019 13:18	0:01	KS	0.008004	0.037000	System constraint
6/1/2019 13:18	0:01	SMRR	0.005888	0.190000	System constraint
6/1/2019 13:19	0:01	KS	0.008004	0.391000	System constraint
6/1/2019 13:25	0:01	KS	0.008004	0.985000	System constraint
6/1/2019 13:25	0:01	KS	0.008158	1.429000	System constraint
6/1/2019 13:26	0:01	SMRR	0.005763	0.796000	System constraint
6/1/2019 13:27	0:01	KS	0.008004	1.433000	System constraint
6/1/2019 13:30	0:01	SMRR	0.014734	1.945000	System constraint
6/1/2019 13:31	0:01	KS	0.005126	1.425000	System constraint
6/1/2019 13:31	0:01	SMRR	0.014734	1.846000	System constraint
6/1/2019 13:32	0:01	KS	0.005126	1.289000	System constraint
6/1/2019 13:32	0:01	SMRR	0.015061	1.308000	System constraint
6/1/2019 13:32	0:01	KS	0.005126	0.605000	System constraint
6/1/2019 13:33	0:01	SMRR	0.015388	1.392000	System constraint
6/1/2019 13:38	0:01	SMRR	0.015388	1.841000	System constraint
6/1/2019 13:38	0:01	KS	0.005126	1.885000	System constraint
6/1/2019 13:39	0:01	SMRR	0.015061	2.535000	System constraint
6/1/2019 13:39	0:01	KS	0.005126	1.623000	System constraint
6/1/2019 13:40	0:01	SMRR	0.015388	1.660000	System constraint
6/1/2019 13:40	0:01	KS	0.005126	1.171000	System constraint
6/1/2019 13:40	0:01	SMRR	0.015388	1.154000	System constraint
6/1/2019 13:41	0:01	KS	0.005126	0.839000	System constraint
6/1/2019 13:42	0:01	SMRR	0.015388	0.634000	System constraint
6/1/2019 13:43	0:01	KS	0.005126	1.502000	System constraint
6/1/2019 13:46	0:01	SMRR	0.007901	2.681000	System constraint





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6/1/2019 13:46	0:01	KS	0.010415	1.216000	System constraint
6/1/2019 13:47	0:01	SMRR	0.008073	2.015000	System constraint
6/1/2019 13:47	0:01	KS	0.010415	0.498000	System constraint
6/1/2019 13:47	0:01	SMRR	0.008073	1.537000	System constraint
6/1/2019 13:48	0:01	KS	0.010415	0.689000	System constraint
6/1/2019 13:48	0:01	SMRR	0.007901	0.920000	System constraint
6/1/2019 13:49	0:01	KS	0.010415	0.865000	System constraint
6/1/2019 13:49	0:01	SMRR	0.007729	0.585000	System constraint
6/1/2019 13:50	0:01	KS	0.010415	1.003000	System constraint
6/1/2019 13:50	0:01	SMRR	0.007901	1.034000	System constraint
6/1/2019 13:51	0:01	SMRR	0.007901	1.567000	System constraint
6/1/2019 13:51	0:01	KS	0.010415	1.624000	System constraint
6/1/2019 13:51	0:01	SMRR	0.008073	2.122000	System constraint
6/1/2019 13:51	0:01	KS	0.010415	2.265000	System constraint
6/1/2019 13:52	0:01	SMRR	0.007901	2.600000	System constraint
6/1/2019 13:52	0:01	KS	0.010415	2.705000	System constraint
6/1/2019 13:53	0:01	SMRR	0.007901	2.776000	System constraint
6/1/2019 13:57	0:01	SMRR	0.008073	1.729000	System constraint
6/1/2019 13:58	0:01	KS	0.010015	2.905000	System constraint
6/1/2019 13:58	0:01	SMRR	0.008073	1.549000	System constraint
6/1/2019 13:58	0:01	KS	0.010415	2.455000	System constraint
6/1/2019 13:59	0:01	SMRR	0.011641	1.533000	System constraint
6/1/2019 13:59	0:02	KS	0.024381	1.850000	System constraint
6/1/2019 14:00	0:01	SMRR	0.009127	0.685000	System constraint
6/1/2019 14:01	0:01	SMRR	0.009127	0.516000	System constraint
6/1/2019 14:01	0:01	KS	0.010388	0.939000	System constraint
6/1/2019 14:01	0:01	SMRR	0.008933	0.530000	System constraint
6/1/2019 14:02	0:01	KS	0.010388	1.364000	System constraint
6/1/2019 14:02	0:01	SMRR	0.009127	0.861000	System constraint
6/1/2019 14:03	0:01	KS	0.010388	1.309000	System constraint
6/1/2019 14:03	0:01	SMRR	0.009127	1.315000	System constraint
6/1/2019 14:04	0:01	KS	0.010388	1.667000	System constraint
6/1/2019 14:04	0:01	SMRR	0.008933	1.805000	System constraint
6/1/2019 14:04	0:01	KS	0.010388	2.170000	System constraint
6/1/2019 14:04	0:01	SMRR	0.009127	2.029000	System constraint
6/1/2019 14:16	0:01	KS	0.016299	1.721000	System constraint
6/1/2019 14:16	0:01	SMRR	0.006680	1.889000	System constraint
6/1/2019 14:17	0:01	KS	0.016299	1.834000	System constraint
6/1/2019 14:17	0:01	SMRR	0.006680	1.059000	System constraint
6/1/2019 14:17	0:01	KS	0.015986	1.575000	System constraint
6/1/2019 14:18	0:01	SMRR	0.006538	0.885000	System constraint
6/1/2019 14:18	0:01	KS	0.016299	1.528000	System constraint
6/1/2019 14:18	0:01	SMRR	0.006680	1.392000	System constraint
6/1/2019 14:19	0:01	KS	0.016299	1.245000	System constraint
6/1/2019 14:19	0:01	SMRR	0.006538	1.667000	System constraint
6/1/2019 14:20	0:01	SMRR	0.006538	1.451000	System constraint
6/1/2019 14:20	0:01	KS	0.016299	0.827000	System constraint
6/1/2019 14:21	0:02	SMRR	0.013360	0.984000	System constraint
6/1/2019 14:21	0:01	KS	0.015986	0.917000	System constraint
6/1/2019 14:22	0:01	KS	0.016299	0.943000	System constraint
6/1/2019 14:22	0:01	SMRR	0.006538	0.965000	System constraint
6/1/2019 14:23	0:01	KS	0.016299	1.091000	System constraint
6/1/2019 14:23	0:01	SMRR	0.006680	0.966000	System constraint
6/1/2019 14:23	0:01	KS	0.016299	1.453000	System constraint
6/1/2019 14:24	0:01	SMRR	0.006680	0.971000	System constraint
6/1/2019 14:25	0:01	SMRR	0.006396	1.041000	System constraint
6/1/2019 14:25	0:01	KS	0.016299	2.031000	System constraint
6/1/2019 14:25	0:01	SMRR	0.006680	0.607000	System constraint
6/1/2019 14:26	0:01	KS	0.016299	1.212000	System constraint
6/1/2019 14:26	0:01	SMRR	0.006680	0.420000	System constraint
6/1/2019 14:27	0:01	KS	0.016299	0.708000	System constraint
6/1/2019 14:27	0:01	SMRR	0.006396	0.248000	System constraint
6/1/2019 14:28	0:01	SMRR	0.006680	0.225000	System constraint
6/1/2019 14:28	0:01	KS	0.016299	0.524000	System constraint
6/1/2019 14:29	0:01	5A	Data is not available	Data is not available	System constraint
6/1/2019 14:29	0:01	BS250	Data is not available	Data is not available	System constraint
6/1/2019 14:29	0:01	SMRR	0.006964	0.072000	System constraint
6/1/2019 14:29	0:01	ESA	Data is not available	Data is not available	System constraint
6/1/2019 14:29	0:01	ESB	Data is not available	Data is not available	System constraint
6/1/2019 14:29	0:02	KWP11	0.013402939	16.7257309	System constraint
6/1/2019 14:29	0:02	KS	0.051642	0.066000	System constraint
6/1/2019 14:29	0:01	SMRR	0.012527	0.017000	System constraint
6/1/2019 14:30	0:01	SMRR	0.028241	0.035000	System constraint



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6/1/2019 14:30	0:01	KS	0.035088	0.073000	System constraint
6/1/2019 14:31	0:01	SMRR	0.028869	0.103000	System constraint
6/1/2019 14:31	0:01	KS	0.035088	0.140000	System constraint
6/1/2019 14:32	0:01	SMRR	0.028869	0.145000	System constraint
6/1/2019 14:32	0:01	KS	0.034414	0.143000	System constraint
6/1/2019 14:32	0:01	SMRR	0.028241	0.052000	System constraint
6/1/2019 14:33	0:01	KS	0.035088	0.100000	System constraint
6/1/2019 14:33	0:01	SMRR	0.030124	0.127000	System constraint
6/1/2019 14:34	0:01	KS	0.035088	0.147000	System constraint
6/1/2019 14:34	0:01	SMRR	0.029496	0.241000	System constraint
6/1/2019 14:35	0:01	KS	0.035088	0.152000	System constraint
6/1/2019 14:35	0:01	SMRR	0.028241	0.476000	System constraint
6/1/2019 14:35	0:01	SMRR	0.029496	0.812000	System constraint
6/1/2019 14:36	0:01	KS	0.035088	0.553000	System constraint
6/1/2019 14:36	0:01	SMRR	0.029496	1.190000	System constraint
6/1/2019 14:36	0:01	KS	0.035088	0.824000	System constraint
6/1/2019 14:37	0:01	SMRR	0.028241	1.459000	System constraint
6/1/2019 14:37	0:01	KS	0.035088	1.267000	System constraint
6/1/2019 14:38	0:01	SMRR	0.028241	1.265000	System constraint
6/1/2019 14:38	0:01	KS	0.035088	0.992000	System constraint
6/1/2019 14:39	0:01	SMRR	0.029496	0.747000	System constraint
6/1/2019 14:39	0:01	KS	0.035088	0.468000	System constraint
6/1/2019 14:39	0:02	SMRR	0.087861	0.223000	System constraint
6/1/2019 14:40	0:02	5A	Data is not available	Data is not available	System constraint
6/1/2019 14:40	0:02	BS250	Data is not available	Data is not available	System constraint
6/1/2019 14:40	0:02	ESA	Data is not available	Data is not available	System constraint
6/1/2019 14:40	0:02	ESB	Data is not available	Data is not available	System constraint
6/1/2019 14:40	0:02	KWP2	0.01567831	17.14287567	System constraint
6/1/2019 14:40	0:02	KS	0.070177	0.018000	System constraint
6/1/2019 14:42	0:01	KS	0.035088	0.071000	System constraint
6/1/2019 14:42	0:01	SMRR	0.028869	-0.003000	System constraint
6/1/2019 14:42	0:01	SMRR	0.029496	-0.003000	System constraint
6/1/2019 14:43	0:01	KS	0.035088	0.121000	System constraint
6/1/2019 14:43	0:01	SMRR	0.029496	-0.003000	System constraint
6/1/2019 14:43	0:01	KS	0.035088	0.106000	System constraint
6/1/2019 14:44	0:01	SMRR	0.028106	-0.003000	System constraint
6/1/2019 14:44	0:01	KS	0.034048	0.134000	System constraint
6/1/2019 14:45	0:01	SMRR	0.024495	-0.003000	System constraint
6/1/2019 14:45	0:01	KS	0.022178	0.061000	System constraint
6/1/2019 14:46	0:01	SMRR	0.024495	0.037000	System constraint
6/1/2019 14:46	0:01	KS	0.022178	0.055000	System constraint
6/1/2019 14:46	0:01	SMRR	0.025027	0.133000	System constraint
6/1/2019 14:47	0:01	KS	0.022178	0.193000	System constraint
6/1/2019 14:47	0:01	SMRR	0.025027	0.348000	System constraint
6/1/2019 14:48	0:01	KS	0.021325	0.579000	System constraint
6/1/2019 14:48	0:01	SMRR	0.024495	0.659000	System constraint
6/1/2019 14:49	0:01	KS	0.022178	0.279000	System constraint
6/1/2019 14:49	0:01	SMRR	0.024495	0.576000	System constraint
6/1/2019 14:49	0:01	SMRR	0.025027	0.231000	System constraint
6/1/2019 14:49	0:01	KS	0.022178	0.006000	System constraint
6/1/2019 14:50	0:01	5A	Data is not available	Data is not available	System constraint
6/1/2019 14:50	0:01	BS250	Data is not available	Data is not available	System constraint
6/1/2019 14:50	0:01	ESA	Data is not available	Data is not available	System constraint
6/1/2019 14:50	0:01	ESB	Data is not available	Data is not available	System constraint
6/1/2019 14:50	0:01	SMRR	0.024495	0.008000	System constraint
6/1/2019 14:50	0:01	KS	0.022178	0.075000	System constraint
6/1/2019 14:51	0:01	SMRR	0.025027	0.413000	System constraint
6/1/2019 14:51	0:01	KS	0.022178	0.242000	System constraint
6/1/2019 14:52	0:01	SMRR	0.025027	0.722000	System constraint
6/1/2019 14:52	0:01	KS	0.022178	0.617000	System constraint
6/1/2019 14:52	0:01	SMRR	0.024495	1.268000	System constraint
6/1/2019 14:53	0:01	KS	0.022178	0.886000	System constraint
6/1/2019 14:53	0:01	SMRR	0.025027	1.572000	System constraint
6/1/2019 14:54	0:01	KS	0.022178	1.159000	System constraint
6/1/2019 14:54	0:01	SMRR	0.025027	1.336000	System constraint
6/1/2019 14:55	0:01	KS	0.022178	0.829000	System constraint
6/1/2019 14:55	0:01	SMRR	0.023962	0.795000	System constraint
6/1/2019 14:55	0:01	KS	0.022178	0.469000	System constraint
6/1/2019 14:56	0:01	SMRR	0.025027	0.359000	System constraint
6/1/2019 14:56	0:01	KS	0.022178	0.524000	System constraint
6/1/2019 14:56	0:01	SMRR	0.025027	0.274000	System constraint
6/1/2019 14:57	0:01	SMRR	0.024495	0.649000	System constraint
6/1/2019 14:57	0:01	KS	0.022178	0.317000	System constraint



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6/1/2019 14:58	0:01	SMRR	0.025027	0.549000	System constraint
6/1/2019 14:58	0:01	KS	0.022178	0.283000	System constraint
6/1/2019 14:59	0:01	SMRR	0.025027	0.514000	System constraint
6/1/2019 14:59	0:01	KS	0.023198	0.691000	System constraint
6/1/2019 14:59	0:01	SMRR	0.029530	0.671000	System constraint
6/1/2019 15:00	0:01	KS	0.028289	0.600000	System constraint
6/1/2019 15:00	0:01	SMRR	0.027162	0.274000	System constraint
6/1/2019 15:01	0:09	5A	Data is not available	Data is not available	System constraint
6/1/2019 15:01	0:09	BS250	Data is not available	Data is not available	System constraint
6/1/2019 15:01	0:09	ESA	Data is not available	Data is not available	System constraint
6/1/2019 15:01	0:09	ESB	Data is not available	Data is not available	System constraint
6/1/2019 15:01	0:09	KS	0.281253	0.417000	System constraint
6/1/2019 15:01	0:09	SMRR	0.295890	0.195000	System constraint
6/1/2019 15:03	0:07	KWPPII	0.068536822	17.37240601	System constraint
6/1/2019 15:09	0:01	KS	0.028289	0.037000	System constraint
6/1/2019 15:10	0:01	SMRR	0.027162	0.117000	System constraint
6/1/2019 15:10	0:01	KS	0.028289	0.067000	System constraint
6/1/2019 15:10	0:01	SMRR	0.027162	0.106000	System constraint
6/1/2019 15:11	0:01	KS	0.028289	0.349000	System constraint
6/1/2019 15:11	0:01	SMRR	0.026584	0.365000	System constraint
6/1/2019 15:12	0:01	KS	0.028289	0.351000	System constraint
6/1/2019 15:12	0:01	SMRR	0.027162	0.206000	System constraint
6/1/2019 15:13	0:01	SMRR	0.027162	0.368000	System constraint
6/1/2019 15:13	0:01	KS	0.027201	0.351000	System constraint
6/1/2019 15:13	0:01	SMRR	0.026584	0.474000	System constraint
6/1/2019 15:14	0:01	KS	0.028289	0.808000	System constraint
6/1/2019 15:14	0:01	SMRR	0.017562	0.730000	System constraint
6/1/2019 15:14	0:01	KS	0.012173	0.952000	System constraint
6/1/2019 15:15	0:01	SMRR	0.011086	1.073000	System constraint
6/1/2019 15:15	0:01	KS	0.018986	1.180000	System constraint
6/1/2019 15:16	0:01	SMRR	0.011086	1.187000	System constraint
6/1/2019 15:16	0:01	KS	0.018986	0.949000	System constraint
6/1/2019 15:17	0:01	SMRR	0.011086	0.966000	System constraint
6/1/2019 15:17	0:01	KS	0.018986	1.019000	System constraint
6/1/2019 15:17	0:01	SMRR	0.011086	0.759000	System constraint
6/1/2019 15:18	0:01	KS	0.018986	0.614000	System constraint
6/1/2019 15:18	0:01	SMRR	0.011327	0.542000	System constraint
6/1/2019 15:19	0:01	KS	0.018986	0.475000	System constraint
6/1/2019 15:19	0:01	SMRR	0.011327	0.425000	System constraint
6/1/2019 15:20	0:01	SMRR	0.011086	0.430000	System constraint
6/1/2019 15:20	0:01	KS	0.018986	0.447000	System constraint
6/1/2019 15:20	0:01	SMRR	0.011327	0.489000	System constraint
6/1/2019 15:21	0:01	KS	0.018986	0.322000	System constraint
6/1/2019 15:21	0:01	SMRR	0.011327	0.987000	System constraint
6/1/2019 15:21	0:01	KS	0.018986	0.947000	System constraint
6/1/2019 15:22	0:01	SMRR	0.011086	0.994000	System constraint
6/1/2019 15:22	0:01	KS	0.018986	1.352000	System constraint
6/1/2019 15:23	0:01	SMRR	0.011086	1.217000	System constraint
6/1/2019 15:23	0:01	KS	0.018986	1.176000	System constraint
6/1/2019 15:24	0:01	SMRR	0.011327	1.667000	System constraint
6/1/2019 15:24	0:01	KS	0.018986	1.349000	System constraint
6/1/2019 15:24	0:01	SMRR	0.011086	1.476000	System constraint
6/1/2019 15:25	0:01	KS	0.018986	1.904000	System constraint
6/1/2019 15:25	0:02	SMRR	0.022172	1.780000	System constraint
6/2/2019 5:55	0:01	KWPPII	0.007168646	0.43011874	System constraint
6/2/2019 9:25	0:01	KS	0.000460	1.990000	System constraint
6/2/2019 9:45	0:01	SMRR	0.009115	2.369000	System constraint
6/2/2019 9:45	0:01	KS	0.009564	1.895000	System constraint
6/2/2019 9:46	0:01	SMRR	0.009115	1.811000	System constraint
6/2/2019 9:46	0:01	KS	0.009564	1.914000	System constraint
6/2/2019 9:46	0:01	SMRR	0.008921	1.196000	System constraint
6/2/2019 9:47	0:01	KS	0.009564	1.223000	System constraint
6/2/2019 9:54	0:01	SMRR	0.009115	2.076000	System constraint
6/2/2019 9:54	0:01	KS	0.009564	0.435000	System constraint
6/2/2019 9:55	0:01	SMRR	0.008921	1.312000	System constraint
6/2/2019 9:55	0:01	KS	0.009564	0.402000	System constraint
6/2/2019 9:56	0:01	SMRR	0.008921	0.796000	System constraint
6/2/2019 9:56	0:01	KS	0.009196	0.088000	System constraint
6/2/2019 9:57	0:31	5A	Data is not available	Data is not available	System constraint
6/2/2019 9:57	0:31	BS250	Data is not available	Data is not available	System constraint
6/2/2019 9:57	0:31	ESA	Data is not available	Data is not available	System constraint
6/2/2019 9:57	0:31	ESB	Data is not available	Data is not available	System constraint
6/2/2019 9:57	0:32	KWPPII	3.168023872	13.62707996	System constraint



