



September 26, 2019 **FILED**

2019 SEP 26 P 3:17

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

**PUBLIC UTILITIES  
COMMISSION**

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 August 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,

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 August 31, 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 August 31, 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:**

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

**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 August 31, 2019):

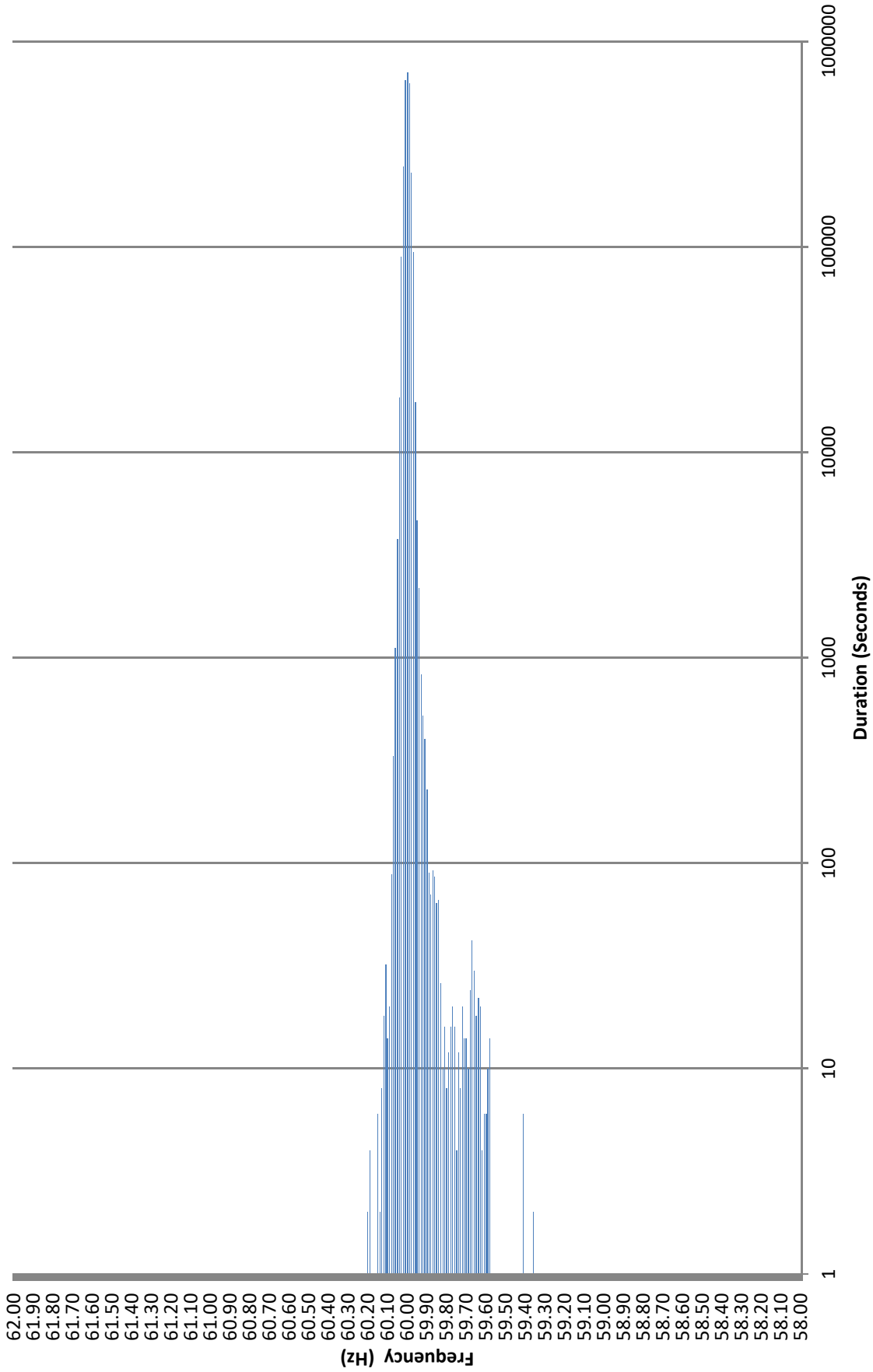
**3a) Tabulation of each curtailment event for each resource including the starting date and time, duration, megawatt hours curtailed, peak MW curtailed, and reason for curtailment:**

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

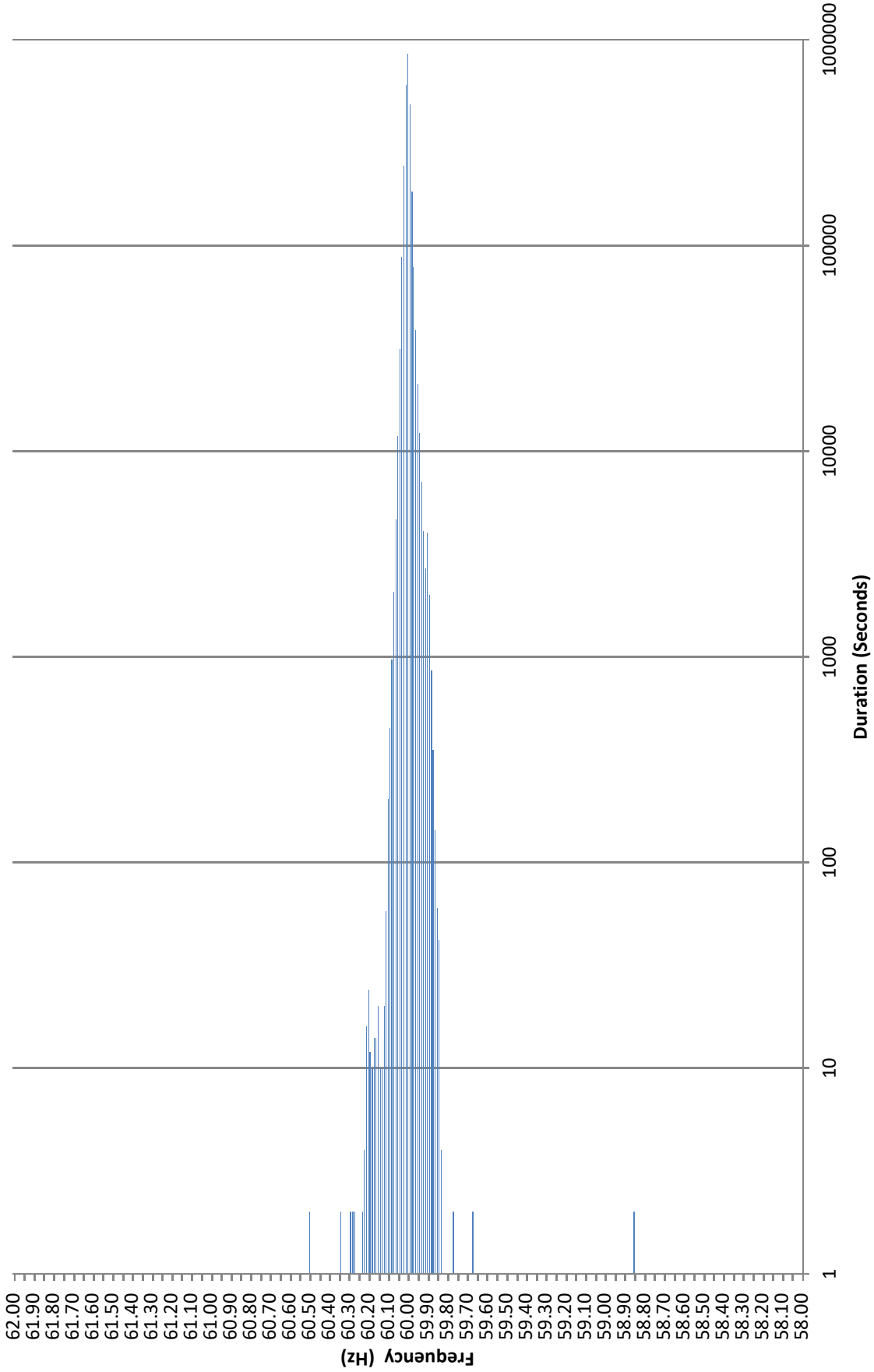
**3b) Total MWh of non-dispatchable renewable resources curtailed for the month:**

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.

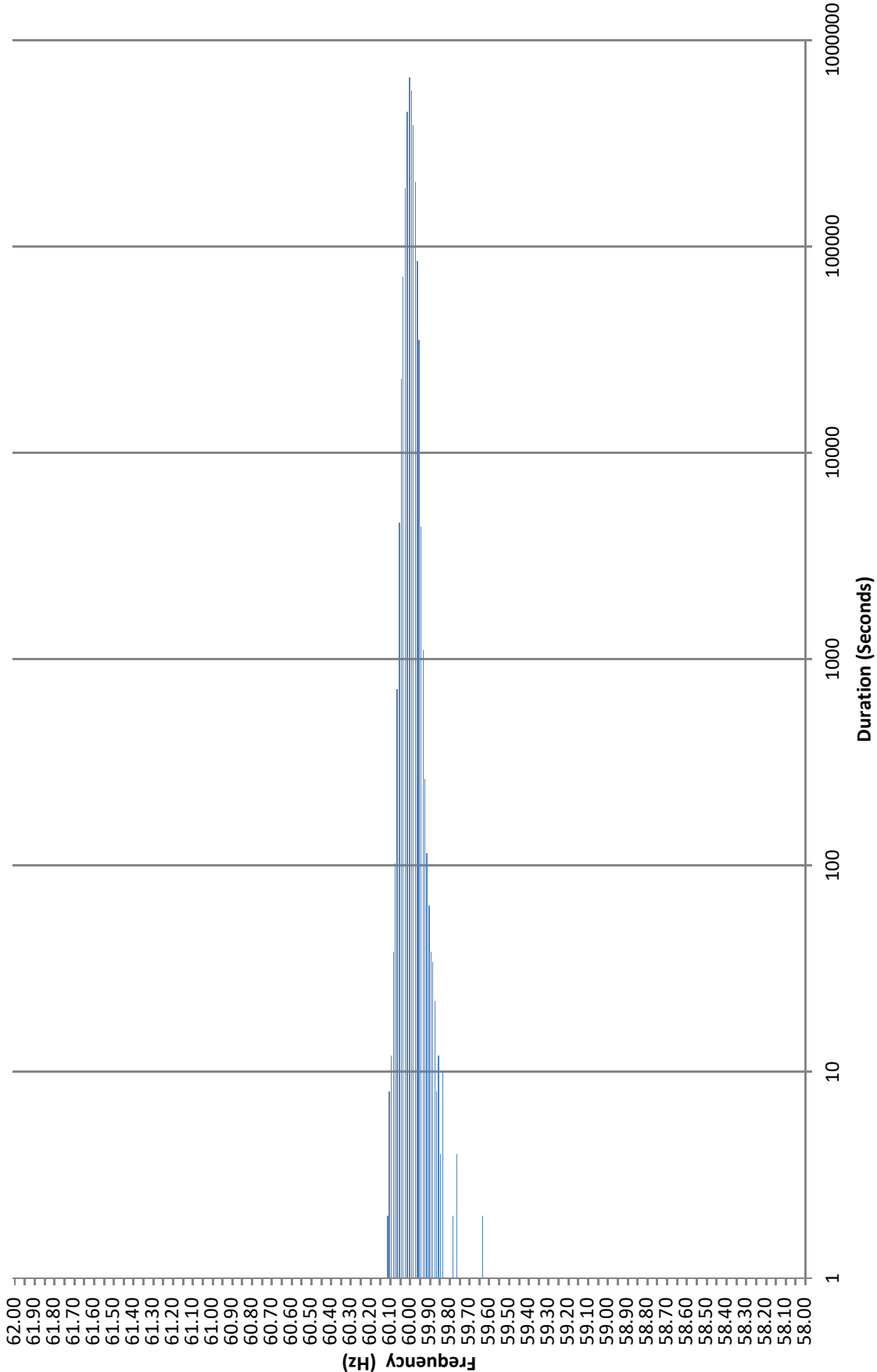
# Frequency Distribution Plot - Hawaiian Electric August 2019



# Frequency Distribution Plot - Maui Electric August 2019



**Frequency Distribution Plot - Hawai'i Electric Light  
August 2019**



Hawaiian Electric Frequency Excursion Statistics August 2019		
Data Rounded to the nearest	<59.95 Hz	>60.05 Hz
Number of Excursions	400	274
Maximum Duration (sec)	738	176
Maximum Deviation (Hz)	59.356	60.196
Total Duration of Excursions (sec)	6452	2690

Maui Electric Frequency Excursion Statistics August 2019		
	<59.95 Hz	>60.05 Hz
Number of Excursions	4424	1986
Maximum Duration (sec)	382	274
Maximum Deviation (Hz)	58.852	60.499
Total Duration of Excursions (sec)	42622	12862



Hawai'i Electric Light Frequency Excursion Statistics August 2019		
	<59.95 Hz	>60.05 Hz
Number of Excursions	3947	591
Maximum Duration (sec)	196	44
Maximum Deviation (Hz)	59.632	60.106
Total Duration of Excursions (sec)	22488	2130





HAWAIIAN ELECTRIC COMPANY, INC.  
DEMAND RESPONSE EVENTS  
August 2019

Event #	Date & Time	Frequency (Hz)			Load Shed (MW)	Duration (HH:MM)	Description
		Prior to Event	Nadir	Trigger			
1	8/5/2019 19:15	60.00	59.58	59.70	NA	0:58	Schofield tripped offline while generating ~49MW. RDLC activated.
2	8/25/2019 2:46	60.00	59.36	59.70	NA	0:07	KPLP CT 2 tripped offline while generating ~68MW. RDLC/CIDLC activated.

Hawaiian Electric Curtailment Report August 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
08/01/19 07:04	0.0	18.50	08/01/19 12:00	0	*	KWF	System Constraints
08/01/19 07:02	0.0	1.50	08/01/19 07:25	0	*	Makai	System Constraints
08/01/19 07:03	0.0	23.40	08/01/19 07:25	0	*	Mauka	System Constraints
08/01/19 10:14	0.0	8.00	08/01/19 11:57	0	*	Makai	System Constraints
08/01/19 10:14	0.0	28.50	08/01/19 11:57	0	*	Mauka	System Constraints
08/03/19 06:57	0.0	0.00	08/03/19 15:34	0	*	Aloha1	System Constraints
08/03/19 07:18	0.0	4.00	08/03/19 07:26	0	*	Waianae	System Constraints
08/03/19 14:35	0.0	23.80	08/03/19 15:33	0	*	Waianae	System Constraints
08/05/19 05:54	0.0	0.00	08/05/19 06:46	0	*	Waianae	System Constraints
08/05/19 06:01	0.0	0.00	08/05/19 06:44	0	*	Aloha1	System Constraints
08/05/19 06:09	0.0	3.00	08/05/19 07:14	0	*	KWF	System Constraints
08/05/19 06:11	0.0	0.20	08/05/19 07:16	0	*	Makai	System Constraints
08/05/19 08:57	25.0	3.14	08/05/19 08:58	3.14	*	Mauka	Facility Requested
08/05/19 08:57	10.0	1.48	08/05/19 08:58	1.27	*	Makai	Facility Requested
08/05/19 13:30	0.0	9.10	08/05/19 15:09	0	*	KWF	System Constraints
08/05/19 12:03	0.0	4.00	08/05/19 14:56	0	*	Makai	System Constraints
08/05/19 23:00	0.0	0.00	08/05/19 23:30	0	*	Waianae	System Constraints
08/05/19 23:02	0.0	0.00	08/05/19 23:31	0	*	Aloha1	System Constraints
08/06/19 06:50	0.0	0.00	08/06/19 16:23	0	*	KWF	System Constraints
08/06/19 06:43	0.0	0.00	08/06/19 15:57	0	*	Makai	System Constraints
08/06/19 06:45	0.0	0.00	08/06/19 07:44	0	*	Mauka	System Constraints
08/06/19 15:10	0.0	0.00	08/06/19 15:57	0	*	Mauka	System Constraints
08/07/19 05:07	0.0	0.00	08/07/19 16:13	0	*	KWF	System Constraints
08/07/19 06:05	0.0	0.00	08/07/19 07:05	0	*	Mauka	System Constraints
08/07/19 06:06	0.0	0.00	08/07/19 18:39	0	*	Makai	System Constraints
08/07/19 15:44	0.0	1.80	08/07/19 18:39	0	*	Mauka	System Constraints
08/09/19 05:51	0.0	0.40	08/09/19 07:03	0	*	KWF	System Constraints
08/09/19 05:49	0.0	0.00	08/09/19 06:56	0	*	Makai	System Constraints
08/09/19 05:58	0.0	0.00	08/10/19 08:17	0	*	KREP	System Constraints
08/09/19 07:05	0.0	5.00	08/09/19 07:34	0	*	Waianae	System Constraints
08/09/19 07:09	0.0	2.00	08/09/19 07:32	0	*	Aloha1	System Constraints
08/09/19 12:20	0.0	27.40	08/09/19 13:03	0	*	Waianae	System Constraints
08/09/19 12:22	0.0	2.70	08/09/19 13:05	0	*	Aloha1	System Constraints
08/09/19 17:23	0.0	3.90	08/09/19 17:52	0	*	KWF	System Constraints
08/09/19 17:25	0.0	2.60	08/09/19 17:56	0	*	Makai	System Constraints
08/09/19 17:56	0.0	0.00	08/09/19 18:15	0	*	Makai	System Constraints
08/11/19 07:32	0.0	2.70	08/11/19 15:36	0	*	KLS2	System Constraints
08/11/19 07:33	0.0	0.70	08/11/19 07:52	0	*	KREP	System Constraints
08/11/19 14:39	0.0	2.00	08/11/19 15:36	0	*	KREP	System Constraints
08/13/19 06:15	0.0	2.40	08/13/19 07:58	0	*	KWF	System Constraints
08/13/19 06:20	0.0	0.00	08/13/19 07:49	0	*	Makai	System Constraints
08/13/19 14:43	0.0	4.90	08/13/19 15:48	0	*	KWF	System Constraints
08/13/19 14:46	0.0	8.00	08/13/19 15:50	0	*	Makai	System Constraints
08/17/19 07:47	0.0	1.00	08/17/19 08:29	0	*	KREP	System Constraints
08/17/19 15:35	0.0	2.30	08/17/19 15:48	0	*	KREP	System Constraints
08/18/19 06:25	0.0	0.00	08/18/19 07:47	0	*	KREP	System Constraints
08/18/19 06:27	0.0	0.00	08/18/19 15:46	0	*	KLS2	System Constraints
08/18/19 15:02	0.0	1.50	08/18/19 15:46	0	*	KREP	System Constraints
08/19/19 06:42	0.0	1.20	08/19/19 07:37	0	*	KWF	System Constraints
08/19/19 06:49	0.0	1.40	08/19/19 07:23	0	*	Makai	System Constraints
08/19/19 06:50	0.0	4.40	08/19/19 07:23	0	*	Mauka	System Constraints
08/20/19 06:31	0.0	0.00	08/20/19 15:52	0	*	Waianae	System Constraints
08/20/19 06:34	0.0	0.00	08/20/19 06:57	0	*	Aloha1	System Constraints
08/20/19 14:42	0.0	4.00	08/20/19 15:49	0	*	Aloha1	System Constraints
08/21/19 05:54	0.0	0.00	08/21/19 13:59	0	*	Waianae	System Constraints
08/21/19 05:55	0.0	0.00	08/21/19 06:02	0	*	Aloha1	System Constraints
08/21/19 12:43	0.0	3.80	08/21/19 14:02	0	*	Aloha1	System Constraints
08/23/19 07:22	0.0	0.50	08/23/19 07:49	0	*	KREP	System Constraints
08/23/19 13:32	0.0	1.60	08/23/19 14:59	0	*	KREP	System Constraints
08/24/19 07:17	0.0	0.30	08/24/19 07:38	0	*	North	System Constraints

