



December 21, 2017

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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

Pursuant to Ordering Paragraph 3 of the Commission's Order No. 30371, filed on May 4, 2012, in the above subject proceeding, enclosed as Exhibit A is the Hawaiian Electric Companies'¹ monthly report for November 2017 on (1) system frequency control performance during month; (2) significant system events during month; and (3) curtailment of non-dispatchable renewable resources.

In addition, an electronic copy of each report is also included with this filing. These files are voluminous, and therefore, the Companies are providing a compact disc ("CD") containing the electronic files to both the Commission and the Consumer Advocate. Copies of the CD will be available to any Party to this proceeding. Interested Parties should email Marisa Chun at marisa.chun@hawaiianelectric.com to request a copy.

If you have any questions on this matter, please contact Marisa Chun at (808) 543-4723.

Sincerely,

for Daniel G. Brown
Manager
Regulatory Non-Rate Proceedings

Enclosure

c: Service List

¹ 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 November 30, 2017):

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 November 30, 2017):

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

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

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

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

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 did not have any demand response activations for system events for the month of October. 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 November 30, 2017):

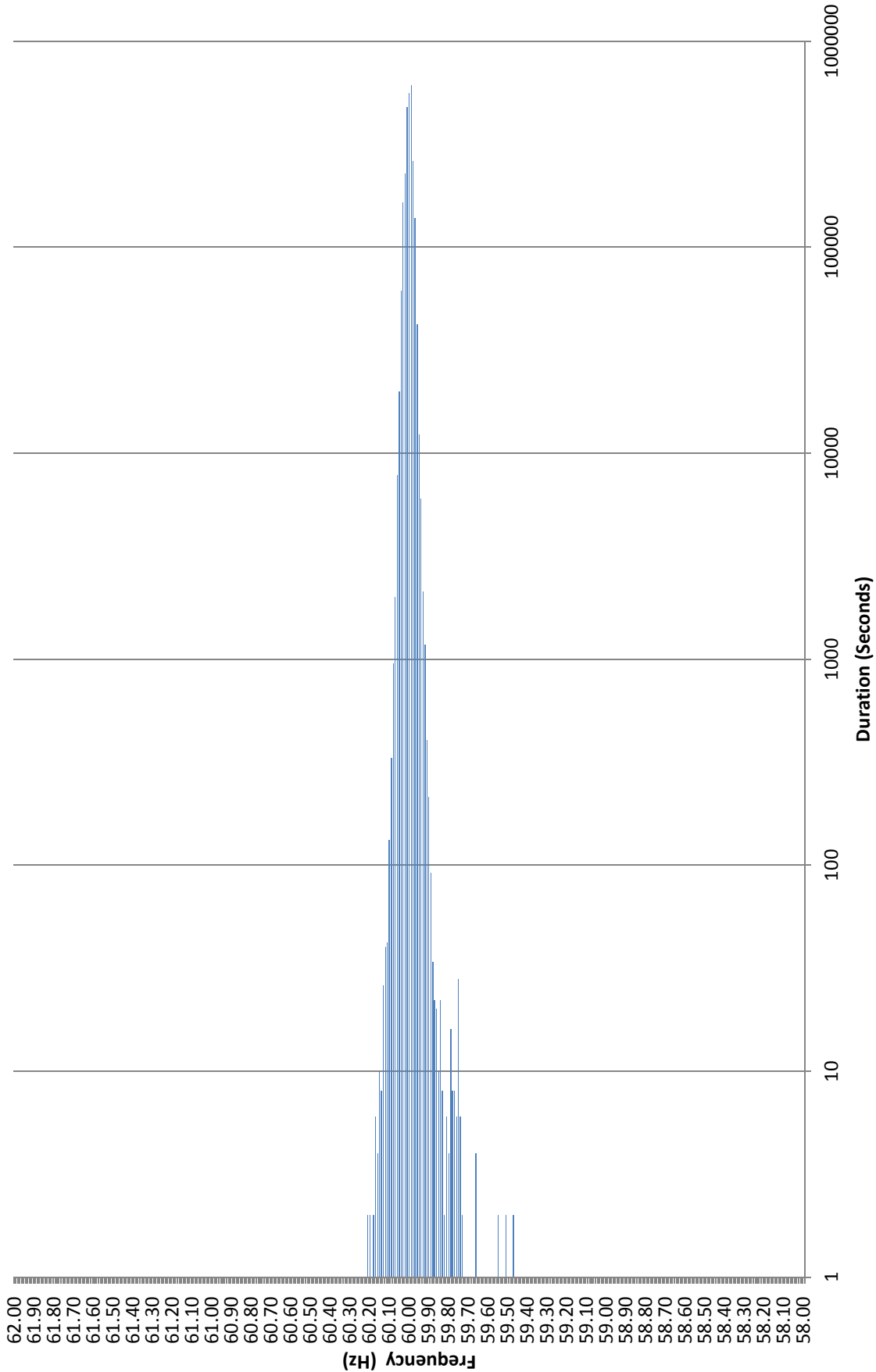
3a) Tabulation of each curtailment event for each resource including the starting date and time, duration, megawatt hours curtailed, peak MW curtailed, and reason for curtailment:

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

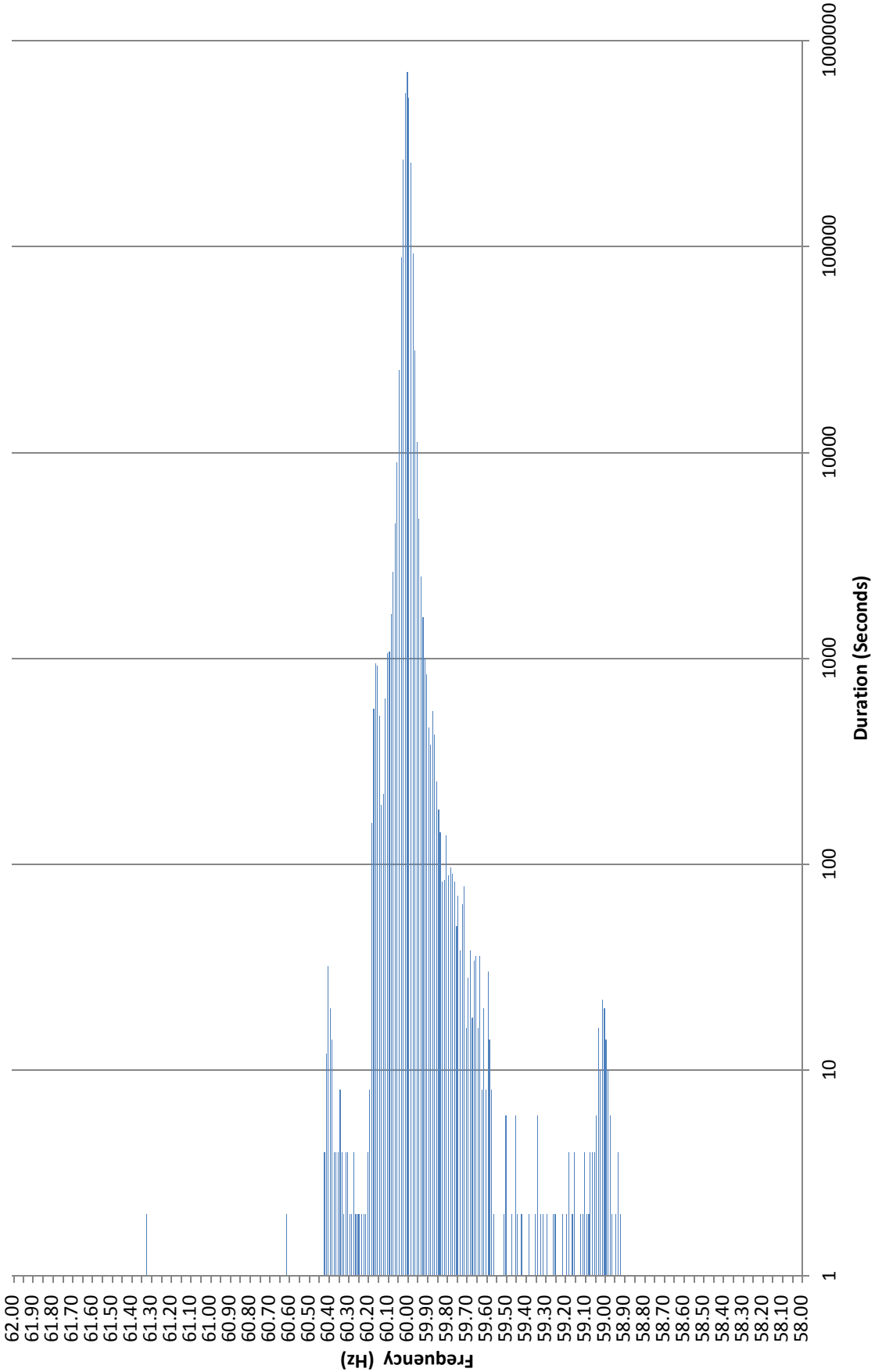
3b) Total MWh of non-dispatchable renewable resources curtailed for the month:

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.

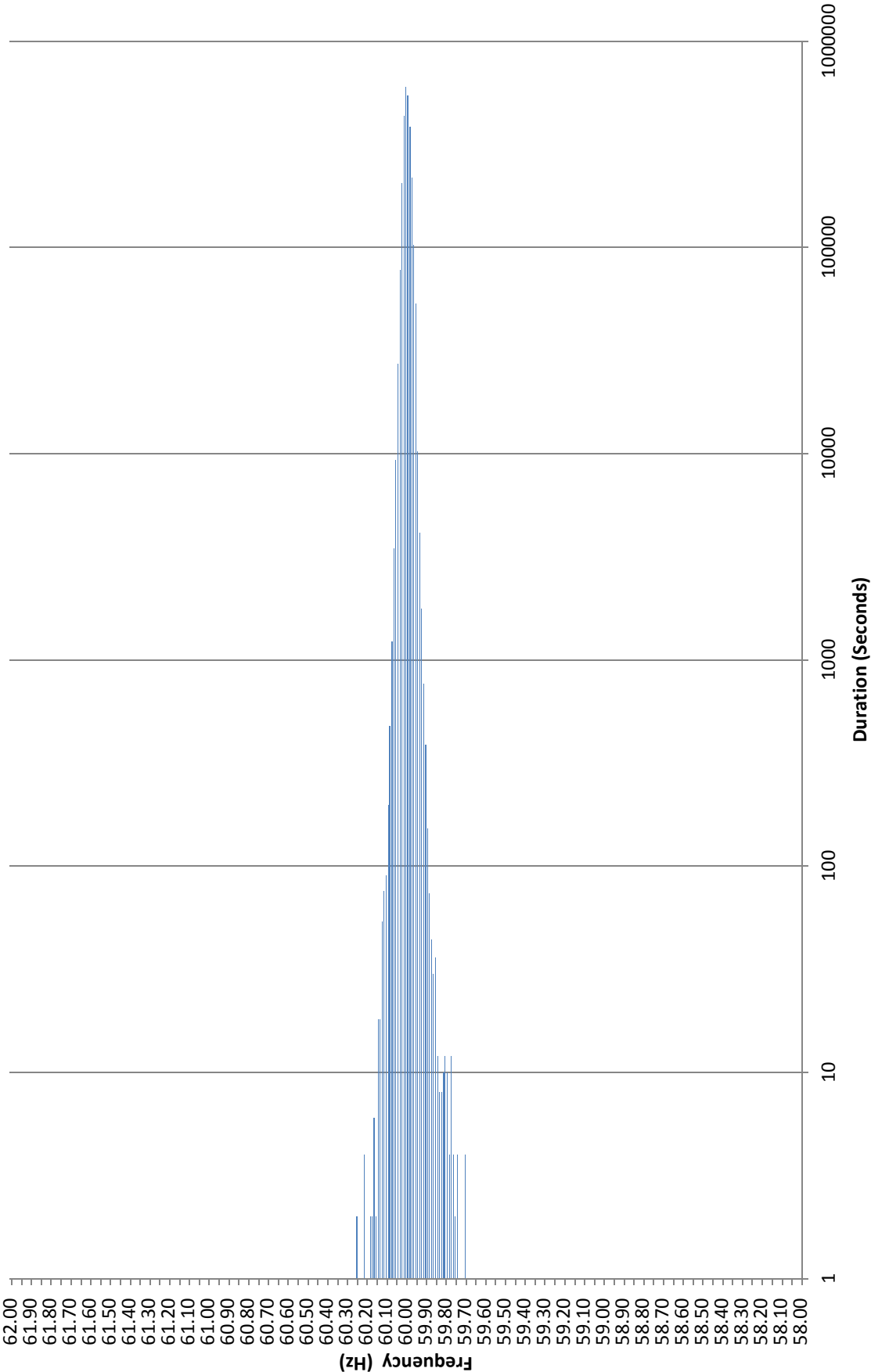
Frequency Distribution Plot - Hawaiian Electric November 2017