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6/2/2019 9:57	0:31	SMRR	1.001985	0.265000	System constraint
6/2/2019 9:57	0:31	KS	1.024546	0.027000	System constraint
6/2/2019 10:28	0:01	SMRR	0.033469	0.008000	System constraint
6/2/2019 10:28	0:01	KS	0.035282	0.296000	System constraint
6/2/2019 10:28	0:01	SMRR	0.033469	0.369000	System constraint
6/2/2019 10:29	0:01	KS	0.035252	0.713000	System constraint
6/2/2019 10:29	0:01	SMRR	0.032757	0.697000	System constraint
6/2/2019 10:30	0:01	SMRR	0.024809	0.483000	System constraint
6/2/2019 10:30	0:01	KS	0.036244	0.524000	System constraint
6/2/2019 10:31	0:49	5A	Data is not available	Data is not available	System constraint
6/2/2019 10:31	0:49	BS250	Data is not available	Data is not available	System constraint
6/2/2019 10:31	0:49	ESA	Data is not available	Data is not available	System constraint
6/2/2019 10:31	0:49	ESB	Data is not available	Data is not available	System constraint
6/2/2019 10:31	0:49	SMRR	1.996061	-0.001000	System constraint
6/2/2019 10:31	0:49	KS	2.036076	0.009000	System constraint
6/2/2019 10:32	1:01	KWPPII	3.518864926	16.35748482	System constraint
6/2/2019 11:20	0:11	SMRR	0.410947	0.007000	System constraint
6/2/2019 11:20	0:10	KS	0.490240	0.014000	System constraint
6/2/2019 11:21	0:11	5A	Data is not available	Data is not available	System constraint
6/2/2019 11:21	0:11	BS250	Data is not available	Data is not available	System constraint
6/2/2019 11:21	0:11	ESA	Data is not available	Data is not available	System constraint
6/2/2019 11:21	0:11	ESB	Data is not available	Data is not available	System constraint
6/2/2019 11:31	0:01	KS	0.035736	0.161000	System constraint
6/2/2019 11:31	0:01	SMRR	0.021440	0.045000	System constraint
6/2/2019 11:31	0:01	KS	0.035736	0.028000	System constraint
6/2/2019 11:32	0:01	SMRR	0.021440	0.060000	System constraint
6/2/2019 11:32	0:01	KS	0.035048	0.133000	System constraint
6/2/2019 11:32	0:02	SMRR	0.041511	0.076000	System constraint
6/2/2019 11:33	0:01	KS	0.035736	0.672000	System constraint
6/2/2019 11:34	0:01	SMRR	0.021440	0.709000	System constraint
6/2/2019 11:34	0:01	KS	0.035736	1.059000	System constraint
6/2/2019 11:35	0:01	SMRR	0.020983	1.069000	System constraint
6/2/2019 11:35	0:01	KS	0.035736	1.237000	System constraint
6/2/2019 11:35	0:01	SMRR	0.020983	1.080000	System constraint
6/2/2019 11:36	0:01	KS	0.035736	1.074000	System constraint
6/2/2019 11:36	0:01	SMRR	0.020983	1.190000	System constraint
6/2/2019 11:37	0:01	KS	0.035736	1.276000	System constraint
6/2/2019 11:37	0:01	SMRR	0.021440	1.108000	System constraint
6/2/2019 11:37	0:01	KS	0.035736	0.844000	System constraint
6/2/2019 11:38	0:01	SMRR	0.021440	0.645000	System constraint
6/2/2019 11:38	0:01	KS	0.035736	0.291000	System constraint
6/2/2019 11:39	0:04	5A	Data is not available	Data is not available	System constraint
6/2/2019 11:39	0:04	BS250	Data is not available	Data is not available	System constraint
6/2/2019 11:39	0:04	ESA	Data is not available	Data is not available	System constraint
6/2/2019 11:39	0:04	ESB	Data is not available	Data is not available	System constraint
6/2/2019 11:39	0:04	SMRR	0.105829	0.096000	System constraint
6/2/2019 11:39	0:03	KS	0.142942	0.017000	System constraint
6/2/2019 11:40	0:03	KWPPII	0.0838147	13.08219624	System constraint
6/2/2019 11:42	0:01	SMRR	0.020983	0.102000	System constraint
6/2/2019 11:43	0:01	KS	0.035736	0.159000	System constraint
6/2/2019 11:43	0:01	SMRR	0.021440	0.205000	System constraint
6/2/2019 11:43	0:01	KS	0.035736	0.228000	System constraint
6/2/2019 11:44	0:01	KWPPII	0.002748219	12.57423687	System constraint
6/2/2019 11:44	0:01	SMRR	0.023158	0.184000	System constraint
6/2/2019 11:44	0:01	KS	0.040036	0.488000	System constraint
6/2/2019 11:45	0:43	SMRR	1.782668	0.342000	System constraint
6/2/2019 11:45	0:42	KS	1.856585	0.273000	System constraint
6/2/2019 11:46	0:42	5A	Data is not available	Data is not available	System constraint
6/2/2019 11:46	0:42	BS250	Data is not available	Data is not available	System constraint
6/2/2019 11:46	0:42	ESA	Data is not available	Data is not available	System constraint
6/2/2019 11:46	0:42	ESB	Data is not available	Data is not available	System constraint
6/2/2019 11:47	0:42	KWPPII	2.387707218	17.47818947	System constraint
6/2/2019 12:27	0:01	SMRR	0.032400	0.006000	System constraint
6/2/2019 12:28	0:01	KS	0.036336	0.004000	System constraint
6/2/2019 12:28	0:01	SMRR	0.032400	0.098000	System constraint
6/2/2019 12:28	0:01	KS	0.036336	0.099000	System constraint
6/2/2019 12:29	0:01	SMRR	0.033386	0.370000	System constraint
6/2/2019 12:29	0:01	KS	0.022399	0.462000	System constraint
6/2/2019 12:30	0:01	SMRR	0.004570	0.640000	System constraint
6/2/2019 12:30	0:01	KS	0.021522	0.725000	System constraint
6/2/2019 12:30	0:01	SMRR	0.004669	0.594000	System constraint
6/2/2019 12:31	0:01	KS	0.021522	0.807000	System constraint
6/2/2019 12:31	0:01	SMRR	0.004570	0.595000	System constraint



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6/2/2019 12:32	0:01	KS	0.021522	0.986000	System constraint
6/2/2019 12:32	0:01	SMRR	0.004570	0.382000	System constraint
6/2/2019 12:33	0:01	5A	Data is not available	Data is not available	System constraint
6/2/2019 12:33	0:01	BS250	Data is not available	Data is not available	System constraint
6/2/2019 12:33	0:01	ESA	Data is not available	Data is not available	System constraint
6/2/2019 12:33	0:01	ESB	Data is not available	Data is not available	System constraint
6/2/2019 12:33	0:01	SMRR	0.004669	0.053000	System constraint
6/2/2019 12:33	0:01	KS	0.021522	0.445000	System constraint
6/2/2019 12:33	0:01	SMRR	0.004669	0.019000	System constraint
6/2/2019 12:34	0:01	KWPPII	0.00334177	17.521101	System constraint
6/2/2019 12:34	0:01	KS	0.021522	0.297000	System constraint
6/2/2019 12:34	0:01	SMRR	0.004570	0.301000	System constraint
6/2/2019 12:34	0:01	KS	0.021522	0.558000	System constraint
6/2/2019 12:35	0:01	SMRR	0.004669	0.515000	System constraint
6/2/2019 12:35	0:01	KS	0.021522	1.174000	System constraint
6/2/2019 12:36	0:01	SMRR	0.004570	0.380000	System constraint
6/2/2019 12:36	0:01	KS	0.021522	1.368000	System constraint
6/2/2019 12:37	0:01	SMRR	0.004471	0.435000	System constraint
6/2/2019 12:37	0:01	KS	0.021522	1.052000	System constraint
6/2/2019 12:37	0:01	SMRR	0.004669	0.166000	System constraint
6/2/2019 12:38	0:01	KS	0.021522	0.740000	System constraint
6/2/2019 12:38	0:01	SMRR	0.004570	0.293000	System constraint
6/2/2019 12:39	0:02	KS	0.043044	1.225000	System constraint
6/2/2019 12:39	0:01	SMRR	0.004669	0.470000	System constraint
6/2/2019 12:40	0:01	SMRR	0.004570	0.575000	System constraint
6/2/2019 12:40	0:01	SMRR	0.004570	0.637000	System constraint
6/2/2019 12:41	0:01	KS	0.021522	2.075000	System constraint
6/2/2019 13:27	0:01	KS	-0.003725	2.157000	System constraint
6/2/2019 13:27	0:01	SMRR	0.006162	2.706000	System constraint
6/2/2019 13:28	0:01	KS	-0.003725	1.548000	System constraint
6/2/2019 13:28	0:01	SMRR	0.006162	2.406000	System constraint
6/2/2019 13:29	0:01	KS	0.000989	1.018000	System constraint
6/2/2019 13:29	0:01	SMRR	0.014856	1.822000	System constraint
6/2/2019 13:30	0:01	SMRR	0.028801	1.834000	System constraint
6/2/2019 13:30	0:01	KS	0.032888	1.119000	System constraint
6/2/2019 13:31	0:01	SMRR	0.028801	1.517000	System constraint
6/2/2019 13:31	0:01	KS	0.032888	1.194000	System constraint
6/2/2019 13:31	0:01	SMRR	0.027575	1.560000	System constraint
6/2/2019 13:32	0:01	KS	0.032888	1.048000	System constraint
6/2/2019 13:32	0:01	SMRR	0.028801	1.705000	System constraint
6/2/2019 13:32	0:01	KS	0.032888	0.459000	System constraint
6/2/2019 13:33	0:01	SMRR	0.028801	1.283000	System constraint
6/2/2019 13:33	0:01	KS	0.032888	0.203000	System constraint
6/2/2019 13:34	0:07	5A	Data is not available	Data is not available	System constraint
6/2/2019 13:34	0:07	BS250	Data is not available	Data is not available	System constraint
6/2/2019 13:34	0:07	ESA	Data is not available	Data is not available	System constraint
6/2/2019 13:34	0:07	ESB	Data is not available	Data is not available	System constraint
6/2/2019 13:34	0:06	SMRR	0.227341	0.730000	System constraint
6/2/2019 13:34	0:06	KS	0.228950	0.033000	System constraint
6/2/2019 13:36	0:04	KWPPII	0.043680795	17.56201744	System constraint
6/2/2019 13:40	0:01	SMRR	0.028801	0.019000	System constraint
6/2/2019 13:40	0:01	KS	0.032888	0.229000	System constraint
6/2/2019 13:41	0:01	SMRR	0.028188	0.117000	System constraint
6/2/2019 13:41	0:01	KS	0.032888	0.546000	System constraint
6/2/2019 13:41	0:01	SMRR	0.028801	0.511000	System constraint
6/2/2019 13:42	0:01	KS	0.032888	1.025000	System constraint
6/2/2019 13:42	0:01	SMRR	0.028801	0.963000	System constraint
6/2/2019 13:43	0:01	KS	0.032888	1.139000	System constraint
6/2/2019 13:43	0:01	SMRR	0.028188	1.203000	System constraint
6/2/2019 13:44	0:01	KS	0.031275	1.414000	System constraint
6/2/2019 13:44	0:01	SMRR	0.028231	1.180000	System constraint
6/2/2019 13:45	0:01	KS	0.006096	1.248000	System constraint
6/2/2019 13:45	0:01	SMRR	0.002472	0.957000	System constraint
6/2/2019 13:45	0:01	SMRR	0.002419	1.104000	System constraint
6/2/2019 13:45	0:01	KS	0.006096	1.887000	System constraint
6/2/2019 13:46	0:01	SMRR	0.002367	1.507000	System constraint
6/2/2019 13:46	0:01	KS	0.006096	2.052000	System constraint
6/2/2019 13:47	0:01	SMRR	0.002419	1.345000	System constraint
6/2/2019 13:47	0:01	KS	0.006096	2.196000	System constraint
6/2/2019 13:48	0:01	SMRR	0.002419	1.366000	System constraint
6/2/2019 13:48	0:01	KS	0.006096	2.097000	System constraint
6/2/2019 13:48	0:01	SMRR	0.002472	1.490000	System constraint
6/2/2019 13:51	0:01	KS	0.006096	2.895000	System constraint



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6/2/2019 13:56	0:01	SMRR	0.002367	1.417000	System constraint
6/2/2019 13:57	0:01	KS	0.006096	2.397000	System constraint
6/2/2019 13:57	0:01	SMRR	0.002367	1.394000	System constraint
6/2/2019 13:58	0:01	KS	0.006096	2.310000	System constraint
6/2/2019 13:58	0:01	KS	0.006096	2.769000	System constraint
6/2/2019 13:59	0:01	SMRR	0.001725	1.641000	System constraint
6/2/2019 15:24	0:01	KS	0.002306	2.661000	System constraint
6/2/2019 15:24	0:01	SMRR	0.001911	2.745000	System constraint
6/2/2019 15:25	0:01	KS	0.002306	2.658000	System constraint
6/2/2019 15:25	0:01	SMRR	0.001911	2.614000	System constraint
6/2/2019 15:26	0:01	SMRR	0.001830	2.432000	System constraint
6/2/2019 15:26	0:01	KS	0.002306	2.657000	System constraint
6/2/2019 15:27	0:01	SMRR	0.001830	2.419000	System constraint
6/2/2019 15:27	0:01	KS	0.002306	2.005000	System constraint
6/2/2019 15:27	0:01	SMRR	0.001911	2.101000	System constraint
6/2/2019 15:28	0:01	KS	0.002306	1.946000	System constraint
6/2/2019 15:28	0:01	SMRR	0.001870	1.545000	System constraint
6/2/2019 15:28	0:01	KS	0.002306	1.518000	System constraint
6/2/2019 15:29	0:01	SMRR	0.002958	1.179000	System constraint
6/2/2019 15:29	0:01	KS	0.006751	1.054000	System constraint
6/2/2019 15:30	0:01	SMRR	0.004290	0.455000	System constraint
6/2/2019 15:30	0:01	KS	0.006345	0.654000	System constraint
6/2/2019 15:30	0:01	SMRR	0.004199	0.275000	System constraint
6/2/2019 15:31	0:01	KS	0.006345	0.676000	System constraint
6/2/2019 15:31	0:01	SMRR	0.004108	0.414000	System constraint
6/2/2019 15:32	0:01	KS	0.006345	0.947000	System constraint
6/2/2019 15:32	0:01	SMRR	0.004290	0.620000	System constraint
6/2/2019 15:34	0:01	KS	0.006345	2.094000	System constraint
6/2/2019 15:34	0:01	SMRR	0.004290	1.835000	System constraint
6/2/2019 15:34	0:01	KS	0.006345	2.050000	System constraint
6/2/2019 15:36	0:01	KS	0.006345	2.541000	System constraint
6/3/2019 0:41	0:04	KWPPII	0.017299906	16.71175957	System constraint
6/3/2019 1:02	1:17	KWPPII	6.705261405	17.71370697	System constraint
6/3/2019 2:43	0:28	KWPPII	1.578403823	17.70871735	System constraint
6/3/2019 3:12	0:01	KWPPII	0.018777259	15.74074841	System constraint
6/3/2019 3:15	0:01	KWPPII	0.000473309	15.24676132	System constraint
6/3/2019 3:31	0:01	KWPPII	0.004061286	15.19287109	System constraint
6/3/2019 3:33	0:11	KWPPII	0.171212339	16.81953812	System constraint
6/3/2019 4:12	1:19	KWPPII	6.905166483	17.70272827	System constraint
6/3/2019 8:09	0:01	KS	0.001918	0.961000	System constraint
6/3/2019 8:09	0:01	SMRR	0.000173	1.258000	System constraint
6/3/2019 8:09	0:01	KS	0.001918	0.949000	System constraint
6/3/2019 8:09	0:01	SMRR	0.000180	1.276000	System constraint
6/3/2019 8:10	0:01	SMRR	0.000176	1.055000	System constraint
6/3/2019 8:10	0:01	KS	0.001918	0.988000	System constraint
6/3/2019 8:11	0:01	SMRR	0.000173	1.034000	System constraint
6/3/2019 8:12	0:01	KS	0.001881	1.006000	System constraint
6/3/2019 8:13	0:01	SMRR	0.000176	1.156000	System constraint
6/3/2019 8:13	0:01	KS	0.001918	1.022000	System constraint
6/3/2019 8:15	0:01	KS	0.005792	1.004000	System constraint
6/3/2019 8:16	0:01	KS	0.005792	1.049000	System constraint
6/3/2019 8:16	0:01	SMRR	0.006781	0.962000	System constraint
6/3/2019 8:17	0:01	KS	0.005570	0.742000	System constraint
6/3/2019 8:17	0:01	SMRR	0.006637	0.845000	System constraint
6/3/2019 8:19	0:01	SMRR	0.006781	0.825000	System constraint
6/3/2019 8:19	0:01	KS	0.005792	0.694000	System constraint
6/3/2019 8:20	0:01	SMRR	0.006781	0.926000	System constraint
6/3/2019 8:20	0:01	SMRR	0.006637	1.197000	System constraint
6/3/2019 8:21	0:01	KS	0.005792	1.083000	System constraint
6/3/2019 8:21	0:01	SMRR	0.006781	0.880000	System constraint
6/3/2019 8:21	0:01	KS	0.005792	0.774000	System constraint
6/3/2019 8:22	0:01	SMRR	0.006492	1.009000	System constraint
6/3/2019 8:23	0:01	KS	0.005792	1.186000	System constraint
6/3/2019 8:23	0:01	SMRR	0.006781	1.491000	System constraint
6/3/2019 8:24	0:01	KS	0.005792	1.177000	System constraint
6/3/2019 8:24	0:01	SMRR	0.006781	1.392000	System constraint
6/3/2019 8:25	0:01	KS	0.005792	1.062000	System constraint
6/3/2019 8:25	0:01	SMRR	0.006637	0.986000	System constraint
6/3/2019 8:26	0:02	SMRR	0.013129	0.480000	System constraint
6/3/2019 8:26	0:02	KS	0.011585	0.589000	System constraint
6/3/2019 8:27	0:01	5A	Data is not available	Data is not available	System constraint
6/3/2019 8:27	0:01	BS250	Data is not available	Data is not available	System constraint
6/3/2019 8:27	0:01	ESA	Data is not available	Data is not available	System constraint



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Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
6/3/2019 8:27	0:01	ESB	Data is not available	Data is not available	System constraint
6/3/2019 8:27	0:02	KWP11	0.010933399	17.69873619	System constraint
6/3/2019 8:27	0:01	SMRR	0.006637	0.003000	System constraint
6/3/2019 8:28	0:01	KS	0.005792	0.022000	System constraint
6/3/2019 8:28	0:01	SMRR	0.006637	-0.002000	System constraint
6/3/2019 8:28	0:01	KS	0.005792	0.048000	System constraint
6/3/2019 8:29	0:01	SMRR	0.006997	-0.002000	System constraint
6/3/2019 8:29	0:01	KS	0.006975	0.111000	System constraint
6/3/2019 8:30	0:01	SMRR	0.010043	-0.002000	System constraint
6/3/2019 8:30	0:01	KS	0.008482	0.133000	System constraint
6/3/2019 8:30	0:01	SMRR	0.010043	-0.002000	System constraint
6/3/2019 8:31	0:01	KS	0.008482	0.162000	System constraint
6/3/2019 8:31	0:01	SMRR	0.009830	-0.002000	System constraint
6/3/2019 8:32	0:01	KS	0.008156	0.153000	System constraint
6/3/2019 8:32	0:01	SMRR	0.010043	-0.002000	System constraint
6/3/2019 8:33	0:01	KS	0.008482	0.179000	System constraint
6/3/2019 8:33	0:01	SMRR	0.010043	0.163000	System constraint
6/3/2019 8:34	0:01	SMRR	0.009830	0.471000	System constraint
6/3/2019 8:34	0:01	KS	0.008482	0.518000	System constraint
6/3/2019 8:37	0:01	KS	0.008482	0.990000	System constraint
6/3/2019 8:38	0:01	KS	0.008482	0.640000	System constraint
6/3/2019 8:39	0:01	KS	0.008482	1.179000	System constraint
6/3/2019 8:39	0:01	SMRR	0.010043	1.142000	System constraint
6/3/2019 8:40	0:01	KS	0.008482	1.089000	System constraint
6/3/2019 8:40	0:01	SMRR	0.009830	0.629000	System constraint
6/3/2019 8:40	0:01	SMRR	0.009616	0.525000	System constraint
6/3/2019 8:41	0:01	KS	0.008482	0.535000	System constraint
6/3/2019 8:41	0:01	SMRR	0.009830	0.364000	System constraint
6/3/2019 8:41	0:01	KS	0.008482	0.573000	System constraint
6/3/2019 8:42	0:01	SMRR	0.010043	0.769000	System constraint
6/3/2019 8:42	0:01	KS	0.008482	0.607000	System constraint
6/3/2019 8:43	0:01	SMRR	0.009830	0.574000	System constraint
6/3/2019 8:43	0:01	KS	0.008482	0.898000	System constraint
6/3/2019 8:44	0:01	SMRR	0.009830	0.701000	System constraint
6/3/2019 8:44	0:01	KS	0.011638	0.456000	System constraint
6/3/2019 8:44	0:01	SMRR	0.015643	0.652000	System constraint
6/3/2019 8:45	0:01	KS	0.021612	0.535000	System constraint
6/3/2019 8:45	0:01	SMRR	0.021108	0.532000	System constraint
6/3/2019 8:46	0:01	KS	0.021612	0.400000	System constraint
6/3/2019 8:46	0:01	SMRR	0.020659	0.466000	System constraint
6/3/2019 8:47	0:01	KS	0.021197	0.243000	System constraint
6/3/2019 8:47	0:01	SMRR	0.021108	0.363000	System constraint
6/3/2019 8:47	0:01	KS	0.021612	0.464000	System constraint
6/3/2019 8:47	0:01	SMRR	0.020210	0.078000	System constraint
6/3/2019 8:48	4:02	5A	Data is not available	Data is not available	System constraint
6/3/2019 8:48	4:02	BS250	Data is not available	Data is not available	System constraint
6/3/2019 8:48	4:02	ESA	Data is not available	Data is not available	System constraint
6/3/2019 8:48	4:02	ESB	Data is not available	Data is not available	System constraint
6/3/2019 8:48	4:01	SMRR	9.914925	0.001000	System constraint
6/3/2019 8:48	4:01	KS	8.112848	0.021000	System constraint
6/3/2019 8:49	4:02	KWP11	35.11633653	17.71370697	System constraint
6/3/2019 11:25	0:04	AWE	0.024334431	21	System constraint
6/3/2019 12:50	0:01	SMRR	0.036686	0.002000	System constraint
6/3/2019 12:50	0:01	KS	0.013138	0.020000	System constraint
6/3/2019 12:50	0:01	SMRR	0.036686	-0.003000	System constraint
6/3/2019 12:51	0:01	KS	0.013138	0.137000	System constraint
6/3/2019 12:51	0:01	SMRR	0.035125	-0.003000	System constraint
6/3/2019 12:51	0:01	KS	0.013138	0.278000	System constraint
6/3/2019 12:52	0:01	SMRR	0.036686	-0.003000	System constraint
6/3/2019 12:52	0:01	KS	0.013138	0.397000	System constraint
6/3/2019 12:53	0:01	SMRR	0.036686	-0.003000	System constraint
6/3/2019 12:53	0:01	KS	0.012886	0.471000	System constraint
6/3/2019 12:53	0:01	SMRR	0.035906	-0.004000	System constraint
6/3/2019 12:54	0:01	KS	0.013138	0.480000	System constraint
6/3/2019 12:54	0:01	SMRR	0.035125	-0.001000	System constraint
6/3/2019 12:55	0:01	KS	0.013138	0.563000	System constraint
6/3/2019 12:55	0:01	SMRR	0.035906	0.120000	System constraint
6/3/2019 12:56	0:01	SMRR	0.035906	0.300000	System constraint
6/3/2019 12:56	0:01	KS	0.013138	0.589000	System constraint
6/3/2019 12:56	0:01	SMRR	0.036686	0.520000	System constraint
6/3/2019 12:57	0:01	KS	0.013138	0.160000	System constraint
6/3/2019 12:57	0:01	SMRR	0.036686	0.067000	System constraint
6/3/2019 12:58	0:01	KS	0.013138	0.039000	System constraint