Hawaiian Electric Curtailment Report August 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
08/24/19 07:17	0.0	0.10	08/24/19 07:39	0	*	South	System Constraints
08/24/19 13:35	0.0	19.00	08/24/19 15:16	0	*	Mauka	System Constraints
08/24/19 13:38	0.0	2.50	08/24/19 15:18	0	*	North	System Constraints
08/24/19 13:39	0.0	0.50	08/24/19 15:18	0	*	South	System Constraints
08/26/19 05:49	0.0	5.40	08/26/19 07:26	0	*	KWF	System Constraints
08/26/19 06:03	0.0	0.00	08/26/19 15:50	0	*	Mauka	System Constraints
08/26/19 14:14	0.0	7.80	08/26/19 15:43	0	*	KWF	System Constraints
08/26/19 14:17	0.0	7.30	08/26/19 15:48	0	*	Makai	System Constraints
08/27/19 08:16	0.0	24.00	08/27/19 08:36	0	*	Waianae	System Constraints
08/27/19 20:38	0.0	0.00	08/27/19 21:10	0	*	Waianae	System Constraints
08/28/19 05:04	0.0	0.00	08/28/19 06:40	0	*	Mauka	System Constraints
08/28/19 05:05	0.0	0.00	08/28/19 06:39	0	*	Makai	System Constraints
08/28/19 05:01	0.0	1.20	08/28/19 15:38	0	*	KWF	System Constraints
08/28/19 06:40	0.0	0.00	08/28/19 15:34	0	*	Makai	System Constraints
08/28/19 14:20	0.0	14.70	08/28/19 15:32	0	*	Mauka	System Constraints
08/29/19 06:46	0.0	0.00	08/29/19 15:53	0	*	Makai	System Constraints
08/29/19 06:46	0.0	0.00	08/29/19 07:37	0	*	Mauka	System Constraints
08/29/19 06:49	0.0	0.00	08/29/19 16:07	0	*	KWF	System Constraints
08/29/19 06:09	0.0	0.00	08/29/19 06:39	0	*	Waianae	System Constraints
08/29/19 06:10	0.0	0.00	08/29/19 06:38	0	*	Aloha1	System Constraints
08/29/19 10:24	0.0	4.00	08/29/19 10:54	0	*	Aloha1	System Constraints
08/29/19 10:25	0.0	27.40	08/29/19 10:53	0	*	Waianae	System Constraints
08/29/19 14:27	0.0	10.00	08/29/19 15:53	0	*	Mauka	System Constraints
08/30/19 05:36	0.0	0.10	08/30/19 16:19	0	*	Makai	System Constraints
08/30/19 05:36	0.0	0.10	08/30/19 09:58	0	*	Mauka	System Constraints
08/30/19 05:39	0.0	5.90	08/30/19 16:27	0	*	KWF	System Constraints
08/30/19 15:53	0.0	9.11	08/30/19 16:19	0	*	Mauka	System Constraints

Aloha1 = Aloha Solar 1 PV Farm  
KLS2 = Kalaeloa Solar 2 PV Farm  
KREP = Kalaeloa 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**

August 2019

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
8/1/2019 1:40	0:41	KWP11	1.36589	19.21064	Oversupply
8/1/2019 3:04	0:44	KWP11	3.55586	19.21064	Oversupply
8/1/2019 3:52	0:34	KWP11	2.08741	19.21064	Oversupply
8/1/2019 8:05	0:01	AWE	0.00167	0.10000	Oversupply
8/1/2019 8:20	0:01	AWE	0.00167	0.10000	Oversupply
8/1/2019 9:24	0:01	SSA2	0.00167	1.83100	Oversupply
8/1/2019 9:24	0:01	SSA3	-0.00020	2.07000	Oversupply
8/1/2019 9:25	0:01	SSA2	0.00164	1.84700	Oversupply
8/1/2019 9:26	0:01	SSA2	0.00167	1.87200	Oversupply
8/1/2019 9:38	0:01	SSA3	0.00459	2.07700	Oversupply
8/1/2019 9:39	0:01	SSA2	0.00412	1.95500	Oversupply
8/1/2019 9:39	0:01	SSA3	0.00449	2.07600	Oversupply
8/1/2019 9:40	0:01	SSA2	0.00404	1.99000	Oversupply
8/1/2019 9:40	0:01	SSA3	0.00449	2.08700	Oversupply
8/1/2019 9:40	0:01	SSA2	0.00412	1.55700	Oversupply
8/1/2019 9:40	0:01	SSA3	0.00449	1.47400	Oversupply
8/1/2019 9:41	0:01	SSA3	0.00449	1.20400	Oversupply
8/1/2019 9:41	0:01	SSA2	0.00412	1.22000	Oversupply
8/1/2019 9:42	0:01	SSA3	0.00439	0.69500	Oversupply
8/1/2019 9:42	0:01	SSA2	0.00412	0.66000	Oversupply
8/1/2019 9:43	0:01	SSA3	0.00449	0.80400	Oversupply
8/1/2019 9:43	0:01	SSA2	0.00412	0.64400	Oversupply
8/1/2019 9:44	0:01	SSA3	0.00449	0.47100	Oversupply
8/1/2019 9:44	0:39	SSA2	1.24757	0.21100	Oversupply
8/1/2019 9:44	0:39	SSA3	1.41477	0.01100	Oversupply
8/1/2019 9:45	0:38	ESA	Data is not available	Data is not available	Oversupply
8/1/2019 9:45	0:38	ESB	Data is not available	Data is not available	Oversupply
8/1/2019 9:46	0:39	KWP11	1.96694	19.21064	Oversupply
8/1/2019 10:23	0:01	SSA2	0.02875	0.02900	Oversupply
8/1/2019 10:23	0:01	SSA3	0.03044	0.00300	Oversupply
8/1/2019 10:24	0:04	ESA	Data is not available	Data is not available	Oversupply
8/1/2019 10:24	0:04	ESB	Data is not available	Data is not available	Oversupply
8/1/2019 10:24	0:03	SSA2	0.11446	0.20000	Oversupply
8/1/2019 10:24	0:04	SSA3	0.14832	0.20800	Oversupply
8/1/2019 10:26	0:03	KWP11	0.01181	19.21064	Oversupply
8/1/2019 10:27	0:01	SSA2	0.02875	0.00400	Oversupply
8/1/2019 10:28	0:01	SSA3	0.02979	0.07200	Oversupply
8/1/2019 10:28	0:01	SSA2	0.02875	0.10300	Oversupply
8/1/2019 10:28	0:01	SSA3	0.02915	0.40100	Oversupply
8/1/2019 10:29	0:01	SSA2	0.02442	0.33200	Oversupply
8/1/2019 10:29	0:01	SSA3	0.01801	0.54700	Oversupply
8/1/2019 10:30	0:01	SSA2	0.00443	1.15300	Oversupply
8/1/2019 10:30	0:01	SSA3	0.00243	0.74500	Oversupply
8/1/2019 10:31	0:01	SSA2	0.00443	1.18700	Oversupply
8/1/2019 10:31	0:01	SSA3	0.00237	0.72400	Oversupply
8/1/2019 10:33	0:01	SSA2	0.00443	2.67200	Oversupply
8/1/2019 10:40	0:01	SSA3	0.00248	2.81900	Oversupply
8/1/2019 10:44	0:01	SSA3	0.01740	2.66000	Oversupply
8/1/2019 10:44	0:01	SSA2	0.00460	1.01700	Oversupply
8/1/2019 10:47	0:01	SSA3	0.00615	0.76700	Oversupply
8/1/2019 10:47	0:01	SSA2	0.01372	0.70300	Oversupply
8/1/2019 10:48	0:02	SSA3	0.01203	0.24000	Oversupply
8/1/2019 10:48	0:01	SSA2	0.01372	1.08100	Oversupply
8/1/2019 10:49	0:01	SSA2	0.01372	1.36200	Oversupply
8/1/2019 10:49	0:01	SSA3	0.00602	0.31400	Oversupply
8/1/2019 10:50	0:01	SSA2	0.01372	1.06600	Oversupply
8/1/2019 10:50	0:01	SSA3	0.00602	0.35300	Oversupply
8/1/2019 10:51	0:01	SSA2	0.01372	1.24800	Oversupply
8/1/2019 10:51	0:01	SSA3	0.00588	0.38300	Oversupply
8/1/2019 10:51	0:01	SSA3	0.00588	0.41800	Oversupply
8/1/2019 10:51	0:01	SSA2	0.01372	1.85500	Oversupply
8/1/2019 10:52	0:01	SSA3	0.00602	0.46400	Oversupply
8/1/2019 10:52	0:01	SSA2	0.01372	1.68500	Oversupply
8/1/2019 10:53	0:01	SSA3	0.00602	0.37000	Oversupply
8/1/2019 10:53	0:01	SSA2	0.01372	1.43500	Oversupply
8/1/2019 10:54	0:01	SSA3	0.00602	0.48400	Oversupply
8/1/2019 10:54	0:01	SSA2	0.01372	1.78900	Oversupply
8/1/2019 10:54	0:01	SSA3	0.00602	0.41200	Oversupply
8/1/2019 10:55	0:01	SSA2	0.01372	1.17900	Oversupply
8/1/2019 10:55	0:01	SSA3	0.00602	0.06100	Oversupply
8/1/2019 10:56	0:01	SSA2	0.01372	0.75900	Oversupply
8/1/2019 10:56	0:01	SSA3	0.00602	0.34400	Oversupply
8/1/2019 10:57	0:01	SSA2	0.01372	0.62000	Oversupply



Maui Curtailment Report

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Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
8/1/2019 10:57	0:01	SSA3	0.00588	0.26000	Oversupply
8/1/2019 10:57	0:01	SSA3	0.00588	0.01800	Oversupply
8/1/2019 10:57	0:01	SSA2	0.01372	0.10400	Oversupply
8/1/2019 10:58	0:01	SSA3	0.00615	0.14900	Oversupply
8/1/2019 10:58	0:01	SSA2	0.01372	0.31700	Oversupply
8/1/2019 10:59	0:01	SSA3	0.00128	0.41100	Oversupply
8/1/2019 10:59	0:01	SSA2	0.01145	0.79400	Oversupply
8/1/2019 11:00	0:01	SSA3	0.00977	0.65700	Oversupply
8/1/2019 11:00	0:01	SSA2	0.00097	1.31200	Oversupply
8/1/2019 11:00	0:01	SSA3	0.00999	0.86100	Oversupply
8/1/2019 11:01	0:01	SSA2	0.00099	1.50400	Oversupply
8/1/2019 11:01	0:01	SSA3	0.00999	1.03100	Oversupply
8/1/2019 11:04	0:01	SSA2	0.00099	2.31200	Oversupply
8/1/2019 11:04	0:01	SSA3	0.00999	1.74600	Oversupply
8/1/2019 11:05	0:01	SSA3	0.00977	2.14000	Oversupply
8/1/2019 11:05	0:01	SSA2	0.00099	0.36600	Oversupply
8/1/2019 11:06	0:01	SSA3	0.00999	2.52300	Oversupply
8/1/2019 11:06	0:01	SSA2	0.00099	0.81000	Oversupply
8/1/2019 11:07	0:01	SSA3	0.00999	1.78100	Oversupply
8/1/2019 11:07	0:01	SSA2	0.00099	0.55300	Oversupply
8/1/2019 11:07	0:01	SSA3	0.00977	2.00300	Oversupply
8/1/2019 11:08	0:01	SSA2	0.00099	0.60600	Oversupply
8/1/2019 11:08	0:01	SSA3	0.00999	1.77400	Oversupply
8/1/2019 11:09	0:01	SSA2	0.00099	0.77500	Oversupply
8/1/2019 11:09	0:01	SSA3	0.00999	1.68200	Oversupply
8/1/2019 11:20	0:01	SSA3	0.00002	2.88100	Oversupply
8/1/2019 11:26	0:01	SSA3	0.00002	2.78700	Oversupply
8/1/2019 11:26	0:01	SSA2	-0.00018	1.38400	Oversupply
8/1/2019 11:34	0:01	SSA3	0.00070	2.86200	Oversupply
8/1/2019 11:57	0:01	SSA2	0.00182	2.87100	Oversupply
8/1/2019 11:58	0:01	SSA2	0.00182	2.61400	Oversupply
8/1/2019 11:58	0:01	SSA3	0.00379	2.34800	Oversupply
8/1/2019 11:59	0:01	SSA2	0.01268	2.11600	Oversupply
8/1/2019 11:59	0:01	SSA3	0.01845	2.20900	Oversupply
8/1/2019 12:00	0:01	SSA2	0.03712	2.08200	Oversupply
8/1/2019 12:00	0:01	SSA3	0.02421	1.76200	Oversupply
8/1/2019 12:01	0:01	SSA2	0.03712	1.15500	Oversupply
8/1/2019 12:01	0:01	SSA3	0.02421	1.36100	Oversupply
8/1/2019 12:01	0:01	SSA3	0.02369	0.77200	Oversupply
8/1/2019 12:02	0:01	SSA2	0.03712	0.69700	Oversupply
8/1/2019 12:02	0:01	SSA3	0.02421	0.31600	Oversupply
8/1/2019 12:02	0:01	SSA2	0.03712	0.56500	Oversupply
8/1/2019 12:03	0:02	SSA3	0.04790	0.11400	Oversupply
8/1/2019 12:03	0:01	SSA2	0.03712	0.09700	Oversupply
8/1/2019 12:04	0:01	ESA	Data is not available	Data is not available	Oversupply
8/1/2019 12:04	0:01	ESB	Data is not available	Data is not available	Oversupply
8/1/2019 12:04	0:01	SSA2	0.03712	0.02600	Oversupply
8/1/2019 12:05	0:01	SSA3	0.02369	0.02900	Oversupply
8/1/2019 12:05	0:01	SSA2	0.03641	0.22300	Oversupply
8/1/2019 12:05	0:01	SSA3	0.02421	0.03300	Oversupply
8/1/2019 12:06	0:57	ESA	Data is not available	Data is not available	Oversupply
8/1/2019 12:06	0:57	ESB	Data is not available	Data is not available	Oversupply
8/1/2019 12:06	0:57	SSA2	2.53453	0.06600	Oversupply
8/1/2019 12:06	0:56	SSA3	2.31485	-0.00100	Oversupply
8/1/2019 12:08	0:55	KWP11	2.92878	19.21064	Oversupply
8/1/2019 13:02	0:01	SSA3	0.01924	0.00000	Oversupply
8/1/2019 13:03	0:01	SSA2	0.01817	0.21600	Oversupply
8/1/2019 13:03	0:01	SSA3	0.01883	0.18200	Oversupply
8/1/2019 13:04	0:01	SSA3	0.01924	0.52000	Oversupply
8/1/2019 13:04	0:01	SSA2	0.01817	0.62000	Oversupply
8/1/2019 13:04	0:01	SSA3	0.01924	0.92700	Oversupply
8/1/2019 13:05	0:01	SSA2	0.01817	1.31100	Oversupply
8/1/2019 13:05	0:01	SSA3	0.01883	1.14400	Oversupply
8/1/2019 13:06	0:01	SSA2	0.01817	1.67300	Oversupply
8/1/2019 13:06	0:01	SSA3	0.01924	1.67000	Oversupply
8/1/2019 13:06	0:01	SSA2	0.01817	2.19700	Oversupply
8/1/2019 13:07	0:01	SSA3	0.01924	2.03200	Oversupply
8/1/2019 13:07	0:01	SSA2	0.01817	2.06000	Oversupply
8/1/2019 13:08	0:01	SSA3	0.01883	2.05900	Oversupply
8/1/2019 13:08	0:01	SSA2	0.01817	2.11400	Oversupply
8/1/2019 13:08	0:01	SSA3	0.01924	2.05400	Oversupply
8/1/2019 13:09	0:01	SSA2	0.01817	1.93800	Oversupply
8/1/2019 13:09	0:01	SSA3	0.01924	2.04800	Oversupply