**Frequency Distribution Plot - Maui Electric
November 2017**



**Frequency Distribution Plot - Hawai'i Electric Light
November 2017**



Hawaiian Electric Frequency Excursion Statistics November 2017		
Data Rounded to the nearest	<59.95 Hz	>60.05 Hz
Number of Excursions	1221	2249
Maximum Duration (sec)	270	196
Maximum Deviation (Hz)	59.47	60.212
Total Duration of Excursions (sec)	14442	17562

Maui Electric Frequency Excursion Statistics November 2017		
	<59.95 Hz	>60.05 Hz
Number of Excursions	2263	1576
Maximum Duration (sec)	2516	4032
Maximum Deviation (Hz)	58.921	61.321
Total Duration of Excursions (sec)	18892	18636

Hawai'i Electric Light Frequency Excursion Statistics November 2017		
	<59.95 Hz	>60.05 Hz
Number of Excursions	6829	1713
Maximum Duration (sec)	186	182
Maximum Deviation (Hz)	59.696	60.248
Total Duration of Excursions (sec)	44298	9216

Hawaiian Electric Curtailment Report November 2017

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
11/03/17 05:41	0.0	0.00	11/04/17 09:55	0	*	North	System constraints
11/03/17 05:42	0.0	0.00	11/03/17 17:26	0	*	South	System constraints
11/08/17 08:45	0.0	6.00	11/08/17 09:30	0	*	Mauka	System constraints
11/08/17 18:21	0.0	0.00	11/08/17 19:14	0	*	Waianae	System constraints
11/08/17 18:23	0.0	0.00	11/08/17 19:14	0	*	Aloha1	System constraints
11/09/17 05:42	0.0	0.00	11/09/17 05:56	0	*	Waianae	System constraints
11/09/17 05:44	0.0	0.00	11/09/17 05:57	0	*	Aloha1	System constraints
11/09/17 09:17	0.0	1.00	11/09/17 09:54	0	*	Mauka	System constraints
11/14/17 06:49	0.0	0.00	11/14/17 08:26	0	*	KREP	System constraints
11/14/17 06:51	0.0	0.00	11/14/17 16:13	0	*	KLS2	System constraints
11/14/17 14:53	0.0	3.10	11/14/17 16:11	0	*	KREP	System constraints
11/16/17 06:48	0.0	0.00	11/16/17 19:10	0	*	KLS2	System constraints
11/16/17 06:51	0.0	0.00	11/16/17 08:02	0	*	KREP	System constraints
11/16/17 18:17	0.0	0.00	11/16/17 19:13	0	*	KREP	System constraints
11/22/17 18:41	0.0	14.40	11/22/17 19:05	0	*	KWF	System constraints
11/22/17 18:43	0.0	12.60	11/22/17 19:07	0	*	Makai	System constraints
11/26/17 07:45	0.0	2.50	11/26/17 08:48	0	*	Waianae	System constraints
11/26/17 07:46	0.0	0.10	11/26/17 08:50	0	*	Aloha1	System constraints
11/26/17 13:35	0.0	22.60	11/26/17 14:13	0	*	Waianae	System constraints

Aloha1 = Aloha Solar 1 PV Farm
KLS2 = Kalaehoa Solar 2 PV Farm
KREP = Kalaehoa Renewable Energy Park
KWF = Kahuku Wind Farm
Makai = Kawaiiloa Makai Wind Farm
Mauka = Kawaiiloa 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 Kawaiiloa Wind Farm, and HECO does not make any representations as to its accuracy.

* Data has not been provided by IPP.



Maui Curtailment Report

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
11/1/2017 9:12	0:01	KWP	0.330	19.672	System constraint
11/2/2017 6:13	0:01	KWP	0.000	0.001	System constraint
11/3/2017 1:00	0:01	KWP	0.006	3.821	System constraint
11/3/2017 1:11	0:06	KWP	0.113	8.252	System constraint
11/3/2017 1:18	0:10	KWP	0.136	10.754	System constraint
11/3/2017 1:32	1:33	KWP	10.709	14.918	System constraint
11/3/2017 2:31	0:16	AWE	0.458	20.600	System constraint
11/3/2017 2:49	0:01	AWE	0.012	18.100	System constraint
11/3/2017 2:52	0:01	AWE	0.010	17.900	System constraint
11/3/2017 2:54	0:07	AWE	0.044	18.800	System constraint
11/3/2017 3:07	0:43	KWP	7.785	14.175	System constraint
11/3/2017 3:27	0:06	AWE	0.108	20.200	System constraint
11/3/2017 3:34	0:01	AWE	0.002	18.400	System constraint
11/3/2017 3:36	0:04	AWE	0.028	18.800	System constraint
11/3/2017 3:41	0:03	AWE	0.029	17.900	System constraint
11/3/2017 3:52	0:21	KWP	1.060	12.223	System constraint
11/3/2017 4:30	0:04	KWP	0.057	7.714	System constraint
11/3/2017 4:36	0:16	KWP	0.584	11.151	System constraint
11/3/2017 5:45	0:23	KWP	1.137	14.750	System constraint
11/3/2017 6:20	0:01	KWP	0.005	15.632	System constraint
11/3/2017 7:31	0:05	ESA	Data is not available	Data is not available	System constraint
11/3/2017 7:31	0:06	ESA	Data is not available	Data is not available	System constraint
11/3/2017 7:31	0:05	ESB	Data is not available	Data is not available	System constraint
11/3/2017 7:31	0:06	ESB	Data is not available	Data is not available	System constraint
11/3/2017 7:32	0:26	KWP	1.649	19.102	System constraint
11/3/2017 7:45	0:11	ESA	Data is not available	Data is not available	System constraint
11/3/2017 7:45	0:11	ESB	Data is not available	Data is not available	System constraint
11/3/2017 7:45	0:10	ESA	Data is not available	Data is not available	System constraint
11/3/2017 7:45	0:10	ESB	Data is not available	Data is not available	System constraint
11/3/2017 8:42	2:43	KWP	8.813	19.211	System constraint
11/3/2017 8:58	2:25	ESA	Data is not available	Data is not available	System constraint
11/3/2017 8:58	2:25	ESB	Data is not available	Data is not available	System constraint
11/3/2017 11:25	0:07	ESA	Data is not available	Data is not available	System constraint
11/3/2017 11:25	0:08	ESA	Data is not available	Data is not available	System constraint
11/3/2017 11:25	0:07	ESB	Data is not available	Data is not available	System constraint
11/3/2017 11:25	0:08	ESB	Data is not available	Data is not available	System constraint
11/3/2017 11:26	0:07	KWP	0.224	15.239	System constraint
11/3/2017 12:36	0:09	ESA	Data is not available	Data is not available	System constraint
11/3/2017 12:36	0:10	ESA	Data is not available	Data is not available	System constraint
11/3/2017 12:36	0:09	ESB	Data is not available	Data is not available	System constraint
11/3/2017 12:36	0:10	ESB	Data is not available	Data is not available	System constraint
11/3/2017 12:37	0:08	KWP	0.145	19.103	System constraint
11/3/2017 13:08	0:01	ESA	Data is not available	Data is not available	System constraint
11/3/2017 13:08	0:01	ESB	Data is not available	Data is not available	System constraint
11/3/2017 13:12	1:09	ESA	Data is not available	Data is not available	System constraint
11/3/2017 13:12	1:09	ESB	Data is not available	Data is not available	System constraint
11/3/2017 13:12	1:08	ESA	Data is not available	Data is not available	System constraint
11/3/2017 13:12	1:08	ESB	Data is not available	Data is not available	System constraint
11/3/2017 13:12	0:01	KWP	0.001	17.640	System constraint
11/3/2017 13:14	1:08	KWP	4.080	19.211	System constraint
11/3/2017 22:48	0:07	KWP	0.127	17.714	Oversupply
11/3/2017 23:20	2:20	KWP	17.360	17.714	Oversupply
11/4/2017 1:50	2:27	KWP	18.165	17.714	Oversupply
11/4/2017 4:45	0:09	KWP	0.130	17.714	Oversupply
11/4/2017 4:55	0:03	KWP	0.021	17.714	Oversupply
11/4/2017 4:59	0:01	KWP	0.001	17.714	Oversupply
11/4/2017 8:35	0:01	ESA	Data is not available	Data is not available	Oversupply
11/4/2017 8:35	0:01	ESB	Data is not available	Data is not available	Oversupply
11/4/2017 8:36	0:01	KWP	0.003	19.209	Oversupply
11/4/2017 8:40	0:07	ESA	Data is not available	Data is not available	Oversupply
11/4/2017 8:40	0:07	ESB	Data is not available	Data is not available	Oversupply
11/4/2017 8:40	0:01	KWP	0.007	19.211	Oversupply
11/4/2017 8:42	1:55	KWP	22.677	19.211	Oversupply
11/4/2017 8:49	1:47	ESA	Data is not available	Data is not available	Oversupply
11/4/2017 8:49	1:47	ESB	Data is not available	Data is not available	Oversupply
11/4/2017 8:49	1:48	ESA	Data is not available	Data is not available	Oversupply
11/4/2017 8:49	1:48	ESB	Data is not available	Data is not available	Oversupply
11/4/2017 9:54	0:02	AWE	0.002	20.500	Oversupply
11/4/2017 9:57	0:01	AWE	0.002	20.500	Oversupply
11/4/2017 9:59	0:02	AWE	0.005	19.900	Oversupply
11/4/2017 10:28	0:01	AWE	0.001	20.800	Oversupply
11/4/2017 10:30	0:01	AWE	0.002	20.700	Oversupply
11/4/2017 10:39	3:58	ESA	Data is not available	Data is not available	Oversupply
11/4/2017 10:39	3:59	ESA	Data is not available	Data is not available	Oversupply
11/4/2017 10:39	3:58	ESB	Data is not available	Data is not available	Oversupply
11/4/2017 10:39	3:59	ESB	Data is not available	Data is not available	Oversupply
11/4/2017 10:40	3:57	KWP	52.860	19.211	Oversupply
11/4/2017 12:39	0:39	AWE	5.282	21.000	Oversupply
11/4/2017 13:25	0:01	AWE	0.015	20.000	Oversupply
11/4/2017 14:52	0:09	ESA	Data is not available	Data is not available	Oversupply
11/4/2017 14:52	0:10	ESA	Data is not available	Data is not available	Oversupply
11/4/2017 14:52	0:09	ESB	Data is not available	Data is not available	Oversupply