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6/3/2019 12:58	0:01	KWP2	0.001633422	16.90236855	System constraint
6/3/2019 12:58	0:14	SMRR	0.635213	0.213000	System constraint
6/3/2019 12:58	0:13	KS	0.545782	0.048000	System constraint
6/3/2019 12:59	0:13	5A	Data is not available	Data is not available	System constraint
6/3/2019 12:59	0:13	BS250	Data is not available	Data is not available	System constraint
6/3/2019 12:59	0:13	ESA	Data is not available	Data is not available	System constraint
6/3/2019 12:59	0:13	ESB	Data is not available	Data is not available	System constraint
6/3/2019 13:00	0:13	KWP2	0.341872136	17.32849503	System constraint
6/3/2019 13:11	0:01	KS	0.039953	0.019000	System constraint
6/3/2019 13:12	0:01	SMRR	0.035694	0.452000	System constraint
6/3/2019 13:12	0:01	KS	0.039953	0.580000	System constraint
6/3/2019 13:13	0:01	SMRR	0.035694	0.642000	System constraint
6/3/2019 13:13	0:01	KS	0.039953	0.719000	System constraint
6/3/2019 13:14	0:01	SMRR	0.034175	0.854000	System constraint
6/3/2019 13:14	0:01	KS	0.039594	0.662000	System constraint
6/3/2019 13:14	0:01	SMRR	0.031626	1.288000	System constraint
6/3/2019 13:15	0:01	KS	0.027957	0.627000	System constraint
6/3/2019 13:15	0:01	SMRR	0.031829	1.651000	System constraint
6/3/2019 13:16	0:01	KS	0.027957	0.896000	System constraint
6/3/2019 13:16	0:01	SMRR	0.031152	1.712000	System constraint
6/3/2019 13:17	0:01	KS	0.027957	0.592000	System constraint
6/3/2019 13:17	0:01	SMRR	0.031829	1.830000	System constraint
6/3/2019 13:17	0:02	SMRR	0.062982	1.277000	System constraint
6/3/2019 13:17	0:03	KS	0.083872	0.210000	System constraint
6/3/2019 13:19	0:02	5A	Data is not available	Data is not available	System constraint
6/3/2019 13:19	0:02	BS250	Data is not available	Data is not available	System constraint
6/3/2019 13:19	0:02	ESA	Data is not available	Data is not available	System constraint
6/3/2019 13:19	0:02	ESB	Data is not available	Data is not available	System constraint
6/3/2019 13:19	0:01	SMRR	0.031152	0.162000	System constraint
6/3/2019 13:20	0:01	KWP2	0.000137742	16.97422218	System constraint
6/3/2019 13:20	0:01	SMRR	0.031829	0.010000	System constraint
6/3/2019 13:20	0:01	KS	0.027957	0.032000	System constraint
6/3/2019 13:20	0:01	SMRR	0.031152	0.060000	System constraint
6/3/2019 13:21	0:01	KS	0.027957	0.113000	System constraint
6/3/2019 13:21	0:01	SMRR	0.031829	0.110000	System constraint
6/3/2019 13:22	0:01	KS	0.027957	0.130000	System constraint
6/3/2019 13:22	0:01	SMRR	0.031829	0.127000	System constraint
6/3/2019 13:23	0:07	5A	Data is not available	Data is not available	System constraint
6/3/2019 13:23	0:07	BS250	Data is not available	Data is not available	System constraint
6/3/2019 13:23	0:07	ESA	Data is not available	Data is not available	System constraint
6/3/2019 13:23	0:07	ESB	Data is not available	Data is not available	System constraint
6/3/2019 13:23	0:07	KS	0.222864	0.122000	System constraint
6/3/2019 13:23	0:06	SMRR	0.251927	0.022000	System constraint
6/3/2019 13:24	0:07	KWP2	0.149066242	17.41132545	System constraint
6/3/2019 13:29	0:01	SMRR	0.029669	0.021000	System constraint
6/3/2019 13:30	0:01	KS	0.021123	0.100000	System constraint
6/3/2019 13:30	0:01	SMRR	0.022579	0.394000	System constraint
6/3/2019 13:30	0:01	KS	0.021123	0.440000	System constraint
6/3/2019 13:31	0:01	SMRR	0.022579	0.491000	System constraint
6/3/2019 13:31	0:01	SMRR	0.023582	0.247000	System constraint
6/3/2019 13:31	0:01	KS	0.021123	0.333000	System constraint
6/3/2019 13:32	0:01	SMRR	0.023582	0.048000	System constraint
6/3/2019 13:32	0:01	KS	0.021123	0.176000	System constraint
6/3/2019 13:33	0:01	SMRR	0.023080	0.632000	System constraint
6/3/2019 13:33	0:01	KS	0.021123	0.434000	System constraint
6/3/2019 13:34	0:01	SMRR	0.023582	0.292000	System constraint
6/3/2019 13:34	0:01	KS	0.021123	0.233000	System constraint
6/3/2019 13:34	0:01	SMRR	0.023582	0.741000	System constraint
6/3/2019 13:35	0:01	KS	0.021123	0.928000	System constraint
6/3/2019 13:35	0:01	SMRR	0.023080	0.846000	System constraint
6/3/2019 13:36	0:01	KS	0.021123	0.515000	System constraint
6/3/2019 13:36	0:01	SMRR	0.023582	0.642000	System constraint
6/3/2019 13:36	0:01	KS	0.021123	0.757000	System constraint
6/3/2019 13:37	0:01	SMRR	0.023582	0.650000	System constraint
6/3/2019 13:37	0:01	KS	0.021123	0.594000	System constraint
6/3/2019 13:37	0:01	SMRR	0.022579	0.507000	System constraint
6/3/2019 13:38	0:01	KS	0.020310	0.879000	System constraint
6/3/2019 13:38	0:01	SMRR	0.023582	0.914000	System constraint
6/3/2019 13:39	0:01	SMRR	0.023080	0.740000	System constraint
6/3/2019 13:39	0:01	KS	0.021123	0.987000	System constraint
6/3/2019 13:40	0:01	SMRR	0.023080	0.546000	System constraint
6/3/2019 13:40	0:01	KS	0.021123	0.948000	System constraint
6/3/2019 13:41	0:01	SMRR	0.023582	0.750000	System constraint





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6/3/2019 13:41	0:01	KS	0.021123	0.658000	System constraint
6/3/2019 13:41	0:01	SMRR	0.023582	1.317000	System constraint
6/3/2019 13:42	0:01	KS	0.021123	0.791000	System constraint
6/3/2019 13:42	0:01	SMRR	0.023080	1.583000	System constraint
6/3/2019 13:43	0:01	SMRR	0.023582	1.962000	System constraint
6/3/2019 15:00	0:10	KS	0.196770	0.917000	System constraint
6/3/2019 15:00	0:10	SMRR	0.115053	0.754000	System constraint
6/3/2019 15:01	0:10	5A	Data is not available	Data is not available	System constraint
6/3/2019 15:01	0:10	BS250	Data is not available	Data is not available	System constraint
6/3/2019 15:01	0:10	ESA	Data is not available	Data is not available	System constraint
6/3/2019 15:01	0:10	ESB	Data is not available	Data is not available	System constraint
6/3/2019 15:02	0:06	KWPPII	0.120425256	17.39336205	System constraint
6/3/2019 15:09	0:03	KWPPII	0.024587186	17.5610199	System constraint
6/3/2019 15:11	0:01	SMRR	0.008923	0.038000	System constraint
6/3/2019 15:11	0:01	KS	0.016450	0.050000	System constraint
6/3/2019 15:12	0:01	KS	0.016450	0.121000	System constraint
6/3/2019 15:16	0:01	KS	0.028269	1.404000	System constraint
6/3/2019 15:16	0:01	SMRR	0.011633	0.861000	System constraint
6/3/2019 15:17	0:01	SMRR	0.011386	0.577000	System constraint
6/3/2019 15:17	0:01	KS	0.028269	1.331000	System constraint
6/3/2019 15:18	0:07	5A	Data is not available	Data is not available	System constraint
6/3/2019 15:18	0:07	BS250	Data is not available	Data is not available	System constraint
6/3/2019 15:18	0:07	ESA	Data is not available	Data is not available	System constraint
6/3/2019 15:18	0:07	ESB	Data is not available	Data is not available	System constraint
6/3/2019 15:18	0:01	SMRR	0.011633	0.024000	System constraint
6/3/2019 15:18	0:06	KS	0.197883	0.470000	System constraint
6/3/2019 15:18	0:06	SMRR	0.091579	0.008000	System constraint
6/3/2019 15:20	0:04	KWPPII	0.174352741	17.71370697	System constraint
6/3/2019 15:24	0:01	KS	0.027725	0.070000	System constraint
6/3/2019 15:24	0:01	SMRR	0.011386	0.068000	System constraint
6/3/2019 15:25	0:02	KS	0.056538	0.134000	System constraint
6/3/2019 15:25	0:01	SMRR	0.011633	0.351000	System constraint
6/3/2019 15:26	0:01	SMRR	0.011386	0.490000	System constraint
6/3/2019 15:26	0:01	KS	0.028269	0.307000	System constraint
6/3/2019 15:27	0:01	SMRR	0.011633	0.074000	System constraint
6/3/2019 15:27	0:02	KS	0.055994	0.004000	System constraint
6/3/2019 15:28	0:01	5A	Data is not available	Data is not available	System constraint
6/3/2019 15:28	0:01	BS250	Data is not available	Data is not available	System constraint
6/3/2019 15:28	0:01	ESA	Data is not available	Data is not available	System constraint
6/3/2019 15:28	0:01	ESB	Data is not available	Data is not available	System constraint
6/3/2019 15:28	0:02	SMRR	0.023019	0.028000	System constraint
6/3/2019 15:29	0:01	KS	0.028162	0.062000	System constraint
6/3/2019 15:29	0:01	SMRR	0.010985	0.215000	System constraint
6/3/2019 15:30	0:01	KS	0.024619	0.468000	System constraint
6/3/2019 15:30	0:02	SMRR	0.032442	0.278000	System constraint
6/3/2019 15:31	0:01	KS	0.024619	0.814000	System constraint
6/3/2019 15:31	0:01	SMRR	0.016574	0.306000	System constraint
6/3/2019 15:32	0:01	KS	0.024619	1.020000	System constraint
6/3/2019 15:32	0:01	SMRR	0.016221	0.124000	System constraint
6/3/2019 15:32	0:01	KS	0.024619	0.542000	System constraint
6/3/2019 15:33	0:01	5A	Data is not available	Data is not available	System constraint
6/3/2019 15:33	0:01	BS250	Data is not available	Data is not available	System constraint
6/3/2019 15:33	0:01	ESA	Data is not available	Data is not available	System constraint
6/3/2019 15:33	0:01	ESB	Data is not available	Data is not available	System constraint
6/3/2019 15:33	0:01	KWPPII	4.16756E-05	17.70871735	System constraint
6/3/2019 15:33	0:01	SMRR	0.016574	0.052000	System constraint
6/3/2019 15:33	0:01	KS	0.024619	0.227000	System constraint
6/3/2019 15:34	0:01	SMRR	0.017631	0.465000	System constraint
6/3/2019 15:34	0:01	KS	0.024619	0.412000	System constraint
6/3/2019 15:35	0:01	SMRR	0.016221	0.204000	System constraint
6/3/2019 15:35	0:02	KS	0.049237	0.072000	System constraint
6/3/2019 15:35	0:01	SMRR	0.015868	0.395000	System constraint
6/3/2019 15:36	0:01	SMRR	0.016574	0.261000	System constraint
6/3/2019 15:37	0:01	KS	0.024619	0.466000	System constraint
6/3/2019 15:37	0:01	SMRR	0.015868	0.254000	System constraint
6/3/2019 15:38	0:01	KS	0.024619	0.770000	System constraint
6/3/2019 15:38	0:01	SMRR	0.016574	0.545000	System constraint
6/3/2019 15:38	0:01	SMRR	0.016221	0.344000	System constraint
6/3/2019 15:38	0:01	KS	0.024145	0.231000	System constraint
6/3/2019 15:39	0:03	5A	Data is not available	Data is not available	System constraint
6/3/2019 15:39	0:03	BS250	Data is not available	Data is not available	System constraint
6/3/2019 15:39	0:03	ESA	Data is not available	Data is not available	System constraint
6/3/2019 15:39	0:03	ESB	Data is not available	Data is not available	System constraint



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6/3/2019 15:39	0:01	SMRR	0.015868	0.009000	System constraint
6/3/2019 15:39	0:01	KS	0.024619	0.015000	System constraint
6/3/2019 15:40	0:01	SMRR	0.016574	0.006000	System constraint
6/3/2019 15:40	0:01	KS	0.024619	0.035000	System constraint
6/3/2019 15:41	0:02	SMRR	0.032795	0.209000	System constraint
6/3/2019 15:41	0:01	KS	0.024619	0.029000	System constraint
6/3/2019 15:42	0:01	KS	0.024619	0.007000	System constraint
6/3/2019 15:42	0:01	SMRR	0.016574	0.041000	System constraint
6/3/2019 15:43	0:01	KS	0.024619	0.066000	System constraint
6/3/2019 15:43	0:01	SMRR	0.016574	0.069000	System constraint
6/3/2019 15:44	0:01	KS	0.024619	0.430000	System constraint
6/4/2019 0:15	0:02	KWP2	0.01456995	16.15090752	System constraint
6/4/2019 0:26	0:26	KWP2	0.963755989	17.51012421	System constraint
6/4/2019 0:59	0:15	KWP2	0.386659066	17.2167244	System constraint
6/4/2019 1:15	0:05	KWP2	0.114317878	16.34750557	System constraint
6/4/2019 1:21	0:01	KWP2	0.006043657	16.48422623	System constraint
6/4/2019 1:44	0:09	KWP2	0.245979373	16.81454849	System constraint
6/4/2019 2:08	0:05	KWP2	0.087934462	15.86249924	System constraint
6/4/2019 2:34	0:05	KWP2	0.038176187	15.95530891	System constraint
6/4/2019 4:28	0:31	KWP2	1.912909285	15.99622536	System constraint
6/4/2019 9:07	0:01	SMRR	0.000676	1.018000	System constraint
6/4/2019 9:08	0:01	SMRR	0.000690	1.044000	System constraint
6/4/2019 9:08	0:01	KS	0.001781	1.130000	System constraint
6/4/2019 9:08	0:01	SMRR	0.000690	0.698000	System constraint
6/4/2019 9:08	0:01	KS	0.001781	0.555000	System constraint
6/4/2019 9:09	0:01	SMRR	0.000676	0.221000	System constraint
6/4/2019 9:09	0:01	KS	0.001781	0.374000	System constraint
6/4/2019 9:10	0:01	5A	Data is not available	Data is not available	System constraint
6/4/2019 9:10	0:01	BS250	Data is not available	Data is not available	System constraint
6/4/2019 9:10	0:01	ESA	Data is not available	Data is not available	System constraint
6/4/2019 9:10	0:01	ESB	Data is not available	Data is not available	System constraint
6/4/2019 9:10	0:01	SMRR	0.000661	0.216000	System constraint
6/4/2019 9:10	0:01	KS	0.001781	0.069000	System constraint
6/4/2019 9:11	0:01	SMRR	0.000661	0.584000	System constraint
6/4/2019 9:43	0:01	KS	-0.000644	0.879000	System constraint
6/4/2019 9:43	0:01	SMRR	-0.001542	1.897000	System constraint
6/4/2019 9:45	0:01	SMRR	0.022576	1.727000	System constraint
6/4/2019 9:46	0:01	KS	0.025785	0.440000	System constraint
6/4/2019 9:46	0:01	SMRR	0.022096	1.208000	System constraint
6/4/2019 9:46	0:01	KS	0.025785	0.427000	System constraint
6/4/2019 9:47	0:01	SMRR	0.022096	0.747000	System constraint
6/4/2019 9:47	0:01	KS	0.025290	0.604000	System constraint
6/4/2019 9:48	0:01	SMRR	0.022096	0.739000	System constraint
6/4/2019 9:48	0:01	KS	0.025785	0.328000	System constraint
6/4/2019 9:48	0:01	SMRR	0.022576	0.675000	System constraint
6/4/2019 9:49	0:01	KS	0.025785	0.451000	System constraint
6/4/2019 9:49	0:01	SMRR	0.022576	0.484000	System constraint
6/4/2019 9:50	0:01	KS	0.025785	0.093000	System constraint
6/4/2019 9:50	0:24	SMRR	0.753984	0.190000	System constraint
6/4/2019 9:51	0:25	5A	Data is not available	Data is not available	System constraint
6/4/2019 9:51	0:25	BS250	Data is not available	Data is not available	System constraint
6/4/2019 9:51	0:25	ESA	Data is not available	Data is not available	System constraint
6/4/2019 9:51	0:25	ESB	Data is not available	Data is not available	System constraint
6/4/2019 9:51	0:24	KWP2	1.622765859	17.36941147	System constraint
6/4/2019 9:51	0:23	KS	0.664423	0.026000	System constraint
6/4/2019 10:14	0:01	SMRR	0.020582	0.022000	System constraint
6/4/2019 10:14	0:01	KS	0.012514	0.095000	System constraint
6/4/2019 10:15	0:01	SMRR	0.004456	0.239000	System constraint
6/4/2019 10:15	0:01	KS	0.010470	0.125000	System constraint
6/4/2019 10:16	0:01	KWP2	0.012799358	12.92751312	System constraint
6/4/2019 10:16	0:01	SMRR	0.004266	0.006000	System constraint
6/4/2019 10:16	0:01	KS	0.010470	0.007000	System constraint
6/4/2019 10:16	0:02	SMRR	0.008911	0.187000	System constraint
6/4/2019 10:17	0:01	KS	0.010470	0.043000	System constraint
6/4/2019 10:18	0:01	KWP2	0.005692561	13.93245411	System constraint
6/4/2019 10:18	0:01	KS	0.010268	0.017000	System constraint
6/4/2019 10:18	0:01	SMRR	0.004361	0.055000	System constraint
6/4/2019 12:50	0:01	KS	0.013372	2.784000	System constraint
6/4/2019 12:50	0:01	SMRR	0.016413	2.414000	System constraint
6/4/2019 12:51	0:01	KS	0.013372	2.728000	System constraint
6/4/2019 12:51	0:01	SMRR	0.016056	1.996000	System constraint
6/4/2019 12:52	0:01	KS	0.013372	1.314000	System constraint
6/4/2019 12:52	0:01	SMRR	0.016056	1.577000	System constraint



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Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
6/4/2019 12:52	0:07	SMRR	0.147001	1.003000	System constraint
6/4/2019 12:52	0:07	KS	0.106717	1.462000	System constraint
6/4/2019 12:53	0:06	5A	Data is not available	Data is not available	System constraint
6/4/2019 12:53	0:06	BS250	Data is not available	Data is not available	System constraint
6/4/2019 12:53	0:06	ESA	Data is not available	Data is not available	System constraint
6/4/2019 12:53	0:06	ESB	Data is not available	Data is not available	System constraint
6/4/2019 12:54	0:06	KWPPII	0.268122021	15.59404945	System constraint
6/4/2019 12:59	0:01	SMRR	0.025442	0.105000	System constraint
6/4/2019 12:59	0:01	KS	0.020630	0.106000	System constraint
6/4/2019 13:00	0:01	SMRR	0.023157	0.246000	System constraint
6/4/2019 13:00	0:06	KS	0.191288	0.136000	System constraint
6/4/2019 13:01	0:06	5A	Data is not available	Data is not available	System constraint
6/4/2019 13:01	0:06	BS250	Data is not available	Data is not available	System constraint
6/4/2019 13:01	0:06	ESA	Data is not available	Data is not available	System constraint
6/4/2019 13:01	0:06	ESB	Data is not available	Data is not available	System constraint
6/4/2019 13:01	0:05	SMRR	0.157172	0.004000	System constraint
6/4/2019 13:02	0:05	KWPPII	0.198449914	13.42349625	System constraint
6/4/2019 13:06	0:01	SMRR	0.022172	0.057000	System constraint
6/4/2019 13:06	0:01	KS	0.027327	0.284000	System constraint
6/4/2019 13:07	0:01	SMRR	0.022664	0.383000	System constraint
6/4/2019 13:07	0:01	KS	0.027327	0.726000	System constraint
6/4/2019 13:08	0:01	SMRR	0.022664	0.641000	System constraint
6/4/2019 13:08	0:01	KS	0.027327	0.982000	System constraint
6/4/2019 13:09	0:01	KS	0.027327	1.398000	System constraint
6/4/2019 13:09	0:01	SMRR	0.022664	1.302000	System constraint
6/4/2019 13:10	0:01	KS	0.027327	1.721000	System constraint
6/4/2019 13:10	0:01	SMRR	0.022664	1.057000	System constraint
6/4/2019 13:11	0:01	KS	0.027327	1.642000	System constraint
6/4/2019 13:11	0:01	SMRR	0.022172	0.931000	System constraint
6/4/2019 13:15	0:01	KS	0.004589	2.170000	System constraint
6/4/2019 13:16	0:01	KS	0.004589	2.204000	System constraint
6/4/2019 13:16	0:01	SMRR	0.001510	1.277000	System constraint
6/4/2019 13:17	0:01	KS	0.004589	1.744000	System constraint
6/4/2019 13:17	0:01	SMRR	0.001445	1.273000	System constraint
6/4/2019 13:18	0:01	KS	0.004589	1.729000	System constraint
6/4/2019 13:19	0:01	SMRR	0.001445	1.260000	System constraint
6/4/2019 13:23	0:01	KS	0.004589	1.626000	System constraint
6/4/2019 13:23	0:01	SMRR	0.001478	1.701000	System constraint
6/4/2019 13:24	0:01	SMRR	0.001478	1.697000	System constraint
6/4/2019 13:25	0:01	KS	0.004589	1.407000	System constraint
6/4/2019 13:25	0:01	SMRR	0.001478	1.414000	System constraint
6/4/2019 13:25	0:01	KS	0.004589	1.220000	System constraint
6/4/2019 13:26	0:01	SMRR	0.001445	1.394000	System constraint
6/4/2019 13:26	0:01	KS	0.004589	1.459000	System constraint
6/4/2019 13:27	0:01	SMRR	0.001478	1.405000	System constraint
6/4/2019 13:27	0:01	KS	0.004589	2.098000	System constraint
6/4/2019 13:28	0:01	SMRR	0.001478	1.083000	System constraint
6/4/2019 13:28	0:01	SMRR	0.001478	1.063000	System constraint
6/4/2019 13:29	0:01	KS	0.007994	2.482000	System constraint
6/4/2019 13:30	0:01	KS	0.032500	1.614000	System constraint
6/4/2019 13:30	0:01	SMRR	0.014998	1.127000	System constraint
6/4/2019 13:31	0:01	KS	0.032500	1.917000	System constraint
6/4/2019 13:31	0:01	SMRR	0.014998	0.737000	System constraint
6/4/2019 13:31	0:01	SMRR	0.014998	0.894000	System constraint
6/4/2019 13:31	0:01	KS	0.032500	1.595000	System constraint
6/4/2019 13:32	0:01	SMRR	0.014998	0.545000	System constraint
6/4/2019 13:32	0:01	KS	0.032500	1.000000	System constraint
6/4/2019 13:33	0:01	5A	Data is not available	Data is not available	System constraint
6/4/2019 13:33	0:01	BS250	Data is not available	Data is not available	System constraint
6/4/2019 13:33	0:01	ESA	Data is not available	Data is not available	System constraint
6/4/2019 13:33	0:01	ESB	Data is not available	Data is not available	System constraint
6/4/2019 13:33	0:01	KWPPII	0.001286856	16.76465034	System constraint
6/4/2019 13:33	0:01	SMRR	0.014998	0.086000	System constraint
6/4/2019 13:33	0:01	KS	0.032500	0.393000	System constraint
6/4/2019 13:34	0:01	SMRR	0.015324	0.056000	System constraint
6/4/2019 13:34	0:01	KS	0.032500	0.278000	System constraint
6/4/2019 13:34	0:02	SMRR	0.030322	0.029000	System constraint
6/4/2019 13:35	0:04	5A	Data is not available	Data is not available	System constraint
6/4/2019 13:35	0:04	BS250	Data is not available	Data is not available	System constraint
6/4/2019 13:35	0:04	ESA	Data is not available	Data is not available	System constraint
6/4/2019 13:35	0:04	ESB	Data is not available	Data is not available	System constraint
6/4/2019 13:35	0:03	KS	0.097500	0.031000	System constraint
6/4/2019 13:36	0:01	KWPPII	0.023284721	16.68381691	System constraint