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Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
8/1/2019 13:10	0:01	SSA3	0.01882	1.94600	Oversupply
8/1/2019 13:10	0:01	SSA2	0.01817	2.35600	Oversupply
8/1/2019 13:17	0:01	SSA3	0.00072	2.56000	Oversupply
8/1/2019 13:17	0:01	SSA2	0.00159	2.56000	Oversupply
8/1/2019 13:18	0:01	SSA2	0.00159	2.25300	Oversupply
8/1/2019 13:50	0:01	SSA2	0.01372	2.90900	Oversupply
8/1/2019 13:50	0:01	SSA3	0.01467	2.59500	Oversupply
8/1/2019 13:51	0:01	SSA3	0.01500	2.04800	Oversupply
8/1/2019 13:51	0:01	SSA2	0.01372	2.31100	Oversupply
8/1/2019 13:51	0:01	SSA3	0.01468	1.49100	Oversupply
8/1/2019 13:51	0:01	SSA2	0.01372	1.69500	Oversupply
8/1/2019 13:52	0:01	SSA3	0.01500	1.04800	Oversupply
8/1/2019 13:52	0:01	SSA2	0.01372	0.36400	Oversupply
8/1/2019 13:53	0:01	SSA3	0.01533	0.58600	Oversupply
8/1/2019 13:53	0:01	SSA2	0.01372	0.94900	Oversupply
8/1/2019 13:54	0:01	SSA3	0.01467	0.76100	Oversupply
8/1/2019 13:54	0:01	SSA2	0.01372	0.90500	Oversupply
8/1/2019 13:54	0:01	SSA3	0.01500	0.77500	Oversupply
8/1/2019 13:55	0:01	SSA2	0.01372	0.80000	Oversupply
8/1/2019 13:55	0:01	SSA3	0.01467	0.72600	Oversupply
8/1/2019 13:56	0:01	SSA2	0.01319	0.73700	Oversupply
8/1/2019 13:56	0:01	SSA3	0.01500	0.77000	Oversupply
8/1/2019 13:57	0:01	SSA2	0.01372	1.26800	Oversupply
8/1/2019 13:57	0:01	SSA3	0.01500	1.24300	Oversupply
8/1/2019 13:57	0:01	SSA3	0.01468	1.32100	Oversupply
8/1/2019 13:57	0:01	SSA2	0.01372	1.35500	Oversupply
8/1/2019 13:58	0:01	SSA3	0.01500	1.25500	Oversupply
8/1/2019 13:58	0:01	SSA2	0.01372	1.73900	Oversupply
8/2/2019 1:09	2:51	KWP2	15.08269	19.21064	System constraint
8/2/2019 4:03	0:02	KWP2	0.03450	18.41826	System constraint
8/2/2019 4:11	0:02	KWP2	0.01960	16.06209	System constraint
8/2/2019 16:32	0:07	ESA	Data is not available	Data is not available	System constraint
8/2/2019 16:32	0:07	ESB	Data is not available	Data is not available	System constraint
8/2/2019 16:32	0:07	SSA2	0.01330	0.38600	System constraint
8/2/2019 16:32	0:06	SSA3	0.01286	0.40500	System constraint
8/2/2019 16:33	0:07	KWP2	0.44485	15.16593	System constraint
8/2/2019 16:38	0:01	SSA3	0.00162	0.00500	System constraint
8/2/2019 23:46	1:13	KWP2	3.21621	20.70757	System constraint
8/3/2019 1:02	0:25	KWP2	0.70269	20.70757	System constraint
8/3/2019 1:29	0:04	KWP2	0.12343	20.62075	System constraint
8/3/2019 1:35	0:06	KWP2	0.14885	20.40918	System constraint
8/3/2019 1:43	0:01	KWP2	0.00525	16.41237	System constraint
8/3/2019 1:48	0:12	KWP2	0.35527	19.04598	System constraint
8/3/2019 2:01	0:01	KWP2	0.00434	17.91430	System constraint
8/3/2019 2:03	0:01	KWP2	0.01353	17.49915	System constraint
8/3/2019 2:17	0:12	KWP2	0.80222	19.05496	System constraint
8/3/2019 2:35	0:18	KWP2	1.05309	19.74255	System constraint
8/3/2019 3:00	0:02	KWP2	0.00819	17.21373	System constraint
8/3/2019 3:13	0:02	KWP2	0.03725	18.05601	System constraint
8/3/2019 3:17	0:03	KWP2	0.02135	17.62189	System constraint
8/3/2019 3:23	0:01	KWP2	0.00346	14.39151	System constraint
8/3/2019 6:28	0:01	ESA	Data is not available	Data is not available	System constraint
8/3/2019 6:28	0:01	ESB	Data is not available	Data is not available	System constraint
8/3/2019 6:28	0:01	SSA3	0.00016	0.05700	System constraint
8/3/2019 6:30	0:01	SSA3	0.00124	0.06800	System constraint
8/3/2019 6:31	0:30	ESA	Data is not available	Data is not available	System constraint
8/3/2019 6:31	0:30	ESB	Data is not available	Data is not available	System constraint
8/3/2019 6:31	0:31	KWP2	3.99905	12.85766	System constraint
8/3/2019 6:31	0:30	SSA2	0.08080	0.09000	System constraint
8/3/2019 6:31	0:30	SSA3	0.07253	0.01100	System constraint
8/3/2019 6:39	0:17	AWE	0.59868	20.70000	System constraint
8/3/2019 7:03	0:02	SSA3	0.00417	0.27200	System constraint
8/3/2019 7:04	0:02	ESA	Data is not available	Data is not available	System constraint
8/3/2019 7:04	0:02	ESB	Data is not available	Data is not available	System constraint
8/3/2019 7:04	0:02	KWP2	0.05866	10.34580	System constraint
8/3/2019 7:04	0:02	SSA2	0.00191	0.08500	System constraint
8/3/2019 10:50	0:01	KWP2	0.00123	0.07385	System constraint
8/3/2019 21:44	0:01	AWE	0.00500	0.30000	System constraint
8/4/2019 11:51	0:01	KWP2	0.00003	0.00200	System constraint
8/6/2019 6:32	0:01	AWE	0.00333	0.20000	System constraint
8/6/2019 23:55	0:01	AWE	0.00667	0.40000	System constraint
8/9/2019 12:38	0:01	KWP2	0.00065	0.03892	System constraint
8/9/2019 20:06	0:01	KWP2	0.00113	0.06786	System constraint



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Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
8/11/2019 16:10	0:01	KWP11	0.00015	0.00898	Oversupply
8/12/2019 7:05	0:04	SSA3	0.00376	0.13200	System constraint
8/12/2019 7:06	0:04	ESA	Data is not available	Data is not available	System constraint
8/12/2019 7:06	0:04	ESB	Data is not available	Data is not available	System constraint
8/12/2019 7:06	0:04	SSA2	0.00037	0.03900	System constraint
8/12/2019 7:07	0:03	KWP11	0.03439	19.72459	System constraint
8/12/2019 7:13	0:01	SSA2	0.00007	0.12200	System constraint
8/12/2019 7:14	0:01	SSA3	-0.00048	0.01600	System constraint
8/12/2019 7:15	0:01	ESA	Data is not available	Data is not available	System constraint
8/12/2019 7:15	0:01	ESB	Data is not available	Data is not available	System constraint
8/12/2019 7:15	0:01	SSA2	0.00170	0.04400	System constraint
8/12/2019 7:18	0:01	SSA2	0.00170	0.16300	System constraint
8/12/2019 7:18	0:01	SSA3	0.00341	0.34900	System constraint
8/12/2019 7:23	0:19	SSA3	0.16022	0.53700	System constraint
8/12/2019 7:24	0:19	ESA	Data is not available	Data is not available	System constraint
8/12/2019 7:24	0:19	ESB	Data is not available	Data is not available	System constraint
8/12/2019 7:24	0:19	KWP11	0.95625	19.48807	System constraint
8/12/2019 7:42	0:01	SSA3	0.00802	0.00600	System constraint
8/12/2019 7:42	0:01	SSA2	0.00338	0.12300	System constraint
8/12/2019 7:44	0:01	SSA3	0.00785	0.79300	System constraint
8/12/2019 7:44	0:01	SSA3	-0.00027	0.53000	System constraint
8/12/2019 7:45	0:01	SSA2	0.00116	0.35700	System constraint
8/12/2019 7:45	0:01	SSA3	0.00110	0.56400	System constraint
8/12/2019 7:46	0:01	SSA2	0.00116	0.36400	System constraint
8/12/2019 7:46	0:01	SSA3	0.00108	0.39100	System constraint
8/12/2019 7:47	0:01	SSA2	0.00116	0.25100	System constraint
8/12/2019 7:47	0:01	SSA3	0.00108	0.10900	System constraint
8/13/2019 5:39	0:01	AWE	0.00333	0.20000	Oversupply
8/14/2019 9:34	0:01	SSA3	-0.00164	2.22500	Oversupply
8/14/2019 9:42	0:01	SSA3	-0.00164	2.31600	Oversupply
8/14/2019 9:48	0:01	SSA3	0.00066	2.34300	Oversupply
8/14/2019 9:48	0:01	SSA2	0.00127	1.63000	Oversupply
8/14/2019 9:48	0:01	SSA3	0.00075	2.35200	Oversupply
8/14/2019 9:49	0:01	SSA2	0.00127	1.58600	Oversupply
8/14/2019 9:49	0:01	SSA3	0.00068	1.74600	Oversupply
8/14/2019 9:50	0:01	SSA2	0.00127	1.67200	Oversupply
8/14/2019 9:50	0:01	SSA3	0.00068	1.84400	Oversupply
8/14/2019 9:53	0:01	SSA3	0.00066	2.40600	Oversupply
8/14/2019 9:54	0:01	SSA3	0.00068	2.09400	Oversupply
8/14/2019 9:56	0:01	SSA3	0.00065	2.41400	Oversupply
8/14/2019 14:05	0:01	KWP11	0.00008	0.00499	Oversupply
8/15/2019 11:30	0:01	KWP11	0.00105	0.06287	Oversupply
8/16/2019 9:11	0:01	KWP11	0.00013	0.00798	Oversupply
8/16/2019 15:13	0:01	KWP11	0.00032	0.01896	System constraint
8/17/2019 2:22	0:01	KWP11	0.01189	19.23958	Oversupply
8/17/2019 2:26	0:20	KWP11	0.49554	20.49900	Oversupply
8/17/2019 2:53	0:31	KWP11	1.00570	20.66965	Oversupply
8/17/2019 3:26	0:02	KWP11	0.00390	19.42520	Oversupply
8/17/2019 3:32	0:01	KWP11	0.00376	20.14872	Oversupply
8/17/2019 3:36	0:13	KWP11	0.21575	19.88127	Oversupply
8/17/2019 4:28	0:01	KWP11	0.00737	20.40819	Oversupply
8/17/2019 8:41	0:01	SSA2	0.00085	1.29900	System constraint
8/17/2019 8:42	0:01	SSA3	-0.00009	1.44800	System constraint
8/17/2019 8:42	0:01	SSA2	0.00085	1.32600	System constraint
8/17/2019 8:42	0:01	SSA3	-0.00009	1.59400	System constraint
8/17/2019 8:43	0:01	SSA3	-0.00009	1.15100	System constraint
8/17/2019 8:43	0:01	SSA2	0.00085	1.34600	System constraint
8/17/2019 8:44	0:02	ESA	Data is not available	Data is not available	System constraint
8/17/2019 8:44	0:02	ESB	Data is not available	Data is not available	System constraint
8/17/2019 8:44	0:02	SSA3	0.04223	0.58600	System constraint
8/17/2019 8:44	0:03	SSA2	0.04336	0.42300	System constraint
8/17/2019 8:45	0:02	KWP11	0.00756	20.67963	System constraint
8/17/2019 8:46	0:01	SSA3	0.01949	0.15000	System constraint
8/17/2019 8:47	0:04	ESA	Data is not available	Data is not available	System constraint
8/17/2019 8:47	0:04	ESB	Data is not available	Data is not available	System constraint
8/17/2019 8:47	0:01	SSA2	0.01867	0.01100	System constraint
8/17/2019 8:47	0:01	SSA3	0.01992	0.05000	System constraint
8/17/2019 8:47	0:01	SSA2	0.01867	0.05200	System constraint
8/17/2019 8:48	0:01	KWP11	0.00923	20.59480	System constraint
8/17/2019 8:48	0:02	SSA3	0.03985	0.01300	System constraint
8/17/2019 8:48	0:01	SSA2	0.01867	0.04000	System constraint
8/17/2019 8:49	0:02	SSA2	0.03734	0.00100	System constraint
8/17/2019 8:49	0:01	SSA3	0.02036	0.05400	System constraint



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Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
8/17/2019 8:50	0:01	SSA3	0.01992	0.16000	System constraint
8/17/2019 8:51	0:01	KWP11	0.00095	20.45309	System constraint
8/17/2019 8:51	0:01	SSA3	0.01992	0.08000	System constraint
8/17/2019 8:51	0:01	SSA2	0.01867	0.04300	System constraint
8/17/2019 8:52	0:02	SSA3	0.03941	0.06400	System constraint
8/17/2019 8:52	0:01	SSA2	0.01867	0.08500	System constraint
8/17/2019 8:53	0:33	ESA	Data is not available	Data is not available	System constraint
8/17/2019 8:53	0:33	ESB	Data is not available	Data is not available	System constraint
8/17/2019 8:53	0:32	KWP11	2.34228	20.65867	System constraint
8/17/2019 8:53	0:01	SSA2	0.01867	0.12500	System constraint
8/17/2019 8:53	0:31	SSA3	0.90644	0.09100	System constraint
8/17/2019 8:53	0:31	SSA2	0.77627	0.02100	System constraint
8/17/2019 9:24	0:01	SSA3	0.02298	0.07900	System constraint
8/17/2019 9:25	0:01	SSA2	0.02107	0.02300	System constraint
8/17/2019 9:25	0:01	SSA3	0.02200	0.00800	System constraint
8/17/2019 9:25	0:01	SSA2	0.02107	0.01400	System constraint
8/17/2019 9:26	0:01	KWP11	0.00592	19.27451	System constraint
8/17/2019 9:26	0:01	SSA3	0.02249	0.32800	System constraint
8/17/2019 9:26	0:01	SSA2	0.02067	0.43000	System constraint
8/17/2019 9:27	0:01	SSA3	0.02249	0.76500	System constraint
8/17/2019 9:27	0:01	SSA2	0.02107	0.96700	System constraint
8/17/2019 9:28	0:01	SSA3	0.02200	0.81200	System constraint
8/17/2019 9:28	0:01	SSA2	0.02107	1.00500	System constraint
8/17/2019 9:28	0:01	SSA3	0.02200	0.93200	System constraint
8/17/2019 10:37	0:01	SSA3	-0.00119	2.72300	System constraint
8/17/2019 10:37	0:01	SSA2	0.00057	2.25900	System constraint
8/17/2019 10:37	0:01	SSA3	-0.00117	2.71200	System constraint
8/17/2019 10:38	0:01	SSA3	-0.00122	1.87800	System constraint
8/17/2019 10:38	0:01	SSA2	0.00057	1.79300	System constraint
8/17/2019 10:40	0:01	SSA3	-0.00122	2.72700	System constraint
8/17/2019 10:50	0:01	SSA3	0.00010	2.75300	System constraint
8/17/2019 10:50	0:01	SSA2	-0.00227	2.81500	System constraint
8/17/2019 10:50	0:02	SSA3	0.00019	2.77200	System constraint
8/17/2019 10:51	0:01	SSA2	-0.00227	2.30000	System constraint
8/17/2019 10:52	0:01	SSA3	0.00010	2.64000	System constraint
8/18/2019 7:40	0:01	SSA3	0.00022	0.78400	Oversupply
8/18/2019 7:41	0:01	SSA2	0.00250	0.38600	Oversupply
8/18/2019 10:14	0:01	SSA3	-0.00698	1.51800	Oversupply
8/18/2019 10:15	0:01	SSA2	-0.00197	2.42600	Oversupply
8/18/2019 10:15	0:01	SSA3	0.00714	1.96400	Oversupply
8/18/2019 10:15	0:01	SSA2	-0.00197	2.49800	Oversupply
8/18/2019 10:16	0:01	SSA3	0.00730	2.27300	Oversupply
8/18/2019 10:16	0:01	SSA2	-0.00197	2.49700	Oversupply
8/18/2019 13:15	0:01	SSA3	0.00294	2.21400	Oversupply
8/18/2019 13:15	0:01	SSA2	0.00009	2.68200	Oversupply
8/18/2019 13:21	0:01	SSA2	0.00009	2.89600	Oversupply
8/18/2019 13:43	0:01	SSA3	0.00024	2.89900	Oversupply
8/18/2019 13:45	0:01	SSA3	0.00614	2.91100	Oversupply
8/18/2019 13:46	0:01	SSA2	0.00766	2.75100	Oversupply
8/18/2019 13:46	0:01	SSA2	0.00766	2.89100	Oversupply
8/18/2019 13:47	0:01	SSA3	0.00601	2.85300	Oversupply
8/18/2019 13:47	0:01	SSA2	0.00766	2.55100	Oversupply
8/18/2019 13:47	0:01	SSA3	0.00614	2.53200	Oversupply
8/18/2019 13:48	0:01	SSA2	0.00751	2.23400	Oversupply
8/18/2019 13:48	0:01	SSA3	0.00614	2.25700	Oversupply
8/18/2019 13:49	0:01	SSA3	0.00601	2.23400	Oversupply
8/18/2019 13:49	0:01	SSA2	0.00766	2.21900	Oversupply
8/18/2019 13:50	0:01	SSA3	0.00601	1.86100	Oversupply
8/18/2019 13:50	0:01	SSA2	0.00766	1.83200	Oversupply
8/18/2019 13:50	0:01	SSA3	0.00587	1.83300	Oversupply
8/18/2019 13:51	0:01	SSA2	0.00766	1.73800	Oversupply
8/18/2019 13:51	0:01	SSA3	0.00601	1.67400	Oversupply
8/18/2019 13:52	0:01	SSA2	0.00766	1.46600	Oversupply
8/18/2019 13:52	0:01	SSA3	0.00614	1.49300	Oversupply
8/18/2019 13:52	0:01	SSA2	0.00766	1.66800	Oversupply
8/18/2019 13:53	0:01	SSA3	0.00614	1.85100	Oversupply
8/18/2019 13:53	0:01	SSA2	0.00766	2.19200	Oversupply
8/18/2019 13:54	0:01	SSA3	0.00601	2.38100	Oversupply
8/18/2019 14:05	0:01	SSA2	0.00378	2.79700	Oversupply
8/18/2019 14:05	0:02	SSA3	0.00504	2.46600	Oversupply
8/18/2019 14:05	0:01	SSA2	0.00378	2.60900	Oversupply
8/18/2019 14:06	0:01	SSA2	0.00378	2.43800	Oversupply
8/18/2019 14:07	0:01	SSA3	0.00247	2.20100	Oversupply