Maui Curtailment Report

November 2017

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
11/4/2017 14:52	0:10	ESB	Data is not available	Data is not available	Oversupply
11/4/2017 14:55	0:03	KWPPII	0.022	19.211	Oversupply
11/4/2017 15:06	0:02	ESA	Data is not available	Data is not available	Oversupply
11/4/2017 15:06	0:03	ESA	Data is not available	Data is not available	Oversupply
11/4/2017 15:06	0:02	ESB	Data is not available	Data is not available	Oversupply
11/4/2017 15:06	0:03	ESB	Data is not available	Data is not available	Oversupply
11/4/2017 15:08	0:01	KWPPII	0.009	19.211	Oversupply
11/4/2017 23:27	0:01	AWE	0.003	0.200	Oversupply
11/5/2017 1:26	0:01	KWPPII	0.001	17.714	Oversupply
11/5/2017 1:32	0:04	KWPPII	0.072	17.714	Oversupply
11/5/2017 4:49	0:05	KWPPII	0.122	17.714	Oversupply
11/5/2017 8:09	0:06	ESA	Data is not available	Data is not available	Oversupply
11/5/2017 8:09	0:06	ESB	Data is not available	Data is not available	Oversupply
11/5/2017 8:10	0:01	KWPPII	0.001	19.211	Oversupply
11/5/2017 8:12	0:04	KWPPII	0.083	19.211	Oversupply
11/5/2017 8:17	1:21	ESA	Data is not available	Data is not available	Oversupply
11/5/2017 8:17	1:21	ESB	Data is not available	Data is not available	Oversupply
11/5/2017 8:17	1:22	ESA	Data is not available	Data is not available	Oversupply
11/5/2017 8:17	1:22	ESB	Data is not available	Data is not available	Oversupply
11/5/2017 8:17	1:23	KWPPII	17.740	19.211	Oversupply
11/5/2017 9:16	0:05	AWE	0.100	20.100	Oversupply
11/5/2017 9:22	0:13	AWE	0.598	20.400	Oversupply
11/5/2017 9:41	4:02	ESA	Data is not available	Data is not available	Oversupply
11/5/2017 9:41	4:02	ESB	Data is not available	Data is not available	Oversupply
11/5/2017 9:41	4:03	ESA	Data is not available	Data is not available	Oversupply
11/5/2017 9:41	4:03	ESB	Data is not available	Data is not available	Oversupply
11/5/2017 9:42	4:03	KWPPII	64.141	19.210	Oversupply
11/5/2017 11:38	0:01	AWE	0.000	17.800	Oversupply
11/5/2017 12:13	0:01	AWE	0.002	20.000	Oversupply
11/5/2017 12:16	0:05	AWE	0.019	20.700	Oversupply
11/5/2017 12:22	0:04	AWE	0.030	20.500	Oversupply
11/5/2017 12:28	0:54	AWE	1.811	20.500	Oversupply
11/5/2017 13:24	0:02	AWE	0.006	20.300	Oversupply
11/5/2017 13:28	0:01	AWE	0.006	20.300	Oversupply
11/5/2017 13:30	0:02	AWE	0.011	20.700	Oversupply
11/5/2017 13:33	0:01	AWE	0.002	20.300	Oversupply
11/5/2017 13:35	0:02	AWE	0.015	20.800	Oversupply
11/5/2017 13:46	1:01	ESA	Data is not available	Data is not available	Oversupply
11/5/2017 13:46	1:02	ESA	Data is not available	Data is not available	Oversupply
11/5/2017 13:46	1:01	ESB	Data is not available	Data is not available	Oversupply
11/5/2017 13:46	1:02	ESB	Data is not available	Data is not available	Oversupply
11/5/2017 13:47	0:56	KWPPII	8.407	19.210	Oversupply
11/5/2017 14:44	0:04	KWPPII	0.050	19.205	Oversupply
11/5/2017 14:50	0:05	ESA	Data is not available	Data is not available	Oversupply
11/5/2017 14:50	0:06	ESA	Data is not available	Data is not available	Oversupply
11/5/2017 14:50	0:05	ESB	Data is not available	Data is not available	Oversupply
11/5/2017 14:50	0:06	ESB	Data is not available	Data is not available	Oversupply
11/5/2017 14:50	0:02	KWPPII	0.019	19.179	Oversupply
11/5/2017 14:54	0:02	KWPPII	0.005	19.210	Oversupply
11/6/2017 0:41	0:08	KWPPII	0.105	17.446	Oversupply
11/6/2017 0:50	0:01	KWPPII	0.012	16.301	Oversupply
11/6/2017 0:53	0:02	KWPPII	0.011	17.247	Oversupply
11/6/2017 1:38	0:01	KWPPII	0.004	15.989	Oversupply
11/6/2017 1:43	0:19	KWPPII	0.715	15.721	Oversupply
11/6/2017 2:09	0:10	KWPPII	0.250	17.396	Oversupply
11/6/2017 2:24	0:05	KWPPII	0.094	17.526	Oversupply
11/6/2017 2:30	0:02	KWPPII	0.040	15.430	Oversupply
11/6/2017 2:53	0:12	KWPPII	0.396	17.133	Oversupply
11/6/2017 3:08	0:01	KWPPII	0.002	13.831	Oversupply
11/6/2017 3:10	0:10	KWPPII	0.216	15.102	Oversupply
11/6/2017 3:22	0:02	KWPPII	0.020	14.847	Oversupply
11/6/2017 3:42	0:01	KWPPII	0.007	14.554	Oversupply
11/6/2017 9:28	0:07	ESA	Data is not available	Data is not available	Oversupply
11/6/2017 9:28	0:07	ESB	Data is not available	Data is not available	Oversupply
11/6/2017 9:28	0:06	ESA	Data is not available	Data is not available	Oversupply
11/6/2017 9:28	0:06	ESB	Data is not available	Data is not available	Oversupply
11/6/2017 9:29	0:06	KWPPII	0.270	13.147	Oversupply
11/7/2017 9:12	0:09	ESA	Data is not available	Data is not available	System constraint
11/7/2017 9:12	0:09	ESB	Data is not available	Data is not available	System constraint
11/7/2017 9:14	0:08	KWPPII	0.072	1.608	System constraint
11/7/2017 9:20	0:01	AWE	0.001	19.200	System constraint
11/7/2017 9:23	0:01	ESA	Data is not available	Data is not available	System constraint
11/7/2017 9:23	0:01	ESB	Data is not available	Data is not available	System constraint
11/7/2017 9:23	0:02	ESA	Data is not available	Data is not available	System constraint
11/7/2017 9:23	0:02	ESB	Data is not available	Data is not available	System constraint
11/7/2017 9:23	0:03	KWPPII	0.012	1.800	System constraint
11/7/2017 9:57	0:09	AWE	0.199	18.000	System constraint
11/7/2017 9:58	0:22	ESA	Data is not available	Data is not available	System constraint
11/7/2017 9:58	0:23	ESA	Data is not available	Data is not available	System constraint
11/7/2017 9:58	0:22	ESB	Data is not available	Data is not available	System constraint
11/7/2017 9:58	0:23	ESB	Data is not available	Data is not available	System constraint
11/7/2017 9:58	0:22	KWPPII	0.440	2.318	System constraint



Maui Curtailment Report

November 2017

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
11/7/2017 10:07	0:03	AWE	0.061	17.200	System constraint
11/7/2017 10:11	0:06	AWE	0.071	17.500	System constraint
11/7/2017 10:21	0:01	KWP/II	0.001	1.336	System constraint
11/7/2017 10:53	0:01	ESA	Data is not available	Data is not available	System constraint
11/7/2017 10:53	0:01	ESB	Data is not available	Data is not available	System constraint
11/7/2017 11:44	0:01	ESA	Data is not available	Data is not available	System constraint
11/7/2017 11:44	0:01	ESB	Data is not available	Data is not available	System constraint
11/7/2017 11:46	0:01	AWE	0.003	19.500	System constraint
11/7/2017 22:42	0:29	KWP/II	1.351	19.027	Oversupply
11/7/2017 23:27	0:05	KWP/II	0.096	15.091	Oversupply
11/7/2017 23:33	0:02	KWP/II	0.034	12.465	Oversupply
11/7/2017 23:37	1:48	KWP/II	10.893	17.525	Oversupply
11/8/2017 1:35	0:03	KWP/II	0.015	12.581	Oversupply
11/8/2017 1:59	0:02	KWP/II	0.028	9.623	Oversupply
11/8/2017 2:02	0:01	KWP/II	0.005	8.715	Oversupply
11/8/2017 2:05	1:46	KWP/II	20.606	19.147	Oversupply
11/8/2017 3:12	0:02	AWE	0.012	14.800	Oversupply
11/8/2017 3:17	0:05	AWE	0.083	17.000	Oversupply
11/8/2017 3:23	0:16	AWE	0.331	16.300	Oversupply
11/8/2017 3:40	0:06	AWE	0.088	12.700	Oversupply
11/8/2017 3:53	1:18	KWP/II	16.958	18.988	Oversupply
11/8/2017 4:51	0:14	AWE	0.351	20.500	Oversupply
11/8/2017 5:13	0:18	KWP/II	1.831	16.500	Oversupply
11/8/2017 7:24	0:11	ESA	Data is not available	Data is not available	System constraint
11/8/2017 7:24	0:12	ESA	Data is not available	Data is not available	Oversupply
11/8/2017 7:24	0:11	ESB	Data is not available	Data is not available	Oversupply
11/8/2017 7:24	0:12	ESB	Data is not available	Data is not available	Oversupply
11/8/2017 7:25	0:12	KWP/II	0.509	19.206	Oversupply
11/8/2017 9:20	0:07	ESA	Data is not available	Data is not available	Oversupply
11/8/2017 9:20	0:08	ESA	Data is not available	Data is not available	Oversupply
11/8/2017 9:20	0:07	ESB	Data is not available	Data is not available	Oversupply
11/8/2017 9:20	0:08	ESB	Data is not available	Data is not available	Oversupply
11/8/2017 9:21	0:01	KWP/II	0.000	18.801	Oversupply
11/8/2017 9:23	0:05	KWP/II	0.064	19.042	Oversupply
11/8/2017 9:35	2:51	ESA	Data is not available	Data is not available	Oversupply
11/8/2017 9:35	2:51	ESB	Data is not available	Data is not available	Oversupply
11/8/2017 9:36	0:01	KWP/II	0.003	18.861	Oversupply
11/8/2017 9:38	2:49	KWP/II	39.800	19.154	Oversupply
11/8/2017 10:37	0:04	AWE	0.012	20.200	Oversupply
11/8/2017 10:58	0:04	AWE	0.025	20.100	Oversupply
11/8/2017 11:03	0:01	AWE	0.001	18.700	Oversupply
11/8/2017 11:05	0:02	AWE	0.012	19.100	Oversupply
11/8/2017 11:10	0:01	AWE	0.004	19.300	Oversupply
11/8/2017 11:12	0:03	AWE	0.019	19.600	Oversupply
11/8/2017 11:18	0:02	AWE	0.019	20.700	Oversupply
11/8/2017 12:02	0:02	AWE	0.002	20.300	Oversupply
11/8/2017 12:06	0:02	AWE	0.012	19.900	Oversupply
11/8/2017 12:19	0:01	AWE	0.005	20.500	Oversupply
11/8/2017 12:28	0:14	ESA	Data is not available	Data is not available	Oversupply
11/8/2017 12:28	0:14	ESB	Data is not available	Data is not available	Oversupply
11/8/2017 12:28	0:13	ESA	Data is not available	Data is not available	Oversupply
11/8/2017 12:28	0:13	ESB	Data is not available	Data is not available	Oversupply
11/8/2017 12:28	0:14	KWP/II	3.746	18.021	Oversupply
11/8/2017 12:32	0:02	AWE	0.032	19.400	Oversupply
11/8/2017 12:35	0:02	AWE	0.020	19.200	Oversupply
11/8/2017 12:43	1:14	KWP/II	10.985	18.392	Oversupply
11/8/2017 12:44	1:09	ESA	Data is not available	Data is not available	Oversupply
11/8/2017 12:44	1:09	ESB	Data is not available	Data is not available	Oversupply
11/8/2017 12:44	1:10	ESA	Data is not available	Data is not available	Oversupply
11/8/2017 12:44	1:10	ESB	Data is not available	Data is not available	Oversupply
11/8/2017 14:02	0:01	ESA	Data is not available	Data is not available	Oversupply
11/8/2017 14:02	0:01	ESB	Data is not available	Data is not available	Oversupply
11/8/2017 22:36	0:15	KWP/II	0.648	17.207	Oversupply
11/8/2017 23:10	0:15	KWP/II	0.673	18.033	Oversupply
11/8/2017 23:38	0:39	KWP/II	2.174	18.610	Oversupply
11/9/2017 0:19	0:01	KWP/II	0.009	17.011	Oversupply
11/9/2017 1:03	0:07	KWP/II	0.115	17.132	Oversupply
11/9/2017 1:23	0:02	KWP/II	0.016	18.281	Oversupply
11/9/2017 1:43	0:24	KWP/II	0.856	18.794	Oversupply
11/9/2017 2:09	0:06	KWP/II	0.115	17.749	Oversupply
11/9/2017 2:25	0:07	KWP/II	0.250	18.263	Oversupply
11/9/2017 2:34	0:13	KWP/II	1.487	17.939	Oversupply
11/9/2017 2:49	0:21	KWP/II	1.288	17.479	Oversupply
11/9/2017 3:15	0:31	KWP/II	2.028	18.729	Oversupply
11/9/2017 11:11	0:01	KWP/II	0.005	11.164	System constraint
11/9/2017 11:23	0:01	ESA	Data is not available	Data is not available	System constraint
11/9/2017 11:23	0:01	ESB	Data is not available	Data is not available	System constraint
11/9/2017 11:23	0:01	KWP/II	0.004	10.421	System constraint
11/9/2017 11:53	0:01	ESA	Data is not available	Data is not available	System constraint
11/9/2017 11:53	0:01	ESB	Data is not available	Data is not available	System constraint
11/9/2017 12:21	0:01	ESA	Data is not available	Data is not available	System constraint
11/9/2017 12:21	0:01	ESB	Data is not available	Data is not available	System constraint