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6/4/2019 13:36	0:01	SMRR	0.015324	0.001000	System constraint
6/4/2019 13:37	0:01	SMRR	0.014672	0.007000	System constraint
6/4/2019 13:37	0:01	KS	0.032500	0.068000	System constraint
6/4/2019 13:37	0:01	SMRR	0.015324	0.066000	System constraint
6/4/2019 13:38	0:02	SMRR	0.045646	0.000000	System constraint
6/4/2019 13:38	0:02	KS	0.065000	0.002000	System constraint
6/4/2019 13:40	0:01	KS	0.032500	0.005000	System constraint
6/4/2019 13:41	0:01	SMRR	0.015324	0.222000	System constraint
6/4/2019 13:41	0:01	KS	0.032500	0.297000	System constraint
6/4/2019 13:41	0:01	SMRR	0.014998	0.224000	System constraint
6/4/2019 13:42	0:01	KS	0.032500	0.663000	System constraint
6/4/2019 13:42	0:01	SMRR	0.015324	0.384000	System constraint
6/4/2019 13:43	0:01	KS	0.032500	0.657000	System constraint
6/4/2019 13:43	0:01	SMRR	0.015324	0.394000	System constraint
6/4/2019 13:44	0:01	KS	0.031875	1.076000	System constraint
6/4/2019 13:44	0:01	SMRR	0.014672	0.619000	System constraint
6/4/2019 13:44	0:01	KS	0.008682	1.510000	System constraint
6/4/2019 13:44	0:01	SMRR	0.007174	0.895000	System constraint
6/4/2019 13:45	0:01	SMRR	-0.000400	1.072000	System constraint
6/4/2019 13:45	0:01	KS	0.005576	2.104000	System constraint
6/4/2019 14:24	0:01	SMRR	0.007937	3.002000	System constraint
6/4/2019 14:24	0:01	KS	0.015109	1.826000	System constraint
6/4/2019 14:25	0:01	SMRR	0.008109	2.399000	System constraint
6/4/2019 14:25	0:01	KS	0.015109	1.129000	System constraint
6/4/2019 14:25	0:01	SMRR	0.008109	1.813000	System constraint
6/4/2019 14:26	0:01	KS	0.015109	0.885000	System constraint
6/4/2019 14:26	0:01	SMRR	0.007937	1.235000	System constraint
6/4/2019 14:27	0:01	KS	0.015109	0.856000	System constraint
6/4/2019 14:27	0:01	SMRR	0.008109	1.070000	System constraint
6/4/2019 14:28	0:01	KS	0.015109	0.933000	System constraint
6/4/2019 14:28	0:01	SMRR	0.008109	0.914000	System constraint
6/4/2019 14:29	0:01	KS	0.014528	1.071000	System constraint
6/4/2019 14:29	0:01	SMRR	0.007937	0.826000	System constraint
6/4/2019 14:29	0:01	SMRR	0.010823	1.288000	System constraint
6/4/2019 14:29	0:01	KS	0.011393	1.671000	System constraint
6/6/2019 8:27	0:01	KWP2	0.000216224	0.012973418	System constraint
6/7/2019 6:37	0:01	KWP2	0.000831629	0.049897764	System constraint
6/7/2019 11:43	0:01	KWP2	0.000848262	0.050895721	System constraint
6/7/2019 21:09	0:01	KWP2	0.002212134	0.132728055	System constraint
6/8/2019 2:24	0:28	KWP2	2.153718408	19.06693459	System constraint
6/8/2019 3:11	0:17	KWP2	0.878779936	19.21063995	System constraint
6/8/2019 3:32	0:02	KWP2	0.023661772	17.66181183	System constraint
6/8/2019 3:35	0:05	KWP2	0.046774864	17.56800461	System constraint
6/8/2019 4:02	0:20	KWP2	0.873641237	19.08090591	System constraint
6/8/2019 4:24	0:02	KWP2	0.024092054	17.31652069	System constraint
6/8/2019 4:31	0:05	KWP2	0.0757761	14.87252808	System constraint
6/8/2019 4:43	0:07	KWP2	0.06261069	18.95516205	System constraint
6/8/2019 4:58	0:03	KWP2	0.066038736	17.64684296	System constraint
6/8/2019 5:06	0:01	KWP2	0.008292039	16.72273636	System constraint
6/8/2019 5:09	0:01	KWP2	0.001855628	16.30958366	System constraint
6/8/2019 5:41	0:38	5A	Data is not available	Data is not available	System constraint
6/8/2019 5:41	0:38	BS250	Data is not available	Data is not available	System constraint
6/8/2019 5:41	0:38	ESA	Data is not available	Data is not available	System constraint
6/8/2019 5:41	0:38	ESB	Data is not available	Data is not available	System constraint
6/8/2019 5:41	0:39	KWP2	2.122712978	19.20864296	System constraint
6/8/2019 5:56	0:23	SMRR	0.015085	0.006000	System constraint
6/8/2019 6:12	0:06	KS	0.002885	0.004000	System constraint
6/8/2019 8:16	0:01	SMRR	0.008367	0.406000	System constraint
6/8/2019 8:18	0:01	SMRR	0.008367	0.474000	System constraint
6/8/2019 8:21	0:01	SMRR	0.008186	0.779000	System constraint
6/8/2019 8:21	0:01	KS	0.008949	1.465000	System constraint
6/8/2019 8:22	0:01	SMRR	0.008367	0.734000	System constraint
6/8/2019 8:22	0:01	KS	0.008949	1.000000	System constraint
6/8/2019 8:23	0:01	KS	0.008949	0.427000	System constraint
6/8/2019 8:23	0:01	SMRR	0.008186	0.492000	System constraint
6/8/2019 8:23	0:01	KS	0.008949	0.981000	System constraint
6/8/2019 8:24	1:31	5A	Data is not available	Data is not available	System constraint
6/8/2019 8:24	1:31	BS250	Data is not available	Data is not available	System constraint
6/8/2019 8:24	1:31	ESA	Data is not available	Data is not available	System constraint
6/8/2019 8:24	1:31	ESB	Data is not available	Data is not available	System constraint
6/8/2019 8:24	1:32	SMRR	2.658719	0.152000	System constraint
6/8/2019 8:24	1:32	KS	2.073030	0.332000	System constraint
6/8/2019 8:25	1:34	KWP2	12.43167801	18.71365738	System constraint



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6/8/2019 9:56	0:02	5A	Data is not available	Data is not available	System constraint
6/8/2019 9:56	0:02	BS250	Data is not available	Data is not available	System constraint
6/8/2019 9:56	0:02	ESA	Data is not available	Data is not available	System constraint
6/8/2019 9:56	0:02	ESB	Data is not available	Data is not available	System constraint
6/8/2019 9:56	0:02	SMRR	0.083600	0.002000	System constraint
6/8/2019 9:56	0:01	KS	0.029892	0.005000	System constraint
6/8/2019 9:57	0:01	KS	0.029892	0.193000	System constraint
6/8/2019 9:58	0:01	KS	0.029892	0.078000	System constraint
6/8/2019 9:58	0:01	SMRR	0.028066	0.123000	System constraint
6/8/2019 9:59	0:01	KS	0.029892	0.297000	System constraint
6/8/2019 9:59	0:01	SMRR	0.017869	0.702000	System constraint
6/8/2019 10:01	0:01	KS	0.007496	1.610000	System constraint
6/8/2019 10:01	0:01	SMRR	0.008601	1.766000	System constraint
6/8/2019 10:02	0:01	KS	0.007496	1.858000	System constraint
6/8/2019 10:02	0:01	SMRR	0.008788	1.565000	System constraint
6/8/2019 10:03	0:01	KS	0.007496	0.819000	System constraint
6/8/2019 10:03	0:01	SMRR	0.008788	1.252000	System constraint
6/8/2019 10:04	0:01	SMRR	0.008601	1.076000	System constraint
6/8/2019 10:04	0:01	KS	0.007496	0.461000	System constraint
6/8/2019 10:05	0:01	SMRR	0.008788	0.781000	System constraint
6/8/2019 10:05	0:01	KS	0.007352	0.532000	System constraint
6/8/2019 10:05	0:01	SMRR	0.008788	0.677000	System constraint
6/8/2019 10:06	0:01	KS	0.007496	0.912000	System constraint
6/8/2019 10:06	0:01	SMRR	0.008414	1.144000	System constraint
6/8/2019 10:06	0:01	KS	0.007496	0.778000	System constraint
6/8/2019 10:07	0:01	SMRR	0.008414	1.063000	System constraint
6/8/2019 10:07	0:01	KS	0.007496	1.235000	System constraint
6/8/2019 10:23	0:01	KS	-0.000566	2.865000	System constraint
6/8/2019 12:39	0:01	KWP2	9.97955E-05	0.005987732	System constraint
6/8/2019 12:41	0:01	KWP2	0.000648671	0.038920257	System constraint
6/8/2019 13:26	0:01	KWP2	0.000498978	0.029938659	System constraint
6/10/2019 7:36	0:01	KWP2	0.000299387	0.017963195	System constraint
6/11/2019 3:27	0:02	KWP2	0.012051137	17.69474602	System constraint
6/11/2019 3:30	1:26	KWP2	9.010447836	19.17970276	System constraint
6/11/2019 4:59	0:06	KWP2	0.129799779	19.19966125	System constraint
6/11/2019 5:29	0:02	KWP2	0.007413387	18.18374252	System constraint
6/11/2019 5:32	0:03	KWP2	0.023166625	18.2965126	System constraint
6/11/2019 6:37	0:01	5A	Data is not available	Data is not available	System constraint
6/11/2019 6:37	0:01	ESA	Data is not available	Data is not available	System constraint
6/11/2019 6:37	0:01	ESB	Data is not available	Data is not available	System constraint
6/11/2019 6:37	0:02	SMRR	0.001690	0.220000	System constraint
6/11/2019 6:37	0:01	KS	0.000482	0.049000	System constraint
6/11/2019 6:38	0:01	KS	0.000482	0.005000	System constraint
6/11/2019 6:38	0:01	SMRR	0.000827	0.019000	System constraint
6/11/2019 6:43	0:01	SMRR	0.000827	0.174000	System constraint
6/11/2019 6:43	0:02	KS	0.000652	0.085000	System constraint
6/11/2019 6:44	0:01	SMRR	0.000845	0.013000	System constraint
6/11/2019 6:44	0:01	SMRR	-0.001205	0.003000	System constraint
6/11/2019 6:45	0:01	SMRR	0.001010	0.195000	System constraint
6/11/2019 6:47	0:01	SMRR	0.001010	0.301000	System constraint
6/11/2019 6:56	0:01	KS	0.001694	0.108000	System constraint
6/11/2019 6:57	0:01	SMRR	0.001032	0.368000	System constraint
6/11/2019 6:57	0:01	KS	0.001694	0.110000	System constraint
6/12/2019 0:47	0:11	KWP2	0.377386967	17.45922852	System constraint
6/12/2019 1:05	0:38	KWP2	3.487921341	18.76754761	System constraint
6/12/2019 1:44	0:28	KWP2	1.737587786	18.1787529	System constraint
6/12/2019 2:15	0:02	KWP2	0.032180405	17.34246635	System constraint
6/12/2019 3:36	0:05	KWP2	0.086524693	16.37644577	System constraint
6/12/2019 3:42	0:03	KWP2	0.002518622	16.6059761	System constraint
6/12/2019 4:04	0:01	KWP2	0.006716855	17.51411629	System constraint
6/12/2019 4:07	0:01	KWP2	0.006655375	17.14187813	System constraint
6/12/2019 4:10	0:02	KWP2	0.007717959	16.5480938	System constraint
6/12/2019 4:17	0:01	KWP2	0.00853885	16.44929695	System constraint
6/12/2019 15:25	0:01	KWP2	0.000299387	0.017963195	System constraint
6/13/2019 2:07	0:01	KWP2	0.002584648	10.73600292	System constraint
6/13/2019 2:22	1:14	KWP2	5.863627485	17.75162888	System constraint
6/13/2019 3:43	0:08	KWP2	0.226020304	17.15285492	System constraint
6/13/2019 3:52	0:31	KWP2	1.850557701	17.03808975	System constraint
6/13/2019 13:32	0:01	KS	0.004663	2.898000	System constraint
6/13/2019 13:32	0:01	SMRR	-0.000387	1.128000	System constraint
6/13/2019 13:33	0:01	SMRR	-0.000387	1.117000	System constraint
6/13/2019 13:33	0:01	KS	0.004663	2.496000	System constraint
6/13/2019 13:33	0:01	SMRR	-0.000379	1.111000	System constraint



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6/13/2019 13:42	0:01	KWP2	3.32652E-05	0.001995911	System constraint
6/13/2019 13:46	0:01	KS	0.001202	1.686000	System constraint
6/13/2019 13:50	0:01	SMRR	-0.001533	1.757000	System constraint
6/13/2019 13:53	0:01	KS	0.001202	2.694000	System constraint
6/13/2019 13:57	0:01	KS	0.001202	2.929000	System constraint
6/13/2019 13:59	0:01	KS	0.001202	0.892000	System constraint
6/13/2019 14:00	0:01	KS	0.016801	2.749000	System constraint
6/13/2019 14:00	0:01	SMRR	0.006327	1.102000	System constraint
6/13/2019 14:01	0:01	KS	0.016478	2.132000	System constraint
6/13/2019 14:01	0:01	SMRR	0.006464	0.427000	System constraint
6/13/2019 14:02	0:01	SMRR	0.006464	0.295000	System constraint
6/13/2019 14:02	0:01	KS	0.016801	1.532000	System constraint
6/13/2019 14:03	0:01	SMRR	0.006189	0.440000	System constraint
6/13/2019 14:03	0:01	KS	0.016801	0.922000	System constraint
6/13/2019 14:04	0:01	SMRR	0.006464	0.603000	System constraint
6/13/2019 14:04	0:01	KS	0.016801	1.049000	System constraint
6/13/2019 14:04	0:01	SMRR	0.006464	0.758000	System constraint
6/13/2019 14:05	0:01	KS	0.016801	1.437000	System constraint
6/13/2019 14:09	0:01	KS	0.016801	2.782000	System constraint
6/13/2019 14:09	0:01	SMRR	0.006464	1.546000	System constraint
6/13/2019 14:10	0:01	SMRR	0.006327	1.437000	System constraint
6/13/2019 14:10	0:01	KS	0.016801	2.451000	System constraint
6/13/2019 14:11	0:01	SMRR	0.006464	1.035000	System constraint
6/13/2019 14:11	0:01	KS	0.016801	1.211000	System constraint
6/13/2019 14:11	0:01	SMRR	0.006464	0.505000	System constraint
6/13/2019 14:12	0:01	KS	0.016801	0.967000	System constraint
6/13/2019 14:12	0:01	SMRR	0.006327	0.167000	System constraint
6/13/2019 14:12	0:01	KS	0.016801	0.357000	System constraint
6/13/2019 14:13	0:01	5A	Data is not available	Data is not available	System constraint
6/13/2019 14:13	0:01	BS250	Data is not available	Data is not available	System constraint
6/13/2019 14:13	0:01	ESA	Data is not available	Data is not available	System constraint
6/13/2019 14:13	0:01	ESB	Data is not available	Data is not available	System constraint
6/13/2019 14:13	0:01	SMRR	0.006189	0.185000	System constraint
6/13/2019 14:13	0:01	KS	0.016801	0.291000	System constraint
6/13/2019 14:14	0:01	SMRR	0.006464	0.414000	System constraint
6/13/2019 14:14	0:01	KS	0.020034	0.290000	System constraint
6/13/2019 14:14	0:01	SMRR	0.004090	0.344000	System constraint
6/13/2019 14:15	0:01	KS	0.021252	0.364000	System constraint
6/13/2019 14:15	0:01	SMRR	0.017023	0.591000	System constraint
6/13/2019 14:16	0:01	KS	0.021252	0.793000	System constraint
6/13/2019 14:16	0:01	SMRR	0.017023	1.064000	System constraint
6/13/2019 14:17	0:01	KS	0.021252	0.475000	System constraint
6/13/2019 14:17	0:01	SMRR	0.017023	1.636000	System constraint
6/13/2019 14:18	0:01	SMRR	0.016299	1.669000	System constraint
6/13/2019 14:18	0:01	KS	0.021252	1.093000	System constraint
6/13/2019 14:18	0:01	SMRR	0.016299	1.111000	System constraint
6/13/2019 14:18	0:01	KS	0.021252	1.196000	System constraint
6/13/2019 14:19	0:01	SMRR	0.017023	0.949000	System constraint
6/13/2019 14:19	0:01	KS	0.021252	1.019000	System constraint
6/13/2019 14:20	0:01	SMRR	0.016661	1.104000	System constraint
6/13/2019 14:20	0:01	KS	0.021252	1.071000	System constraint
6/13/2019 14:21	0:01	SMRR	0.017023	0.702000	System constraint
6/13/2019 14:21	0:01	KS	0.021252	0.314000	System constraint
6/13/2019 14:21	0:01	SMRR	0.017023	0.496000	System constraint
6/13/2019 14:22	0:01	KS	0.021252	0.681000	System constraint
6/13/2019 14:22	0:01	SMRR	0.016661	0.997000	System constraint
6/13/2019 14:23	0:01	KS	0.020435	1.161000	System constraint
6/13/2019 14:23	0:01	SMRR	0.016661	0.962000	System constraint
6/13/2019 14:24	0:01	KS	0.021252	1.449000	System constraint
6/13/2019 14:24	0:01	SMRR	0.017023	0.875000	System constraint
6/13/2019 14:25	0:01	KS	0.021252	1.358000	System constraint
6/13/2019 14:25	0:01	SMRR	0.016661	0.756000	System constraint
6/13/2019 14:25	0:01	KS	0.021252	1.727000	System constraint
6/13/2019 14:26	0:01	SMRR	0.017023	1.503000	System constraint
6/13/2019 14:26	0:01	KS	0.021252	2.358000	System constraint
6/13/2019 14:27	0:01	SMRR	0.016661	1.858000	System constraint
6/13/2019 14:27	0:01	KS	0.021252	2.526000	System constraint
6/13/2019 14:28	0:01	KS	0.021252	2.846000	System constraint
6/13/2019 14:29	0:01	SMRR	0.007811	1.324000	System constraint
6/13/2019 14:30	0:01	KS	-0.000759	2.633000	System constraint
6/13/2019 14:30	0:01	SMRR	0.003613	1.239000	System constraint
6/13/2019 23:35	0:08	KWP2	0.130087598	18.22565842	System constraint
6/14/2019 0:03	0:14	KWP2	0.832878637	15.63795948	System constraint



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6/14/2019 0:24	0:27	KWP II	0.801551104	18.73062325	System constraint
6/14/2019 2:48	0:01	KWP II	0.002744377	0.164662629	System constraint
6/14/2019 3:45	0:03	AWE	0.056375535	21	System constraint
6/14/2019 3:49	0:03	KWP II	0.034207076	1.548826575	System constraint
6/14/2019 4:00	0:23	KWP II	1.220093908	6.348991394	System constraint
6/14/2019 4:09	0:06	AWE	0.057312044	21	System constraint
6/14/2019 4:25	0:35	KWP II	6.247530117	13.82966423	System constraint
6/14/2019 4:28	0:21	AWE	1.217975791	21	System constraint
6/14/2019 4:52	0:04	AWE	0.051295376	21	System constraint
6/14/2019 5:02	1:38	5A	Data is not available	Data is not available	System constraint
6/14/2019 5:02	1:38	BS250	Data is not available	Data is not available	System constraint
6/14/2019 5:02	1:38	ESA	Data is not available	Data is not available	System constraint
6/14/2019 5:02	1:38	ESB	Data is not available	Data is not available	System constraint
6/14/2019 5:03	1:37	KWP II	13.43209796	19.13778877	System constraint
6/14/2019 5:56	0:43	SMRR	0.068197	0.004000	System constraint
6/14/2019 5:59	0:41	KS	0.035381	0.004000	System constraint
6/14/2019 6:53	4:50	5A	Data is not available	Data is not available	System constraint
6/14/2019 6:53	4:50	BS250	Data is not available	Data is not available	System constraint
6/14/2019 6:53	4:50	ESA	Data is not available	Data is not available	System constraint
6/14/2019 6:53	4:50	ESB	Data is not available	Data is not available	System constraint
6/14/2019 6:53	4:50	SMRR	8.493382	0.004000	System constraint
6/14/2019 6:53	4:50	KS	8.016889	0.008000	System constraint
6/14/2019 6:54	4:49	KWP II	59.17867464	19.2096405	System constraint
6/14/2019 11:24	0:03	AWE	0.0422225	20.69999886	System constraint
6/14/2019 11:29	0:07	AWE	0.105056667	21	System constraint
6/14/2019 11:37	0:01	AWE	0.008686352	20.60000038	System constraint
6/14/2019 11:42	0:01	SMRR	0.035776	0.119000	System constraint
6/14/2019 11:43	0:01	KS	0.040820	0.392000	System constraint
6/14/2019 11:43	0:01	SMRR	0.035015	0.352000	System constraint
6/14/2019 11:44	1:16	5A	Data is not available	Data is not available	System constraint
6/14/2019 11:44	1:16	BS250	Data is not available	Data is not available	System constraint
6/14/2019 11:44	1:16	ESA	Data is not available	Data is not available	System constraint
6/14/2019 11:44	1:16	ESB	Data is not available	Data is not available	System constraint
6/14/2019 11:44	1:16	KS	3.598078	0.552000	System constraint
6/14/2019 11:44	1:19	SMRR	3.677209	0.388000	System constraint
6/14/2019 11:45	1:15	KWP II	8.837426098	18.92123222	System constraint
6/14/2019 13:00	0:01	KS	0.028282	0.003000	System constraint
6/14/2019 13:00	0:01	KS	0.028282	0.004000	System constraint
6/14/2019 13:01	0:02	5A	Data is not available	Data is not available	System constraint
6/14/2019 13:01	0:02	BS250	Data is not available	Data is not available	System constraint
6/14/2019 13:01	0:02	ESA	Data is not available	Data is not available	System constraint
6/14/2019 13:01	0:02	ESB	Data is not available	Data is not available	System constraint
6/14/2019 13:01	0:01	KS	0.028282	0.004000	System constraint
6/14/2019 13:02	0:01	KS	0.027738	0.005000	System constraint
6/14/2019 13:02	0:01	SMRR	0.021445	0.089000	System constraint
6/14/2019 13:03	0:02	KS	0.056564	0.126000	System constraint
6/14/2019 13:03	0:01	SMRR	0.022378	0.173000	System constraint
6/14/2019 13:04	0:01	SMRR	0.021445	0.321000	System constraint
6/14/2019 13:05	0:01	SMRR	0.021445	0.094000	System constraint
6/14/2019 13:05	0:01	KS	0.028282	0.144000	System constraint
6/14/2019 13:06	0:01	SMRR	0.021912	0.454000	System constraint
6/14/2019 13:06	0:01	KS	0.028282	0.646000	System constraint
6/14/2019 13:06	0:01	SMRR	0.021912	0.821000	System constraint
6/14/2019 13:07	0:01	KS	0.028282	0.916000	System constraint
6/14/2019 13:07	0:01	SMRR	0.021445	1.283000	System constraint
6/14/2019 13:07	0:01	KS	0.028282	1.444000	System constraint
6/14/2019 13:08	0:01	SMRR	0.021912	1.272000	System constraint
6/14/2019 13:08	0:01	KS	0.028282	1.602000	System constraint
6/14/2019 13:09	0:01	SMRR	0.021912	1.026000	System constraint
6/14/2019 13:09	0:01	KS	0.028282	1.556000	System constraint
6/14/2019 13:10	0:01	KS	0.028282	2.027000	System constraint
6/14/2019 13:10	0:01	SMRR	0.021912	0.812000	System constraint
6/14/2019 13:11	0:01	KS	0.027738	1.925000	System constraint
6/14/2019 13:11	0:01	SMRR	0.021445	0.774000	System constraint
6/14/2019 13:12	0:01	KS	0.027738	1.832000	System constraint
6/14/2019 13:12	0:01	SMRR	0.021445	0.632000	System constraint
6/14/2019 13:13	0:01	SMRR	0.021912	0.519000	System constraint
6/14/2019 13:13	0:01	KS	0.028282	1.598000	System constraint
6/14/2019 13:13	0:01	SMRR	0.021912	0.408000	System constraint
6/14/2019 13:13	0:01	KS	0.028282	1.332000	System constraint
6/14/2019 13:14	0:01	SMRR	0.020045	0.597000	System constraint
6/14/2019 13:14	0:01	KS	0.021436	1.203000	System constraint
6/14/2019 13:15	0:01	SMRR	0.006664	0.448000	System constraint