**Maui Curtailment Report**

**August 2019**

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
8/18/2019 14:07	0:01	SSA2	0.00378	1.95200	Oversupply
8/18/2019 14:07	0:01	SSA3	0.00258	1.63900	Oversupply
8/18/2019 14:08	0:01	SSA2	0.00378	1.83600	Oversupply
8/18/2019 14:08	0:01	SSA3	0.00258	2.00600	Oversupply
8/18/2019 14:09	0:01	SSA2	0.00378	2.45900	Oversupply
8/18/2019 14:10	0:01	SSA2	0.00378	2.66500	Oversupply
8/18/2019 14:10	0:01	SSA3	0.00268	2.50500	Oversupply
8/18/2019 14:11	0:01	SSA3	0.00247	2.36100	Oversupply
8/18/2019 14:11	0:01	SSA2	0.00378	2.50200	Oversupply
8/18/2019 14:13	0:01	SSA3	0.00258	2.91200	Oversupply
8/18/2019 14:13	0:01	SSA2	0.00378	2.89800	Oversupply
8/18/2019 14:14	0:01	SSA3	0.00252	2.64200	Oversupply
8/18/2019 14:14	0:01	SSA2	0.00217	2.70800	Oversupply
8/18/2019 14:14	0:01	SSA3	-0.00036	2.72700	Oversupply
8/18/2019 14:15	0:01	SSA2	0.00055	2.41400	Oversupply
8/18/2019 14:29	0:01	SSA2	0.00044	1.84700	Oversupply
8/20/2019 8:32	0:01	SSA2	0.00237	0.60200	System constraint
8/20/2019 8:32	0:01	SSA3	0.00096	1.18900	System constraint
8/20/2019 8:33	0:01	SSA2	0.00237	0.97600	System constraint
8/20/2019 8:33	0:01	SSA3	0.00094	0.95000	System constraint
8/20/2019 8:33	0:01	SSA2	0.00237	0.85500	System constraint
8/20/2019 8:34	0:01	SSA3	0.00094	0.75700	System constraint
8/20/2019 8:34	0:01	SSA2	0.00237	0.63300	System constraint
8/20/2019 8:35	0:01	SSA3	0.00096	0.84300	System constraint
8/20/2019 8:35	0:01	SSA2	0.00237	0.61300	System constraint
8/20/2019 8:36	0:01	SSA2	0.00237	0.98000	System constraint
8/20/2019 8:36	0:01	SSA3	0.00096	1.27700	System constraint
8/20/2019 8:37	0:01	SSA2	0.00237	1.20600	System constraint
8/20/2019 8:37	0:01	SSA3	0.00094	1.36000	System constraint
8/20/2019 8:40	0:01	SSA3	0.00096	1.61100	System constraint
8/20/2019 9:21	0:01	SSA2	0.00947	1.85600	System constraint
8/20/2019 9:21	0:01	SSA3	0.00941	2.11200	System constraint
8/20/2019 9:22	0:01	SSA2	0.00947	1.86700	System constraint
8/20/2019 9:22	0:01	SSA3	0.00901	2.06100	System constraint
8/20/2019 9:23	0:01	SSA3	0.00921	1.00900	System constraint
8/20/2019 9:23	0:01	SSA2	0.00929	1.03500	System constraint
8/20/2019 9:24	0:01	SSA3	0.00921	0.59700	System constraint
8/20/2019 9:24	0:01	SSA2	0.00947	0.49600	System constraint
8/20/2019 9:24	0:01	SSA3	0.00921	0.30100	System constraint
8/20/2019 9:25	0:01	SSA2	0.00947	0.43000	System constraint
8/20/2019 9:25	0:01	SSA3	0.00921	0.24800	System constraint
8/20/2019 9:25	0:01	SSA2	0.00947	0.49700	System constraint
8/20/2019 9:26	0:01	SSA3	0.00901	0.51800	System constraint
8/20/2019 9:26	0:01	SSA2	0.00947	0.18500	System constraint
8/20/2019 9:27	0:01	SSA3	0.00901	0.25200	System constraint
8/20/2019 9:27	0:55	SSA2	1.87091	0.11000	System constraint
8/20/2019 9:27	0:55	SSA3	2.01425	-0.00200	System constraint
8/20/2019 9:29	0:54	KWP11	3.98764	19.06793	System constraint
8/20/2019 10:22	0:01	SSA3	0.03116	0.05100	System constraint
8/20/2019 10:22	0:01	SSA2	0.03207	0.01100	System constraint
8/20/2019 10:23	0:01	SSA3	0.02984	0.00600	System constraint
8/20/2019 10:23	0:01	SSA2	0.03336	0.00400	System constraint
8/20/2019 10:24	0:01	SSA3	0.03050	0.26300	System constraint
8/20/2019 10:24	0:01	SSA2	0.03336	0.25800	System constraint
8/20/2019 10:25	0:01	SSA3	0.03116	0.33300	System constraint
8/20/2019 10:25	0:01	SSA2	0.03336	0.45400	System constraint
8/20/2019 10:25	0:01	SSA3	0.03050	0.60600	System constraint
8/20/2019 10:26	0:01	SSA2	0.03272	0.44300	System constraint
8/20/2019 10:26	0:01	SSA3	0.03116	0.59900	System constraint
8/20/2019 10:27	0:01	SSA2	0.03272	0.40800	System constraint
8/20/2019 10:27	0:01	SSA3	0.03116	0.27500	System constraint
8/20/2019 10:27	0:01	SSA2	0.03336	0.45100	System constraint
8/20/2019 10:28	0:01	SSA3	0.02984	0.39300	System constraint
8/20/2019 10:28	0:01	SSA2	0.03336	0.17800	System constraint
8/20/2019 10:28	0:01	SSA3	0.03050	0.21100	System constraint
8/20/2019 10:29	0:01	SSA2	0.03054	0.22100	System constraint
8/20/2019 10:29	0:01	SSA3	0.02842	0.18100	System constraint
8/20/2019 10:30	0:02	SSA3	0.08701	0.00700	System constraint
8/20/2019 10:30	0:02	SSA2	0.06333	0.01200	System constraint
8/20/2019 10:31	0:02	KWP11	0.00999	17.87138	System constraint
8/20/2019 10:32	0:01	SSA2	0.03166	-0.00300	System constraint
8/20/2019 10:32	0:01	SSA3	0.02900	0.02700	System constraint
8/20/2019 10:33	0:01	SSA2	0.03106	-0.00300	System constraint



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**August 2019**

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
8/20/2019 10:33	0:01	SSA3	0.02900	0.09700	System constraint
8/20/2019 10:33	0:01	SSA2	0.03106	-0.00300	System constraint
8/20/2019 10:34	0:01	SSA3	0.02837	0.14300	System constraint
8/20/2019 10:34	0:01	SSA2	0.03349	-0.00200	System constraint
8/20/2019 10:35	0:01	SSA3	0.02900	0.14300	System constraint
8/20/2019 10:35	0:01	SSA2	0.03045	-0.00300	System constraint
8/20/2019 10:35	0:01	SSA3	0.02900	0.14500	System constraint
8/20/2019 10:36	0:01	SSA2	0.03106	0.06100	System constraint
8/20/2019 10:36	0:01	SSA3	0.02837	0.23900	System constraint
8/20/2019 10:37	0:01	SSA3	0.02963	0.50900	System constraint
8/20/2019 10:37	0:01	SSA2	0.03106	0.27000	System constraint
8/20/2019 10:38	0:01	SSA3	0.02837	0.86700	System constraint
8/20/2019 10:38	0:01	SSA2	0.03106	0.53400	System constraint
8/20/2019 10:38	0:01	SSA3	0.02837	0.62400	System constraint
8/20/2019 10:39	0:01	SSA2	0.03045	0.51500	System constraint
8/20/2019 10:39	0:01	SSA3	0.02837	0.71600	System constraint
8/20/2019 10:39	0:01	SSA2	0.03166	0.75000	System constraint
8/20/2019 10:40	0:01	SSA3	0.02963	1.32300	System constraint
8/20/2019 10:40	0:01	SSA2	0.03166	1.00800	System constraint
8/20/2019 10:41	0:01	SSA3	0.02900	0.95100	System constraint
8/20/2019 10:41	0:01	SSA2	0.03106	0.95200	System constraint
8/20/2019 10:41	0:01	SSA3	0.02963	1.15900	System constraint
8/20/2019 10:42	0:01	SSA2	0.03045	0.94500	System constraint
8/20/2019 10:42	0:01	SSA3	0.02837	0.76500	System constraint
8/20/2019 10:43	0:01	SSA2	0.03106	0.30300	System constraint
8/20/2019 10:43	0:01	SSA3	0.02900	0.23200	System constraint
8/20/2019 10:44	0:01	SSA2	0.03106	0.31900	System constraint
8/20/2019 10:44	0:01	SSA3	0.02900	0.43700	System constraint
8/20/2019 10:44	0:01	SSA3	0.01778	0.94800	System constraint
8/20/2019 10:44	0:01	SSA2	0.01517	0.80700	System constraint
8/20/2019 10:45	0:01	SSA3	0.01351	1.42700	System constraint
8/20/2019 10:45	0:01	SSA2	0.01361	1.35900	System constraint
8/20/2019 10:46	0:01	SSA3	0.01381	1.42200	System constraint
8/20/2019 10:46	0:01	SSA2	0.01443	1.29100	System constraint
8/20/2019 10:47	0:01	SSA3	0.01351	0.97500	System constraint
8/20/2019 10:47	0:01	SSA2	0.01388	0.88800	System constraint
8/20/2019 10:47	0:01	SSA3	0.01381	0.84700	System constraint
8/20/2019 10:48	0:01	SSA2	0.01361	0.82300	System constraint
8/20/2019 10:48	0:01	SSA3	0.01381	0.95700	System constraint
8/20/2019 10:49	0:01	SSA2	0.01416	1.25500	System constraint
8/20/2019 10:49	0:01	SSA3	0.01561	1.06100	System constraint
8/20/2019 10:50	0:01	SSA2	0.01361	1.06100	System constraint
8/20/2019 10:50	0:01	SSA3	0.01351	1.30600	System constraint
8/20/2019 10:50	0:01	SSA2	0.01416	1.19700	System constraint
8/20/2019 10:51	0:01	SSA3	0.01351	0.99000	System constraint
8/20/2019 10:51	0:01	SSA2	0.01388	1.36900	System constraint
8/20/2019 10:51	0:01	SSA3	0.01381	1.31200	System constraint
8/20/2019 10:52	0:01	SSA3	0.01411	1.23300	System constraint
8/20/2019 10:52	0:01	SSA2	0.01416	1.23100	System constraint
8/20/2019 10:53	0:01	SSA3	0.01381	1.41500	System constraint
8/20/2019 10:53	0:01	SSA2	0.01416	1.68100	System constraint
8/20/2019 10:54	0:01	SSA3	0.01411	1.55300	System constraint
8/20/2019 10:54	0:01	SSA2	0.01416	1.81600	System constraint
8/20/2019 10:54	0:01	SSA3	0.01411	1.79900	System constraint
8/20/2019 10:55	0:01	SSA2	0.01416	2.19800	System constraint
8/20/2019 10:57	0:01	SSA2	0.01388	2.89000	System constraint
8/20/2019 10:57	0:01	SSA3	0.01351	1.69500	System constraint
8/20/2019 10:59	0:01	SSA2	0.01031	1.45200	System constraint
8/20/2019 11:00	0:01	SSA3	0.00605	2.11700	System constraint
8/20/2019 11:00	0:01	SSA2	0.00802	1.38100	System constraint
8/20/2019 11:01	0:01	SSA3	0.00592	1.95400	System constraint
8/20/2019 11:01	0:01	SSA2	0.00802	1.99700	System constraint
8/20/2019 11:01	0:01	SSA3	0.00592	1.76800	System constraint
8/20/2019 11:02	0:01	SSA2	0.00802	2.21200	System constraint
8/20/2019 11:02	0:01	SSA3	0.00605	2.27300	System constraint
8/20/2019 11:03	0:01	SSA2	0.00802	2.32600	System constraint
8/20/2019 11:03	0:01	SSA3	0.00605	2.32100	System constraint
8/20/2019 11:03	0:01	SSA2	0.00802	2.35600	System constraint
8/20/2019 11:04	0:01	SSA3	0.00592	2.32600	System constraint
8/20/2019 11:04	0:01	SSA2	0.00802	2.23900	System constraint
8/20/2019 11:05	0:01	SSA3	0.00592	1.88600	System constraint
8/20/2019 11:05	0:01	SSA2	0.00802	1.95800	System constraint
8/20/2019 11:05	0:01	SSA3	0.00605	1.98900	System constraint