Maui Curtailment Report

November 2017

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
11/9/2017 12:58	0:01	KWPPII		11.749	System constraint
11/9/2017 13:27	0:03	ESA	Data is not available	Data is not available	System constraint
11/9/2017 13:27	0:04	ESA	Data is not available	Data is not available	System constraint
11/9/2017 13:27	0:03	ESB	Data is not available	Data is not available	System constraint
11/9/2017 13:27	0:04	ESB	Data is not available	Data is not available	System constraint
11/9/2017 13:28	0:03	KWPPII	0.020	12.573	System constraint
11/9/2017 13:35	0:01	ESA	Data is not available	Data is not available	System constraint
11/9/2017 13:35	0:01	ESB	Data is not available	Data is not available	System constraint
11/9/2017 13:35	0:02	ESA	Data is not available	Data is not available	System constraint
11/9/2017 13:35	0:02	ESB	Data is not available	Data is not available	System constraint
11/9/2017 13:35	0:02	KWPPII	0.027	12.964	System constraint
11/9/2017 13:53	0:01	ESA	Data is not available	Data is not available	System constraint
11/9/2017 13:53	0:01	ESB	Data is not available	Data is not available	System constraint
11/9/2017 14:01	0:04	ESA	Data is not available	Data is not available	System constraint
11/9/2017 14:01	0:04	ESB	Data is not available	Data is not available	System constraint
11/9/2017 14:01	0:03	ESA	Data is not available	Data is not available	System constraint
11/9/2017 14:01	0:03	ESB	Data is not available	Data is not available	System constraint
11/9/2017 14:01	0:05	KWPPII	0.171	15.616	System constraint
11/9/2017 14:17	0:01	ESA	Data is not available	Data is not available	System constraint
11/9/2017 14:17	0:01	ESB	Data is not available	Data is not available	System constraint
11/9/2017 14:26	0:02	KWPPII	0.083	17.378	System constraint
11/9/2017 21:52	0:02	KWPPII	0.013	19.091	System constraint
11/9/2017 21:55	0:02	KWPPII	0.010	18.854	System constraint
11/9/2017 22:24	0:01	KWPPII	0.002	19.100	System constraint
11/9/2017 23:18	0:04	KWPPII	0.040	18.164	System constraint
11/9/2017 23:45	0:07	KWPPII	0.161	17.742	System constraint
11/9/2017 23:53	0:43	KWPPII	3.757	17.646	System constraint
11/10/2017 12:46	0:01	ESA	Data is not available	Data is not available	System constraint
11/10/2017 12:46	0:02	ESA	Data is not available	Data is not available	System constraint
11/10/2017 12:46	0:01	ESB	Data is not available	Data is not available	System constraint
11/10/2017 12:46	0:02	ESB	Data is not available	Data is not available	System constraint
11/10/2017 12:46	0:02	KWPPII	0.037	18.042	System constraint
11/10/2017 12:52	0:01	ESA	Data is not available	Data is not available	System constraint
11/10/2017 12:52	0:01	ESB	Data is not available	Data is not available	System constraint
11/10/2017 12:52	0:02	KWPPII	0.066	17.742	System constraint
11/10/2017 13:36	0:01	ESA	Data is not available	Data is not available	System constraint
11/10/2017 13:36	0:01	ESB	Data is not available	Data is not available	System constraint
11/10/2017 13:36	0:01	KWPPII	0.003	18.260	System constraint
11/10/2017 13:57	0:01	ESA	Data is not available	Data is not available	System constraint
11/10/2017 13:57	0:01	ESB	Data is not available	Data is not available	System constraint
11/10/2017 14:57	0:06	ESA	Data is not available	Data is not available	System constraint
11/10/2017 14:57	0:06	ESB	Data is not available	Data is not available	System constraint
11/10/2017 14:57	0:05	ESA	Data is not available	Data is not available	System constraint
11/10/2017 14:57	0:05	ESB	Data is not available	Data is not available	System constraint
11/10/2017 14:58	0:05	KWPPII	0.088	18.957	System constraint
11/11/2017 0:21	0:03	KWPPII	0.024	17.667	Oversupply
11/11/2017 5:10	0:01	KWPPII	0.000	0.003	Oversupply
11/11/2017 14:59	0:49	KWPPII	4.298	18.586	Oversupply
11/12/2017 1:15	0:37	KWPPII	3.337	19.211	Oversupply
11/12/2017 3:08	0:04	KWPPII	0.071	16.256	Oversupply
11/12/2017 4:13	0:01	KWPPII	0.008	18.115	Oversupply
11/12/2017 4:21	0:10	KWPPII	0.560	17.805	Oversupply
11/12/2017 17:57	0:01	AWE	0.002	0.100	System constraint
11/13/2017 1:25	0:01	AWE	0.003	0.200	System constraint
11/13/2017 14:03	0:01	KWPPII	0.028	10.796	System constraint
11/13/2017 15:35	0:02	KWPPII	0.034	18.762	System constraint
11/14/2017 8:53	0:02	ESA	Data is not available	Data is not available	System constraint
11/14/2017 8:53	0:03	ESA	Data is not available	Data is not available	System constraint
11/14/2017 8:53	0:02	ESB	Data is not available	Data is not available	System constraint
11/14/2017 8:53	0:03	ESB	Data is not available	Data is not available	System constraint
11/14/2017 8:55	0:02	KWPPII	0.015	18.893	System constraint
11/14/2017 9:02	0:24	ESA	Data is not available	Data is not available	System constraint
11/14/2017 9:02	0:24	ESB	Data is not available	Data is not available	System constraint
11/14/2017 9:04	0:03	KWPPII	0.029	19.091	System constraint
11/14/2017 9:07	0:01	AWE	0.002	0.100	System constraint
11/14/2017 9:08	0:01	KWPPII	0.011	19.042	System constraint
11/14/2017 9:10	4:34	KWPPII	61.785	19.170	System constraint
11/14/2017 9:11	0:01	AWE	0.002	0.100	System constraint
11/14/2017 9:28	4:15	ESA	Data is not available	Data is not available	System constraint
11/14/2017 9:28	4:15	ESB	Data is not available	Data is not available	System constraint
11/14/2017 9:28	4:14	ESA	Data is not available	Data is not available	System constraint
11/14/2017 9:28	4:14	ESB	Data is not available	Data is not available	System constraint
11/14/2017 10:34	0:01	AWE	0.002	2.500	System constraint
11/14/2017 10:36	0:05	AWE	0.023	2.700	System constraint
11/14/2017 10:45	0:01	AWE	0.004	1.900	System constraint
11/14/2017 11:42	1:28	AWE	2.429	7.900	System constraint
11/14/2017 11:44	0:01	5A	Data is not available	Data is not available	System constraint
11/14/2017 11:46	0:04	5A	Data is not available	Data is not available	System constraint
11/14/2017 11:48	0:04	KWPPII	0.178	19.672	System constraint
11/14/2017 11:51	0:02	5A	Data is not available	Data is not available	System constraint
11/14/2017 11:51	0:01	BS	Data is not available	Data is not available	System constraint
11/14/2017 11:53	0:04	BS	Data is not available	Data is not available	System constraint



Maui Curtailment Report

November 2017

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
11/14/2017 11:54	0:02	5A	Data is not available	Data is not available	System constraint
11/14/2017 11:54	0:03	KWP	0.228	19.672	System constraint
11/14/2017 11:57	0:05	5A	Data is not available	Data is not available	System constraint
11/14/2017 11:58	0:02	BS	Data is not available	Data is not available	System constraint
11/14/2017 11:58	0:06	KWP	0.565	19.672	System constraint
11/14/2017 12:01	0:02	BS	Data is not available	Data is not available	System constraint
11/14/2017 12:03	0:01	5A	Data is not available	Data is not available	System constraint
11/14/2017 12:04	0:05	BS	Data is not available	Data is not available	System constraint
11/14/2017 12:06	0:02	5A	Data is not available	Data is not available	System constraint
11/14/2017 12:07	0:02	KWP	0.148	19.672	System constraint
11/14/2017 12:09	0:03	5A	Data is not available	Data is not available	System constraint
11/14/2017 12:10	0:01	BS	Data is not available	Data is not available	System constraint
11/14/2017 12:10	0:01	KWP	0.065	19.672	System constraint
11/14/2017 12:12	0:01	KWP	0.085	19.672	System constraint
11/14/2017 12:13	0:02	5A	Data is not available	Data is not available	System constraint
11/14/2017 12:13	0:02	BS	Data is not available	Data is not available	System constraint
11/14/2017 12:14	0:02	KWP	0.133	19.672	System constraint
11/14/2017 12:16	0:03	5A	Data is not available	Data is not available	System constraint
11/14/2017 12:16	0:03	BS	Data is not available	Data is not available	System constraint
11/14/2017 12:17	0:04	KWP	0.291	19.672	System constraint
11/14/2017 12:20	0:02	BS	Data is not available	Data is not available	System constraint
11/14/2017 12:21	0:01	5A	Data is not available	Data is not available	System constraint
11/14/2017 12:22	0:01	KWP	0.061	19.672	System constraint
11/14/2017 12:23	0:03	BS	Data is not available	Data is not available	System constraint
11/14/2017 12:24	0:03	5A	Data is not available	Data is not available	System constraint
11/14/2017 12:24	0:03	KWP	0.156	19.672	System constraint
11/14/2017 12:28	0:01	BS	Data is not available	Data is not available	System constraint
11/14/2017 12:28	0:02	KWP	0.110	19.672	System constraint
11/14/2017 12:29	0:02	5A	Data is not available	Data is not available	System constraint
11/14/2017 12:31	0:03	BS	Data is not available	Data is not available	System constraint
11/14/2017 12:31	0:01	KWP	0.061	19.672	Oversupply
11/14/2017 12:33	0:01	5A	Data is not available	Data is not available	Oversupply
11/14/2017 12:33	0:01	KWP	0.054	19.672	Oversupply
11/14/2017 12:35	0:01	KWP	0.055	19.672	Oversupply
11/14/2017 12:36	0:02	BS	Data is not available	Data is not available	Oversupply
11/14/2017 12:37	0:03	KWP	0.148	19.672	Oversupply
11/14/2017 12:38	0:06	5A	Data is not available	Data is not available	Oversupply
11/14/2017 12:40	0:01	BS	Data is not available	Data is not available	Oversupply
11/14/2017 12:43	0:03	KWP	0.076	19.672	Oversupply
11/14/2017 12:45	0:06	BS	Data is not available	Data is not available	Oversupply
11/14/2017 12:47	0:01	5A	Data is not available	Data is not available	Oversupply
11/14/2017 12:47	0:03	KWP	0.077	19.672	Oversupply
11/14/2017 12:53	0:01	5A	Data is not available	Data is not available	Oversupply
11/14/2017 12:54	0:01	BS	Data is not available	Data is not available	Oversupply
11/14/2017 12:56	0:01	5A	Data is not available	Data is not available	Oversupply
11/14/2017 13:00	0:01	BS	Data is not available	Data is not available	Oversupply
11/14/2017 13:03	0:01	BS	Data is not available	Data is not available	Oversupply
11/14/2017 13:13	0:04	AWE	0.172	8.500	Oversupply
11/14/2017 13:21	0:11	AWE	0.528	12.100	Oversupply
11/14/2017 13:35	0:04	AWE	0.158	9.000	Oversupply
11/14/2017 13:45	0:57	ESA	Data is not available	Data is not available	Oversupply
11/14/2017 13:45	0:58	ESA	Data is not available	Data is not available	Oversupply
11/14/2017 13:45	0:57	ESB	Data is not available	Data is not available	Oversupply
11/14/2017 13:45	0:58	ESB	Data is not available	Data is not available	Oversupply
11/14/2017 13:46	1:46	KWP/II	17.599	19.126	Oversupply
11/14/2017 14:59	0:33	ESA	Data is not available	Data is not available	Oversupply
11/14/2017 14:59	0:33	ESB	Data is not available	Data is not available	Oversupply
11/14/2017 14:59	0:32	ESA	Data is not available	Data is not available	Oversupply
11/14/2017 14:59	0:32	ESB	Data is not available	Data is not available	Oversupply
11/15/2017 4:24	0:05	KWP/II	0.060	19.211	Oversupply
11/15/2017 7:54	0:08	ESA	Data is not available	Data is not available	System constraint
11/15/2017 7:54	0:08	ESB	Data is not available	Data is not available	System constraint
11/15/2017 7:54	0:07	ESA	Data is not available	Data is not available	System constraint
11/15/2017 7:54	0:07	ESB	Data is not available	Data is not available	System constraint
11/15/2017 7:58	0:05	KWP/II	0.099	19.211	System constraint
11/15/2017 8:22	0:06	ESA	Data is not available	Data is not available	System constraint
11/15/2017 8:22	0:07	ESA	Data is not available	Data is not available	System constraint
11/15/2017 8:22	0:06	ESB	Data is not available	Data is not available	System constraint
11/15/2017 8:22	0:07	ESB	Data is not available	Data is not available	System constraint
11/15/2017 8:25	0:06	KWP/II	0.030	19.211	System constraint
11/15/2017 8:34	0:16	ESA	Data is not available	Data is not available	System constraint
11/15/2017 8:34	0:17	ESA	Data is not available	Data is not available	System constraint
11/15/2017 8:34	0:16	ESB	Data is not available	Data is not available	System constraint
11/15/2017 8:34	0:17	ESB	Data is not available	Data is not available	System constraint
11/15/2017 8:37	0:15	KWP/II	0.273	19.211	System constraint
11/15/2017 8:55	0:49	ESA	Data is not available	Data is not available	System constraint
11/15/2017 8:55	0:49	ESB	Data is not available	Data is not available	System constraint
11/15/2017 8:57	0:50	KWP/II	5.977	19.211	System constraint
11/15/2017 9:46	0:01	ESA	Data is not available	Data is not available	System constraint
11/15/2017 9:46	0:01	ESB	Data is not available	Data is not available	System constraint
11/15/2017 9:49	0:01	ESA	Data is not available	Data is not available	System constraint
11/15/2017 9:49	0:02	ESA	Data is not available	Data is not available	System constraint