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6/14/2019 13:15	0:01	KS	0.019153	0.841000	System constraint
6/14/2019 13:16	0:01	SMRR	0.006664	0.454000	System constraint
6/14/2019 13:16	0:01	KS	0.019153	0.613000	System constraint
6/14/2019 13:16	0:01	SMRR	0.006522	0.722000	System constraint
6/14/2019 13:17	0:01	KS	0.019153	1.075000	System constraint
6/14/2019 13:17	0:01	SMRR	0.006664	0.623000	System constraint
6/14/2019 13:18	0:01	KS	0.018417	1.059000	System constraint
6/14/2019 13:18	0:01	SMRR	0.006664	0.365000	System constraint
6/14/2019 13:19	0:01	KS	0.019153	1.234000	System constraint
6/14/2019 13:19	0:01	SMRR	0.006522	0.711000	System constraint
6/14/2019 13:20	0:01	SMRR	0.006380	0.980000	System constraint
6/14/2019 13:20	0:01	KS	0.019153	2.277000	System constraint
6/14/2019 13:21	0:01	SMRR	0.006522	0.860000	System constraint
6/14/2019 13:21	0:01	KS	0.019153	2.289000	System constraint
6/14/2019 13:22	0:01	SMRR	0.006522	0.579000	System constraint
6/14/2019 13:22	0:01	KS	0.019153	1.691000	System constraint
6/14/2019 13:23	0:01	SMRR	0.006664	0.340000	System constraint
6/14/2019 13:23	0:01	KS	0.019153	1.071000	System constraint
6/14/2019 13:23	0:01	SMRR	0.006522	0.357000	System constraint
6/14/2019 13:24	0:01	KS	0.019153	1.046000	System constraint
6/14/2019 13:24	0:01	SMRR	0.006664	0.355000	System constraint
6/14/2019 13:25	0:01	KS	0.019153	1.336000	System constraint
6/14/2019 13:25	0:01	SMRR	0.006664	0.865000	System constraint
6/14/2019 13:26	0:01	KS	0.019153	1.642000	System constraint
6/14/2019 13:26	0:01	SMRR	0.006522	1.122000	System constraint
6/14/2019 13:26	0:01	KS	0.019153	1.803000	System constraint
6/14/2019 13:26	0:01	SMRR	0.006664	1.063000	System constraint
6/14/2019 13:27	0:01	SMRR	0.006664	1.094000	System constraint
6/14/2019 13:27	0:01	KS	0.019153	1.797000	System constraint
6/14/2019 13:29	0:01	SMRR	0.006160	1.397000	System constraint
6/14/2019 13:29	0:01	KS	0.012667	2.557000	System constraint
6/14/2019 13:30	0:01	SMRR	0.000975	1.134000	System constraint
6/14/2019 13:31	0:01	KS	0.003091	2.606000	System constraint
6/14/2019 13:31	0:01	SMRR	0.000996	1.112000	System constraint
6/14/2019 13:32	0:01	KS	0.003091	2.489000	System constraint
6/14/2019 13:33	0:01	SMRR	0.000975	1.137000	System constraint
6/14/2019 13:33	0:01	KS	0.002972	2.493000	System constraint
6/14/2019 13:33	0:01	SMRR	0.000996	1.169000	System constraint
6/14/2019 13:34	0:01	KS	0.003091	2.439000	System constraint
6/14/2019 13:34	0:01	SMRR	0.000954	0.891000	System constraint
6/14/2019 13:40	0:01	KS	0.003091	2.890000	System constraint
6/14/2019 13:41	0:01	SMRR	0.000975	1.807000	System constraint
6/14/2019 13:41	0:01	KS	0.003091	2.902000	System constraint
6/14/2019 13:42	0:01	SMRR	0.000996	1.905000	System constraint
6/14/2019 13:50	0:01	SMRR	0.015937	1.622000	System constraint
6/14/2019 13:51	0:01	KS	0.015051	2.592000	System constraint
6/14/2019 13:51	0:01	SMRR	0.016283	1.631000	System constraint
6/14/2019 13:51	0:01	KS	0.015051	1.990000	System constraint
6/14/2019 13:52	0:01	SMRR	0.015937	0.804000	System constraint
6/14/2019 13:52	0:01	KS	0.015051	1.505000	System constraint
6/14/2019 13:53	0:01	SMRR	0.016283	0.351000	System constraint
6/14/2019 13:53	0:01	KS	0.015051	1.225000	System constraint
6/14/2019 13:53	0:01	SMRR	0.016283	0.859000	System constraint
6/14/2019 13:54	0:01	KS	0.015051	1.734000	System constraint
6/14/2019 13:54	0:01	SMRR	0.015937	1.408000	System constraint
6/14/2019 13:55	0:01	KS	0.015051	1.088000	System constraint
6/14/2019 13:55	0:01	SMRR	0.016283	1.115000	System constraint
6/14/2019 13:56	0:01	KS	0.015051	1.173000	System constraint
6/14/2019 13:56	0:01	SMRR	0.015937	1.091000	System constraint
6/14/2019 13:57	0:02	SMRR	0.032220	0.615000	System constraint
6/14/2019 13:57	0:03	KS	0.045153	0.569000	System constraint
6/14/2019 13:58	0:02	5A	Data is not available	Data is not available	System constraint
6/14/2019 13:58	0:02	BS250	Data is not available	Data is not available	System constraint
6/14/2019 13:58	0:02	ESA	Data is not available	Data is not available	System constraint
6/14/2019 13:58	0:02	ESB	Data is not available	Data is not available	System constraint
6/14/2019 13:58	0:01	KWPII	0.011751239	17.59095764	System constraint
6/14/2019 13:58	0:01	SMRR	0.016283	0.026000	System constraint
6/14/2019 13:59	0:01	SMRR	0.015659	-0.004000	System constraint
6/14/2019 13:59	0:01	KS	0.017753	0.042000	System constraint
6/14/2019 14:00	0:01	SMRR	0.016947	-0.004000	System constraint
6/14/2019 14:00	0:01	KS	0.018749	0.120000	System constraint
6/14/2019 14:00	0:01	SMRR	0.016587	-0.004000	System constraint
6/14/2019 14:01	0:01	KS	0.018749	0.134000	System constraint





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6/14/2019 14:01	0:01	SMRR	0.016587	-0.003000	System constraint
6/14/2019 14:02	0:01	KS	0.018749	0.136000	System constraint
6/14/2019 14:02	0:01	SMRR	0.016947	-0.003000	System constraint
6/14/2019 14:03	0:01	KS	0.018749	0.149000	System constraint
6/14/2019 14:03	0:01	SMRR	0.016947	-0.003000	System constraint
6/14/2019 14:04	0:01	SMRR	0.016587	0.105000	System constraint
6/14/2019 14:04	0:01	KS	0.018028	0.247000	System constraint
6/14/2019 14:06	0:01	SMRR	0.016587	0.859000	System constraint
6/14/2019 14:06	0:01	KS	0.018749	1.406000	System constraint
6/15/2019 1:39	0:01	AWE	0.005	0.299999982	System constraint
6/16/2019 0:15	0:01	KWP2	0.001605352	18.21567726	System constraint
6/16/2019 0:35	0:01	KWP2	0.00125068	18.80047989	System constraint
6/16/2019 2:26	0:01	KWP2	0.01976703	17.93625069	System constraint
6/16/2019 2:28	2:13	KWP2	12.9818598	19.1517601	System constraint
6/16/2019 4:42	0:02	KWP2	0.021342723	18.25958824	System constraint
6/16/2019 4:45	0:01	KWP2	0.004085541	17.05106354	System constraint
6/16/2019 4:48	0:01	KWP2	0.007354514	16.70078087	System constraint
6/16/2019 4:54	0:01	KWP2	0.011757723	16.40937805	System constraint
6/16/2019 4:56	0:06	KWP2	0.132146835	18.20669556	System constraint
6/16/2019 8:43	0:01	KS	-0.001216	1.397000	System constraint
6/16/2019 8:44	0:01	SMRR	-0.000959	1.631000	System constraint
6/16/2019 8:44	0:01	KS	-0.004416	1.414000	System constraint
6/16/2019 8:45	0:01	SMRR	0.000258	1.067000	System constraint
6/16/2019 8:45	0:01	KS	0.001715	0.913000	System constraint
6/16/2019 8:45	0:01	SMRR	0.000258	0.906000	System constraint
6/16/2019 9:26	0:01	SMRR	0.000015	2.053000	System constraint
6/16/2019 9:26	0:01	KS	0.000641	1.921000	System constraint
6/16/2019 9:26	0:01	SMRR	0.000015	2.061000	System constraint
6/16/2019 9:27	0:01	SMRR	0.000015	1.772000	System constraint
6/16/2019 9:28	0:01	KS	0.000641	1.565000	System constraint
6/16/2019 9:28	0:01	SMRR	0.000015	1.800000	System constraint
6/16/2019 9:28	0:01	KS	0.000641	1.730000	System constraint
6/16/2019 9:29	0:01	SMRR	0.000015	1.710000	System constraint
6/16/2019 9:29	0:01	KS	0.012641	1.568000	System constraint
6/16/2019 9:29	0:01	SMRR	0.015015	1.762000	System constraint
6/16/2019 9:32	0:01	SMRR	0.017465	1.973000	System constraint
6/16/2019 9:32	0:01	KS	0.018766	1.723000	System constraint
6/16/2019 9:33	0:01	SMRR	0.017465	1.604000	System constraint
6/16/2019 9:33	0:01	KS	0.018766	1.217000	System constraint
6/16/2019 9:33	0:01	SMRR	0.017465	1.030000	System constraint
6/16/2019 9:34	0:05	KS	0.111873	0.593000	System constraint
6/16/2019 9:34	0:04	SMRR	0.085838	0.517000	System constraint
6/16/2019 9:35	0:02	5A	Data is not available	Data is not available	System constraint
6/16/2019 9:35	0:02	BS250	Data is not available	Data is not available	System constraint
6/16/2019 9:35	0:02	ESA	Data is not available	Data is not available	System constraint
6/16/2019 9:35	0:02	ESB	Data is not available	Data is not available	System constraint
6/16/2019 9:36	0:02	KWP2	0.032692321	12.31277275	System constraint
6/16/2019 9:38	0:01	5A	Data is not available	Data is not available	System constraint
6/16/2019 9:38	0:01	BS250	Data is not available	Data is not available	System constraint
6/16/2019 9:38	0:01	ESA	Data is not available	Data is not available	System constraint
6/16/2019 9:38	0:01	ESB	Data is not available	Data is not available	System constraint
6/16/2019 9:38	0:01	SMRR	0.017093	-0.003000	System constraint
6/16/2019 9:39	0:01	SMRR	0.017465	-0.003000	System constraint
6/16/2019 9:39	0:01	KS	0.018766	0.049000	System constraint
6/16/2019 9:40	0:01	SMRR	0.017465	-0.003000	System constraint
6/16/2019 9:40	0:01	KS	0.018766	0.141000	System constraint
6/16/2019 9:40	0:01	SMRR	0.017093	-0.003000	System constraint
6/16/2019 9:41	0:01	KS	0.018766	0.266000	System constraint
6/16/2019 9:41	0:01	SMRR	0.017093	0.184000	System constraint
6/16/2019 9:41	0:01	KS	0.018766	0.622000	System constraint
6/16/2019 9:42	0:01	SMRR	0.016722	0.443000	System constraint
6/16/2019 9:42	0:01	KS	0.018766	0.951000	System constraint
6/16/2019 9:43	0:01	SMRR	0.017093	0.717000	System constraint
6/16/2019 9:43	0:01	KS	0.018766	1.117000	System constraint
6/16/2019 9:43	0:01	SMRR	0.017465	1.043000	System constraint
6/16/2019 9:44	0:01	KS	0.015148	1.509000	System constraint
6/16/2019 9:44	0:01	SMRR	0.012575	1.437000	System constraint
6/16/2019 9:45	0:01	KS	0.012566	1.637000	System constraint
6/16/2019 9:45	0:01	SMRR	0.010409	1.807000	System constraint
6/16/2019 9:47	0:01	SMRR	0.010635	1.987000	System constraint
6/16/2019 9:47	0:01	KS	0.012566	1.769000	System constraint
6/16/2019 9:48	0:01	SMRR	0.010635	2.209000	System constraint
6/16/2019 9:49	0:01	SMRR	0.010409	2.193000	System constraint



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6/16/2019 9:50	0:01	SMRR	0.010635	2.229000	System constraint
6/16/2019 9:50	0:01	KS	0.012566	1.983000	System constraint
6/16/2019 9:50	0:01	SMRR	0.010635	1.878000	System constraint
6/16/2019 9:51	0:01	KS	0.012566	1.693000	System constraint
6/16/2019 9:51	0:01	SMRR	0.010409	1.565000	System constraint
6/16/2019 9:52	0:01	KS	0.012566	1.260000	System constraint
6/16/2019 9:52	0:01	SMRR	0.010635	1.214000	System constraint
6/16/2019 9:53	0:01	KS	0.012325	1.287000	System constraint
6/16/2019 9:53	0:01	SMRR	0.010635	1.246000	System constraint
6/16/2019 9:54	0:01	SMRR	0.010183	1.374000	System constraint
6/16/2019 9:54	0:01	KS	0.012566	1.478000	System constraint
6/16/2019 9:54	0:01	SMRR	0.010635	1.716000	System constraint
6/16/2019 9:54	0:01	KS	0.012566	1.710000	System constraint
6/16/2019 9:55	0:01	SMRR	0.010635	1.331000	System constraint
6/16/2019 9:55	0:01	KS	0.012566	1.079000	System constraint
6/16/2019 9:56	1:38	SMRR	4.065052	0.818000	System constraint
6/16/2019 9:56	1:38	KS	4.077772	0.461000	System constraint
6/16/2019 9:57	1:37	5A	Data is not available	Data is not available	System constraint
6/16/2019 9:57	1:37	BS250	Data is not available	Data is not available	System constraint
6/16/2019 9:57	1:37	ESA	Data is not available	Data is not available	System constraint
6/16/2019 9:57	1:37	ESB	Data is not available	Data is not available	System constraint
6/16/2019 9:57	1:38	KWP11	15.02918561	18.91724014	System constraint
6/16/2019 10:49	0:01	AWE	0.007628886	20.19999886	System constraint
6/16/2019 10:51	0:02	AWE	0.006194719	21	System constraint
6/16/2019 11:34	0:01	KS	0.029496	-0.003000	System constraint
6/16/2019 11:34	0:01	SMRR	0.033501	-0.003000	System constraint
6/16/2019 11:35	0:01	KS	0.029496	-0.003000	System constraint
6/16/2019 11:35	0:01	SMRR	0.032075	-0.003000	System constraint
6/16/2019 11:36	0:01	SMRR	0.033501	-0.003000	System constraint
6/16/2019 11:36	0:01	KS	0.029496	-0.003000	System constraint
6/16/2019 11:36	0:01	SMRR	0.033501	0.001000	System constraint
6/16/2019 11:36	0:01	KS	0.029496	0.027000	System constraint
6/16/2019 11:37	0:01	SMRR	0.032075	0.217000	System constraint
6/16/2019 11:37	0:01	KS	0.029496	0.354000	System constraint
6/16/2019 11:38	0:01	SMRR	0.032075	0.506000	System constraint
6/16/2019 11:38	0:01	KS	0.028929	0.580000	System constraint
6/16/2019 11:39	0:01	SMRR	0.034926	0.753000	System constraint
6/16/2019 11:39	0:01	KS	0.029496	1.087000	System constraint
6/16/2019 11:39	0:01	SMRR	0.032788	1.266000	System constraint
6/16/2019 11:40	0:01	KS	0.029496	0.771000	System constraint
6/16/2019 11:40	0:01	SMRR	0.033501	1.077000	System constraint
6/16/2019 11:41	0:01	KS	0.029496	0.674000	System constraint
6/16/2019 11:41	0:01	SMRR	0.033501	0.488000	System constraint
6/16/2019 11:42	0:01	KS	0.029496	0.730000	System constraint
6/16/2019 11:42	0:01	SMRR	0.032788	0.745000	System constraint
6/16/2019 11:42	0:01	SMRR	0.033501	0.462000	System constraint
6/16/2019 11:43	0:01	KS	0.029496	0.438000	System constraint
6/16/2019 11:43	0:01	SMRR	0.033501	0.053000	System constraint
6/16/2019 11:43	0:01	KS	0.029496	0.196000	System constraint
6/16/2019 11:44	0:01	SMRR	0.024175	0.448000	System constraint
6/16/2019 11:44	0:01	KS	0.016012	0.600000	System constraint
6/16/2019 11:45	0:01	SMRR	0.012325	0.667000	System constraint
6/16/2019 11:45	0:01	KS	0.017882	0.851000	System constraint
6/16/2019 11:46	0:01	SMRR	0.012599	0.258000	System constraint
6/16/2019 11:46	0:01	KS	0.017882	0.454000	System constraint
6/16/2019 11:46	0:01	SMRR	0.012873	0.547000	System constraint
6/16/2019 11:47	0:01	KS	0.017882	0.572000	System constraint
6/16/2019 11:47	0:01	SMRR	0.012873	1.047000	System constraint
6/16/2019 11:48	0:01	KS	0.017882	1.266000	System constraint
6/16/2019 11:48	0:01	SMRR	0.012599	1.181000	System constraint
6/16/2019 11:49	0:01	KS	0.017882	1.700000	System constraint
6/16/2019 11:49	0:01	SMRR	0.012873	1.712000	System constraint
6/16/2019 11:49	0:01	SMRR	0.012599	2.117000	System constraint
6/16/2019 11:49	0:01	KS	0.017882	2.164000	System constraint
6/16/2019 11:50	0:01	SMRR	0.012599	2.151000	System constraint
6/16/2019 11:50	0:01	KS	0.017538	2.049000	System constraint
6/16/2019 11:51	0:01	SMRR	0.012873	2.280000	System constraint
6/16/2019 11:51	0:01	KS	0.018226	2.206000	System constraint
6/16/2019 11:52	0:01	SMRR	0.014242	1.775000	System constraint
6/16/2019 11:52	0:01	KS	0.017538	1.942000	System constraint
6/16/2019 11:53	0:01	SMRR	0.012325	2.262000	System constraint
6/16/2019 11:53	0:01	KS	0.017538	2.454000	System constraint
6/16/2019 11:53	0:01	SMRR	0.012599	2.768000	System constraint



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6/16/2019 11:54	0:01	KS	0.017882	2.500000	System constraint
6/16/2019 11:54	0:02	SMRR	0.024924	2.223000	System constraint
6/16/2019 11:55	0:01	KS	0.017882	2.060000	System constraint
6/16/2019 11:55	0:01	KS	0.017882	1.637000	System constraint
6/16/2019 11:56	0:01	SMRR	0.012873	1.922000	System constraint
6/16/2019 11:56	0:01	KS	0.017882	2.173000	System constraint
6/16/2019 11:56	0:01	SMRR	0.012873	2.169000	System constraint
6/16/2019 11:57	0:01	SMRR	0.012599	2.704000	System constraint
6/16/2019 14:11	0:01	SMRR	0.000221	1.066000	System constraint
6/16/2019 14:11	0:01	KS	0.003611	2.608000	System constraint
6/16/2019 14:12	0:01	SMRR	0.000226	1.036000	System constraint
6/16/2019 14:12	0:01	KS	0.003611	2.014000	System constraint
6/16/2019 14:13	0:01	SMRR	0.000226	0.509000	System constraint
6/16/2019 14:13	0:01	KS	0.003611	1.373000	System constraint
6/16/2019 14:13	0:01	SMRR	0.000221	0.554000	System constraint
6/16/2019 14:14	0:01	KS	0.005940	1.364000	System constraint
6/16/2019 14:14	0:01	SMRR	-0.000325	0.543000	System constraint
6/16/2019 14:15	0:01	KS	0.010965	1.577000	System constraint
6/16/2019 14:15	0:01	SMRR	0.002104	0.842000	System constraint
6/16/2019 14:16	0:01	KS	0.011180	1.912000	System constraint
6/16/2019 14:16	0:01	SMRR	0.002058	0.727000	System constraint
6/16/2019 14:17	0:01	SMRR	0.002058	0.911000	System constraint
6/16/2019 14:21	0:02	KS	0.022360	2.686000	System constraint
6/16/2019 14:21	0:01	SMRR	0.002150	1.039000	System constraint
6/16/2019 14:22	0:01	SMRR	0.002104	1.092000	System constraint
6/16/2019 14:23	0:01	KS	0.011180	2.177000	System constraint
6/16/2019 14:23	0:01	SMRR	0.002150	0.508000	System constraint
6/16/2019 14:23	0:01	KS	0.010965	1.557000	System constraint
6/16/2019 14:23	0:01	SMRR	0.002150	0.545000	System constraint
6/16/2019 14:27	0:01	SMRR	0.002104	1.404000	System constraint
6/16/2019 14:29	0:01	KS	0.011180	1.500000	System constraint
6/16/2019 14:29	0:01	SMRR	0.002983	1.366000	System constraint
6/16/2019 14:29	0:01	KS	0.033180	1.125000	System constraint
6/16/2019 14:30	0:01	SMRR	0.016553	1.274000	System constraint
6/16/2019 14:30	0:01	KS	0.025298	1.336000	System constraint
6/16/2019 14:30	0:01	SMRR	0.016553	0.803000	System constraint
6/16/2019 14:31	0:01	SMRR	0.016201	0.529000	System constraint
6/16/2019 14:31	0:01	KS	0.025298	0.813000	System constraint
6/16/2019 14:32	0:01	SMRR	0.016553	0.367000	System constraint
6/16/2019 14:32	0:01	KS	0.025298	0.610000	System constraint
6/16/2019 14:33	0:01	SMRR	0.016553	0.260000	System constraint
6/16/2019 14:33	0:01	KS	0.025298	0.194000	System constraint
6/16/2019 14:34	0:01	SMRR	0.016201	0.426000	System constraint
6/16/2019 14:34	0:01	KS	0.025298	0.452000	System constraint
6/16/2019 14:34	0:01	SMRR	0.016553	0.847000	System constraint
6/16/2019 14:35	0:01	KS	0.025298	0.550000	System constraint
6/16/2019 14:35	0:01	SMRR	0.016553	1.132000	System constraint
6/16/2019 14:36	0:01	KS	0.025298	0.585000	System constraint
6/16/2019 14:36	0:01	SMRR	0.015848	1.067000	System constraint
6/16/2019 14:36	0:01	KS	0.025298	0.432000	System constraint
6/16/2019 14:37	0:01	SMRR	0.015848	0.657000	System constraint
6/16/2019 14:37	0:01	KS	0.025298	0.530000	System constraint
6/16/2019 14:37	0:01	SMRR	0.016553	0.668000	System constraint
6/16/2019 14:38	0:01	KS	0.025298	0.412000	System constraint
6/16/2019 14:38	0:01	SMRR	0.016201	0.333000	System constraint
6/16/2019 14:39	0:01	SMRR	0.016553	0.107000	System constraint
6/16/2019 14:39	0:01	KS	0.024325	0.299000	System constraint
6/16/2019 14:40	0:01	SMRR	0.016553	0.253000	System constraint
6/16/2019 14:40	0:01	KS	0.025298	0.422000	System constraint
6/16/2019 14:40	0:01	SMRR	0.015848	0.620000	System constraint
6/16/2019 14:41	0:01	KS	0.025298	0.737000	System constraint
6/16/2019 14:41	0:01	SMRR	0.016201	0.647000	System constraint
6/16/2019 14:42	0:01	KS	0.025298	0.413000	System constraint
6/16/2019 14:42	0:01	SMRR	0.016553	0.475000	System constraint
6/16/2019 14:42	0:01	KS	0.025298	0.196000	System constraint
6/16/2019 14:43	0:01	SMRR	0.016553	0.185000	System constraint
6/16/2019 14:43	0:01	KS	0.025298	0.023000	System constraint
6/16/2019 14:44	0:01	SMRR	0.016201	0.092000	System constraint
6/16/2019 14:44	0:01	KS	0.027929	0.072000	System constraint
6/16/2019 14:44	0:01	SMRR	0.015193	0.141000	System constraint
6/16/2019 14:45	0:01	KS	0.024881	0.140000	System constraint
6/16/2019 14:45	0:01	SMRR	0.020729	0.635000	System constraint
6/16/2019 14:46	0:01	SMRR	0.020288	0.913000	System constraint