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Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
8/20/2019 11:06	0:01	SSA2	0.00802	1.93700	System constraint
8/20/2019 11:06	0:01	SSA3	0.00592	1.86800	System constraint
8/20/2019 11:07	0:01	SSA3	0.00605	1.71300	System constraint
8/20/2019 11:07	0:01	SSA2	0.00802	1.70500	System constraint
8/20/2019 11:31	0:01	SSA3	0.00024	2.73900	System constraint
8/20/2019 11:33	0:01	SSA3	0.00024	2.90000	System constraint
8/20/2019 12:13	0:01	SSA3	0.00074	2.77500	System constraint
8/20/2019 12:13	0:01	SSA3	0.00074	2.83400	System constraint
8/20/2019 12:13	0:01	SSA2	0.00165	2.33000	System constraint
8/20/2019 12:14	0:01	SSA3	0.00046	2.83900	System constraint
8/20/2019 12:15	0:01	SSA3	0.00018	2.91700	System constraint
8/21/2019 8:09	0:01	AWE	0.00333	0.20000	System constraint
8/21/2019 8:48	0:01	AWE	0.00667	0.40000	System constraint
8/21/2019 12:47	0:01	SSA3	0.00395	2.36900	System constraint
8/21/2019 12:47	0:01	SSA2	0.00482	2.82600	System constraint
8/22/2019 10:26	0:01	SSA3	0.00132	1.21900	System constraint
8/22/2019 10:26	0:01	SSA2	-0.00091	2.52600	System constraint
8/22/2019 10:27	0:01	SSA2	-0.00091	2.53700	System constraint
8/22/2019 10:27	0:01	SSA3	0.00122	1.65100	System constraint
8/22/2019 10:28	0:01	SSA2	-0.00091	2.33800	System constraint
8/22/2019 10:28	0:01	SSA3	0.00119	1.71300	System constraint
8/22/2019 10:29	0:01	SSA2	0.00109	1.89500	System constraint
8/22/2019 10:29	0:01	SSA3	0.00280	2.00300	System constraint
8/22/2019 10:30	0:01	SSA3	0.01160	1.53900	System constraint
8/22/2019 10:30	0:01	SSA2	0.00974	1.50600	System constraint
8/22/2019 10:30	0:01	SSA3	0.01185	1.13800	System constraint
8/22/2019 10:31	0:01	SSA2	0.00974	1.04300	System constraint
8/22/2019 10:31	0:01	SSA3	0.01160	1.01300	System constraint
8/22/2019 10:31	0:01	SSA2	0.00974	0.79200	System constraint
8/22/2019 10:32	0:01	SSA3	0.01185	0.83500	System constraint
8/22/2019 10:32	0:01	SSA2	0.00974	0.94400	System constraint
8/22/2019 10:33	0:01	SSA3	0.01185	1.14000	System constraint
8/22/2019 10:33	0:01	SSA2	0.00974	1.23500	System constraint
8/22/2019 10:34	0:01	SSA3	0.01160	1.18200	System constraint
8/22/2019 10:34	0:01	SSA2	0.00974	1.19500	System constraint
8/22/2019 10:34	0:01	SSA3	0.01160	1.29500	System constraint
8/22/2019 10:35	0:01	SSA2	0.00974	1.72100	System constraint
8/22/2019 10:35	0:01	SSA3	0.01185	1.60900	System constraint
8/22/2019 10:36	0:01	SSA2	0.00974	1.29800	System constraint
8/22/2019 10:36	0:01	SSA3	0.01134	1.32800	System constraint
8/22/2019 10:37	0:01	SSA3	0.01134	1.06300	System constraint
8/22/2019 10:37	0:01	SSA2	0.00974	1.51700	System constraint
8/22/2019 10:37	0:01	SSA3	0.01185	1.46500	System constraint
8/22/2019 10:38	0:01	SSA2	0.00974	1.70700	System constraint
8/22/2019 10:38	0:01	SSA3	0.01134	2.00600	System constraint
8/22/2019 10:38	0:01	SSA2	0.00974	2.26100	System constraint
8/22/2019 10:39	0:01	SSA3	0.01160	2.41500	System constraint
8/22/2019 10:39	0:01	SSA2	0.00974	2.08000	System constraint
8/22/2019 10:40	0:01	SSA3	0.01160	1.95700	System constraint
8/22/2019 10:40	0:01	SSA2	0.00974	2.25700	System constraint
8/22/2019 10:55	0:01	SSA3	0.00589	2.94600	System constraint
8/22/2019 10:57	0:01	SSA2	-0.00018	2.77400	System constraint
8/22/2019 10:58	0:01	SSA3	0.00577	2.22600	System constraint
8/22/2019 10:58	0:01	SSA2	-0.00018	2.77300	System constraint
8/22/2019 10:59	0:01	SSA3	0.00460	2.08500	System constraint
8/22/2019 10:59	0:01	SSA2	0.00228	2.78700	System constraint
8/22/2019 11:01	0:01	SSA3	0.00691	2.04900	System constraint
8/22/2019 11:01	0:02	SSA2	0.01118	2.69800	System constraint
8/22/2019 11:03	0:01	SSA2	0.00559	2.79300	System constraint
8/22/2019 11:04	0:01	SSA3	0.00706	2.83600	System constraint
8/22/2019 11:04	0:02	SSA2	0.01118	2.13700	System constraint
8/22/2019 11:05	0:01	SSA3	0.00691	2.39000	System constraint
8/22/2019 11:05	0:01	SSA3	0.00691	1.98500	System constraint
8/22/2019 11:06	0:01	SSA3	0.00706	1.84400	System constraint
8/22/2019 11:06	0:01	SSA2	0.00559	1.84700	System constraint
8/22/2019 11:07	0:01	SSA3	0.00706	2.04200	System constraint
8/22/2019 11:07	0:01	SSA2	0.00559	1.46000	System constraint
8/22/2019 11:08	0:01	SSA3	0.00691	2.11800	System constraint
8/22/2019 11:08	0:01	SSA2	0.00559	2.08600	System constraint
8/22/2019 11:08	0:01	SSA3	0.00706	2.30200	System constraint
8/22/2019 11:09	0:01	SSA2	0.00559	2.25200	System constraint
8/22/2019 11:09	0:01	SSA3	0.00691	2.47800	System constraint
8/22/2019 11:10	0:02	SSA2	0.01118	2.37600	System constraint



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8/22/2019 11:10	0:01	SSA3	0.00691	2.23900	System constraint
8/22/2019 11:11	0:01	SSA3	0.00706	1.96900	System constraint
8/22/2019 11:11	0:01	SSA2	0.00559	2.35400	System constraint
8/22/2019 11:12	0:01	SSA3	0.00706	2.37000	System constraint
8/22/2019 11:12	0:01	SSA2	0.00559	2.20100	System constraint
8/22/2019 11:12	0:01	SSA3	0.00691	2.32000	System constraint
8/22/2019 11:13	0:01	SSA2	0.00559	2.20100	System constraint
8/22/2019 11:13	0:01	SSA3	0.00706	2.14000	System constraint
8/22/2019 11:14	0:01	SSA3	0.00689	1.83600	System constraint
8/22/2019 11:14	0:01	SSA2	0.00564	2.08700	System constraint
8/22/2019 11:17	0:01	SSA2	0.00712	2.89300	System constraint
8/22/2019 11:18	0:01	SSA3	0.00713	2.91200	System constraint
8/22/2019 11:18	0:01	SSA3	0.00713	2.79600	System constraint
8/22/2019 11:19	0:01	SSA2	0.00712	2.53500	System constraint
8/22/2019 11:19	0:01	SSA3	0.00698	2.44000	System constraint
8/22/2019 11:20	0:01	SSA2	0.00712	2.13000	System constraint
8/22/2019 11:20	0:01	SSA3	0.00713	2.25600	System constraint
8/22/2019 11:21	0:01	SSA2	0.00712	2.19100	System constraint
8/22/2019 11:21	0:01	SSA3	0.00713	2.22700	System constraint
8/22/2019 11:22	0:01	SSA3	0.00698	1.84200	System constraint
8/22/2019 11:22	0:01	SSA2	0.00712	1.69400	System constraint
8/22/2019 11:22	0:01	SSA3	0.00713	1.25400	System constraint
8/22/2019 11:23	0:01	SSA2	0.00712	1.10100	System constraint
8/22/2019 11:23	0:01	SSA3	0.00713	1.47900	System constraint
8/22/2019 11:23	0:01	SSA2	0.00712	1.59600	System constraint
8/22/2019 11:24	0:01	SSA3	0.00682	2.02400	System constraint
8/22/2019 11:24	0:01	SSA2	0.00712	2.20900	System constraint
8/22/2019 11:25	0:01	SSA3	0.00682	2.23400	System constraint
8/22/2019 11:25	0:01	SSA2	0.00712	2.31400	System constraint
8/22/2019 11:25	0:01	SSA3	0.00713	2.46800	System constraint
8/22/2019 11:26	0:01	SSA2	0.00712	2.46700	System constraint
8/22/2019 11:26	0:01	SSA3	0.00698	2.18800	System constraint
8/22/2019 11:27	0:01	SSA2	0.00712	2.31700	System constraint
8/22/2019 11:27	0:01	SSA3	0.00698	2.42300	System constraint
8/22/2019 11:28	0:01	SSA2	0.00712	2.15400	System constraint
8/22/2019 11:28	0:01	SSA3	0.00713	2.24200	System constraint
8/22/2019 11:29	0:01	SSA3	0.00698	2.50500	System constraint
8/22/2019 11:29	0:01	SSA3	0.00213	2.61700	System constraint
8/22/2019 11:29	0:01	SSA2	0.00059	2.58300	System constraint
8/22/2019 11:30	0:01	SSA3	0.00049	2.21900	System constraint
8/22/2019 11:30	0:01	SSA2	0.00124	1.60300	System constraint
8/22/2019 11:31	0:01	SSA3	0.00050	2.37800	System constraint
8/22/2019 13:56	0:01	SSA3	0.00095	2.89600	System constraint
8/22/2019 13:57	0:01	SSA2	0.00147	2.65800	System constraint
8/22/2019 13:58	0:01	SSA2	0.00147	2.50600	System constraint
8/22/2019 13:58	0:01	SSA3	0.00095	2.70500	System constraint
8/22/2019 13:58	0:01	SSA2	0.00147	2.32800	System constraint
8/22/2019 13:59	0:01	SSA3	0.00095	2.30500	System constraint
8/22/2019 13:59	0:01	SSA2	0.00248	2.48300	System constraint
8/22/2019 14:00	0:01	SSA3	0.00079	2.63900	System constraint
8/22/2019 14:00	0:01	SSA2	0.00269	2.58100	System constraint
8/22/2019 14:00	0:01	SSA3	0.00079	2.72800	System constraint
8/22/2019 14:01	0:01	SSA3	0.00081	2.64600	System constraint
8/22/2019 14:01	0:01	SSA2	0.00269	2.52500	System constraint
8/22/2019 14:02	0:01	SSA3	0.00079	2.19500	System constraint
8/22/2019 14:02	0:01	SSA2	0.00269	2.18100	System constraint
8/22/2019 14:03	0:01	SSA2	0.00263	2.83000	System constraint
8/22/2019 14:04	0:01	SSA2	0.00269	2.90200	System constraint
8/22/2019 14:04	0:01	SSA3	0.00079	2.65300	System constraint
8/22/2019 14:05	0:01	SSA2	0.00269	1.64900	System constraint
8/22/2019 14:05	0:01	SSA3	0.00077	2.40100	System constraint
8/22/2019 14:05	0:01	SSA2	0.00269	2.40100	System constraint
8/23/2019 0:53	0:02	KWP11	0.00821	19.94015	Oversupply
8/23/2019 0:57	0:04	KWP11	0.04615	20.41118	Oversupply
8/23/2019 1:04	0:02	KWP11	0.00396	19.99803	Oversupply
8/23/2019 1:07	0:02	KWP11	0.00484	20.39821	Oversupply
8/23/2019 1:10	0:50	KWP11	1.83234	20.66067	Oversupply
8/23/2019 2:31	0:05	KWP11	0.09531	16.50219	Oversupply
8/23/2019 2:48	0:05	KWP11	0.10570	16.63192	Oversupply
8/23/2019 2:56	0:03	KWP11	0.02229	14.17795	Oversupply
8/23/2019 3:54	0:02	KWP11	0.01797	11.69803	Oversupply
8/23/2019 3:57	0:05	KWP11	0.13724	12.90256	Oversupply
8/24/2019 5:43	0:32	ESA	Data is not available	Data is not available	System constraint



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8/24/2019 5:43	0:32	ESB	Data is not available	Data is not available	System constraint
8/24/2019 5:43	0:33	KWP11	2.34790	15.48028	System constraint
8/24/2019 8:08	0:01	SSA3	-0.00063	1.17000	System constraint
8/24/2019 8:09	0:01	SSA2	0.00137	0.72400	System constraint
8/24/2019 8:09	0:01	SSA2	0.00139	0.78500	System constraint
8/24/2019 8:27	0:01	SSA3	-0.00075	1.43600	System constraint
8/24/2019 8:28	0:01	SSA2	0.00049	0.85700	System constraint
8/24/2019 8:28	0:01	SSA2	0.00049	0.73000	System constraint
8/24/2019 8:29	0:01	SSA3	-0.00146	0.98300	System constraint
8/24/2019 8:30	0:01	SSA3	-0.00096	1.36000	System constraint
8/24/2019 8:30	0:01	SSA2	0.00070	0.94600	System constraint
8/24/2019 10:56	0:01	SSA2	0.00215	1.69800	System constraint
8/24/2019 10:57	0:01	SSA3	-0.00043	2.78800	System constraint
8/24/2019 10:57	0:01	SSA2	0.00215	1.59100	System constraint
8/24/2019 10:57	0:01	SSA3	-0.00044	2.79200	System constraint
8/24/2019 10:58	0:01	SSA2	0.00215	1.38900	System constraint
8/24/2019 10:58	0:01	SSA3	-0.00045	2.80200	System constraint
8/24/2019 10:59	0:01	SSA3	0.00635	2.04400	System constraint
8/24/2019 10:59	0:01	SSA2	0.00249	1.25100	System constraint
8/24/2019 11:00	0:01	SSA3	0.01771	1.46700	System constraint
8/24/2019 11:00	0:01	SSA2	0.01619	0.86800	System constraint
8/24/2019 11:01	0:01	SSA3	0.01811	0.94100	System constraint
8/24/2019 11:01	0:01	SSA2	0.01651	0.28300	System constraint
8/24/2019 11:01	0:01	SSA3	0.01850	0.64500	System constraint
8/24/2019 11:02	0:01	SSA2	0.01651	0.37700	System constraint
8/24/2019 11:02	0:01	SSA3	0.01850	0.61700	System constraint
8/24/2019 11:03	0:01	SSA2	0.01651	0.42800	System constraint
8/24/2019 11:03	0:01	SSA3	0.01811	0.41700	System constraint
8/24/2019 11:03	0:01	SSA2	0.01651	0.69100	System constraint
8/24/2019 11:04	0:01	SSA3	0.01850	0.82600	System constraint
8/24/2019 11:04	0:01	SSA2	0.01651	0.89400	System constraint
8/24/2019 11:04	0:01	SSA3	0.01811	0.94900	System constraint
8/24/2019 11:05	0:01	SSA2	0.01651	1.35600	System constraint
8/24/2019 11:05	0:01	SSA3	0.01811	1.45500	System constraint
8/24/2019 11:06	0:01	SSA3	0.01850	1.89500	System constraint
8/24/2019 11:06	0:01	SSA2	0.01651	1.28700	System constraint
8/24/2019 11:08	0:01	SSA3	0.01811	2.45500	System constraint
8/24/2019 11:08	0:01	SSA2	0.01651	2.09000	System constraint
8/24/2019 11:08	0:01	SSA3	0.01850	1.92500	System constraint
8/24/2019 11:09	0:01	SSA2	0.01651	1.96300	System constraint
8/24/2019 11:09	0:01	SSA3	0.01771	1.95100	System constraint
8/24/2019 11:09	0:01	SSA2	0.01651	2.00800	System constraint
8/24/2019 11:10	0:01	SSA3	0.01771	1.83200	System constraint
8/24/2019 11:10	0:01	SSA2	0.01651	1.81100	System constraint
8/24/2019 11:11	0:01	SSA3	0.01850	1.99300	System constraint
8/24/2019 11:11	0:01	SSA2	0.01651	1.65000	System constraint
8/24/2019 11:11	0:01	SSA3	0.01850	1.63800	System constraint
8/24/2019 11:12	0:01	SSA2	0.01651	1.50300	System constraint
8/24/2019 11:12	0:01	SSA3	0.01811	1.48300	System constraint
8/24/2019 11:13	0:01	SSA3	0.01850	1.17400	System constraint
8/24/2019 11:13	0:01	SSA2	0.01651	0.85100	System constraint
8/24/2019 11:14	0:01	SSA3	0.01850	0.61000	System constraint
8/24/2019 11:14	0:01	SSA2	0.01711	0.66400	System constraint
8/24/2019 11:14	0:01	SSA3	0.01781	0.99400	System constraint
8/24/2019 11:15	0:01	SSA2	0.01258	1.16400	System constraint
8/24/2019 11:15	0:01	SSA3	0.01845	1.54000	System constraint
8/24/2019 11:16	0:01	SSA2	0.01258	1.42500	System constraint
8/24/2019 11:16	0:01	SSA3	0.01845	2.07500	System constraint
8/24/2019 11:16	0:01	SSA2	0.01258	1.44600	System constraint
8/24/2019 11:17	0:01	SSA3	0.01884	1.96800	System constraint
8/24/2019 11:17	0:01	SSA2	0.01258	0.53200	System constraint
8/24/2019 11:18	0:01	SSA3	0.01767	1.90800	System constraint
8/24/2019 11:18	0:01	SSA2	0.01258	1.71400	System constraint
8/24/2019 11:18	0:01	SSA3	0.01845	2.24800	System constraint
8/24/2019 11:19	0:01	SSA2	0.01258	1.59800	System constraint
8/24/2019 11:19	0:01	SSA3	0.01806	1.94600	System constraint
8/24/2019 11:20	0:01	SSA2	0.01234	1.18500	System constraint
8/24/2019 11:20	0:01	SSA3	0.01845	2.09700	System constraint
8/24/2019 11:21	0:01	SSA3	0.01845	1.91100	System constraint
8/24/2019 11:21	0:01	SSA2	0.01258	0.91400	System constraint
8/24/2019 11:21	0:01	SSA3	0.01806	1.66400	System constraint
8/24/2019 11:22	0:01	SSA2	0.01258	0.75100	System constraint
8/24/2019 11:22	0:01	SSA3	0.01845	1.46300	System constraint