Maui Curtailment Report

November 2017

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
11/15/2017 9:49	0:01	ESB	Data is not available	Data is not available	System constraint
11/15/2017 9:49	0:02	ESB	Data is not available	Data is not available	System constraint
11/15/2017 9:50	0:01	KWP/II	0.001	19.211	System constraint
11/15/2017 9:53	6:38	ESA	Data is not available	Data is not available	System constraint
11/15/2017 9:53	6:39	ESA	Data is not available	Data is not available	System constraint
11/15/2017 9:53	6:38	ESB	Data is not available	Data is not available	System constraint
11/15/2017 9:53	6:39	ESB	Data is not available	Data is not available	System constraint
11/15/2017 9:56	6:36	KWP/II	102.900	19.211	System constraint
11/15/2017 10:45	0:01	AWE	0.000	20.100	System constraint
11/15/2017 10:48	0:01	AWE	0.008	20.300	System constraint
11/15/2017 10:51	0:01	AWE	0.002	20.100	System constraint
11/15/2017 10:53	3:33	AWE	24.563	20.900	System constraint
11/15/2017 13:21	0:02	5A	Data is not available	Data is not available	System constraint
11/15/2017 13:28	0:02	BS	Data is not available	Data is not available	System constraint
11/15/2017 14:27	0:04	AWE	0.099	18.200	System constraint
11/15/2017 14:32	0:03	AWE	0.045	18.900	System constraint
11/15/2017 14:36	0:02	AWE	0.014	19.700	System constraint
11/15/2017 23:23	1:53	KWP/II	11.922	19.211	Oversupply
11/16/2017 1:17	0:06	KWP/II	0.084	19.211	Oversupply
11/16/2017 1:24	0:05	KWP/II	0.040	19.211	Oversupply
11/16/2017 1:30	0:01	KWP/II	0.005	19.211	Oversupply
11/16/2017 2:22	0:27	KWP/II	2.073	19.211	Oversupply
11/16/2017 4:00	0:33	KWP/II	0.972	19.211	Oversupply
11/16/2017 4:26	0:01	AWE	0.002	0.100	Oversupply
11/16/2017 7:05	2:29	ESA	Data is not available	Data is not available	System constraint
11/16/2017 7:05	2:30	ESA	Data is not available	Data is not available	System constraint
11/16/2017 7:05	2:29	ESB	Data is not available	Data is not available	System constraint
11/16/2017 7:05	2:30	ESB	Data is not available	Data is not available	System constraint
11/16/2017 7:08	7:19	KWP/II	133.144	19.211	System constraint
11/16/2017 8:06	0:01	5A	Data is not available	Data is not available	System constraint
11/16/2017 8:09	0:05	5A	Data is not available	Data is not available	System constraint
11/16/2017 8:13	0:01	BS	Data is not available	Data is not available	System constraint
11/16/2017 8:16	0:05	BS	Data is not available	Data is not available	System constraint
11/16/2017 8:17	0:01	5A	Data is not available	Data is not available	System constraint
11/16/2017 8:19	0:01	5A	Data is not available	Data is not available	System constraint
11/16/2017 8:21	0:04	5A	Data is not available	Data is not available	System constraint
11/16/2017 8:24	0:01	BS	Data is not available	Data is not available	System constraint
11/16/2017 8:26	0:03	5A	Data is not available	Data is not available	System constraint
11/16/2017 8:26	0:01	BS	Data is not available	Data is not available	System constraint
11/16/2017 8:26	0:02	AWE	0.003	0.100	System constraint
11/16/2017 8:28	0:04	BS	Data is not available	Data is not available	System constraint
11/16/2017 8:29	0:02	AWE	0.006	0.200	System constraint
11/16/2017 8:33	0:03	BS	Data is not available	Data is not available	System constraint
11/16/2017 8:35	0:01	5A	Data is not available	Data is not available	System constraint
11/16/2017 8:37	0:02	5A	Data is not available	Data is not available	System constraint
11/16/2017 8:40	0:29	5A	Data is not available	Data is not available	System constraint
11/16/2017 8:42	0:01	BS	Data is not available	Data is not available	System constraint
11/16/2017 8:44	0:02	BS	Data is not available	Data is not available	System constraint
11/16/2017 8:47	0:29	BS	Data is not available	Data is not available	System constraint
11/16/2017 8:47	0:03	KWP	0.084	19.672	System constraint
11/16/2017 8:51	0:01	KWP	0.041	19.672	System constraint
11/16/2017 8:53	0:03	KWP	0.114	19.672	System constraint
11/16/2017 8:57	0:03	KWP	0.166	19.672	System constraint
11/16/2017 9:01	0:03	KWP	0.244	19.672	System constraint
11/16/2017 9:05	0:04	KWP	0.299	19.672	System constraint
11/16/2017 9:10	0:04	5A	Data is not available	Data is not available	System constraint
11/16/2017 9:10	0:05	KWP	0.529	19.672	System constraint
11/16/2017 9:10	0:26	AWE	0.875	7.100	System constraint
11/16/2017 9:16	0:11	KWP	1.177	19.672	System constraint
11/16/2017 9:17	0:04	5A	Data is not available	Data is not available	System constraint
11/16/2017 9:17	0:04	BS	Data is not available	Data is not available	System constraint
11/16/2017 9:22	0:02	5A	Data is not available	Data is not available	System constraint
11/16/2017 9:24	0:04	BS	Data is not available	Data is not available	System constraint
11/16/2017 9:25	0:10	5A	Data is not available	Data is not available	System constraint
11/16/2017 9:28	0:04	KWP	0.542	19.672	System constraint
11/16/2017 9:29	0:02	BS	Data is not available	Data is not available	System constraint
11/16/2017 9:32	0:10	BS	Data is not available	Data is not available	System constraint
11/16/2017 9:33	5:20	KWP	96.609	19.672	System constraint
11/16/2017 9:41	4:08	AWE	29.146	20.300	System constraint
11/16/2017 14:29	0:28	KWP/II	7.682	19.199	System constraint
11/16/2017 14:53	0:04	ESA	Data is not available	Data is not available	System constraint
11/16/2017 14:53	0:04	ESB	Data is not available	Data is not available	System constraint
11/16/2017 14:53	0:03	ESA	Data is not available	Data is not available	System constraint
11/16/2017 14:53	0:03	ESB	Data is not available	Data is not available	System constraint
11/16/2017 14:59	0:33	ESA	Data is not available	Data is not available	System constraint
11/16/2017 14:59	0:33	ESB	Data is not available	Data is not available	System constraint
11/16/2017 14:59	0:32	ESA	Data is not available	Data is not available	System constraint
11/16/2017 14:59	0:32	ESB	Data is not available	Data is not available	System constraint
11/16/2017 14:59	0:21	KWP/II	2.724	19.196	System constraint
11/16/2017 15:21	0:11	KWP/II	0.503	19.196	System constraint
11/16/2017 15:36	0:01	ESA	Data is not available	Data is not available	System constraint
11/16/2017 15:36	0:02	ESA	Data is not available	Data is not available	System constraint



Maui Curtailment Report

November 2017

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
11/16/2017 15:36	0:01	ESB	Data is not available	Data is not available	System constraint
11/16/2017 15:36	0:02	ESB	Data is not available	Data is not available	System constraint
11/16/2017 15:38	0:08	KWP/II	0.326	19.167	System constraint
11/16/2017 15:39	0:02	AWE	0.037	10.200	System constraint
11/16/2017 15:41	0:04	ESA	Data is not available	Data is not available	System constraint
11/16/2017 15:41	0:04	ESB	Data is not available	Data is not available	System constraint
11/16/2017 15:41	0:03	ESA	Data is not available	Data is not available	System constraint
11/16/2017 15:41	0:03	ESB	Data is not available	Data is not available	System constraint
11/16/2017 15:47	0:02	KWP/II	0.017	19.100	System constraint
11/16/2017 15:48	0:11	ESA	Data is not available	Data is not available	System constraint
11/16/2017 15:48	0:11	ESB	Data is not available	Data is not available	System constraint
11/16/2017 15:48	0:12	ESA	Data is not available	Data is not available	System constraint
11/16/2017 15:48	0:12	ESB	Data is not available	Data is not available	System constraint
11/16/2017 15:51	0:09	KWP/II	0.390	19.181	System constraint
11/16/2017 16:42	0:01	ESA	Data is not available	Data is not available	System constraint
11/16/2017 16:42	0:01	ESB	Data is not available	Data is not available	System constraint
11/16/2017 16:42	0:02	ESA	Data is not available	Data is not available	System constraint
11/16/2017 16:42	0:02	ESB	Data is not available	Data is not available	System constraint
11/16/2017 16:46	0:01	AWE	0.013	7.800	System constraint
11/16/2017 16:46	0:13	KWP/II	0.835	19.193	System constraint
11/16/2017 16:57	0:01	ESA	Data is not available	Data is not available	System constraint
11/16/2017 16:57	0:02	ESA	Data is not available	Data is not available	System constraint
11/16/2017 16:57	0:01	ESB	Data is not available	Data is not available	System constraint
11/16/2017 16:57	0:02	ESB	Data is not available	Data is not available	System constraint
11/16/2017 17:02	0:01	KWP/II	0.003	19.018	System constraint
11/16/2017 22:24	0:05	KWP/II	0.049	19.016	Oversupply
11/16/2017 22:34	0:32	KWP/II	1.121	19.207	Oversupply
11/16/2017 23:16	2:20	KWP/II	20.283	19.211	Oversupply
11/17/2017 1:18	0:12	AWE	0.318	13.900	Oversupply
11/17/2017 1:38	1:13	KWP/II	6.481	16.744	Oversupply
11/17/2017 2:52	0:20	KWP/II	1.388	16.938	Oversupply
11/17/2017 3:14	0:06	KWP/II	0.116	15.795	Oversupply
11/17/2017 3:23	0:07	KWP/II	0.137	14.623	Oversupply
11/17/2017 3:32	0:03	KWP/II	0.012	13.377	Oversupply
11/17/2017 3:40	0:01	KWP/II	0.006	13.141	Oversupply
11/17/2017 3:48	0:33	KWP/II	0.955	16.227	Oversupply
11/17/2017 4:22	0:02	KWP/II	0.015	13.949	Oversupply
11/17/2017 4:25	0:02	KWP/II	0.023	13.177	Oversupply
11/17/2017 13:00	0:01	ESA	Data is not available	Data is not available	System constraint
11/17/2017 13:00	0:01	ESB	Data is not available	Data is not available	System constraint
11/17/2017 13:00	0:02	ESA	Data is not available	Data is not available	System constraint
11/17/2017 13:00	0:02	ESB	Data is not available	Data is not available	System constraint
11/17/2017 13:01	0:01	KWP/II	0.004	3.374	System constraint
11/18/2017 4:17	0:01	KWP/II	0.002	0.137	System constraint
11/18/2017 14:45	0:02	AWE	0.003	0.100	System constraint
11/18/2017 14:49	0:01	AWE	0.002	0.100	System constraint
11/18/2017 15:02	0:01	AWE	0.002	0.100	System constraint
11/20/2017 12:25	0:01	AWE	0.002	0.100	Oversupply
11/20/2017 12:27	0:01	AWE	0.002	0.100	Oversupply
11/20/2017 12:29	0:01	AWE	0.002	0.100	Oversupply
11/20/2017 12:47	0:01	AWE	0.002	0.100	Oversupply
11/21/2017 9:49	0:01	KWP	0.325	19.672	Oversupply
11/21/2017 13:39	0:05	ESA	Data is not available	Data is not available	Oversupply
11/21/2017 13:39	0:06	ESA	Data is not available	Data is not available	Oversupply
11/21/2017 13:39	0:05	ESB	Data is not available	Data is not available	Oversupply
11/21/2017 13:39	0:06	ESB	Data is not available	Data is not available	Oversupply
11/21/2017 13:40	0:05	KWP/II	0.165	14.718	System constraint
11/22/2017 11:36	0:11	ESA	Data is not available	Data is not available	System constraint
11/22/2017 11:36	0:11	ESB	Data is not available	Data is not available	System constraint
11/22/2017 11:36	0:12	ESA	Data is not available	Data is not available	System constraint
11/22/2017 11:36	0:12	ESB	Data is not available	Data is not available	System constraint
11/22/2017 11:37	0:49	KWP/II	10.760	18.760	System constraint
11/22/2017 11:49	0:01	AWE	0.002	0.100	System constraint
11/22/2017 11:55	0:02	AWE	0.003	0.100	System constraint
11/22/2017 11:58	0:04	AWE	0.008	0.200	System constraint
11/22/2017 12:01	0:23	ESA	Data is not available	Data is not available	System constraint
11/22/2017 12:01	0:24	ESA	Data is not available	Data is not available	System constraint
11/22/2017 12:01	0:23	ESB	Data is not available	Data is not available	System constraint
11/22/2017 12:01	0:24	ESB	Data is not available	Data is not available	System constraint
11/22/2017 12:02	0:01	5A	Data is not available	Data is not available	System constraint
11/22/2017 12:03	0:01	AWE	0.001	0.300	System constraint
11/22/2017 12:05	0:01	AWE	0.001	0.100	System constraint
11/22/2017 12:06	0:01	KWP	0.002	19.672	System constraint
11/22/2017 12:09	0:01	BS	Data is not available	Data is not available	System constraint
11/22/2017 12:10	0:04	5A	Data is not available	Data is not available	System constraint
11/22/2017 12:11	0:04	AWE	0.012	0.300	System constraint
11/22/2017 12:15	0:03	5A	Data is not available	Data is not available	System constraint
11/22/2017 12:16	0:02	AWE	0.005	0.200	System constraint
11/22/2017 12:17	0:03	BS	Data is not available	Data is not available	System constraint
11/22/2017 12:19	0:02	5A	Data is not available	Data is not available	System constraint
11/22/2017 12:22	0:02	BS	Data is not available	Data is not available	System constraint
11/22/2017 12:26	0:01	BS	Data is not available	Data is not available	System constraint