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6/16/2019 14:46	0:01	KS	0.024881	0.129000	System constraint
6/16/2019 14:47	0:01	SMRR	0.020729	0.973000	System constraint
6/16/2019 14:47	0:01	KS	0.024881	0.139000	System constraint
6/16/2019 14:47	0:01	SMRR	0.020729	0.539000	System constraint
6/16/2019 14:48	0:01	KS	0.024881	0.143000	System constraint
6/16/2019 14:48	0:01	SMRR	0.020288	0.771000	System constraint
6/16/2019 14:49	0:01	KS	0.024881	0.137000	System constraint
6/16/2019 14:49	0:01	SMRR	0.020288	0.510000	System constraint
6/16/2019 14:51	0:01	KS	0.024881	0.600000	System constraint
6/16/2019 14:51	0:01	SMRR	0.020288	1.897000	System constraint
6/16/2019 14:52	0:01	KS	0.024881	0.846000	System constraint
6/16/2019 14:52	0:01	SMRR	0.019847	1.915000	System constraint
6/16/2019 14:53	0:01	SMRR	0.020288	1.364000	System constraint
6/16/2019 14:53	0:01	KS	0.024881	0.541000	System constraint
6/16/2019 14:54	0:01	SMRR	0.020729	0.854000	System constraint
6/16/2019 14:54	0:01	KS	0.023924	0.325000	System constraint
6/16/2019 14:54	0:01	SMRR	0.020729	0.714000	System constraint
6/16/2019 14:55	0:08	KWPUI	0.106572692	17.66979599	System constraint
6/16/2019 14:55	0:01	KS	0.024881	0.180000	System constraint
6/16/2019 14:55	0:08	SMRR	0.196102	0.357000	System constraint
6/16/2019 14:55	0:07	KS	0.172184	0.060000	System constraint
6/16/2019 14:56	0:06	5A	Data is not available	Data is not available	System constraint
6/16/2019 14:56	0:06	BS250	Data is not available	Data is not available	System constraint
6/16/2019 14:56	0:06	ESA	Data is not available	Data is not available	System constraint
6/16/2019 14:56	0:06	ESB	Data is not available	Data is not available	System constraint
6/16/2019 15:02	0:01	KS	0.016647	0.066000	System constraint
6/16/2019 15:03	0:01	SMRR	0.019016	0.311000	System constraint
6/16/2019 15:03	0:01	KS	0.016647	0.292000	System constraint
6/16/2019 15:04	0:01	SMRR	0.019016	0.294000	System constraint
6/16/2019 15:04	0:01	KS	0.016647	0.242000	System constraint
6/16/2019 15:04	0:01	SMRR	0.018612	0.679000	System constraint
6/16/2019 15:05	0:01	KS	0.016647	0.679000	System constraint
6/16/2019 15:05	0:01	SMRR	0.018612	0.961000	System constraint
6/16/2019 15:06	0:01	KS	0.016647	0.904000	System constraint
6/16/2019 15:06	0:01	SMRR	0.019016	1.223000	System constraint
6/16/2019 15:07	0:01	KS	0.016647	0.716000	System constraint
6/16/2019 15:07	0:01	SMRR	0.018612	1.511000	System constraint
6/18/2019 5:12	0:01	KWPUI	0.005671713	0.340302765	System constraint
6/18/2019 5:16	0:03	KWPUI	0.082362493	8.153294563	System constraint
6/19/2019 11:18	0:01	SMRR	0.013775	2.179000	System constraint
6/19/2019 11:18	0:01	KS	0.010024	2.856000	System constraint
6/19/2019 11:19	0:01	KS	0.010024	2.846000	System constraint
6/19/2019 11:20	0:01	SMRR	0.014081	1.983000	System constraint
6/19/2019 11:20	0:01	KS	0.010024	2.861000	System constraint
6/19/2019 11:20	0:01	SMRR	0.013775	1.892000	System constraint
6/19/2019 11:21	0:01	KS	0.010024	1.703000	System constraint
6/19/2019 11:21	0:01	SMRR	0.014081	1.646000	System constraint
6/19/2019 11:22	0:01	KS	0.010024	0.830000	System constraint
6/19/2019 11:22	0:01	SMRR	0.014081	1.485000	System constraint
6/19/2019 11:23	0:01	KS	0.010024	1.450000	System constraint
6/19/2019 11:23	0:01	SMRR	0.014081	1.352000	System constraint
6/19/2019 11:23	0:01	KS	0.010024	1.537000	System constraint
6/19/2019 11:23	0:01	SMRR	0.013775	1.350000	System constraint
6/19/2019 11:24	0:01	SMRR	0.014081	1.412000	System constraint
6/19/2019 11:24	0:01	KS	0.010024	1.323000	System constraint
6/19/2019 11:25	0:01	SMRR	0.014081	1.613000	System constraint
6/19/2019 11:25	0:01	KS	0.010024	1.557000	System constraint
6/19/2019 11:26	0:01	SMRR	0.014081	1.961000	System constraint
6/19/2019 11:26	0:01	KS	0.010024	1.861000	System constraint
6/19/2019 11:26	0:01	SMRR	0.014081	2.145000	System constraint
6/19/2019 11:27	0:01	KS	0.010024	2.472000	System constraint
6/19/2019 11:27	0:01	SMRR	0.014081	1.951000	System constraint
6/19/2019 11:28	0:01	KS	0.010024	2.237000	System constraint
6/19/2019 11:28	0:01	SMRR	0.013775	1.889000	System constraint
6/19/2019 11:29	0:01	KS	0.010024	2.321000	System constraint
6/19/2019 11:29	0:01	SMRR	0.014386	1.442000	System constraint
6/19/2019 11:31	0:01	SMRR	0.020585	2.563000	System constraint
6/19/2019 11:31	0:01	KS	0.022736	2.848000	System constraint
6/19/2019 11:32	0:01	SMRR	0.020138	2.384000	System constraint
6/19/2019 11:32	0:01	KS	0.022736	2.048000	System constraint
6/19/2019 11:33	0:01	SMRR	0.021033	1.825000	System constraint
6/19/2019 11:33	0:01	KS	0.022736	1.427000	System constraint
6/19/2019 11:33	0:01	SMRR	0.020138	1.310000	System constraint



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6/19/2019 11:34	0:01	KS	0.022298	0.982000	System constraint
6/19/2019 11:34	0:01	SMRR	0.020585	0.872000	System constraint
6/19/2019 11:35	0:02	5A	Data is not available	Data is not available	System constraint
6/19/2019 11:35	0:02	BS250	Data is not available	Data is not available	System constraint
6/19/2019 11:35	0:02	ESA	Data is not available	Data is not available	System constraint
6/19/2019 11:35	0:02	ESB	Data is not available	Data is not available	System constraint
6/19/2019 11:35	0:01	KS	0.022736	0.482000	System constraint
6/19/2019 11:35	0:02	SMRR	0.040723	0.437000	System constraint
6/19/2019 11:36	0:01	KWPPII	0.01004831	15.4762907	System constraint
6/19/2019 11:36	0:01	KS	0.022736	0.033000	System constraint
6/19/2019 11:36	0:01	KS	0.022736	0.101000	System constraint
6/19/2019 11:36	0:01	SMRR	0.020585	0.100000	System constraint
6/19/2019 11:37	0:01	SMRR	0.020585	0.442000	System constraint
6/19/2019 11:37	0:01	KS	0.022736	0.411000	System constraint
6/19/2019 11:38	0:01	SMRR	0.020138	0.714000	System constraint
6/19/2019 11:38	0:01	KS	0.022736	0.697000	System constraint
6/19/2019 11:39	0:01	SMRR	0.020585	0.943000	System constraint
6/19/2019 11:39	0:02	KS	0.045471	0.980000	System constraint
6/19/2019 11:39	0:01	SMRR	0.020585	1.166000	System constraint
6/19/2019 11:40	0:01	SMRR	0.020585	1.399000	System constraint
6/19/2019 11:41	0:01	KS	0.022736	1.245000	System constraint
6/19/2019 11:41	0:01	SMRR	0.020138	1.133000	System constraint
6/19/2019 11:42	0:01	KS	0.022736	1.252000	System constraint
6/19/2019 11:42	0:01	SMRR	0.020585	1.173000	System constraint
6/19/2019 11:42	0:01	KS	0.022736	1.671000	System constraint
6/19/2019 11:42	0:01	SMRR	0.020585	1.583000	System constraint
6/19/2019 11:43	0:01	SMRR	0.020138	1.593000	System constraint
6/19/2019 11:43	0:01	KS	0.022736	1.522000	System constraint
6/19/2019 11:44	0:01	SMRR	0.025456	1.453000	System constraint
6/19/2019 11:44	0:01	KS	0.033626	1.469000	System constraint
6/19/2019 11:45	0:01	SMRR	0.035851	0.902000	System constraint
6/19/2019 11:45	0:01	KS	0.039896	0.778000	System constraint
6/19/2019 11:46	0:13	5A	Data is not available	Data is not available	System constraint
6/19/2019 11:46	0:13	ESA	Data is not available	Data is not available	System constraint
6/19/2019 11:46	0:13	ESB	Data is not available	Data is not available	System constraint
6/19/2019 11:46	0:01	SMRR	0.034325	0.575000	System constraint
6/19/2019 11:46	0:12	KS	0.557003	0.178000	System constraint
6/19/2019 11:46	0:01	SMRR	0.035088	0.044000	System constraint
6/19/2019 11:47	0:12	BS250	Data is not available	Data is not available	System constraint
6/19/2019 11:47	0:01	KWPPII	0.003057814	16.07007408	System constraint
6/19/2019 11:47	0:01	SMRR	0.035851	0.021000	System constraint
6/19/2019 11:48	0:11	SMRR	0.487415	0.002000	System constraint
6/19/2019 11:49	0:10	KWPPII	0.286601464	16.10400391	System constraint
6/19/2019 11:58	0:01	KS	0.039896	0.001000	System constraint
6/19/2019 11:59	0:01	SMRR	0.034325	0.096000	System constraint
6/19/2019 11:59	0:01	KS	0.034762	0.246000	System constraint
6/19/2019 11:59	0:01	SMRR	0.024582	0.537000	System constraint
6/19/2019 12:00	0:01	KS	0.022100	0.595000	System constraint
6/19/2019 12:00	0:01	SMRR	0.019261	0.840000	System constraint
6/19/2019 12:01	0:01	KS	0.022100	0.942000	System constraint
6/19/2019 12:01	0:01	SMRR	0.018843	1.079000	System constraint
6/19/2019 12:01	0:01	KS	0.022100	1.273000	System constraint
6/19/2019 12:02	0:01	SMRR	0.019261	1.252000	System constraint
6/19/2019 12:02	0:01	SMRR	0.019261	1.024000	System constraint
6/19/2019 12:02	0:01	KS	0.022100	0.987000	System constraint
6/19/2019 12:03	0:01	SMRR	0.018843	0.566000	System constraint
6/19/2019 12:03	0:01	KS	0.022100	0.456000	System constraint
6/19/2019 12:04	0:01	SMRR	0.019261	0.510000	System constraint
6/19/2019 12:04	0:01	KS	0.021675	0.863000	System constraint
6/19/2019 12:05	0:01	SMRR	0.018843	1.008000	System constraint
6/19/2019 12:05	0:01	KS	0.022100	1.288000	System constraint
6/19/2019 12:05	0:01	SMRR	0.019261	1.499000	System constraint
6/19/2019 12:06	0:01	KS	0.022100	1.685000	System constraint
6/19/2019 12:06	0:01	SMRR	0.019261	1.920000	System constraint
6/19/2019 12:07	0:01	KS	0.022100	2.108000	System constraint
6/19/2019 12:07	0:01	SMRR	0.019261	2.218000	System constraint
6/19/2019 12:08	0:01	KS	0.022100	2.397000	System constraint
6/19/2019 12:08	0:01	SMRR	0.019680	2.189000	System constraint
6/19/2019 12:08	0:01	KS	0.022100	2.047000	System constraint
6/19/2019 12:08	0:01	SMRR	0.018843	1.817000	System constraint
6/19/2019 12:09	0:01	SMRR	0.019261	1.524000	System constraint
6/19/2019 12:09	0:01	KS	0.022100	1.417000	System constraint
6/19/2019 12:10	0:01	SMRR	0.019261	0.968000	System constraint



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6/19/2019 12:10	0:01	KS	0.022100	0.842000	System constraint
6/19/2019 12:11	0:01	SMRR	0.018843	1.028000	System constraint
6/19/2019 12:11	0:01	KS	0.022100	1.128000	System constraint
6/19/2019 12:11	0:01	SMRR	0.019261	1.263000	System constraint
6/19/2019 12:12	0:01	KS	0.022100	1.117000	System constraint
6/19/2019 12:12	0:01	SMRR	0.019261	1.838000	System constraint
6/19/2019 12:13	0:01	KS	0.022100	1.864000	System constraint
6/19/2019 12:13	0:01	SMRR	0.019261	1.946000	System constraint
6/19/2019 12:14	0:01	KS	0.022100	0.948000	System constraint
6/19/2019 12:14	0:01	SMRR	0.019275	1.401000	System constraint
6/19/2019 12:14	0:01	KS	0.023767	1.331000	System constraint
6/19/2019 12:15	0:01	SMRR	0.020001	1.329000	System constraint
6/19/2019 12:15	0:01	SMRR	0.020001	0.828000	System constraint
6/19/2019 12:15	0:01	KS	0.023833	0.947000	System constraint
6/19/2019 12:16	0:01	SMRR	0.019567	0.403000	System constraint
6/19/2019 12:16	0:01	KS	0.023833	0.314000	System constraint
6/19/2019 12:17	0:01	5A	Data is not available	Data is not available	System constraint
6/19/2019 12:17	0:01	ESA	Data is not available	Data is not available	System constraint
6/19/2019 12:17	0:01	ESB	Data is not available	Data is not available	System constraint
6/19/2019 12:17	0:01	SMRR	0.020001	0.278000	System constraint
6/19/2019 12:17	0:01	KS	0.023833	0.242000	System constraint
6/19/2019 12:18	0:01	SMRR	0.020001	0.507000	System constraint
6/19/2019 12:18	0:01	KS	0.023833	0.881000	System constraint
6/19/2019 12:18	0:01	SMRR	0.019567	1.055000	System constraint
6/19/2019 12:19	0:01	KS	0.023833	1.391000	System constraint
6/19/2019 12:19	0:01	SMRR	0.020001	1.386000	System constraint
6/19/2019 12:20	0:01	KS	0.022917	1.301000	System constraint
6/19/2019 12:20	0:01	SMRR	0.020001	1.236000	System constraint
6/19/2019 12:21	0:01	KS	0.023833	1.046000	System constraint
6/19/2019 12:21	0:01	SMRR	0.019567	0.953000	System constraint
6/19/2019 12:21	0:01	KS	0.023833	0.816000	System constraint
6/19/2019 12:21	0:01	SMRR	0.020001	1.026000	System constraint
6/19/2019 12:22	0:01	SMRR	0.020001	0.927000	System constraint
6/19/2019 12:22	0:01	KS	0.023833	0.793000	System constraint
6/19/2019 12:23	0:01	SMRR	0.019567	0.794000	System constraint
6/19/2019 12:23	0:01	KS	0.023833	1.081000	System constraint
6/19/2019 12:24	0:01	SMRR	0.020001	0.908000	System constraint
6/19/2019 12:24	0:01	KS	0.023833	1.242000	System constraint
6/19/2019 12:24	0:01	SMRR	0.020001	1.307000	System constraint
6/19/2019 12:25	0:01	KS	0.023833	1.448000	System constraint
6/19/2019 12:25	0:01	SMRR	0.020001	1.738000	System constraint
6/19/2019 12:26	0:01	KS	0.023833	1.661000	System constraint
6/19/2019 12:26	0:01	SMRR	0.019567	1.952000	System constraint
6/19/2019 12:27	0:01	KS	0.023833	1.615000	System constraint
6/19/2019 12:32	0:01	SMRR	0.016293	2.876000	System constraint
6/19/2019 12:33	0:01	KS	0.018287	2.589000	System constraint
6/19/2019 12:33	0:01	SMRR	0.016293	2.252000	System constraint
6/19/2019 12:34	0:01	KS	0.018287	1.985000	System constraint
6/19/2019 12:34	0:01	SMRR	0.015939	1.754000	System constraint
6/19/2019 12:34	0:01	SMRR	0.016293	1.218000	System constraint
6/19/2019 12:34	0:01	KS	0.017583	1.347000	System constraint
6/19/2019 12:35	0:01	SMRR	0.016293	0.740000	System constraint
6/19/2019 12:35	0:01	KS	0.018287	0.992000	System constraint
6/19/2019 12:36	0:01	SMRR	0.015939	0.609000	System constraint
6/19/2019 12:36	0:01	KS	0.018287	0.599000	System constraint
6/19/2019 12:37	0:01	SMRR	0.016293	0.670000	System constraint
6/19/2019 12:37	0:01	KS	0.018287	0.588000	System constraint
6/19/2019 12:37	0:01	SMRR	0.015939	0.676000	System constraint
6/19/2019 12:38	0:01	KS	0.018287	0.699000	System constraint
6/19/2019 12:38	0:01	SMRR	0.016293	0.770000	System constraint
6/19/2019 12:39	0:01	KS	0.018287	1.106000	System constraint
6/19/2019 12:39	0:01	SMRR	0.016293	1.251000	System constraint
6/19/2019 12:40	0:01	KS	0.018287	1.113000	System constraint
6/19/2019 12:40	0:01	SMRR	0.015939	1.746000	System constraint
6/19/2019 12:40	0:01	KS	0.018287	1.993000	System constraint
6/19/2019 12:40	0:01	SMRR	0.016293	2.146000	System constraint
6/19/2019 12:41	0:01	SMRR	0.016293	1.829000	System constraint
6/19/2019 12:41	0:01	KS	0.018287	1.714000	System constraint
6/19/2019 12:42	0:01	SMRR	0.015939	1.316000	System constraint
6/19/2019 12:42	0:02	KS	0.036573	1.113000	System constraint
6/19/2019 12:43	0:01	SMRR	0.016293	1.097000	System constraint
6/19/2019 12:43	0:01	SMRR	0.016293	0.788000	System constraint
6/19/2019 12:44	0:01	KS	0.018567	0.915000	System constraint



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6/19/2019 12:44	0:01	SMRR	0.016436	0.764000	System constraint
6/19/2019 12:45	0:01	KS	0.019327	0.771000	System constraint
6/19/2019 12:45	0:01	SMRR	0.016716	0.968000	System constraint
6/19/2019 12:46	0:01	KS	0.019327	0.943000	System constraint
6/19/2019 12:46	0:01	SMRR	0.016716	1.163000	System constraint
6/19/2019 12:46	0:01	KS	0.019327	0.831000	System constraint
6/19/2019 12:47	0:01	SMRR	0.016352	1.247000	System constraint
6/19/2019 12:47	0:01	SMRR	0.016716	1.053000	System constraint
6/19/2019 12:47	0:01	KS	0.019327	1.040000	System constraint
6/19/2019 12:48	0:01	SMRR	0.017079	1.112000	System constraint
6/19/2019 12:48	0:01	KS	0.019327	1.048000	System constraint
6/19/2019 12:49	0:01	SMRR	0.016352	1.224000	System constraint
6/19/2019 12:49	0:01	KS	0.019327	1.124000	System constraint
6/19/2019 12:50	0:01	SMRR	0.016716	1.384000	System constraint
6/19/2019 12:50	0:01	KS	0.019327	1.396000	System constraint
6/19/2019 12:50	0:01	SMRR	0.016716	1.555000	System constraint
6/19/2019 12:51	0:01	KS	0.019327	2.037000	System constraint
6/19/2019 12:51	0:01	SMRR	0.016352	1.962000	System constraint
6/19/2019 12:52	0:01	KS	0.019327	2.067000	System constraint
6/19/2019 12:52	0:01	SMRR	0.016716	2.185000	System constraint
6/19/2019 12:53	0:01	KS	0.019327	2.298000	System constraint
6/19/2019 12:53	0:01	SMRR	0.016352	2.416000	System constraint
6/19/2019 12:53	0:01	SMRR	0.016716	2.341000	System constraint
6/19/2019 12:53	0:02	KS	0.038653	2.280000	System constraint
6/19/2019 12:54	0:01	SMRR	0.016716	2.124000	System constraint
6/19/2019 12:55	0:01	SMRR	0.016352	1.990000	System constraint
6/19/2019 12:55	0:01	KS	0.019327	1.868000	System constraint
6/19/2019 12:56	0:01	SMRR	0.017442	1.815000	System constraint
6/19/2019 12:56	0:01	KS	0.019327	1.687000	System constraint
6/19/2019 12:56	0:01	SMRR	0.016716	1.529000	System constraint
6/19/2019 12:57	0:01	KS	0.018955	1.554000	System constraint
6/19/2019 12:57	0:01	SMRR	0.016716	1.581000	System constraint
6/19/2019 12:58	0:01	KS	0.019327	1.409000	System constraint
6/19/2019 12:58	0:01	SMRR	0.016716	1.370000	System constraint
6/19/2019 12:59	0:01	KS	0.019327	1.052000	System constraint
6/19/2019 12:59	0:02	SMRR	0.045684	0.982000	System constraint
6/19/2019 12:59	0:01	KS	0.032393	0.774000	System constraint
6/19/2019 13:00	0:01	SMRR	0.028967	0.918000	System constraint
6/19/2019 13:00	0:01	KS	0.033193	0.803000	System constraint
6/19/2019 13:01	0:01	SMRR	0.028967	1.352000	System constraint
6/19/2019 13:01	0:01	KS	0.033193	1.276000	System constraint
6/19/2019 13:02	0:01	SMRR	0.028351	1.210000	System constraint
6/19/2019 13:02	0:01	KS	0.033193	1.215000	System constraint
6/19/2019 13:03	0:01	SMRR	0.028351	1.735000	System constraint
6/19/2019 13:03	0:01	KS	0.033193	1.788000	System constraint
6/19/2019 13:03	0:01	SMRR	0.028351	1.820000	System constraint
6/19/2019 13:04	0:01	KS	0.033193	1.464000	System constraint
6/19/2019 13:04	0:01	SMRR	0.028351	1.235000	System constraint
6/19/2019 13:05	0:01	KS	0.033193	1.179000	System constraint
6/19/2019 13:05	0:01	SMRR	0.028967	1.156000	System constraint
6/19/2019 13:06	0:01	KS	0.033193	0.895000	System constraint
6/19/2019 13:06	0:01	SMRR	0.028967	0.685000	System constraint
6/19/2019 13:06	0:04	KS	0.165328	0.388000	System constraint
6/19/2019 13:06	0:02	SMRR	0.085668	0.156000	System constraint
6/19/2019 13:07	0:04	5A	Data is not available	Data is not available	System constraint
6/19/2019 13:07	0:04	BS250	Data is not available	Data is not available	System constraint
6/19/2019 13:07	0:04	ESA	Data is not available	Data is not available	System constraint
6/19/2019 13:07	0:04	ESB	Data is not available	Data is not available	System constraint
6/19/2019 13:08	0:03	KWP11	0.039480956	17.4921608	System constraint
6/19/2019 13:09	0:01	SMRR	0.027734	-0.001000	System constraint
6/19/2019 13:10	0:01	SMRR	0.027734	0.006000	System constraint
6/19/2019 13:10	0:01	SMRR	0.028967	0.038000	System constraint
6/19/2019 13:11	0:01	KS	0.033193	-0.002000	System constraint
6/19/2019 13:11	0:01	SMRR	0.028351	0.124000	System constraint
6/19/2019 13:12	0:01	KS	0.033193	-0.003000	System constraint
6/19/2019 13:12	0:01	SMRR	0.027734	0.147000	System constraint
6/19/2019 13:12	0:01	KS	0.033193	-0.003000	System constraint
6/19/2019 13:13	0:01	SMRR	0.028351	0.158000	System constraint
6/19/2019 13:13	0:01	KS	0.033193	0.172000	System constraint
6/19/2019 13:13	0:01	SMRR	0.028351	0.419000	System constraint
6/19/2019 13:14	0:01	SMRR	0.024157	0.227000	System constraint
6/19/2019 13:14	0:01	KS	0.027753	0.347000	System constraint
6/19/2019 13:15	0:01	5A	Data is not available	Data is not available	System constraint