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8/24/2019 11:22	0:01	SSA2	0.01258	0.58100	System constraint
8/24/2019 11:23	0:01	SSA3	0.01845	0.92200	System constraint
8/24/2019 11:23	0:01	SSA2	0.01258	0.25700	System constraint
8/24/2019 11:24	0:01	SSA3	0.01806	0.86400	System constraint
8/24/2019 11:24	0:01	SSA2	0.01258	0.37000	System constraint
8/24/2019 11:25	0:01	SSA3	0.01806	0.61900	System constraint
8/24/2019 11:25	0:01	SSA2	0.01210	0.19200	System constraint
8/24/2019 11:25	0:01	SSA3	0.01806	0.71600	System constraint
8/24/2019 11:26	0:01	SSA2	0.01258	0.61500	System constraint
8/24/2019 11:26	0:01	SSA3	0.01806	1.14700	System constraint
8/24/2019 11:27	0:01	SSA2	0.01258	0.38300	System constraint
8/24/2019 11:27	0:01	SSA3	0.01845	0.68800	System constraint
8/24/2019 11:28	0:01	SSA2	0.01258	0.51400	System constraint
8/24/2019 11:28	0:01	SSA3	0.01845	0.64000	System constraint
8/24/2019 11:28	0:01	SSA3	0.01806	0.61900	System constraint
8/24/2019 11:28	0:01	SSA2	0.01258	0.53900	System constraint
8/24/2019 11:29	0:01	SSA3	0.00927	0.58900	System constraint
8/24/2019 11:29	0:01	SSA2	-0.00090	1.14800	System constraint
8/24/2019 11:30	0:01	SSA3	0.00384	0.94400	System constraint
8/24/2019 11:30	0:01	SSA2	0.00674	1.39500	System constraint
8/24/2019 11:31	0:01	SSA3	0.00384	1.09600	System constraint
8/24/2019 11:31	0:01	SSA2	0.00674	1.84300	System constraint
8/24/2019 11:31	0:01	SSA3	0.00393	1.62400	System constraint
8/24/2019 11:32	0:01	SSA2	0.00648	2.06700	System constraint
8/24/2019 11:32	0:01	SSA3	0.00384	2.03500	System constraint
8/24/2019 11:33	0:01	SSA2	0.00674	1.69500	System constraint
8/24/2019 11:33	0:01	SSA3	0.00393	2.39500	System constraint
8/24/2019 12:09	0:01	SSA3	0.00263	2.59100	System constraint
8/24/2019 12:09	0:01	SSA2	0.00066	2.50200	System constraint
8/24/2019 14:44	0:01	SSA2	0.00361	2.80700	System constraint
8/24/2019 14:45	0:01	SSA3	-0.00041	2.84900	System constraint
8/24/2019 14:52	0:01	SSA2	0.00425	2.83300	System constraint
8/24/2019 14:52	0:01	SSA3	-0.00041	2.03600	System constraint
8/24/2019 14:53	0:01	SSA2	0.00425	2.41800	System constraint
8/24/2019 14:53	0:01	SSA3	-0.00040	1.87300	System constraint
8/24/2019 14:54	0:01	SSA2	0.00425	1.95200	System constraint
8/24/2019 14:54	0:01	SSA3	-0.00040	1.86400	System constraint
8/24/2019 14:55	0:01	SSA3	-0.00041	2.14800	System constraint
8/25/2019 0:59	0:25	KWPPII	0.47598	20.70657	System constraint
8/25/2019 3:19	0:22	KWPPII	1.50249	20.58482	System constraint
8/25/2019 3:42	0:23	KWPPII	1.49655	20.69260	System constraint
8/25/2019 4:06	1:53	KWPPII	8.93119	20.70757	System constraint
8/25/2019 8:20	0:01	SSA2	0.00349	1.20200	System constraint
8/25/2019 8:20	0:01	SSA3	0.00420	0.65000	System constraint
8/25/2019 8:21	0:01	SSA2	0.00349	0.84000	System constraint
8/25/2019 8:21	0:01	SSA3	0.00430	0.51200	System constraint
8/25/2019 8:21	0:01	SSA2	0.00349	0.32400	System constraint
8/25/2019 8:22	0:01	SSA3	0.00411	0.17800	System constraint
8/25/2019 8:22	0:01	SSA2	0.00349	0.16100	System constraint
8/25/2019 8:23	0:01	SSA3	0.00420	0.29300	System constraint
8/25/2019 8:23	0:01	SSA2	0.00349	0.22400	System constraint
8/25/2019 8:23	0:01	SSA3	0.00420	0.57000	System constraint
8/25/2019 8:24	0:01	SSA2	0.00349	0.15300	System constraint
8/25/2019 8:24	0:01	SSA3	0.00411	0.37700	System constraint
8/25/2019 8:25	0:01	SSA3	0.00420	0.44200	System constraint
8/25/2019 8:25	0:01	SSA2	0.00343	0.32500	System constraint
8/25/2019 8:26	0:01	SSA3	0.00420	0.25300	System constraint
8/25/2019 8:26	0:01	SSA2	0.00349	0.45200	System constraint
8/25/2019 8:26	0:01	SSA3	0.00420	0.33600	System constraint
8/25/2019 8:27	0:01	SSA2	0.00349	0.78100	System constraint
8/25/2019 8:27	0:01	SSA3	0.00411	0.33300	System constraint
8/25/2019 8:27	0:01	SSA2	0.00349	1.08100	System constraint
8/25/2019 8:28	0:01	SSA3	0.00420	0.30800	System constraint
8/25/2019 8:28	0:01	SSA2	0.00349	0.89900	System constraint
8/25/2019 8:29	0:01	SSA3	0.00420	0.32200	System constraint
8/25/2019 8:29	0:01	SSA2	0.00281	0.57500	System constraint
8/25/2019 8:29	0:01	SSA3	0.00579	0.25400	System constraint
8/25/2019 8:34	0:01	SSA3	0.00108	0.31000	System constraint
8/25/2019 8:34	0:01	SSA2	0.00195	0.74200	System constraint
8/25/2019 8:35	0:01	SSA2	0.00195	0.82700	System constraint
8/25/2019 8:36	0:01	SSA3	0.00111	0.36100	System constraint
8/25/2019 8:36	0:01	SSA2	0.00195	0.73600	System constraint
8/25/2019 8:36	0:01	SSA3	0.00111	0.35300	System constraint



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8/25/2019 8:37	0:01	SSA2	0.00195	0.84200	System constraint
8/25/2019 8:37	0:01	SSA3	0.00108	0.23200	System constraint
8/25/2019 8:38	0:01	SSA3	0.00111	0.21500	System constraint
8/25/2019 8:38	0:01	SSA2	0.00195	0.50000	System constraint
8/25/2019 8:39	0:01	SSA3	0.00111	0.11800	System constraint
8/25/2019 8:39	0:01	SSA2	0.00195	0.26400	System constraint
8/25/2019 8:39	0:01	SSA3	0.00108	0.09300	System constraint
8/25/2019 8:40	0:01	SSA2	0.00188	0.25900	System constraint
8/25/2019 8:40	0:01	SSA3	0.00111	0.29800	System constraint
8/25/2019 8:40	0:01	SSA2	0.00195	0.64500	System constraint
8/25/2019 8:41	0:01	SSA3	0.00113	0.42800	System constraint
8/25/2019 8:41	0:01	SSA2	0.00195	0.74700	System constraint
8/25/2019 8:45	0:01	SSA3	0.00914	0.39100	System constraint
8/25/2019 8:45	0:01	SSA2	0.00609	0.76500	System constraint
8/25/2019 8:45	0:01	SSA3	0.00914	0.56500	System constraint
8/25/2019 8:46	0:01	SSA2	0.00609	0.68200	System constraint
8/25/2019 8:47	0:01	SSA3	0.00914	0.50400	System constraint
8/25/2019 8:48	0:01	SSA2	0.00609	0.82400	System constraint
8/25/2019 8:49	0:01	SSA3	0.00894	0.37600	System constraint
8/25/2019 8:49	0:01	SSA2	0.00609	0.29800	System constraint
8/25/2019 8:49	0:01	SSA3	0.00914	0.01600	System constraint
8/25/2019 8:50	0:01	SSA2	0.00609	0.26700	System constraint
8/25/2019 8:50	0:01	SSA3	0.00894	0.15400	System constraint
8/25/2019 8:51	0:02	ESA	Data is not available	Data is not available	System constraint
8/25/2019 8:51	0:02	ESB	Data is not available	Data is not available	System constraint
8/25/2019 8:51	0:02	SSA3	0.01828	0.01900	System constraint
8/25/2019 8:51	0:02	SSA2	0.01219	0.01500	System constraint
8/25/2019 8:52	0:01	KWP11	0.01183	20.70757	System constraint
8/25/2019 8:52	0:01	SSA3	0.00914	0.05500	System constraint
8/25/2019 8:53	0:01	SSA2	0.00609	-0.00300	System constraint
8/25/2019 8:53	0:01	SSA3	0.00914	0.13000	System constraint
8/25/2019 8:53	0:01	SSA2	0.00609	-0.00200	System constraint
8/25/2019 8:54	0:01	SSA3	0.00894	0.14000	System constraint
8/25/2019 8:54	0:01	SSA2	0.00586	-0.00200	System constraint
8/25/2019 8:55	0:01	SSA3	0.00914	0.14300	System constraint
8/25/2019 8:55	0:01	SSA2	0.00609	-0.00200	System constraint
8/25/2019 8:55	0:01	SSA3	0.00914	0.15800	System constraint
8/25/2019 8:56	0:01	SSA2	0.00609	-0.00300	System constraint
8/25/2019 8:56	0:01	SSA3	0.00894	0.15200	System constraint
8/25/2019 8:57	0:01	SSA3	0.00914	0.40600	System constraint
8/25/2019 8:57	0:01	SSA2	0.00609	0.12700	System constraint
8/25/2019 8:58	0:01	SSA3	0.00914	0.74800	System constraint
8/25/2019 8:58	0:01	SSA2	0.00609	0.25900	System constraint
8/25/2019 8:58	0:01	SSA3	0.00894	1.02100	System constraint
8/25/2019 8:59	0:01	SSA2	0.00609	0.44000	System constraint
8/25/2019 8:59	0:01	SSA3	0.00067	1.28600	System constraint
8/25/2019 9:22	0:01	SSA2	-0.00187	0.94200	System constraint
8/25/2019 9:38	0:01	SSA2	-0.00607	2.36500	System constraint
8/25/2019 9:38	0:01	SSA2	-0.00607	2.28900	System constraint
8/25/2019 9:52	0:01	SSA3	-0.00090	1.01700	System constraint
8/25/2019 10:05	0:01	SSA3	0.00262	1.11500	System constraint
8/25/2019 10:06	0:01	SSA2	0.00344	0.98700	System constraint
8/25/2019 10:06	0:01	SSA3	0.00262	1.12300	System constraint
8/25/2019 10:07	0:01	SSA2	0.00344	1.08900	System constraint
8/25/2019 10:08	0:01	SSA2	0.00344	1.01200	System constraint
8/25/2019 10:08	0:01	SSA3	0.00262	1.12500	System constraint
8/25/2019 10:09	0:01	SSA2	0.00344	0.90300	System constraint
8/25/2019 10:09	0:01	SSA3	0.00262	0.87800	System constraint
8/25/2019 10:10	0:01	SSA3	0.00256	0.80400	System constraint
8/25/2019 10:10	0:01	SSA2	0.00331	0.89200	System constraint
8/25/2019 10:10	0:01	SSA3	0.00262	0.31700	System constraint
8/25/2019 10:10	0:01	SSA2	0.00344	0.42400	System constraint
8/25/2019 10:11	0:01	SSA3	0.00256	0.38800	System constraint
8/25/2019 10:11	0:01	SSA2	0.00344	0.41000	System constraint
8/25/2019 10:12	0:01	SSA3	0.00256	0.56200	System constraint
8/25/2019 10:12	0:01	SSA2	0.00344	0.76300	System constraint
8/25/2019 10:13	0:01	ESA	Data is not available	Data is not available	System constraint
8/25/2019 10:13	0:01	ESB	Data is not available	Data is not available	System constraint
8/25/2019 10:13	0:01	SSA3	0.00262	0.33100	System constraint
8/25/2019 10:13	0:01	SSA2	0.00344	0.14300	System constraint
8/25/2019 10:13	0:01	SSA3	0.00262	0.15100	System constraint
8/25/2019 10:14	0:01	SSA2	0.00631	0.14500	System constraint
8/25/2019 10:14	0:01	SSA3	0.00901	0.15200	System constraint



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Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
8/25/2019 10:15	3:31	ESA	Data is not available	Data is not available	System constraint
8/25/2019 10:15	3:31	ESB	Data is not available	Data is not available	System constraint
8/25/2019 10:15	3:35	SSA2	8.28792	0.03500	System constraint
8/25/2019 10:15	3:34	SSA3	9.22155	0.03100	System constraint
8/25/2019 10:16	3:34	KWPPII	37.38191	20.70757	System constraint
8/25/2019 13:47	0:02	ESA	Data is not available	Data is not available	System constraint
8/25/2019 13:47	0:02	ESB	Data is not available	Data is not available	System constraint
8/25/2019 13:49	0:01	SSA3	0.03573	0.00100	System constraint
8/25/2019 13:49	0:01	SSA2	0.03337	0.00600	System constraint
8/25/2019 13:49	0:01	SSA3	0.03497	0.10500	System constraint
8/25/2019 13:50	0:01	SSA3	0.03421	0.19400	System constraint
8/25/2019 13:50	0:01	SSA2	0.03337	0.23700	System constraint
8/25/2019 13:51	0:01	SSA3	0.03421	0.38500	System constraint
8/25/2019 13:51	0:01	SSA2	0.03337	0.12300	System constraint
8/25/2019 13:52	0:01	SSA3	0.03573	0.46700	System constraint
8/25/2019 13:52	0:01	SSA2	0.03337	0.31800	System constraint
8/25/2019 13:52	0:01	SSA3	0.03573	0.07200	System constraint
8/25/2019 13:53	0:04	ESA	Data is not available	Data is not available	System constraint
8/25/2019 13:53	0:04	ESB	Data is not available	Data is not available	System constraint
8/25/2019 13:53	0:01	SSA2	0.03337	0.03600	System constraint
8/25/2019 13:53	0:03	SSA3	0.13914	0.01900	System constraint
8/25/2019 13:54	0:03	SSA2	0.09881	0.07700	System constraint
8/25/2019 13:55	0:02	KWPPII	0.02779	20.70757	System constraint
8/25/2019 13:56	0:01	SSA2	0.03337	-0.00300	System constraint
8/25/2019 13:56	0:01	SSA3	0.03573	0.00000	System constraint
8/25/2019 13:57	0:01	SSA3	0.03573	0.08500	System constraint
8/25/2019 13:57	0:01	SSA2	0.03337	-0.00300	System constraint
8/25/2019 13:58	0:01	SSA3	0.03497	0.16200	System constraint
8/25/2019 13:58	0:01	SSA2	0.03337	-0.00300	System constraint
8/25/2019 13:59	0:01	SSA3	0.03573	0.16200	System constraint
8/25/2019 13:59	0:01	SSA2	0.03300	-0.00300	System constraint
8/25/2019 13:59	0:01	SSA3	0.03401	0.36400	System constraint
8/25/2019 14:00	0:02	ESA	Data is not available	Data is not available	System constraint
8/25/2019 14:00	0:02	ESB	Data is not available	Data is not available	System constraint
8/25/2019 14:00	0:02	SSA2	0.06984	-0.00300	System constraint
8/25/2019 14:00	0:02	SSA3	0.06426	0.25100	System constraint
8/25/2019 14:01	0:01	SSA2	0.03492	0.03300	System constraint
8/25/2019 14:02	0:01	SSA3	0.03247	0.32700	System constraint
8/25/2019 14:02	0:01	SSA2	0.03492	0.21800	System constraint
8/25/2019 14:02	0:01	SSA3	0.03109	0.35300	System constraint
8/25/2019 14:03	0:01	SSA2	0.03492	0.13300	System constraint
8/25/2019 14:03	0:03	SSA3	0.12920	0.36300	System constraint
8/25/2019 14:04	0:03	SSA2	0.10475	0.06400	System constraint
8/25/2019 14:05	0:02	ESA	Data is not available	Data is not available	System constraint
8/25/2019 14:05	0:02	ESB	Data is not available	Data is not available	System constraint
8/25/2019 14:05	0:03	KWPPII	0.00922	20.70558	System constraint
8/25/2019 14:06	0:01	SSA3	0.03247	0.02700	System constraint
8/25/2019 14:07	0:01	SSA2	0.03492	-0.00300	System constraint
8/25/2019 14:07	0:01	SSA3	0.03178	0.11800	System constraint
8/25/2019 14:07	0:01	SSA2	0.03492	-0.00300	System constraint
8/25/2019 14:08	0:01	SSA3	0.03178	0.07700	System constraint
8/25/2019 14:08	0:02	SSA2	0.06984	-0.00300	System constraint
8/25/2019 14:09	0:02	SSA3	0.09673	0.00100	System constraint
8/25/2019 14:10	0:01	SSA2	0.03492	-0.00300	System constraint
8/25/2019 14:11	0:01	KWPPII	0.00231	20.46407	System constraint
8/25/2019 14:11	0:01	SSA2	0.03358	0.20500	System constraint
8/25/2019 14:11	0:01	SSA3	0.03247	0.29300	System constraint
8/25/2019 14:12	0:01	SSA3	0.03178	0.41700	System constraint
8/25/2019 14:12	0:01	SSA2	0.03492	0.35900	System constraint
8/25/2019 14:13	0:01	SSA3	0.03178	0.66300	System constraint
8/25/2019 14:13	0:01	SSA2	0.03492	0.56400	System constraint
8/25/2019 14:13	0:01	SSA3	0.03247	0.96200	System constraint
8/25/2019 14:13	0:01	SSA2	0.03492	0.85400	System constraint
8/25/2019 14:14	0:01	SSA2	0.02336	1.26600	System constraint
8/25/2019 14:15	0:01	SSA3	0.01779	1.61200	System constraint
8/25/2019 14:15	0:01	SSA2	0.02110	1.65200	System constraint
8/25/2019 14:16	0:01	SSA3	0.01779	1.44300	System constraint
8/25/2019 14:16	0:01	SSA2	0.02110	1.21100	System constraint
8/25/2019 14:16	0:01	SSA3	0.01741	1.37400	System constraint
8/25/2019 14:17	0:01	SSA2	0.02110	0.83500	System constraint
8/25/2019 14:17	0:01	SSA3	0.01779	0.82200	System constraint
8/25/2019 14:18	0:01	ESA	Data is not available	Data is not available	System constraint
8/25/2019 14:18	0:01	ESB	Data is not available	Data is not available	System constraint