Maui Curtailment Report

November 2017

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
11/22/2017 12:26	0:02	BS	Data is not available	Data is not available	System constraint
11/22/2017 12:27	1:15	ESA	Data is not available	Data is not available	System constraint
11/22/2017 12:27	1:16	ESA	Data is not available	Data is not available	System constraint
11/22/2017 12:27	1:15	ESB	Data is not available	Data is not available	System constraint
11/22/2017 12:27	1:16	ESB	Data is not available	Data is not available	System constraint
11/22/2017 12:28	1:16	KWPPII	12.509	18.166	System constraint
11/22/2017 12:35	0:01	5A	Data is not available	Data is not available	System constraint
11/22/2017 12:42	0:01	BS	Data is not available	Data is not available	System constraint
11/22/2017 14:06	1:07	ESA	Data is not available	Data is not available	System constraint
11/22/2017 14:06	1:08	ESA	Data is not available	Data is not available	System constraint
11/22/2017 14:06	1:07	ESB	Data is not available	Data is not available	System constraint
11/22/2017 14:06	1:08	ESB	Data is not available	Data is not available	System constraint
11/22/2017 14:07	1:08	KWPPII	6.065	19.200	System constraint
11/22/2017 15:16	0:01	ESA	Data is not available	Data is not available	System constraint
11/22/2017 15:16	0:01	ESB	Data is not available	Data is not available	System constraint
11/22/2017 15:16	0:01	KWPPII	0.008	19.208	System constraint
11/23/2017 1:07	4:03	KWPPII	22.208	19.211	Oversupply
11/23/2017 5:11	0:01	KWPPII	0.002	19.192	Oversupply
11/23/2017 10:03	0:06	ESA	Data is not available	Data is not available	Oversupply
11/23/2017 10:03	0:07	ESA	Data is not available	Data is not available	Oversupply
11/23/2017 10:03	0:06	ESB	Data is not available	Data is not available	Oversupply
11/23/2017 10:03	0:07	ESB	Data is not available	Data is not available	Oversupply
11/23/2017 10:05	0:04	KWPPII	0.094	19.211	Oversupply
11/23/2017 11:03	0:11	ESA	Data is not available	Data is not available	Oversupply
11/23/2017 11:03	0:12	ESA	Data is not available	Data is not available	Oversupply
11/23/2017 11:03	0:11	ESB	Data is not available	Data is not available	Oversupply
11/23/2017 11:03	0:12	ESB	Data is not available	Data is not available	Oversupply
11/23/2017 11:06	0:10	KWPPII	0.464	19.211	Oversupply
11/23/2017 11:30	0:36	ESA	Data is not available	Data is not available	Oversupply
11/23/2017 11:30	0:36	ESB	Data is not available	Data is not available	Oversupply
11/23/2017 11:30	0:35	ESA	Data is not available	Data is not available	Oversupply
11/23/2017 11:30	0:35	ESB	Data is not available	Data is not available	Oversupply
11/23/2017 11:33	0:34	KWPPII	1.380	19.211	Oversupply
11/23/2017 12:09	0:32	ESA	Data is not available	Data is not available	Oversupply
11/23/2017 12:09	0:32	ESB	Data is not available	Data is not available	Oversupply
11/23/2017 12:11	0:31	KWPPII	2.178	19.211	Oversupply
11/23/2017 12:43	0:13	ESA	Data is not available	Data is not available	Oversupply
11/23/2017 12:43	0:14	ESA	Data is not available	Data is not available	Oversupply
11/23/2017 12:43	0:13	ESB	Data is not available	Data is not available	Oversupply
11/23/2017 12:43	0:14	ESB	Data is not available	Data is not available	Oversupply
11/23/2017 12:43	0:15	KWPPII	0.842	19.211	Oversupply
11/23/2017 13:04	0:24	ESA	Data is not available	Data is not available	Oversupply
11/23/2017 13:04	0:24	ESB	Data is not available	Data is not available	Oversupply
11/23/2017 13:04	0:25	ESA	Data is not available	Data is not available	Oversupply
11/23/2017 13:04	0:25	ESB	Data is not available	Data is not available	Oversupply
11/23/2017 13:07	0:22	KWPPII	2.552	19.211	Oversupply
11/23/2017 13:43	0:03	ESA	Data is not available	Data is not available	Oversupply
11/23/2017 13:43	0:04	ESA	Data is not available	Data is not available	Oversupply
11/23/2017 13:43	0:03	ESB	Data is not available	Data is not available	Oversupply
11/23/2017 13:43	0:04	ESB	Data is not available	Data is not available	Oversupply
11/23/2017 13:45	0:02	KWPPII	0.003	19.211	Oversupply
11/23/2017 14:23	0:03	ESA	Data is not available	Data is not available	Oversupply
11/23/2017 14:23	0:03	ESB	Data is not available	Data is not available	Oversupply
11/23/2017 14:26	0:01	KWPPII	0.019	19.211	Oversupply
11/23/2017 14:28	0:04	ESA	Data is not available	Data is not available	Oversupply
11/23/2017 14:28	0:04	ESB	Data is not available	Data is not available	Oversupply
11/23/2017 14:28	0:05	ESA	Data is not available	Data is not available	Oversupply
11/23/2017 14:28	0:05	ESB	Data is not available	Data is not available	Oversupply
11/23/2017 14:29	0:05	KWPPII	0.088	19.211	Oversupply
11/23/2017 14:41	0:01	ESA	Data is not available	Data is not available	Oversupply
11/23/2017 14:41	0:01	ESB	Data is not available	Data is not available	Oversupply
11/23/2017 14:41	0:02	ESA	Data is not available	Data is not available	Oversupply
11/23/2017 14:41	0:02	ESB	Data is not available	Data is not available	Oversupply
11/23/2017 15:51	0:01	AWE	0.002	0.100	Oversupply
11/23/2017 17:15	0:01	AWE	0.003	0.200	Oversupply
11/23/2017 17:26	0:22	ESA	Data is not available	Data is not available	Oversupply
11/23/2017 17:26	0:22	ESB	Data is not available	Data is not available	Oversupply
11/23/2017 17:28	1:03	KWPPII	8.781	19.211	Oversupply
11/23/2017 17:33	0:05	AWE	0.066	3.500	Oversupply
11/23/2017 17:42	0:04	AWE	0.054	5.000	Oversupply
11/23/2017 19:47	0:03	KWPPII	0.024	19.211	Oversupply
11/23/2017 20:36	5:32	KWPPII	25.216	19.672	System constraint
11/24/2017 1:59	2:03	KWPPII	3.764	16.217	Oversupply
11/24/2017 9:25	0:08	ESA	Data is not available	Data is not available	Oversupply
11/24/2017 9:25	0:08	ESB	Data is not available	Data is not available	Oversupply
11/24/2017 9:26	0:08	KWPPII	0.241	16.217	Oversupply
11/24/2017 9:35	0:01	ESA	Data is not available	Data is not available	Oversupply
11/24/2017 9:35	0:01	ESB	Data is not available	Data is not available	Oversupply
11/24/2017 9:35	0:01	KWPPII	0.005	16.217	Oversupply
11/24/2017 9:40	2:08	ESA	Data is not available	Data is not available	Oversupply
11/24/2017 9:40	2:09	ESA	Data is not available	Data is not available	Oversupply
11/24/2017 9:40	2:08	ESB	Data is not available	Data is not available	Oversupply



Maui Curtailment Report

November 2017

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
11/24/2017 9:40	2:09	ESB	Data is not available	Data is not available	Oversupply
11/24/2017 9:40	2:10	KWP/II	27.326	19.211	Oversupply
11/24/2017 11:01	0:02	5A	Data is not available	Data is not available	Oversupply
11/24/2017 11:04	0:06	5A	Data is not available	Data is not available	Oversupply
11/24/2017 11:07	0:01	AWE	0.002	0.100	Oversupply
11/24/2017 11:08	0:01	BS	Data is not available	Data is not available	Oversupply
11/24/2017 11:10	0:07	KWP	0.367	19.672	Oversupply
11/24/2017 11:11	0:05	5A	Data is not available	Data is not available	Oversupply
11/24/2017 11:11	0:05	BS	Data is not available	Data is not available	Oversupply
11/24/2017 11:12	0:03	AWE	0.008	0.200	Oversupply
11/24/2017 11:16	0:01	AWE	0.003	0.200	Oversupply
11/24/2017 11:17	0:05	5A	Data is not available	Data is not available	Oversupply
11/24/2017 11:18	0:04	BS	Data is not available	Data is not available	Oversupply
11/24/2017 11:19	0:05	KWP	0.659	19.672	Oversupply
11/24/2017 11:24	0:04	BS	Data is not available	Data is not available	Oversupply
11/24/2017 11:24	0:02	5A	Data is not available	Data is not available	Oversupply
11/24/2017 11:24	0:05	BS	Data is not available	Data is not available	Oversupply
11/24/2017 11:25	0:01	AWE	0.003	0.200	Oversupply
11/24/2017 11:25	0:01	KWP	0.120	19.672	Oversupply
11/24/2017 11:27	0:13	5A	Data is not available	Data is not available	Oversupply
11/24/2017 11:27	0:04	AWE	0.017	0.400	Oversupply
11/24/2017 11:27	0:04	KWP	0.468	19.672	Oversupply
11/24/2017 11:31	0:01	BS	Data is not available	Data is not available	Oversupply
11/24/2017 11:32	0:01	KWP	0.141	19.672	Oversupply
11/24/2017 11:32	0:12	AWE	0.588	5.400	Oversupply
11/24/2017 11:34	0:12	BS	Data is not available	Data is not available	Oversupply
11/24/2017 11:34	0:06	KWP	1.125	19.672	Oversupply
11/24/2017 11:41	0:02	5A	Data is not available	Data is not available	Oversupply
11/24/2017 11:41	0:02	KWP	0.482	19.672	Oversupply
11/24/2017 11:45	0:01	AWE	0.001	2.700	Oversupply
11/24/2017 11:48	0:01	BS	Data is not available	Data is not available	Oversupply
11/24/2017 11:48	0:02	BS	Data is not available	Data is not available	Oversupply
11/24/2017 11:51	2:37	ESA	Data is not available	Data is not available	Oversupply
11/24/2017 11:51	2:38	ESA	Data is not available	Data is not available	Oversupply
11/24/2017 11:51	2:37	ESB	Data is not available	Data is not available	Oversupply
11/24/2017 11:51	2:38	ESB	Data is not available	Data is not available	Oversupply
11/24/2017 11:52	2:38	KWP/II	49.595	19.211	Oversupply
11/24/2017 11:53	0:11	AWE	0.145	2.400	Oversupply
11/24/2017 11:54	0:02	5A	Data is not available	Data is not available	Oversupply
11/24/2017 11:59	0:02	5A	Data is not available	Data is not available	Oversupply
11/24/2017 12:01	0:01	BS	Data is not available	Data is not available	Oversupply
11/24/2017 12:01	0:02	BS	Data is not available	Data is not available	Oversupply
11/24/2017 12:06	0:01	BS	Data is not available	Data is not available	Oversupply
11/24/2017 12:06	0:02	BS	Data is not available	Data is not available	Oversupply
11/24/2017 12:06	0:02	AWE	0.060	5.900	Oversupply
11/24/2017 12:09	0:01	AWE	0.001	5.500	Oversupply
11/24/2017 12:12	0:03	AWE	0.074	8.100	Oversupply
11/24/2017 12:18	0:06	AWE	0.252	11.500	Oversupply
11/24/2017 12:25	0:01	AWE	0.001	8.900	Oversupply
11/24/2017 12:28	0:28	AWE	1.531	10.300	Oversupply
11/24/2017 12:33	0:01	5A	Data is not available	Data is not available	Oversupply
11/24/2017 12:35	0:06	5A	Data is not available	Data is not available	Oversupply
11/24/2017 12:42	0:01	5A	Data is not available	Data is not available	Oversupply
11/24/2017 12:42	0:05	BS	Data is not available	Data is not available	Oversupply
11/24/2017 12:44	0:03	5A	Data is not available	Data is not available	Oversupply
11/24/2017 12:51	0:02	BS	Data is not available	Data is not available	Oversupply
11/24/2017 12:51	0:03	BS	Data is not available	Data is not available	Oversupply
11/24/2017 12:57	0:22	AWE	0.436	6.100	Oversupply
11/24/2017 13:03	0:11	5A	Data is not available	Data is not available	Oversupply
11/24/2017 13:10	0:10	BS	Data is not available	Data is not available	Oversupply
11/24/2017 13:10	0:11	BS	Data is not available	Data is not available	Oversupply
11/24/2017 13:16	0:02	5A	Data is not available	Data is not available	Oversupply
11/24/2017 13:20	0:10	5A	Data is not available	Data is not available	Oversupply
11/24/2017 13:20	0:04	AWE	0.038	0.900	Oversupply
11/24/2017 13:23	0:01	BS	Data is not available	Data is not available	Oversupply
11/24/2017 13:23	0:02	BS	Data is not available	Data is not available	Oversupply
11/24/2017 13:25	0:59	AWE	5.105	15.400	Oversupply
11/24/2017 13:27	0:09	BS	Data is not available	Data is not available	Oversupply
11/24/2017 13:31	0:01	5A	Data is not available	Data is not available	Oversupply
11/24/2017 13:34	0:01	5A	Data is not available	Data is not available	Oversupply
11/24/2017 13:38	0:02	5A	Data is not available	Data is not available	Oversupply
11/24/2017 13:38	0:01	BS	Data is not available	Data is not available	Oversupply
11/24/2017 13:41	0:02	5A	Data is not available	Data is not available	Oversupply
11/24/2017 13:41	0:01	BS	Data is not available	Data is not available	Oversupply
11/24/2017 13:44	0:01	5A	Data is not available	Data is not available	Oversupply
11/24/2017 13:45	0:01	BS	Data is not available	Data is not available	Oversupply
11/24/2017 13:48	0:01	BS	Data is not available	Data is not available	Oversupply
11/24/2017 13:51	0:01	BS	Data is not available	Data is not available	Oversupply
11/24/2017 14:31	1:11	ESA	Data is not available	Data is not available	Oversupply
11/24/2017 14:31	1:12	ESA	Data is not available	Data is not available	Oversupply