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Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
6/19/2019 13:15	0:01	ESA	Data is not available	Data is not available	System constraint
6/19/2019 13:15	0:01	ESB	Data is not available	Data is not available	System constraint
6/19/2019 13:15	0:01	SMRR	0.020823	0.075000	System constraint
6/19/2019 13:15	0:01	KS	0.024353	0.020000	System constraint
6/19/2019 13:16	0:01	SMRR	0.021275	0.203000	System constraint
6/19/2019 13:16	0:01	KS	0.024353	0.278000	System constraint
6/19/2019 13:16	0:01	SMRR	0.021275	0.153000	System constraint
6/19/2019 13:17	0:01	KS	0.024353	0.055000	System constraint
6/19/2019 13:17	0:01	SMRR	0.020823	0.106000	System constraint
6/19/2019 13:18	0:01	KS	0.024353	0.369000	System constraint
6/19/2019 13:18	0:01	SMRR	0.020823	0.396000	System constraint
6/19/2019 13:19	0:01	KS	0.024353	0.386000	System constraint
6/19/2019 13:19	0:01	SMRR	0.021275	0.484000	System constraint
6/19/2019 13:19	0:01	KS	0.024353	0.607000	System constraint
6/19/2019 13:20	0:01	SMRR	0.020823	0.789000	System constraint
6/19/2019 13:20	0:01	KS	0.024353	1.020000	System constraint
6/19/2019 13:20	0:01	SMRR	0.021275	1.063000	System constraint
6/19/2019 13:21	0:02	SMRR	0.041645	0.872000	System constraint
6/19/2019 13:21	0:01	KS	0.024353	1.037000	System constraint
6/19/2019 13:22	0:01	KS	0.024353	1.287000	System constraint
6/19/2019 13:23	0:01	SMRR	0.020823	1.159000	System constraint
6/19/2019 13:23	0:01	KS	0.024353	1.505000	System constraint
6/19/2019 13:23	0:01	SMRR	0.020823	1.435000	System constraint
6/19/2019 13:24	0:01	KS	0.024353	1.453000	System constraint
6/19/2019 13:24	0:01	SMRR	0.020823	1.701000	System constraint
6/19/2019 13:25	0:01	KS	0.024353	1.636000	System constraint
6/19/2019 13:25	0:01	SMRR	0.021275	1.795000	System constraint
6/19/2019 13:25	0:01	KS	0.024353	1.314000	System constraint
6/19/2019 13:26	0:01	SMRR	0.020370	2.193000	System constraint
6/19/2019 13:26	0:01	KS	0.024353	2.199000	System constraint
6/19/2019 13:26	0:01	SMRR	0.020823	2.279000	System constraint
6/19/2019 13:27	0:01	KS	0.024353	2.492000	System constraint
6/19/2019 13:27	0:01	SMRR	0.021275	2.576000	System constraint
6/19/2019 13:28	0:01	SMRR	0.020823	2.500000	System constraint
6/19/2019 13:28	0:01	KS	0.024353	2.705000	System constraint
6/19/2019 13:29	0:01	SMRR	0.020307	2.284000	System constraint
6/19/2019 13:29	0:01	KS	0.019962	2.219000	System constraint
6/19/2019 13:30	0:01	SMRR	0.008404	1.818000	System constraint
6/19/2019 13:30	0:01	KS	0.010082	1.962000	System constraint
6/19/2019 13:30	0:01	SMRR	0.008586	2.052000	System constraint
6/19/2019 13:31	0:01	KS	0.010082	2.348000	System constraint
6/19/2019 13:31	0:01	SMRR	0.008404	2.052000	System constraint
6/19/2019 13:32	0:01	KS	0.010082	1.752000	System constraint
6/19/2019 13:32	0:01	SMRR	0.008586	1.495000	System constraint
6/19/2019 13:32	0:01	KS	0.010082	1.150000	System constraint
6/19/2019 13:33	0:01	SMRR	0.008586	1.065000	System constraint
6/19/2019 13:33	0:01	KS	0.010082	1.093000	System constraint
6/19/2019 13:33	0:01	SMRR	0.008404	0.967000	System constraint
6/19/2019 13:34	0:01	KS	0.010082	1.725000	System constraint
6/19/2019 13:34	0:01	SMRR	0.008221	1.529000	System constraint
6/19/2019 13:35	0:01	SMRR	0.008586	1.971000	System constraint
6/19/2019 13:35	0:01	KS	0.009694	2.184000	System constraint
6/19/2019 13:36	0:01	SMRR	0.008404	2.179000	System constraint
6/19/2019 13:36	0:01	KS	0.010082	2.125000	System constraint
6/19/2019 13:36	0:01	SMRR	0.008586	1.935000	System constraint
6/19/2019 13:37	0:01	KS	0.010082	1.315000	System constraint
6/19/2019 13:38	0:01	KS	0.010082	0.843000	System constraint
6/19/2019 13:38	0:01	SMRR	0.008404	2.578000	System constraint
6/19/2019 13:38	0:01	KS	0.010082	2.834000	System constraint
6/19/2019 13:39	0:01	SMRR	0.008586	2.658000	System constraint
6/19/2019 13:39	0:01	KS	0.010082	2.644000	System constraint
6/19/2019 13:40	0:01	SMRR	0.008586	2.340000	System constraint
6/19/2019 13:40	0:01	KS	0.010082	2.060000	System constraint
6/19/2019 13:40	0:01	SMRR	0.008404	1.871000	System constraint
6/19/2019 13:41	0:01	SMRR	0.008586	2.125000	System constraint
6/19/2019 13:50	0:01	KS	0.006096	1.889000	System constraint
6/19/2019 13:50	0:01	SMRR	0.003144	2.787000	System constraint
6/19/2019 13:51	0:01	KS	0.006096	2.770000	System constraint
6/19/2019 13:54	0:01	SMRR	0.003212	2.764000	System constraint
6/19/2019 13:54	0:01	KS	0.006096	2.590000	System constraint
6/19/2019 13:54	0:01	SMRR	0.003144	2.598000	System constraint
6/19/2019 13:55	0:01	KS	0.005978	2.498000	System constraint
6/19/2019 13:55	0:01	SMRR	0.003212	2.298000	System constraint





Maui Curtailment Report

June 2019

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
6/19/2019 13:56	0:01	KS	0.006096	1.951000	System constraint
6/19/2019 13:56	0:01	SMRR	0.003212	1.856000	System constraint
6/19/2019 13:57	0:01	KS	0.005978	1.746000	System constraint
6/19/2019 13:57	0:01	SMRR	0.003144	1.752000	System constraint
6/19/2019 13:57	0:01	KS	0.006213	1.845000	System constraint
6/19/2019 13:57	0:01	SMRR	0.003144	1.817000	System constraint
6/19/2019 13:58	0:01	SMRR	0.003144	1.644000	System constraint
6/19/2019 13:58	0:01	KS	0.005978	1.740000	System constraint
6/19/2019 13:59	0:01	SMRR	0.006084	1.510000	System constraint
6/19/2019 13:59	0:01	KS	0.012389	1.173000	System constraint
6/19/2019 14:00	0:01	SMRR	0.012268	0.975000	System constraint
6/19/2019 14:00	0:01	KS	0.016322	0.651000	System constraint
6/19/2019 14:01	0:01	SMRR	0.012268	0.748000	System constraint
6/19/2019 14:01	0:01	KS	0.016322	0.867000	System constraint
6/19/2019 14:01	0:01	SMRR	0.012007	1.062000	System constraint
6/19/2019 14:02	0:01	KS	0.016322	1.287000	System constraint
6/19/2019 14:02	0:01	SMRR	0.012268	1.416000	System constraint
6/19/2019 14:03	0:01	KS	0.016322	1.576000	System constraint
6/19/2019 14:03	0:01	SMRR	0.011746	1.418000	System constraint
6/19/2019 14:04	0:01	KS	0.016322	1.076000	System constraint
6/19/2019 14:04	0:01	SMRR	0.011746	1.274000	System constraint
6/19/2019 14:04	0:01	SMRR	0.012268	0.733000	System constraint
6/19/2019 14:04	0:01	KS	0.016322	0.734000	System constraint
6/19/2019 14:05	0:01	SMRR	0.012268	1.066000	System constraint
6/19/2019 14:05	0:01	KS	0.016322	1.270000	System constraint
6/19/2019 14:06	0:01	SMRR	0.012007	1.511000	System constraint
6/19/2019 14:06	0:01	KS	0.016322	1.805000	System constraint
6/19/2019 14:07	0:01	SMRR	0.012268	1.889000	System constraint
6/19/2019 14:07	0:01	KS	0.016322	1.705000	System constraint
6/19/2019 14:09	0:01	SMRR	0.012268	2.658000	System constraint
6/19/2019 14:10	0:01	KS	0.016008	2.431000	System constraint
6/19/2019 14:10	0:01	SMRR	0.012268	2.497000	System constraint
6/19/2019 14:10	0:01	KS	0.016322	2.041000	System constraint
6/19/2019 14:11	0:01	SMRR	0.012007	2.018000	System constraint
6/19/2019 14:11	0:01	KS	0.016322	2.027000	System constraint
6/19/2019 14:11	0:01	SMRR	0.012268	1.743000	System constraint
6/19/2019 14:12	0:01	SMRR	0.012007	1.969000	System constraint
6/19/2019 14:12	0:01	KS	0.016322	1.963000	System constraint
6/19/2019 14:13	0:01	KS	0.016322	2.507000	System constraint
6/19/2019 14:14	0:01	SMRR	0.012268	2.665000	System constraint
6/19/2019 14:14	0:01	KS	0.012089	2.893000	System constraint
6/19/2019 14:15	0:01	SMRR	-0.000210	2.667000	System constraint
6/19/2019 14:16	0:01	KS	0.001647	2.461000	System constraint
6/19/2019 14:16	0:01	SMRR	-0.000205	2.145000	System constraint
6/19/2019 14:16	0:01	KS	0.001647	1.989000	System constraint
6/19/2019 14:17	0:01	SMRR	-0.000210	2.019000	System constraint
6/20/2019 4:30	0:01	KWP	0.000951672	17.46421814	System constraint
6/21/2019 9:16	0:01	KWP	0.001197546	0.071852781	System constraint
6/21/2019 9:33	0:01	KWP	0.000482345	0.028940704	System constraint
6/24/2019 15:24	0:01	KWP	0.001463668	0.087820068	System constraint
6/26/2019 3:45	0:01	AWE	0.005	0.299999982	System constraint
6/26/2019 3:45	0:01	KWP	0.005	0.299999982	System constraint
6/26/2019 8:58	0:01	KWP	6.65304E-05	0.003991821	System constraint
6/27/2019 7:14	0:01	5A	Data is not available	Data is not available	System constraint
6/27/2019 7:14	0:01	BS250	Data is not available	Data is not available	System constraint
6/27/2019 7:14	0:01	ESA	Data is not available	Data is not available	System constraint
6/27/2019 7:14	0:01	ESB	Data is not available	Data is not available	System constraint
6/27/2019 7:14	0:01	SMRR	0.000461	0.435000	System constraint
6/27/2019 7:14	0:01	KS	0.001593	0.002000	System constraint
6/27/2019 7:15	0:01	AWE	0.011405691	21	System constraint
6/27/2019 7:15	0:01	KWP	0.011405691	21	System constraint
6/27/2019 12:19	0:01	SMRR	0.003601	2.739000	System constraint
6/27/2019 12:19	0:01	KS	0.005980	2.884000	System constraint
6/27/2019 12:21	0:01	KS	0.005980	1.920000	System constraint
6/27/2019 12:22	0:01	SMRR	0.003523	2.733000	System constraint
6/27/2019 12:22	0:01	KS	0.005980	1.847000	System constraint
6/27/2019 12:23	0:01	SMRR	0.003601	2.739000	System constraint
6/27/2019 12:23	0:01	SMRR	0.003523	2.734000	System constraint
6/27/2019 12:24	0:01	KS	0.005980	2.178000	System constraint
6/27/2019 12:24	0:01	SMRR	0.003601	2.728000	System constraint
6/27/2019 12:25	0:01	KS	0.005750	1.805000	System constraint
6/27/2019 12:25	0:01	SMRR	0.003601	1.864000	System constraint
6/27/2019 12:26	0:01	SMRR	0.003523	1.841000	System constraint



**Maui Curtailment Report**

June 2019

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWh	Peak MW Curtailed	Reasons for Curtailment
6/27/2019 12:26	0:01	KS	0.005980	1.924000	System constraint
6/27/2019 12:26	0:01	SMRR	0.003523	1.935000	System constraint
6/27/2019 12:27	0:01	KS	0.005750	2.011000	System constraint
6/27/2019 12:27	0:01	SMRR	0.003601	2.212000	System constraint
6/27/2019 12:27	0:01	KS	0.005980	2.257000	System constraint
6/27/2019 12:28	0:01	SMRR	0.003601	2.139000	System constraint
6/27/2019 12:28	0:01	KS	0.005980	2.151000	System constraint
6/27/2019 12:29	0:01	SMRR	0.003523	2.041000	System constraint
6/27/2019 12:29	0:01	KS	0.009080	2.069000	System constraint
6/27/2019 12:29	0:01	SMRR	0.004596	1.789000	System constraint
6/27/2019 12:30	0:01	KS	0.009706	1.837000	System constraint
6/27/2019 12:30	0:01	SMRR	0.004975	1.717000	System constraint
6/27/2019 12:31	0:01	KS	0.009706	1.622000	System constraint
6/27/2019 12:31	0:01	SMRR	0.004867	1.601000	System constraint
6/27/2019 12:32	0:01	SMRR	0.004975	1.744000	System constraint
6/27/2019 12:32	0:01	KS	0.009706	1.783000	System constraint
6/27/2019 12:32	0:01	SMRR	0.005083	1.602000	System constraint
6/27/2019 12:33	0:01	KS	0.009706	1.587000	System constraint
6/27/2019 12:33	0:01	SMRR	0.004975	1.915000	System constraint
6/27/2019 12:33	0:01	KS	0.009706	2.110000	System constraint
6/27/2019 12:34	0:02	SMRR	0.010058	2.254000	System constraint
6/27/2019 12:34	0:01	KS	0.009706	2.237000	System constraint
6/27/2019 12:35	0:01	KS	0.009706	1.910000	System constraint
6/27/2019 12:41	0:01	KS	0.009520	2.846000	System constraint
6/29/2019 6:51	0:01	KWPPII	0.00192938	0.115762815	System constraint
6/29/2019 9:11	0:01	KS	0.000283	1.914000	System constraint
6/29/2019 9:11	0:01	SMRR	-0.000322	1.821000	System constraint
6/29/2019 9:11	0:01	KS	0.000283	1.978000	System constraint
<b>Total Estimated Curtailed MWh</b>			<b>366.521</b>		

**Notes:**

- Curtailment for Kaheawa Wind Power ("KWP"), Makila Hydroelectric ("MH"), AAAAA Rent-A-Space Maui LTD ("5A"), Bioreal Solar, LLC ("BS"), Auwahi Wind Energy ("AWE"), Kaheawa Wind Power II ("KWPPII") Bioreal Solar 250, LLC ("BS250"), Extra Spaces A ("ESA"), Extra Spaces B ("ESB"), South Maui Renewable Resources ("SMRR"), and Ku'ia Solar ("KS") may now be controlled by Maui Electric's Automatic Generation Control System ("AGC") or a Maui Electric operator-entered curtailment limit. The AGC curtailment control automatically calculates the amount of Maximum Allowable Variable Generation ("MAVG") that Maui Electric can accept into the Maui system, based on the system current available variable generation ("CAVG"), regulating reserve down requirement ("RRDR"), and available regulating reserve down ("ARRD"). Thus, the AGC MAVG - calculated is equal to CAVG less (RRDR less ARRD). Additionally, the AGC curtailment control allows the Maui Electric operator to enter an AGC MAVG value. The AGC curtailment control will employ the lesser of the AGC MAVG - calculated and AGC MAVG - entered values in the control logic.
- Curtailment signals sent to 5A, BS, BS250, ESA, ESB, SMRR, or KS during nighttime hours only are not recorded as curtailment events because no energy generation is possible during that time.
- The curtailment reasons have been modified to oversupply, system constraints, and facility requested, to provide continuity with HPUC Docket No. 2013-0141 Decoupling for HECO companies metrics.
- The data to calculate the Estimated Curtailed MWh and Peak MW Curtailed is not provided by 5A, BS, BS 250, ESA, ESB, and MH
- The MH facility was offline for the entire month of June. No curtailment events recorded.
- The Estimated Curtailed MWh and Peak MW Curtailed are calculated with information provided by AWE, KWP, KWPPII, KS and SMRR. Maui Electric does not make any representation as to its accuracy.



Lanai Curtailment Report

Start Date and Time	Duration	IPP Curtailed	Estimated MWh Curtailed	Peak MW Curtailed	Reasons for Curtailment
6/3/2019 7:34	0:53	LSR	Data is not available	Data is not available	Oversupply
6/3/2019 8:28	0:21	LSR	Data is not available	Data is not available	Oversupply
6/3/2019 8:50	0:02	LSR	Data is not available	Data is not available	Oversupply
6/3/2019 8:55	0:03	LSR	Data is not available	Data is not available	Oversupply
6/3/2019 9:54	0:02	LSR	Data is not available	Data is not available	Oversupply
6/3/2019 9:57	0:07	LSR	Data is not available	Data is not available	Oversupply
6/3/2019 10:05	0:30	LSR	Data is not available	Data is not available	Oversupply
6/3/2019 11:10	0:49	LSR	Data is not available	Data is not available	Oversupply
6/3/2019 12:00	0:32	LSR	Data is not available	Data is not available	Oversupply
6/3/2019 12:33	0:45	LSR	Data is not available	Data is not available	Oversupply
6/4/2019 8:36	0:04	LSR	Data is not available	Data is not available	Oversupply
6/4/2019 9:12	0:13	LSR	Data is not available	Data is not available	Oversupply
6/4/2019 9:26	3:39	LSR	Data is not available	Data is not available	Oversupply
6/4/2019 13:45	1:11	LSR	Data is not available	Data is not available	Oversupply
6/4/2019 15:11	0:02	LSR	Data is not available	Data is not available	Oversupply
6/4/2019 16:16	0:02	LSR	Data is not available	Data is not available	Oversupply
6/5/2019 8:02	0:01	LSR	Data is not available	Data is not available	Oversupply
6/5/2019 8:04	0:01	LSR	Data is not available	Data is not available	Oversupply
6/5/2019 8:15	0:02	LSR	Data is not available	Data is not available	Oversupply
6/5/2019 8:40	0:13	LSR	Data is not available	Data is not available	Oversupply
6/5/2019 8:54	0:01	LSR	Data is not available	Data is not available	Oversupply
6/5/2019 8:58	0:16	LSR	Data is not available	Data is not available	Oversupply
6/5/2019 9:33	3:52	LSR	Data is not available	Data is not available	Oversupply
6/5/2019 14:11	0:13	LSR	Data is not available	Data is not available	Oversupply
6/5/2019 14:25	0:21	LSR	Data is not available	Data is not available	Oversupply
6/6/2019 9:29	0:13	LSR	Data is not available	Data is not available	Oversupply
6/6/2019 9:45	6:36	LSR	Data is not available	Data is not available	Oversupply
6/7/2019 6:56	0:02	LSR	Data is not available	Data is not available	Oversupply
6/7/2019 8:32	0:45	LSR	Data is not available	Data is not available	Oversupply
6/7/2019 9:20	1:00	LSR	Data is not available	Data is not available	Oversupply
6/7/2019 10:33	0:09	LSR	Data is not available	Data is not available	Oversupply
6/7/2019 10:43	0:06	LSR	Data is not available	Data is not available	Oversupply
6/7/2019 10:50	0:12	LSR	Data is not available	Data is not available	Oversupply
6/7/2019 11:04	0:04	LSR	Data is not available	Data is not available	Oversupply
6/7/2019 11:12	0:02	LSR	Data is not available	Data is not available	Oversupply
6/7/2019 11:18	0:09	LSR	Data is not available	Data is not available	Oversupply
6/7/2019 11:31	0:02	LSR	Data is not available	Data is not available	Oversupply
6/7/2019 11:49	0:10	LSR	Data is not available	Data is not available	Oversupply
6/7/2019 12:00	0:03	LSR	Data is not available	Data is not available	Oversupply
6/7/2019 12:06	0:01	LSR	Data is not available	Data is not available	Oversupply
6/7/2019 12:12	0:01	LSR	Data is not available	Data is not available	Oversupply
6/7/2019 12:15	0:02	LSR	Data is not available	Data is not available	Oversupply
6/7/2019 12:23	0:03	LSR	Data is not available	Data is not available	Oversupply
6/7/2019 12:27	0:01	LSR	Data is not available	Data is not available	Oversupply
6/7/2019 12:29	0:02	LSR	Data is not available	Data is not available	Oversupply
6/7/2019 12:35	0:08	LSR	Data is not available	Data is not available	Oversupply
6/7/2019 12:44	0:03	LSR	Data is not available	Data is not available	Oversupply
6/7/2019 12:48	0:06	LSR	Data is not available	Data is not available	Oversupply
6/7/2019 13:00	0:01	LSR	Data is not available	Data is not available	Oversupply
6/7/2019 13:02	0:09	LSR	Data is not available	Data is not available	Oversupply
6/7/2019 13:43	0:01	LSR	Data is not available	Data is not available	Oversupply
6/7/2019 13:51	0:05	LSR	Data is not available	Data is not available	Oversupply
6/7/2019 13:59	0:01	LSR	Data is not available	Data is not available	Oversupply
6/7/2019 14:17	0:03	LSR	Data is not available	Data is not available	Oversupply
6/7/2019 14:21	0:07	LSR	Data is not available	Data is not available	Oversupply
6/7/2019 14:33	0:10	LSR	Data is not available	Data is not available	Oversupply
6/7/2019 14:56	0:07	LSR	Data is not available	Data is not available	Oversupply
6/7/2019 15:11	0:04	LSR	Data is not available	Data is not available	Oversupply
6/7/2019 15:19	0:04	LSR	Data is not available	Data is not available	Oversupply
6/7/2019 15:34	2:14	LSR	Data is not available	Data is not available	Oversupply
6/8/2019 7:22	0:03	LSR	Data is not available	Data is not available	Oversupply
6/8/2019 7:26	0:08	LSR	Data is not available	Data is not available	Oversupply
6/8/2019 7:51	0:02	LSR	Data is not available	Data is not available	Oversupply
6/8/2019 7:59	0:03	LSR	Data is not available	Data is not available	Oversupply
6/8/2019 8:14	0:25	LSR	Data is not available	Data is not available	Oversupply
6/8/2019 9:20	2:07	LSR	Data is not available	Data is not available	Oversupply
6/8/2019 11:37	2:06	LSR	Data is not available	Data is not available	Oversupply
6/8/2019 14:22	0:23	LSR	Data is not available	Data is not available	Oversupply
6/8/2019 14:55	0:14	LSR	Data is not available	Data is not available	Oversupply
6/8/2019 15:14	0:06	LSR	Data is not available	Data is not available	Oversupply
6/8/2019 15:22	0:23	LSR	Data is not available	Data is not available	Oversupply
6/8/2019 15:52	0:03	LSR	Data is not available	Data is not available	Oversupply
6/8/2019 15:58	0:02	LSR	Data is not available	Data is not available	Oversupply
6/8/2019 17:37	0:13	LSR	Data is not available	Data is not available	Oversupply
6/9/2019 8:45	2:35	LSR	Data is not available	Data is not available	Oversupply
6/9/2019 11:21	1:56	LSR	Data is not available	Data is not available	Oversupply
6/9/2019 17:44	0:09	LSR	Data is not available	Data is not available	Oversupply
6/10/2019 7:35	0:16	LSR	Data is not available	Data is not available	Oversupply
6/10/2019 7:52	0:03	LSR	Data is not available	Data is not available	Oversupply