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8/25/2019 14:18	0:01	SSA2	0.02110	0.22700	System constraint
8/25/2019 14:18	0:01	SSA3	0.01779	0.25000	System constraint
8/25/2019 14:19	0:01	SSA2	0.02110	0.31600	System constraint
8/25/2019 14:19	0:01	SSA3	0.01741	0.37600	System constraint
8/25/2019 14:19	0:01	SSA3	0.01779	0.56600	System constraint
8/25/2019 14:20	0:01	SSA2	0.02110	0.91300	System constraint
8/25/2019 14:20	0:01	SSA3	0.01779	0.65800	System constraint
8/25/2019 14:20	0:01	SSA2	0.02110	1.47300	System constraint
8/25/2019 14:21	0:01	SSA3	0.01741	1.01000	System constraint
8/25/2019 14:21	0:01	SSA2	0.02110	1.39100	System constraint
8/25/2019 14:22	0:01	SSA3	0.01779	1.26200	System constraint
8/25/2019 14:22	0:01	SSA2	0.02110	1.54000	System constraint
8/25/2019 14:23	0:01	SSA3	0.01779	1.29300	System constraint
8/25/2019 14:23	0:01	SSA2	0.02110	1.41200	System constraint
8/25/2019 14:23	0:01	SSA3	0.01741	1.55800	System constraint
8/25/2019 14:24	0:01	SSA2	0.02110	1.69400	System constraint
8/25/2019 14:24	0:01	SSA3	0.01779	1.91700	System constraint
8/25/2019 14:25	0:01	SSA3	0.01779	2.03700	System constraint
8/25/2019 14:26	0:01	SSA2	0.02069	1.00900	System constraint
8/25/2019 14:26	0:01	SSA3	0.01741	2.41400	System constraint
8/25/2019 14:26	0:01	SSA3	0.01779	1.93100	System constraint
8/25/2019 14:27	0:01	SSA3	0.01779	1.95800	System constraint
8/25/2019 14:27	0:01	SSA2	0.02110	0.93300	System constraint
8/25/2019 14:28	0:01	SSA3	0.01741	1.60100	System constraint
8/25/2019 14:28	0:01	SSA2	0.02069	1.39400	System constraint
8/25/2019 14:29	0:01	SSA3	0.01837	1.38100	System constraint
8/25/2019 14:29	0:01	SSA2	0.02171	1.42800	System constraint
8/25/2019 14:30	0:01	SSA3	0.02071	1.14000	System constraint
8/25/2019 14:30	0:01	SSA2	0.02586	1.17100	System constraint
8/25/2019 14:30	0:01	SSA3	0.02027	1.13800	System constraint
8/25/2019 14:31	0:01	SSA2	0.02586	0.91300	System constraint
8/25/2019 14:31	0:01	SSA3	0.02071	0.82800	System constraint
8/25/2019 14:32	0:01	SSA2	0.02586	0.31200	System constraint
8/25/2019 14:32	0:01	SSA3	0.02071	0.73000	System constraint
8/25/2019 14:33	0:01	SSA2	0.02586	0.63100	System constraint
8/25/2019 14:33	0:01	SSA3	0.01983	0.47600	System constraint
8/25/2019 14:33	0:01	SSA2	0.02586	0.62600	System constraint
8/25/2019 14:33	0:01	SSA3	0.02071	0.61300	System constraint
8/25/2019 14:34	0:01	SSA3	0.02027	0.70600	System constraint
8/25/2019 14:34	0:01	SSA2	0.02586	0.90400	System constraint
8/25/2019 14:35	0:01	SSA3	0.02115	0.51200	System constraint
8/25/2019 14:35	0:01	SSA2	0.02586	0.62700	System constraint
8/25/2019 14:36	0:01	SSA3	0.01983	0.84600	System constraint
8/25/2019 14:36	0:01	SSA2	0.02586	1.13800	System constraint
8/25/2019 14:37	0:01	SSA3	0.02027	1.32000	System constraint
8/25/2019 14:37	0:01	SSA2	0.02586	1.55900	System constraint
8/25/2019 14:37	0:01	SSA3	0.02071	1.32500	System constraint
8/25/2019 14:38	0:01	SSA2	0.02586	1.37100	System constraint
8/25/2019 14:38	0:01	SSA3	0.02071	1.18100	System constraint
8/25/2019 14:39	0:01	SSA2	0.02586	1.15900	System constraint
8/25/2019 14:39	0:01	SSA3	0.02027	1.18500	System constraint
8/25/2019 14:39	0:01	SSA2	0.02586	1.32900	System constraint
8/25/2019 14:40	0:01	SSA3	0.02071	1.22600	System constraint
8/25/2019 14:40	0:01	SSA2	0.02586	1.65000	System constraint
8/25/2019 14:40	0:01	SSA3	0.02071	1.52800	System constraint
8/25/2019 14:41	0:01	SSA2	0.02536	1.32900	System constraint
8/25/2019 14:41	0:01	SSA3	0.02027	1.35700	System constraint
8/25/2019 14:42	0:01	SSA3	0.02071	0.73800	System constraint
8/25/2019 14:42	0:01	SSA2	0.02586	0.89800	System constraint
8/25/2019 14:43	0:01	SSA3	0.02027	0.82200	System constraint
8/25/2019 14:43	0:01	SSA2	0.02586	1.13900	System constraint
8/25/2019 14:44	0:01	SSA3	0.02027	0.94100	System constraint
8/25/2019 14:44	0:01	SSA2	0.02443	1.09600	System constraint
8/25/2019 14:44	0:01	SSA3	0.01615	0.84100	System constraint
8/25/2019 14:45	0:01	SSA2	0.01661	0.89300	System constraint
8/25/2019 14:45	0:01	SSA3	0.01314	0.74800	System constraint
8/25/2019 14:46	0:01	SSA2	0.01661	0.71900	System constraint
8/25/2019 14:46	0:01	SSA3	0.01286	0.62500	System constraint
8/25/2019 14:46	0:01	SSA2	0.01661	0.90900	System constraint
8/25/2019 14:47	0:01	SSA3	0.01314	0.92800	System constraint
8/25/2019 14:47	0:01	SSA2	0.01661	0.79000	System constraint
8/25/2019 14:47	0:01	SSA3	0.01286	0.58600	System constraint
8/25/2019 14:48	0:01	SSA2	0.01661	1.12900	System constraint



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Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
8/25/2019 14:48	0:01	SSA3	0.01286	0.95900	System constraint
8/25/2019 14:49	0:01	SSA3	0.01286	1.11600	System constraint
8/25/2019 14:49	0:01	SSA2	0.01661	1.41700	System constraint
8/25/2019 14:50	0:01	SSA3	0.01258	1.01600	System constraint
8/25/2019 14:50	0:01	SSA2	0.01661	1.20500	System constraint
8/25/2019 14:50	0:01	SSA3	0.01286	0.76900	System constraint
8/25/2019 14:51	0:01	SSA2	0.01661	0.97000	System constraint
8/25/2019 14:51	0:01	SSA3	0.01314	0.83000	System constraint
8/25/2019 14:52	0:01	SSA2	0.01661	1.52500	System constraint
8/25/2019 14:52	0:01	SSA3	0.01314	1.08300	System constraint
8/25/2019 14:52	0:01	SSA2	0.01661	1.42400	System constraint
8/25/2019 14:53	0:01	SSA3	0.01286	1.34700	System constraint
8/25/2019 14:53	0:01	SSA2	0.01661	1.65800	System constraint
8/25/2019 14:54	0:01	SSA3	0.01314	1.71400	System constraint
8/25/2019 14:54	0:01	SSA2	0.01661	2.14800	System constraint
8/25/2019 14:54	0:01	SSA3	0.01314	1.76700	System constraint
8/26/2019 1:37	0:31	KWP2	2.24472	20.70757	System constraint
8/26/2019 2:18	0:27	KWP2	1.71467	20.68761	System constraint
8/26/2019 2:49	1:23	KWP2	6.88722	20.70657	System constraint
8/26/2019 4:25	0:05	KWP2	0.08882	20.70657	System constraint
8/26/2019 4:36	0:02	KWP2	0.00392	20.70757	System constraint
8/26/2019 8:52	0:01	SSA2	-0.00033	0.67500	System constraint
8/26/2019 8:52	0:01	SSA3	0.00032	1.58600	System constraint
8/26/2019 8:52	0:01	SSA2	-0.00034	0.46700	System constraint
8/26/2019 8:53	0:01	SSA3	0.00033	1.07100	System constraint
8/26/2019 8:53	0:02	SSA2	-0.00069	0.61100	System constraint
8/26/2019 8:54	0:01	SSA3	0.00033	1.16000	System constraint
8/26/2019 8:54	0:01	SSA3	0.00032	1.49600	System constraint
8/26/2019 10:09	0:01	SSA3	-0.00027	2.75400	System constraint
8/26/2019 10:09	0:01	SSA2	-0.00090	1.18800	System constraint
8/26/2019 10:10	0:01	SSA3	-0.00028	2.75600	System constraint
8/26/2019 10:10	0:01	SSA2	-0.00090	1.14300	System constraint
8/26/2019 10:11	0:01	SSA3	-0.00028	2.25000	System constraint
8/26/2019 10:12	0:01	SSA2	-0.00090	1.26600	System constraint
8/26/2019 10:20	0:01	SSA2	-0.00051	1.85500	System constraint
8/26/2019 10:21	0:01	SSA2	-0.00049	1.42000	System constraint
8/26/2019 10:22	0:01	SSA2	-0.00051	1.52500	System constraint
8/26/2019 10:22	0:01	SSA3	0.00051	2.65000	System constraint
8/26/2019 10:28	0:01	SSA2	-0.00051	1.17200	System constraint
8/26/2019 10:28	0:01	SSA3	0.00049	2.27100	System constraint
8/26/2019 10:28	0:01	SSA2	-0.00051	1.07000	System constraint
8/26/2019 10:29	0:01	SSA3	0.00048	1.61200	System constraint
8/26/2019 10:29	0:01	SSA2	0.01656	0.04500	System constraint
8/26/2019 10:29	0:08	SSA3	0.26662	1.07900	System constraint
8/26/2019 10:30	0:08	ESA	Data is not available	Data is not available	System constraint
8/26/2019 10:30	0:08	ESB	Data is not available	Data is not available	System constraint
8/26/2019 10:30	0:08	KWP2	0.35315	10.22904	System constraint
8/26/2019 10:30	0:07	SSA2	0.09271	0.02400	System constraint
8/26/2019 10:40	0:01	SSA3	0.02596	0.88800	System constraint
8/26/2019 10:41	0:01	SSA2	0.01162	0.56200	System constraint
8/26/2019 10:41	0:01	SSA3	0.02654	0.52600	System constraint
8/26/2019 10:41	0:01	SSA2	0.01162	0.30300	System constraint
8/26/2019 10:42	0:05	SSA3	0.17800	0.35400	System constraint
8/26/2019 10:42	0:01	SSA2	0.01162	0.05100	System constraint
8/26/2019 10:43	0:04	ESA	Data is not available	Data is not available	System constraint
8/26/2019 10:43	0:04	ESB	Data is not available	Data is not available	System constraint
8/26/2019 10:43	0:03	SSA2	0.03836	0.01100	System constraint
8/26/2019 10:44	0:03	KWP2	0.04758	10.22305	System constraint
8/26/2019 10:46	0:01	SSA2	0.01582	0.00800	System constraint
8/26/2019 10:47	0:01	SSA3	0.03431	0.06700	System constraint
8/26/2019 10:47	0:01	SSA2	0.01582	0.24300	System constraint
8/26/2019 10:47	0:01	SSA3	0.03506	0.12500	System constraint
8/26/2019 10:47	0:01	SSA2	0.01582	0.42300	System constraint
8/26/2019 10:48	0:01	SSA3	0.03431	0.15800	System constraint
8/26/2019 10:48	0:01	SSA2	0.01582	0.94500	System constraint
8/26/2019 10:49	0:01	SSA3	0.03506	0.20000	System constraint
8/26/2019 10:49	0:01	SSA2	0.01582	0.96000	System constraint
8/26/2019 10:50	0:01	SSA3	0.03729	0.53600	System constraint
8/26/2019 10:50	0:01	SSA2	0.01582	0.55100	System constraint
8/26/2019 10:50	0:01	SSA3	0.03431	0.76300	System constraint
8/26/2019 10:51	0:01	SSA2	0.01551	0.27500	System constraint
8/26/2019 10:53	0:04	ESA	Data is not available	Data is not available	System constraint
8/26/2019 10:53	0:04	ESB	Data is not available	Data is not available	System constraint



**Maui Curtailment Report**

**August 2019**

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
8/26/2019 10:53	0:09	SSA2	0.17275	0.46300	System constraint
8/26/2019 10:53	0:04	SSA3	0.17379	0.29300	System constraint
8/26/2019 10:54	0:05	KWP11	0.20802	10.22505	System constraint
8/26/2019 10:57	0:01	SSA3	0.03431	0.00200	System constraint
8/26/2019 10:58	0:04	ESA	Data is not available	Data is not available	System constraint
8/26/2019 10:58	0:04	ESB	Data is not available	Data is not available	System constraint
8/26/2019 10:59	0:02	SSA3	0.10177	0.00000	System constraint
8/26/2019 11:00	0:02	KWP11	0.07169	10.21607	System constraint
8/26/2019 11:03	0:01	SSA3	0.03393	0.63800	System constraint
8/26/2019 11:03	0:07	SSA2	0.18521	0.88300	System constraint
8/26/2019 11:04	0:05	SSA3	0.23318	0.24800	System constraint
8/26/2019 11:05	0:05	ESA	Data is not available	Data is not available	System constraint
8/26/2019 11:05	0:05	ESB	Data is not available	Data is not available	System constraint
8/26/2019 11:05	0:06	KWP11	0.19559	10.22505	System constraint
8/26/2019 11:10	0:01	SSA3	0.03393	0.05400	System constraint
8/26/2019 11:10	0:01	SSA2	0.02326	0.15200	System constraint
8/26/2019 11:11	0:01	SSA3	0.03393	0.11900	System constraint
8/26/2019 11:11	0:01	SSA2	0.02326	0.57400	System constraint
8/26/2019 11:11	0:01	SSA3	0.03321	0.31600	System constraint
8/26/2019 11:12	0:01	SSA2	0.02326	1.01300	System constraint
8/26/2019 11:12	0:01	SSA3	0.03393	0.52700	System constraint
8/26/2019 11:13	0:01	SSA2	0.02326	1.60500	System constraint
8/26/2019 11:13	0:01	SSA3	0.03393	0.83900	System constraint
8/26/2019 11:13	0:01	SSA2	0.02326	1.77700	System constraint
8/26/2019 11:14	0:01	SSA3	0.03249	1.50300	System constraint
8/26/2019 11:14	0:01	SSA2	0.01156	1.40900	System constraint
8/26/2019 11:14	0:01	SSA3	0.00626	1.86200	System constraint
8/26/2019 11:15	0:01	SSA2	0.00002	1.35800	System constraint
8/26/2019 11:15	0:01	SSA3	0.00377	2.42400	System constraint
8/26/2019 11:16	0:01	SSA3	0.00369	2.12200	System constraint
8/26/2019 11:26	0:01	SSA2	0.00002	1.09200	System constraint
8/26/2019 11:27	0:01	SSA3	0.00361	2.64200	System constraint
8/26/2019 11:27	0:01	SSA2	0.00002	1.01200	System constraint
8/26/2019 11:27	0:01	SSA3	0.00377	2.10700	System constraint
8/26/2019 11:28	0:01	SSA2	0.00002	0.99700	System constraint
8/26/2019 11:28	0:01	SSA3	0.00369	1.78600	System constraint
8/26/2019 11:29	0:01	SSA3	0.00338	1.47100	System constraint
8/26/2019 11:29	0:01	SSA2	0.00229	0.48000	System constraint
8/26/2019 11:30	0:01	SSA3	0.00373	1.26500	System constraint
8/26/2019 11:30	0:01	SSA2	-0.00013	0.31800	System constraint
8/26/2019 11:31	0:01	SSA3	0.00373	1.34500	System constraint
8/26/2019 11:31	0:01	SSA2	-0.00013	0.56800	System constraint
8/26/2019 11:31	0:01	SSA3	0.00365	1.90300	System constraint
8/26/2019 11:32	0:01	SSA2	-0.00013	1.04000	System constraint
8/26/2019 11:33	0:01	SSA2	-0.00013	0.99600	System constraint
8/27/2019 1:55	0:01	KWP11	0.00055	9.83186	Oversupply
8/27/2019 1:57	0:01	KWP11	0.00752	9.72907	Oversupply
8/27/2019 1:59	0:01	KWP11	0.00936	10.32485	Oversupply
8/27/2019 2:01	0:01	KWP11	0.00073	11.05136	Oversupply
8/27/2019 3:04	0:01	KWP11	0.00057	5.95480	Oversupply
8/29/2019 5:21	0:01	KWP11	0.00027	0.01597	System constraint
8/29/2019 21:47	0:01	KWP11	0.00060	0.03593	System constraint
8/30/2019 11:11	0:01	SSA3	-0.00085	2.60700	System constraint
8/30/2019 11:11	0:01	SSA2	-0.00291	1.84100	System constraint
8/30/2019 11:14	0:01	SSA3	0.00559	1.69800	System constraint
8/30/2019 11:15	0:01	SSA2	0.00438	1.48200	System constraint
8/30/2019 11:15	0:01	SSA3	0.01575	1.52000	System constraint
8/30/2019 11:16	0:01	SSA2	0.00438	0.84300	System constraint
8/30/2019 11:16	0:01	SSA3	0.01575	1.21000	System constraint
8/30/2019 11:17	0:01	SSA2	0.00438	1.00000	System constraint
8/30/2019 11:17	0:01	SSA3	0.01541	1.75000	System constraint
8/30/2019 11:18	0:01	SSA3	0.01575	1.35600	System constraint
8/30/2019 11:18	0:01	SSA2	0.00438	0.56500	System constraint
8/30/2019 11:18	0:01	SSA3	0.01610	0.80100	System constraint
8/30/2019 11:18	0:01	SSA2	0.00429	0.24000	System constraint
8/30/2019 11:19	0:01	SSA3	0.01610	0.88600	System constraint
8/30/2019 11:19	0:01	SSA2	0.00438	0.54300	System constraint
8/30/2019 11:20	0:01	SSA3	0.01575	0.95400	System constraint
8/30/2019 11:20	0:01	SSA2	0.00438	0.35400	System constraint
8/30/2019 11:21	0:01	SSA3	0.01610	0.40000	System constraint
8/30/2019 11:21	0:01	SSA2	0.00438	0.18100	System constraint
8/30/2019 11:21	0:01	SSA3	0.01575	0.33500	System constraint
8/30/2019 11:22	0:01	SSA2	0.00438	0.48500	System constraint