Maui Curtailment Report

November 2017

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
11/24/2017 14:31	1:11	ESB	Data is not available	Data is not available	Oversupply
11/24/2017 14:31	1:12	ESB	Data is not available	Data is not available	Oversupply
11/24/2017 14:32	1:12	KWP/II	13.912	19.211	Oversupply
11/24/2017 14:38	0:01	AWE	0.002	6.400	Oversupply
11/24/2017 14:40	0:04	AWE	0.094	8.800	Oversupply
11/24/2017 14:55	0:03	AWE	0.052	18.700	Oversupply
11/24/2017 15:09	0:02	AWE	0.061	18.200	Oversupply
11/24/2017 16:23	0:13	ESA	Data is not available	Data is not available	Oversupply
11/24/2017 16:23	0:13	ESB	Data is not available	Data is not available	Oversupply
11/24/2017 16:23	0:12	ESA	Data is not available	Data is not available	Oversupply
11/24/2017 16:23	0:12	ESB	Data is not available	Data is not available	Oversupply
11/24/2017 16:26	0:12	KWP/II	0.428	19.211	Oversupply
11/24/2017 18:29	0:01	AWE	0.003	0.200	Oversupply
11/24/2017 21:33	0:05	KWP/II	0.185	19.211	Oversupply
11/24/2017 23:20	0:10	AWE	0.832	13.100	Oversupply
11/24/2017 23:22	5:50	KWP/II	59.990	19.211	Oversupply
11/25/2017 5:16	0:06	KWP/II	0.028	19.211	Oversupply
11/25/2017 8:49	0:09	ESA	Data is not available	Data is not available	Oversupply
11/25/2017 8:49	0:10	ESA	Data is not available	Data is not available	Oversupply
11/25/2017 8:49	0:09	ESB	Data is not available	Data is not available	Oversupply
11/25/2017 8:49	0:10	ESB	Data is not available	Data is not available	Oversupply
11/25/2017 8:52	0:08	KWP/II	0.403	19.211	Oversupply
11/25/2017 9:23	0:01	ESA	Data is not available	Data is not available	Oversupply
11/25/2017 9:23	0:01	ESB	Data is not available	Data is not available	Oversupply
11/25/2017 9:26	0:34	ESA	Data is not available	Data is not available	Oversupply
11/25/2017 9:26	0:34	ESB	Data is not available	Data is not available	Oversupply
11/25/2017 9:27	6:04	KWP/II	89.270	19.211	Oversupply
11/25/2017 9:48	0:01	AWE	0.001	13.100	Oversupply
11/25/2017 9:53	0:03	AWE	0.021	14.800	Oversupply
11/25/2017 10:02	5:27	ESA	Data is not available	Data is not available	Oversupply
11/25/2017 10:02	5:28	ESA	Data is not available	Data is not available	Oversupply
11/25/2017 10:02	5:27	ESB	Data is not available	Data is not available	Oversupply
11/25/2017 10:02	5:28	ESB	Data is not available	Data is not available	Oversupply
11/25/2017 10:04	0:01	AWE	0.002	16.600	Oversupply
11/25/2017 10:22	0:01	AWE	0.000	15.300	Oversupply
11/25/2017 10:24	0:01	AWE	0.004	14.700	Oversupply
11/25/2017 10:27	0:30	AWE	3.541	17.700	Oversupply
11/25/2017 11:00	2:07	AWE	16.653	20.700	Oversupply
11/25/2017 13:17	0:19	AWE	0.679	20.900	Oversupply
11/25/2017 13:38	0:08	AWE	0.084	20.600	Oversupply
11/25/2017 13:57	0:03	AWE	0.008	20.900	Oversupply
11/25/2017 14:01	0:04	AWE	0.053	20.700	Oversupply
11/25/2017 21:25	9:06	KWP/II	140.985	19.211	Oversupply
11/25/2017 23:38	0:18	AWE	0.367	20.700	Oversupply
11/25/2017 23:58	0:01	AWE	0.009	20.600	Oversupply
11/26/2017 0:00	0:43	AWE	2.058	20.600	Oversupply
11/26/2017 0:44	0:01	AWE	0.002	19.100	Oversupply
11/26/2017 0:47	0:02	AWE	0.016	19.400	Oversupply
11/26/2017 0:50	0:01	AWE	0.017	19.700	Oversupply
11/26/2017 0:54	0:02	AWE	0.059	19.300	Oversupply
11/26/2017 0:57	0:03	AWE	0.036	19.100	Oversupply
11/26/2017 1:01	0:04	AWE	0.049	17.900	Oversupply
11/26/2017 1:06	0:09	AWE	0.308	18.800	Oversupply
11/26/2017 1:16	0:44	AWE	1.171	20.500	Oversupply
11/26/2017 2:01	2:35	AWE	14.218	20.700	Oversupply
11/26/2017 4:37	0:19	AWE	0.529	20.700	Oversupply
11/26/2017 4:57	0:06	AWE	0.084	20.700	Oversupply
11/26/2017 6:58	11:02	KWP	45.013	19.672	Facility requested
11/26/2017 7:36	0:01	AWE	0.022	11.800	Oversupply
11/26/2017 7:36	0:01	KWP/II	0.004	10.229	Oversupply
11/26/2017 10:12	12:01	AWE	86.367	20.700	Oversupply
11/26/2017 12:33	0:01	ESA	Data is not available	Data is not available	Oversupply
11/26/2017 12:33	0:01	ESB	Data is not available	Data is not available	Oversupply
11/26/2017 22:15	0:01	AWE	0.003	20.800	Oversupply
11/27/2017 0:25	5:08	AWE	44.725	20.500	Oversupply
11/27/2017 23:41	0:01	AWE	0.007	20.800	Oversupply
11/27/2017 23:43	0:03	AWE	0.011	20.800	Oversupply
11/27/2017 23:47	6:18	AWE	62.007	20.800	System constraint
11/28/2017 11:01	0:02	AWE	0.012	20.600	System constraint
11/28/2017 11:05	0:01	AWE	0.006	20.500	System constraint
11/28/2017 11:22	0:01	AWE	0.001	20.700	System constraint
11/28/2017 11:25	0:01	AWE	0.001	20.700	System constraint
11/28/2017 11:29	0:01	AWE	0.004	20.500	System constraint
11/28/2017 11:34	0:01	AWE	0.003	20.400	System constraint
11/28/2017 11:36	0:02	AWE	0.012	20.400	System constraint
11/29/2017 0:18	0:05	KWP/II	0.197	17.714	Oversupply



Maui Curtailment Report

November 2017

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWh	Peak MW Curtailed	Reasons for Curtailment
11/29/2017 0:24	1:18	KWP	5.916	17.714	Oversupply
11/29/2017 1:43	4:33	KWP	39.134	17.714	Oversupply
11/29/2017 8:15	1:28	KWP	22.580	19.672	Facility requested
11/29/2017 8:20	0:07	AWE	0.103	11.700	Oversupply
11/29/2017 8:33	0:02	AWE	0.040	12.100	Oversupply
11/29/2017 8:40	0:16	AWE	0.378	17.300	Oversupply
11/29/2017 8:49	4:31	KWP	44.102	17.714	System constraint
11/29/2017 12:15	0:14	AWE	0.394	20.700	System constraint
11/29/2017 12:31	0:04	AWE	0.064	20.600	System constraint
11/29/2017 12:52	0:03	AWE	0.030	20.700	System constraint
11/29/2017 12:58	1:36	KWP	20.632	19.672	Facility requested
11/29/2017 21:17	0:08	KWP	0.267	17.498	Oversupply
11/30/2017 2:40	0:37	KWP	2.658	11.749	Oversupply
11/30/2017 3:21	0:10	KWP	0.387	8.255	Oversupply
11/30/2017 3:37	0:13	KWP	0.368	7.782	Oversupply
11/30/2017 4:18	1:25	KWP	18.127	17.480	Oversupply
11/30/2017 4:19	0:03	AWE	0.024	20.900	Oversupply
11/30/2017 4:25	0:06	AWE	0.032	20.700	Oversupply
11/30/2017 4:35	0:01	AWE	0.007	20.800	Oversupply
11/30/2017 4:38	0:31	AWE	1.230	20.600	Oversupply
11/30/2017 5:13	0:24	AWE	0.587	20.800	Oversupply
11/30/2017 5:44	0:18	KWP	2.599	16.378	Oversupply
11/30/2017 9:02	0:20	KWP	0.602	14.942	Oversupply
11/30/2017 9:23	0:56	KWP	5.610	16.042	Oversupply
11/30/2017 21:51	0:12	KWP	0.854	16.473	System constraint
11/30/2017 22:40	0:01	KWP	0.003	15.483	Oversupply
11/30/2017 22:42	0:03	KWP	0.016	17.231	Oversupply
11/30/2017 22:47	0:20	KWP	0.413	18.198	Oversupply
11/30/2017 23:08	0:01	KWP	0.003	18.037	Oversupply
11/30/2017 23:10	0:01	KWP	0.015	18.512	Oversupply
11/30/2017 23:13	0:13	KWP	0.681	19.150	Oversupply
11/30/2017 23:31	0:29	KWP	2.816	19.119	Oversupply
Total Estimated Curtailed MWh			887.667		

Notes:

- Curtailment for Kaheawa Wind Power ("KWP"), Makila Hydroelectric ("MH"), AAAAA Rent-A-Space Maui LTD ("SA"), Bioreal Solar, LLC ("BS"), Auwahi Wind Energy ("AWE"), Kaheawa Wind Power II ("KWPII") Bioreal Solar 250, LLC ("BS250"), Extra Spaces A ("ESA"), and Extra Spaces B ("ESB") 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.
- The Estimated Curtailed MWh and Peak MW Curtailed are calculated with information provided by AWE, KWP, and KWPII. Maui Electric does not make any representation as to its accuracy.
- The data to calculate the Estimated Curtailed MWh and Peak MW Curtailed is not provided by SA, BS, BS 250, ESA, ESB, or MH.
- Curtailment signals sent to SA, BS, BS250, ESA, or ESB during nighttime hours 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.