Lanai Curtailment Report

Start Date and Time	Duration	IPP Curtailed	Estimated MWh Curtailed	Peak MW Curtailed	Reasons for Curtailment
6/10/2019 8:03	0:10	LSR	Data is not available	Data is not available	Oversupply
6/10/2019 8:16	0:01	LSR	Data is not available	Data is not available	Oversupply
6/10/2019 8:18	0:05	LSR	Data is not available	Data is not available	Oversupply
6/10/2019 8:28	0:01	LSR	Data is not available	Data is not available	Oversupply
6/10/2019 8:40	0:03	LSR	Data is not available	Data is not available	Oversupply
6/10/2019 8:53	0:12	LSR	Data is not available	Data is not available	Oversupply
6/10/2019 9:15	0:05	LSR	Data is not available	Data is not available	Oversupply
6/10/2019 9:21	1:24	LSR	Data is not available	Data is not available	Oversupply
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6/11/2019 7:56	0:03	LSR	Data is not available	Data is not available	Oversupply
6/11/2019 8:08	0:03	LSR	Data is not available	Data is not available	Oversupply
6/11/2019 8:22	0:04	LSR	Data is not available	Data is not available	Oversupply
6/11/2019 8:27	0:20	LSR	Data is not available	Data is not available	Oversupply
6/11/2019 8:48	0:10	LSR	Data is not available	Data is not available	Oversupply
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6/11/2019 14:23	0:25	LSR	Data is not available	Data is not available	Oversupply
6/11/2019 14:57	0:01	LSR	Data is not available	Data is not available	Oversupply
6/11/2019 15:00	0:05	LSR	Data is not available	Data is not available	Oversupply
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6/12/2019 13:19	0:03	LSR	Data is not available	Data is not available	Oversupply
6/12/2019 13:26	0:04	LSR	Data is not available	Data is not available	Oversupply
6/12/2019 15:12	0:02	LSR	Data is not available	Data is not available	Oversupply
6/12/2019 15:25	0:07	LSR	Data is not available	Data is not available	Oversupply
6/12/2019 17:54	0:41	LSR	Data is not available	Data is not available	Oversupply
6/13/2019 6:42	0:30	LSR	Data is not available	Data is not available	Oversupply
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6/13/2019 11:03	0:11	LSR	Data is not available	Data is not available	Oversupply
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6/14/2019 9:32	0:02	LSR	Data is not available	Data is not available	Oversupply
6/14/2019 9:40	0:02	LSR	Data is not available	Data is not available	Oversupply
6/14/2019 9:54	0:03	LSR	Data is not available	Data is not available	Oversupply
6/14/2019 9:58	0:04	LSR	Data is not available	Data is not available	Oversupply
6/14/2019 10:03	0:08	LSR	Data is not available	Data is not available	Oversupply
6/14/2019 10:17	0:04	LSR	Data is not available	Data is not available	Oversupply
6/14/2019 10:22	0:01	LSR	Data is not available	Data is not available	Oversupply
6/14/2019 16:02	0:01	LSR	Data is not available	Data is not available	Oversupply
6/14/2019 16:15	0:01	LSR	Data is not available	Data is not available	Oversupply
6/14/2019 16:19	0:04	LSR	Data is not available	Data is not available	Oversupply
6/14/2019 16:32	0:04	LSR	Data is not available	Data is not available	Oversupply
6/14/2019 16:39	0:11	LSR	Data is not available	Data is not available	Oversupply
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6/15/2019 8:01	2:34	LSR	Data is not available	Data is not available	Oversupply
6/15/2019 12:45	0:01	LSR	Data is not available	Data is not available	Oversupply
6/16/2019 6:58	0:41	LSR	Data is not available	Data is not available	Oversupply
6/16/2019 7:57	0:14	LSR	Data is not available	Data is not available	Oversupply
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6/16/2019 18:11	0:25	LSR	Data is not available	Data is not available	Oversupply
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6/17/2019 6:51	2:35	LSR	Data is not available	Data is not available	Oversupply
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6/17/2019 10:17	0:17	LSR	Data is not available	Data is not available	Oversupply
6/17/2019 15:20	1:08	LSR	Data is not available	Data is not available	Oversupply
6/17/2019 17:46	0:01	LSR	Data is not available	Data is not available	Oversupply
6/18/2019 7:03	0:41	LSR	Data is not available	Data is not available	Oversupply
6/18/2019 7:45	0:17	LSR	Data is not available	Data is not available	Oversupply
6/18/2019 8:06	0:34	LSR	Data is not available	Data is not available	Oversupply
6/18/2019 8:41	0:10	LSR	Data is not available	Data is not available	Oversupply
6/18/2019 8:52	0:10	LSR	Data is not available	Data is not available	Oversupply
6/18/2019 9:49	0:20	LSR	Data is not available	Data is not available	Oversupply
6/19/2019 6:28	0:05	LSR	Data is not available	Data is not available	Oversupply
6/19/2019 6:35	0:06	LSR	Data is not available	Data is not available	Oversupply
6/19/2019 6:43	0:33	LSR	Data is not available	Data is not available	Oversupply
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6/19/2019 9:55	0:09	LSR	Data is not available	Data is not available	Oversupply
6/19/2019 10:30	0:03	LSR	Data is not available	Data is not available	Oversupply



Lanai Curtailment Report

Start Date and Time	Duration	IPP Curtailed	Estimated MWh Curtailed	Peak MW Curtailed	Reasons for Curtailment
6/19/2019 10:39	0:11	LSR	Data is not available	Data is not available	Oversupply
6/19/2019 10:59	0:51	LSR	Data is not available	Data is not available	Oversupply
6/19/2019 15:10	0:02	LSR	Data is not available	Data is not available	Oversupply
6/19/2019 15:46	0:01	LSR	Data is not available	Data is not available	Oversupply
6/19/2019 15:56	0:03	LSR	Data is not available	Data is not available	Oversupply
6/19/2019 16:13	0:03	LSR	Data is not available	Data is not available	Oversupply
6/19/2019 16:20	0:01	LSR	Data is not available	Data is not available	Oversupply
6/20/2019 6:20	0:06	LSR	Data is not available	Data is not available	Oversupply
6/20/2019 6:27	0:05	LSR	Data is not available	Data is not available	Oversupply
6/20/2019 6:35	0:22	LSR	Data is not available	Data is not available	Oversupply
6/20/2019 6:58	0:32	LSR	Data is not available	Data is not available	Oversupply
6/20/2019 8:19	0:14	LSR	Data is not available	Data is not available	Oversupply
6/20/2019 8:34	0:05	LSR	Data is not available	Data is not available	Oversupply
6/20/2019 8:45	0:01	LSR	Data is not available	Data is not available	Oversupply
6/20/2019 8:49	0:04	LSR	Data is not available	Data is not available	Oversupply
6/20/2019 8:55	1:32	LSR	Data is not available	Data is not available	Oversupply
6/20/2019 10:28	0:01	LSR	Data is not available	Data is not available	Oversupply
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6/20/2019 10:32	0:01	LSR	Data is not available	Data is not available	Oversupply
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6/23/2019 7:25	0:07	LSR	Data is not available	Data is not available	Oversupply
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6/23/2019 7:40	0:03	LSR	Data is not available	Data is not available	Oversupply
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6/24/2019 10:35	0:01	LSR	Data is not available	Data is not available	Oversupply
6/24/2019 10:38	0:01	LSR	Data is not available	Data is not available	Oversupply
6/24/2019 10:42	0:01	LSR	Data is not available	Data is not available	Oversupply
6/24/2019 10:50	0:02	LSR	Data is not available	Data is not available	Oversupply
6/24/2019 11:05	0:10	LSR	Data is not available	Data is not available	Oversupply
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6/26/2019 12:12	0:01	LSR	Data is not available	Data is not available	Oversupply
6/26/2019 12:14	0:03	LSR	Data is not available	Data is not available	Oversupply
6/26/2019 12:25	0:02	LSR	Data is not available	Data is not available	Oversupply
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6/26/2019 12:31	0:05	LSR	Data is not available	Data is not available	Oversupply
6/26/2019 13:03	0:04	LSR	Data is not available	Data is not available	Oversupply
6/26/2019 13:08	0:07	LSR	Data is not available	Data is not available	Oversupply
6/26/2019 13:17	0:01	LSR	Data is not available	Data is not available	Oversupply
6/26/2019 13:22	0:03	LSR	Data is not available	Data is not available	Oversupply
6/26/2019 13:28	0:07	LSR	Data is not available	Data is not available	Oversupply
6/26/2019 13:37	0:12	LSR	Data is not available	Data is not available	Oversupply
6/26/2019 13:51	0:04	LSR	Data is not available	Data is not available	Oversupply
6/26/2019 15:46	0:05	LSR	Data is not available	Data is not available	Oversupply
6/26/2019 15:52	0:01	LSR	Data is not available	Data is not available	Oversupply
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6/26/2019 16:31	0:01	LSR	Data is not available	Data is not available	Oversupply
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6/27/2019 6:53	0:42	LSR	Data is not available	Data is not available	Oversupply
6/27/2019 7:38	0:40	LSR	Data is not available	Data is not available	Oversupply
6/27/2019 8:19	0:26	LSR	Data is not available	Data is not available	Oversupply
6/27/2019 8:46	0:04	LSR	Data is not available	Data is not available	Oversupply
6/27/2019 8:51	0:23	LSR	Data is not available	Data is not available	Oversupply
6/27/2019 9:15	0:08	LSR	Data is not available	Data is not available	Oversupply
6/27/2019 9:24	0:14	LSR	Data is not available	Data is not available	Oversupply
6/27/2019 9:39	1:43	LSR	Data is not available	Data is not available	Oversupply



Lanai Curtailment Report

Start Date and Time	Duration	IPP Curtailed	Estimated MWh Curtailed	Peak MW Curtailed	Reasons for Curtailment
6/27/2019 11:24	0:26	LSR	Data is not available	Data is not available	Oversupply
6/27/2019 12:14	0:01	LSR	Data is not available	Data is not available	Oversupply
6/27/2019 12:22	0:01	LSR	Data is not available	Data is not available	Oversupply
6/28/2019 6:34	0:03	LSR	Data is not available	Data is not available	Oversupply
6/28/2019 6:42	2:01	LSR	Data is not available	Data is not available	Oversupply
6/28/2019 8:44	0:01	LSR	Data is not available	Data is not available	Oversupply
6/28/2019 8:48	0:06	LSR	Data is not available	Data is not available	Oversupply
6/28/2019 9:12	0:03	LSR	Data is not available	Data is not available	Oversupply
6/28/2019 9:17	0:01	LSR	Data is not available	Data is not available	Oversupply
6/28/2019 9:19	0:10	LSR	Data is not available	Data is not available	Oversupply
6/28/2019 9:35	0:28	LSR	Data is not available	Data is not available	Oversupply
6/28/2019 10:04	0:06	LSR	Data is not available	Data is not available	Oversupply
6/28/2019 10:12	0:04	LSR	Data is not available	Data is not available	Oversupply
6/28/2019 10:21	0:03	LSR	Data is not available	Data is not available	Oversupply
6/28/2019 10:25	0:06	LSR	Data is not available	Data is not available	Oversupply
6/28/2019 10:32	0:02	LSR	Data is not available	Data is not available	Oversupply
6/28/2019 10:57	0:59	LSR	Data is not available	Data is not available	Oversupply
6/28/2019 12:10	0:29	LSR	Data is not available	Data is not available	Oversupply
6/28/2019 12:42	0:02	LSR	Data is not available	Data is not available	Oversupply
6/28/2019 12:54	0:06	LSR	Data is not available	Data is not available	Oversupply
6/28/2019 13:03	2:05	LSR	Data is not available	Data is not available	Oversupply
6/29/2019 8:36	0:04	LSR	Data is not available	Data is not available	Oversupply
6/29/2019 9:30	0:04	LSR	Data is not available	Data is not available	Oversupply
6/29/2019 9:40	0:01	LSR	Data is not available	Data is not available	Oversupply
6/29/2019 9:53	0:01	LSR	Data is not available	Data is not available	Oversupply
6/29/2019 9:58	0:01	LSR	Data is not available	Data is not available	Oversupply
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6/29/2019 10:19	0:03	LSR	Data is not available	Data is not available	Oversupply
6/29/2019 13:27	0:56	LSR	Data is not available	Data is not available	Oversupply
6/29/2019 14:26	0:14	LSR	Data is not available	Data is not available	Oversupply
6/29/2019 14:41	0:13	LSR	Data is not available	Data is not available	Oversupply
6/30/2019 8:32	0:02	LSR	Data is not available	Data is not available	Oversupply
6/30/2019 8:35	0:02	LSR	Data is not available	Data is not available	Oversupply
6/30/2019 8:39	1:45	LSR	Data is not available	Data is not available	Oversupply
6/30/2019 10:25	0:04	LSR	Data is not available	Data is not available	Oversupply
6/30/2019 10:30	0:22	LSR	Data is not available	Data is not available	Oversupply
6/30/2019 10:53	0:02	LSR	Data is not available	Data is not available	Oversupply
6/30/2019 10:57	0:09	LSR	Data is not available	Data is not available	Oversupply
6/30/2019 11:07	0:17	LSR	Data is not available	Data is not available	Oversupply
6/30/2019 11:27	0:02	LSR	Data is not available	Data is not available	Oversupply
6/30/2019 11:31	0:16	LSR	Data is not available	Data is not available	Oversupply
6/30/2019 11:49	0:01	LSR	Data is not available	Data is not available	Oversupply
6/30/2019 13:31	0:36	LSR	Data is not available	Data is not available	Oversupply
6/30/2019 14:15	0:30	LSR	Data is not available	Data is not available	Oversupply
6/30/2019 14:47	0:08	LSR	Data is not available	Data is not available	Oversupply

Notes:  
On June 27, 2012, Maui Electric notified LSR that although LSR has not operated in compliance with the revised ramp rate of 360 kW/minute, Maui Electric would conditionally allow LSR to operate at the allowed capacity of 1.2 MW while the Maui Electric-Lanai Diesel Operator was in the control room.  
LSR possible output data is not available. Therefore, Maui Electric assumes LSR is curtailed if the LSR curtailment set point is less than 1,200 kW and LSR's output is within 50 kW of the curtailment set point.  
The curtailment reasons have been modified to oversupply, system constraints, and facility requested, to provide continuity with HPUC Docket No. 2013-0141 Decoupling for HECO companies metrics.

Hawai'i Electric Light Company Curtailment Report June 2019

Start Date/Time	MW output prior to start of curtailment	End Date/Time	MW output after curtailment released <sup>1</sup>	IPP	Reason for Curtailment
06/29/19 13:59	7.2 MW	06/29/19 16:08	5.5 MW	Hawi Renewable Dev	System constraint

<sup>1</sup> The MW output values are taken soon after curtailment is released by Hawai'i Electric Light and may not reflect their full output depending on ramp rate for the facility. The wind farms generally return immediately to full available levels, whereas PGV and Wailuku may take longer to return to scheduled or full available output levels.

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(Docket No. 2011-0206)

DEAN NISHINA EXECUTIVE DIRECTOR DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS DIVISION OF CONSUMER ADVOCACY P.O. Box 541 Honolulu, HI 96809	2 Copies Via Hand Delivery
GREGG J. KINKLEY, ESQ. DEPARTMENT OF THE ATTORNEY GENERAL 425 Queen Street Honolulu, Hawaii 96813 Counsel for DBEDT	1 Copy Electronically Transmitted
DANIEL W.S. LAWRENCE, ESQ. DEPARTMENT OF THE CORPORATION COUNSEL CITY AND COUNTY OF HONOLULU 530 S. King Street, Room 110 Honolulu, HI 96813 Counsel for the CITY AND COUNTY OF HONOLULU	1 Copy Electronically Transmitted
JOSEPH K. KAMELAMELA ANGELIC M. HO DEPARTMENT OF THE CORPORATION COUNSEL COUNTY OF HAWAII 101 Aupuni Street, Suite 325 Hilo, HI 96720 Counsel for the COUNTY OF HAWAII	1 Copy Electronically Transmitted
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ISAAC MORIWAKE, ESQ.  
DAVID HENKIN, ESQ.  
EARTHJUSTICE  
850 Richards Street, Suite 400  
Honolulu, HI 96813-4501  
Counsel for HAWAII SOLAR ENERGY ASSOCIATION

1 Copy  
Electronically Transmitted

RICK REED  
DIRECTOR  
HAWAII SOLAR ENERGY ASSOCIATION  
761 Ahua Street  
Honolulu, HI 96819

1 Copy  
Electronically Transmitted

KENT D. MORIHARA, ESQ.  
KRIS N. NAKAGAWA, ESQ.  
LAUREN M. IMADA-LEE, ESQ.  
TANYA M. FERNANDES, ESQ.  
Moriyara Lau & Fong LLP  
841 Bishop Street, Suite 400  
Honolulu, Hawaii 96813  
Counsel for KAUAI ISLAND UTILITY COOPERATIVE

1 Copy  
Electronically Transmitted

ERIK W. KVAM  
CHIEF EXECUTIVE OFFICER  
ZERO EMISSIONS LEASING LLC  
4188-4 Keanu Street  
Honolulu, HI 96816

1 Copy  
Electronically Transmitted

SANDRA-ANN Y.H. WONG, ESQ.  
ATTORNEY AT LAW, A LAW CORPORATION  
1050 Bishop Street, #514  
Honolulu, HI 96813  
Counsel for TAWHIRI POWER LLC

1 Copy  
Electronically Transmitted

RILEY SAITO  
73-1294 Awakea Street  
Kailua-Kona, HI 96740  
For SOLAR ENERGY INDUSTRIES ASSOCIATION

1 Copy  
Electronically Transmitted

DEAN T. YAMAMOTO, ESQ.  
YAMAMOTO & SETTLE  
1100 Alakea Street, Suite 3100  
Honolulu, HI 96813  
Counsel for CASTLE & COOKE HOMES HAWAII, INC.,  
CASTLE & COOKE RESORTS, LLC and  
LANAI SUSTAINABILITY RESEARCH, LLC

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(Docket No. 2011-0206)

MICHAEL J. HOPPER, ESQ.  
DEPUTY CORPORATION COUNSEL  
DEPARTMENT OF THE CORPORATION COUNSEL  
COUNTY OF MAUI  
200 S. High Street  
Wailuku, HI 96793  
Counsel for the COUNTY OF MAUI

1 Copy  
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CURTIS SEYMOUR  
SENIOR MANAGER, GOVERNMENT AFFAIRS  
SUN EDISON LLC  
600 Clipper Drive  
Belmont, CA 94002

1 Copy  
Electronically Transmitted

MONA W. CLARK, ESQ.  
OFFICE OF THE COUNTY ATTORNEY  
COUNTY OF KAUAI  
4444 Rice Street, Suite 200  
Lihue, HI 96766-1300

1 Copy  
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BRADLEY ALBERT  
PRESIDENT  
HAWAII PV COALITION  
P.O. Box 81501  
Haiku, HI 96708

1 Copy  
Electronically Transmitted

HILTON H. UNEMORI  
ECM, INC.  
130 N. Market Street  
Wailuku, HI 96793-1716  
For SOUTH MAUI RENEWABLE RESOURCES, LLC

1 Copy  
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SKY STANFIELD  
SHUTE, MIHALY & WEINBERGER LLP  
396 Hayes Street  
San Francisco, CA 94102  
For the INTERSTATE RENEWABLE ENERGY COUNCIL

1 Copy  
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PETE COOPER  
SOLARCITY CORPORATION  
REGIONAL DIRECTOR, HAWAII  
599 Kahelu Street  
Mililani, HI 96789

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SERVICE LIST  
(Docket No. 2011-0206)

ALISON SILVERSTEIN  
19213 Luedtke Lane  
Pflugerville, TX 78660

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BRENDAN KIRBY  
12011 SW Pineapple Court  
Palm City, FL 34990

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