**Maui Curtailment Report**

**August 2019**

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWh	Peak MW Curtailed	Reasons for Curtailment
8/30/2019 11:22	0:01	SSA3	0.01575	0.76400	System constraint
8/30/2019 11:23	0:01	SSA2	0.00429	0.95100	System constraint
8/30/2019 12:19	0:01	SSA3	0.02109	1.99800	System constraint
8/30/2019 12:19	0:01	SSA2	0.02110	2.39800	System constraint
8/30/2019 12:19	0:01	SSA3	0.02064	1.23800	System constraint
8/30/2019 12:20	0:01	SSA2	0.02110	1.62600	System constraint
8/30/2019 12:20	0:01	SSA3	0.02064	1.64500	System constraint
8/30/2019 12:21	0:01	SSA2	0.02110	1.86800	System constraint
8/30/2019 12:21	0:01	SSA3	0.02109	1.45700	System constraint
8/30/2019 12:22	0:01	SSA2	0.02110	1.25600	System constraint
8/30/2019 12:22	0:01	SSA3	0.02109	0.90600	System constraint
8/30/2019 12:22	0:01	SSA2	0.02110	0.62800	System constraint
8/30/2019 12:23	0:01	SSA3	0.02064	0.41400	System constraint
8/30/2019 12:23	0:01	SSA2	0.02110	0.05700	System constraint
8/30/2019 12:23	0:04	SSA3	0.10409	0.04400	System constraint
8/30/2019 12:24	0:04	ESA	Data is not available	Data is not available	System constraint
8/30/2019 12:24	0:04	ESB	Data is not available	Data is not available	System constraint
8/30/2019 12:24	0:04	KWP11	0.06571	6.53661	System constraint
8/30/2019 12:24	0:03	SSA2	0.08441	0.03000	System constraint
8/30/2019 12:27	0:01	SSA3	0.02064	0.03700	System constraint
8/30/2019 12:28	0:01	SSA2	0.02110	0.00700	System constraint
8/30/2019 12:28	0:01	SSA3	0.02109	0.21100	System constraint
8/30/2019 12:28	0:01	SSA2	0.02110	0.09300	System constraint
8/30/2019 12:29	0:01	SSA3	0.02020	0.37800	System constraint
8/30/2019 12:29	0:01	SSA2	0.01967	0.15100	System constraint
8/30/2019 12:30	0:01	SSA3	0.00831	0.87000	System constraint
8/30/2019 12:30	0:01	SSA2	0.00616	0.44600	System constraint
8/30/2019 12:30	0:01	SSA3	0.00849	1.14400	System constraint
8/30/2019 12:31	0:01	SSA2	0.00616	0.83400	System constraint
8/30/2019 12:31	0:01	SSA3	0.00813	1.59300	System constraint
8/30/2019 12:32	0:01	SSA3	0.00813	2.06100	System constraint
8/30/2019 12:32	0:01	SSA2	0.00616	1.33700	System constraint
8/30/2019 12:40	0:01	SSA3	0.00831	2.69900	System constraint
8/30/2019 12:41	0:01	SSA2	0.00616	1.07900	System constraint
8/30/2019 12:41	0:01	SSA3	0.00849	2.72900	System constraint
8/30/2019 12:41	0:01	SSA2	0.00616	1.01100	System constraint
8/30/2019 12:42	0:01	SSA3	0.00831	1.66300	System constraint
8/30/2019 12:42	0:01	SSA2	0.00616	0.14500	System constraint
8/30/2019 12:43	0:01	SSA3	0.00813	1.10700	System constraint
8/30/2019 12:43	0:01	SSA2	0.00616	0.76500	System constraint
8/30/2019 12:43	0:01	SSA3	0.00849	1.05800	System constraint
8/30/2019 12:44	0:01	SSA2	0.00096	0.76600	System constraint
8/30/2019 12:44	0:01	SSA3	0.00718	0.99400	System constraint
8/30/2019 12:45	0:01	SSA2	-0.00150	1.16500	System constraint
8/30/2019 12:45	0:01	SSA3	0.00119	1.56800	System constraint
<b>Total Estimated Curtailed MWh</b>			<b>160.158</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 ("KWPII") Bioreal Solar 250, LLC ("BS250"), Extra Spaces A ("ESA"), Extra Spaces B ("ESB"), SSA Solar of Hawaii 3 ("SSA 3") fka South Maui Renewable Resources ("SMRR"), and SSA Solar of HI 2 ("SSA 2") fka 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, SSA 3 (fka SMRR), or SSA 2 (fka 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 August. No curtailment events recorded.
- The Estimated Curtailed MWh and Peak MW Curtailed are calculated with information provided by AWE, KWP, KWPII, SSA 2 (fka KS) and SSA 3 (fka SMRR). Maui Electric does not make any representation as to its accuracy.



Lanai Curtailment Report

August 2019

Start Date and Time	Duration	IPP Curtailed	Estimated MWh Curtailed	Peak MW Curtailed	Reasons for Curtailment
8/1/2019 7:38	1:57	LSR	Data is not available	Data is not available	Oversupply
8/1/2019 9:55	0:20	LSR	Data is not available	Data is not available	Oversupply
8/8/2019 7:40	0:05	LSR	Data is not available	Data is not available	Oversupply
8/9/2019 9:31	0:02	LSR	Data is not available	Data is not available	Oversupply
8/9/2019 11:06	0:01	LSR	Data is not available	Data is not available	Oversupply
8/9/2019 11:10	0:03	LSR	Data is not available	Data is not available	Oversupply
8/9/2019 11:15	0:07	LSR	Data is not available	Data is not available	Oversupply
8/9/2019 11:25	0:05	LSR	Data is not available	Data is not available	Oversupply
8/11/2019 18:13	0:12	LSR	Data is not available	Data is not available	Oversupply
8/12/2019 8:41	0:07	LSR	Data is not available	Data is not available	Oversupply
8/12/2019 8:49	0:01	LSR	Data is not available	Data is not available	Oversupply
8/12/2019 8:51	0:06	LSR	Data is not available	Data is not available	Oversupply
8/12/2019 8:58	0:05	LSR	Data is not available	Data is not available	Oversupply
8/12/2019 9:04	0:01	LSR	Data is not available	Data is not available	Oversupply
8/12/2019 9:07	0:01	LSR	Data is not available	Data is not available	Oversupply
8/12/2019 9:09	0:07	LSR	Data is not available	Data is not available	Oversupply
8/12/2019 9:28	0:01	LSR	Data is not available	Data is not available	Oversupply
8/12/2019 9:31	0:01	LSR	Data is not available	Data is not available	Oversupply
8/12/2019 9:38	0:02	LSR	Data is not available	Data is not available	Oversupply
8/12/2019 9:48	0:01	LSR	Data is not available	Data is not available	Oversupply
8/12/2019 9:50	0:17	LSR	Data is not available	Data is not available	Oversupply
8/17/2019 9:57	0:08	LSR	Data is not available	Data is not available	Oversupply
8/17/2019 10:18	0:05	LSR	Data is not available	Data is not available	Oversupply
8/17/2019 10:32	0:01	LSR	Data is not available	Data is not available	Oversupply
8/17/2019 10:44	0:01	LSR	Data is not available	Data is not available	Oversupply
8/17/2019 11:02	0:03	LSR	Data is not available	Data is not available	Oversupply
8/17/2019 11:44	0:06	LSR	Data is not available	Data is not available	Oversupply
8/17/2019 15:10	1:11	LSR	Data is not available	Data is not available	Oversupply
8/20/2019 11:16	0:05	LSR	Data is not available	Data is not available	Oversupply
8/20/2019 11:26	0:01	LSR	Data is not available	Data is not available	Oversupply
8/20/2019 11:28	0:01	LSR	Data is not available	Data is not available	Oversupply
8/21/2019 9:31	0:02	LSR	Data is not available	Data is not available	Oversupply
8/21/2019 10:47	0:01	LSR	Data is not available	Data is not available	Oversupply
8/21/2019 10:54	0:08	LSR	Data is not available	Data is not available	Oversupply
8/21/2019 11:25	0:07	LSR	Data is not available	Data is not available	Oversupply
8/21/2019 11:48	0:02	LSR	Data is not available	Data is not available	Oversupply
8/21/2019 16:15	0:12	LSR	Data is not available	Data is not available	Oversupply
8/22/2019 8:02	0:04	LSR	Data is not available	Data is not available	Oversupply
8/22/2019 8:08	0:29	LSR	Data is not available	Data is not available	Oversupply
8/22/2019 9:00	0:01	LSR	Data is not available	Data is not available	Oversupply
8/22/2019 9:04	0:05	LSR	Data is not available	Data is not available	Oversupply
8/22/2019 9:10	0:01	LSR	Data is not available	Data is not available	Oversupply
8/22/2019 9:17	0:44	LSR	Data is not available	Data is not available	Oversupply
8/22/2019 10:12	0:15	LSR	Data is not available	Data is not available	Oversupply
8/22/2019 10:28	0:10	LSR	Data is not available	Data is not available	Oversupply
8/23/2019 11:49	0:01	LSR	Data is not available	Data is not available	Oversupply
8/24/2019 6:38	1:05	LSR	Data is not available	Data is not available	Oversupply
8/24/2019 8:49	0:01	LSR	Data is not available	Data is not available	Oversupply
8/24/2019 9:07	0:03	LSR	Data is not available	Data is not available	Oversupply
8/24/2019 9:12	0:01	LSR	Data is not available	Data is not available	Oversupply
8/24/2019 9:20	0:01	LSR	Data is not available	Data is not available	Oversupply
8/24/2019 9:56	0:06	LSR	Data is not available	Data is not available	Oversupply
8/24/2019 10:03	0:12	LSR	Data is not available	Data is not available	Oversupply
8/24/2019 10:19	0:14	LSR	Data is not available	Data is not available	Oversupply
8/24/2019 10:36	0:02	LSR	Data is not available	Data is not available	Oversupply
8/24/2019 10:41	0:03	LSR	Data is not available	Data is not available	Oversupply
8/24/2019 10:48	0:01	LSR	Data is not available	Data is not available	Oversupply
8/24/2019 10:51	0:22	LSR	Data is not available	Data is not available	Oversupply
8/24/2019 11:15	0:25	LSR	Data is not available	Data is not available	Oversupply
8/24/2019 11:41	0:06	LSR	Data is not available	Data is not available	Oversupply
8/24/2019 11:49	0:01	LSR	Data is not available	Data is not available	Oversupply
8/24/2019 16:56	0:01	LSR	Data is not available	Data is not available	Oversupply
8/25/2019 6:57	0:42	LSR	Data is not available	Data is not available	Oversupply
8/25/2019 8:27	0:03	LSR	Data is not available	Data is not available	Oversupply
8/26/2019 7:15	0:11	LSR	Data is not available	Data is not available	Oversupply
8/26/2019 7:27	0:12	LSR	Data is not available	Data is not available	Oversupply
8/26/2019 7:58	0:01	LSR	Data is not available	Data is not available	Oversupply
8/26/2019 8:17	0:24	LSR	Data is not available	Data is not available	Oversupply
8/26/2019 8:43	0:06	LSR	Data is not available	Data is not available	Oversupply
8/26/2019 8:59	0:15	LSR	Data is not available	Data is not available	Oversupply
8/26/2019 9:15	0:16	LSR	Data is not available	Data is not available	Oversupply
8/26/2019 9:40	0:08	LSR	Data is not available	Data is not available	Oversupply
8/26/2019 9:53	0:02	LSR	Data is not available	Data is not available	Oversupply
8/26/2019 9:56	0:01	LSR	Data is not available	Data is not available	Oversupply
8/26/2019 9:58	0:01	LSR	Data is not available	Data is not available	Oversupply
8/26/2019 10:40	0:02	LSR	Data is not available	Data is not available	Oversupply
8/26/2019 10:56	0:01	LSR	Data is not available	Data is not available	Oversupply
8/26/2019 11:44	0:01	LSR	Data is not available	Data is not available	Oversupply
8/27/2019 7:59	0:05	LSR	Data is not available	Data is not available	Oversupply





Lanai Curtailment Report

August 2019

Start Date and Time	Duration	IPP Curtailed	Estimated MWh Curtailed	Peak MW Curtailed	Reasons for Curtailment
8/27/2019 8:12	0:24	LSR	Data is not available	Data is not available	Oversupply
8/27/2019 8:40	0:10	LSR	Data is not available	Data is not available	Oversupply
8/27/2019 8:51	0:29	LSR	Data is not available	Data is not available	Oversupply
8/27/2019 9:22	0:14	LSR	Data is not available	Data is not available	Oversupply
8/27/2019 9:39	0:03	LSR	Data is not available	Data is not available	Oversupply
8/27/2019 9:43	0:02	LSR	Data is not available	Data is not available	Oversupply
8/27/2019 9:48	0:01	LSR	Data is not available	Data is not available	Oversupply
8/27/2019 10:12	1:03	LSR	Data is not available	Data is not available	Oversupply
8/27/2019 11:19	0:01	LSR	Data is not available	Data is not available	Oversupply
8/27/2019 11:23	0:14	LSR	Data is not available	Data is not available	Oversupply
8/27/2019 12:48	0:09	LSR	Data is not available	Data is not available	Oversupply
8/27/2019 13:08	0:57	LSR	Data is not available	Data is not available	Oversupply
8/27/2019 14:07	0:10	LSR	Data is not available	Data is not available	Oversupply
8/27/2019 14:24	0:15	LSR	Data is not available	Data is not available	Oversupply
8/27/2019 14:55	0:01	LSR	Data is not available	Data is not available	Oversupply
8/28/2019 9:33	0:01	LSR	Data is not available	Data is not available	Oversupply
8/28/2019 9:41	0:20	LSR	Data is not available	Data is not available	Oversupply
8/28/2019 10:32	0:02	LSR	Data is not available	Data is not available	Oversupply
8/28/2019 10:46	0:04	LSR	Data is not available	Data is not available	Oversupply
8/28/2019 10:59	0:02	LSR	Data is not available	Data is not available	Oversupply
8/28/2019 11:22	0:02	LSR	Data is not available	Data is not available	Oversupply
8/28/2019 11:25	0:05	LSR	Data is not available	Data is not available	Oversupply
8/28/2019 11:32	0:01	LSR	Data is not available	Data is not available	Oversupply
8/28/2019 11:40	0:03	LSR	Data is not available	Data is not available	Oversupply
8/28/2019 11:44	0:01	LSR	Data is not available	Data is not available	Oversupply
8/28/2019 11:47	0:03	LSR	Data is not available	Data is not available	Oversupply
8/29/2019 7:21	0:35	LSR	Data is not available	Data is not available	Oversupply
8/30/2019 7:50	0:03	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 Aug 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
08/01/19 15:22	19.9 MW	08/01/19 19:22	17.7 MW	Pakini Nui Windfarm	Facility requested
08/01/19 21:20	19.9 MW	08/02/19 07:54	18.0 MW	Pakini Nui Windfarm	Facility requested
08/02/19 10:16	19.9 MW	08/02/19 13:52	18.0 MW	Pakini Nui Windfarm	Facility requested
08/07/19 07:44	0.8 MW	08/07/19 15:55	2.0 MW	Hawi Renewable Dev	Facility requested
08/08/19 06:43	0.6 MW	08/08/19 12:58	0.0 MW	Hawi Renewable Dev	Facility requested
08/31/19 07:35	18.2 MW	08/31/19 08:02	9.8 MW	Pakini Nui Windfarm	System constraint
08/31/19 13:48	18.8 MW	08/31/19 14:44	13.7 MW	Pakini Nui Windfarm	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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