Lanai Curtailment Report

November 2017

Start Date and Time	Duration	IPP Curtailed	Estimated MWh Curtailed	Peak MW Curtailed	Reasons for Curtailment
11/1/2017 7:25	0:04	LSR	Data is not available	Data is not available	Oversupply
11/1/2017 7:51	0:02	LSR	Data is not available	Data is not available	Oversupply
11/1/2017 8:00	0:32	LSR	Data is not available	Data is not available	Oversupply
11/1/2017 10:16	0:02	LSR	Data is not available	Data is not available	Oversupply
11/1/2017 10:30	0:11	LSR	Data is not available	Data is not available	Oversupply
11/1/2017 10:46	0:02	LSR	Data is not available	Data is not available	Oversupply
11/1/2017 11:05	0:04	LSR	Data is not available	Data is not available	Oversupply
11/1/2017 11:19	0:02	LSR	Data is not available	Data is not available	Oversupply
11/1/2017 11:53	0:02	LSR	Data is not available	Data is not available	Oversupply
11/1/2017 12:33	0:02	LSR	Data is not available	Data is not available	Oversupply
11/1/2017 12:46	0:03	LSR	Data is not available	Data is not available	Oversupply
11/1/2017 12:51	1:12	LSR	Data is not available	Data is not available	Oversupply
11/1/2017 14:07	0:19	LSR	Data is not available	Data is not available	Oversupply
11/1/2017 14:27	0:29	LSR	Data is not available	Data is not available	Oversupply
11/1/2017 14:57	0:02	LSR	Data is not available	Data is not available	Oversupply
11/1/2017 15:00	0:25	LSR	Data is not available	Data is not available	Oversupply
11/1/2017 15:47	0:39	LSR	Data is not available	Data is not available	Oversupply
11/1/2017 16:27	0:04	LSR	Data is not available	Data is not available	Oversupply
11/1/2017 16:32	0:11	LSR	Data is not available	Data is not available	Oversupply
11/2/2017 7:33	0:49	LSR	Data is not available	Data is not available	Oversupply
11/2/2017 8:32	0:01	LSR	Data is not available	Data is not available	Oversupply
11/2/2017 8:34	0:56	LSR	Data is not available	Data is not available	Oversupply
11/2/2017 9:31	4:08	LSR	Data is not available	Data is not available	Oversupply
11/2/2017 13:40	2:18	LSR	Data is not available	Data is not available	Oversupply
11/2/2017 15:59	1:03	LSR	Data is not available	Data is not available	Oversupply
11/3/2017 7:26	1:05	LSR	Data is not available	Data is not available	Oversupply
11/3/2017 8:32	0:50	LSR	Data is not available	Data is not available	Oversupply
11/3/2017 9:23	0:24	LSR	Data is not available	Data is not available	Oversupply
11/3/2017 9:51	0:01	LSR	Data is not available	Data is not available	Oversupply
11/3/2017 9:55	0:16	LSR	Data is not available	Data is not available	Oversupply
11/3/2017 10:14	0:01	LSR	Data is not available	Data is not available	Oversupply
11/3/2017 10:17	0:04	LSR	Data is not available	Data is not available	Oversupply
11/3/2017 10:25	0:02	LSR	Data is not available	Data is not available	Oversupply
11/3/2017 10:31	0:03	LSR	Data is not available	Data is not available	Oversupply
11/3/2017 10:37	0:03	LSR	Data is not available	Data is not available	Oversupply
11/3/2017 10:44	0:02	LSR	Data is not available	Data is not available	Oversupply
11/3/2017 10:53	0:03	LSR	Data is not available	Data is not available	Oversupply
11/3/2017 11:02	0:06	LSR	Data is not available	Data is not available	Oversupply
11/3/2017 11:23	1:02	LSR	Data is not available	Data is not available	Oversupply
11/3/2017 12:39	0:05	LSR	Data is not available	Data is not available	Oversupply
11/3/2017 12:49	0:03	LSR	Data is not available	Data is not available	Oversupply
11/3/2017 13:03	0:04	LSR	Data is not available	Data is not available	Oversupply
11/3/2017 13:10	0:12	LSR	Data is not available	Data is not available	Oversupply
11/3/2017 13:25	0:29	LSR	Data is not available	Data is not available	Oversupply
11/3/2017 13:55	0:03	LSR	Data is not available	Data is not available	Oversupply
11/3/2017 14:10	0:08	LSR	Data is not available	Data is not available	Oversupply
11/3/2017 14:19	0:01	LSR	Data is not available	Data is not available	Oversupply
11/3/2017 14:26	0:22	LSR	Data is not available	Data is not available	Oversupply
11/3/2017 14:53	0:02	LSR	Data is not available	Data is not available	Oversupply
11/3/2017 15:22	0:01	LSR	Data is not available	Data is not available	Oversupply
11/3/2017 15:24	0:01	LSR	Data is not available	Data is not available	Oversupply
11/3/2017 15:54	0:05	LSR	Data is not available	Data is not available	Oversupply
11/4/2017 11:57	0:03	LSR	Data is not available	Data is not available	Oversupply
11/4/2017 12:01	0:06	LSR	Data is not available	Data is not available	Oversupply
11/4/2017 12:08	0:04	LSR	Data is not available	Data is not available	Oversupply
11/4/2017 12:14	0:04	LSR	Data is not available	Data is not available	Oversupply
11/4/2017 12:20	0:01	LSR	Data is not available	Data is not available	Oversupply
11/4/2017 12:22	0:02	LSR	Data is not available	Data is not available	Oversupply
11/4/2017 12:51	0:01	LSR	Data is not available	Data is not available	Oversupply
11/4/2017 13:04	0:02	LSR	Data is not available	Data is not available	Oversupply
11/4/2017 13:09	0:01	LSR	Data is not available	Data is not available	Oversupply
11/4/2017 13:13	0:01	LSR	Data is not available	Data is not available	Oversupply
11/4/2017 15:19	0:01	LSR	Data is not available	Data is not available	Oversupply
11/4/2017 15:54	0:04	LSR	Data is not available	Data is not available	Oversupply
11/4/2017 16:01	0:26	LSR	Data is not available	Data is not available	Oversupply
11/5/2017 8:11	0:04	LSR	Data is not available	Data is not available	Oversupply
11/5/2017 8:56	0:05	LSR	Data is not available	Data is not available	Oversupply
11/5/2017 9:08	0:05	LSR	Data is not available	Data is not available	Oversupply
11/5/2017 9:18	0:01	LSR	Data is not available	Data is not available	Oversupply
11/5/2017 9:20	0:04	LSR	Data is not available	Data is not available	Oversupply
11/5/2017 9:30	0:46	LSR	Data is not available	Data is not available	Oversupply
11/5/2017 10:50	0:14	LSR	Data is not available	Data is not available	Oversupply
11/5/2017 11:05	0:46	LSR	Data is not available	Data is not available	Oversupply



Lanai Curtailment Report

Start Date and Time	Duration	IPP Curtailed	Estimated MWh Curtailed	Peak MW Curtailed	Reasons for Curtailment
11/6/2017 12:54	0:16	LSR	Data is not available	Data is not available	Oversupply
11/6/2017 13:14	0:11	LSR	Data is not available	Data is not available	Oversupply
11/7/2017 13:41	0:01	LSR	Data is not available	Data is not available	Oversupply
11/7/2017 14:08	0:08	LSR	Data is not available	Data is not available	Oversupply
11/7/2017 14:17	0:02	LSR	Data is not available	Data is not available	Oversupply
11/7/2017 14:39	0:02	LSR	Data is not available	Data is not available	Oversupply
11/7/2017 14:50	0:02	LSR	Data is not available	Data is not available	Oversupply
11/7/2017 14:53	0:01	LSR	Data is not available	Data is not available	Oversupply
11/7/2017 14:55	0:02	LSR	Data is not available	Data is not available	Oversupply
11/7/2017 15:19	0:01	LSR	Data is not available	Data is not available	Oversupply
11/10/2017 8:43	0:22	LSR	Data is not available	Data is not available	Oversupply
11/10/2017 9:06	0:09	LSR	Data is not available	Data is not available	Oversupply
11/10/2017 9:17	0:35	LSR	Data is not available	Data is not available	Oversupply
11/10/2017 9:56	1:24	LSR	Data is not available	Data is not available	Oversupply
11/10/2017 11:25	0:01	LSR	Data is not available	Data is not available	Oversupply
11/10/2017 11:41	0:01	LSR	Data is not available	Data is not available	Oversupply
11/10/2017 12:27	0:01	LSR	Data is not available	Data is not available	Oversupply
11/10/2017 13:50	0:02	LSR	Data is not available	Data is not available	Oversupply
11/10/2017 13:55	0:01	LSR	Data is not available	Data is not available	Oversupply
11/10/2017 14:03	0:05	LSR	Data is not available	Data is not available	Oversupply
11/10/2017 14:24	0:02	LSR	Data is not available	Data is not available	Oversupply
11/10/2017 14:27	0:01	LSR	Data is not available	Data is not available	Oversupply
11/10/2017 15:08	0:01	LSR	Data is not available	Data is not available	Oversupply
11/10/2017 15:15	0:02	LSR	Data is not available	Data is not available	Oversupply
11/10/2017 15:21	0:05	LSR	Data is not available	Data is not available	Oversupply
11/10/2017 15:28	0:01	LSR	Data is not available	Data is not available	Oversupply
11/10/2017 15:33	0:02	LSR	Data is not available	Data is not available	Oversupply
11/11/2017 7:31	0:11	LSR	Data is not available	Data is not available	Oversupply
11/11/2017 7:43	0:03	LSR	Data is not available	Data is not available	Oversupply
11/11/2017 7:47	0:03	LSR	Data is not available	Data is not available	Oversupply
11/11/2017 7:57	0:08	LSR	Data is not available	Data is not available	Oversupply
11/11/2017 8:23	0:03	LSR	Data is not available	Data is not available	Oversupply
11/11/2017 8:27	0:18	LSR	Data is not available	Data is not available	Oversupply
11/11/2017 9:18	0:01	LSR	Data is not available	Data is not available	Oversupply
11/11/2017 9:24	0:02	LSR	Data is not available	Data is not available	Oversupply
11/11/2017 9:41	0:02	LSR	Data is not available	Data is not available	Oversupply
11/11/2017 10:32	0:04	LSR	Data is not available	Data is not available	Oversupply
11/11/2017 11:27	0:03	LSR	Data is not available	Data is not available	Oversupply
11/11/2017 14:42	0:12	LSR	Data is not available	Data is not available	Oversupply
11/13/2017 7:24	1:59	LSR	Data is not available	Data is not available	Oversupply
11/13/2017 9:24	0:29	LSR	Data is not available	Data is not available	Oversupply
11/13/2017 9:55	0:04	LSR	Data is not available	Data is not available	Oversupply
11/13/2017 10:05	0:01	LSR	Data is not available	Data is not available	Oversupply
11/13/2017 10:17	0:10	LSR	Data is not available	Data is not available	Oversupply
11/13/2017 10:29	0:02	LSR	Data is not available	Data is not available	Oversupply
11/13/2017 10:55	0:10	LSR	Data is not available	Data is not available	Oversupply
11/13/2017 11:19	0:02	LSR	Data is not available	Data is not available	Oversupply
11/13/2017 11:56	0:09	LSR	Data is not available	Data is not available	Oversupply
11/13/2017 12:51	0:05	LSR	Data is not available	Data is not available	Oversupply
11/13/2017 13:23	0:01	LSR	Data is not available	Data is not available	Oversupply
11/13/2017 13:29	0:02	LSR	Data is not available	Data is not available	Oversupply
11/13/2017 13:44	0:05	LSR	Data is not available	Data is not available	Oversupply
11/13/2017 13:50	0:15	LSR	Data is not available	Data is not available	Oversupply
11/13/2017 14:06	0:36	LSR	Data is not available	Data is not available	Oversupply
11/13/2017 14:47	0:18	LSR	Data is not available	Data is not available	Oversupply
11/13/2017 15:13	0:11	LSR	Data is not available	Data is not available	Oversupply
11/13/2017 15:27	0:06	LSR	Data is not available	Data is not available	Oversupply
11/13/2017 15:35	0:01	LSR	Data is not available	Data is not available	Oversupply
11/13/2017 15:48	0:03	LSR	Data is not available	Data is not available	Oversupply
11/13/2017 15:54	0:49	LSR	Data is not available	Data is not available	Oversupply
11/14/2017 7:16	1:00	LSR	Data is not available	Data is not available	Oversupply
11/14/2017 8:17	0:16	LSR	Data is not available	Data is not available	Oversupply
11/14/2017 8:37	0:23	LSR	Data is not available	Data is not available	Oversupply
11/14/2017 9:01	2:27	LSR	Data is not available	Data is not available	Oversupply
11/14/2017 11:31	2:52	LSR	Data is not available	Data is not available	Oversupply
11/15/2017 7:53	0:06	LSR	Data is not available	Data is not available	Oversupply
11/15/2017 8:41	0:01	LSR	Data is not available	Data is not available	Oversupply
11/15/2017 8:46	0:14	LSR	Data is not available	Data is not available	Oversupply
11/15/2017 9:02	0:05	LSR	Data is not available	Data is not available	Oversupply
11/15/2017 9:25	0:01	LSR	Data is not available	Data is not available	Oversupply
11/15/2017 9:27	0:40	LSR	Data is not available	Data is not available	Oversupply
11/15/2017 10:08	0:01	LSR	Data is not available	Data is not available	Oversupply



Lanai Curtailment Report

Start Date and Time	Duration	IPP Curtailed	Estimated MWh Curtailed	Peak MW Curtailed	Reasons for Curtailment
11/16/2017 7:58	1:55	LSR	Data is not available	Data is not available	Oversupply
11/17/2017 7:37	1:50	LSR	Data is not available	Data is not available	Oversupply
11/17/2017 9:32	1:34	LSR	Data is not available	Data is not available	Oversupply
11/17/2017 11:09	0:12	LSR	Data is not available	Data is not available	Oversupply
11/17/2017 11:22	0:11	LSR	Data is not available	Data is not available	Oversupply
11/17/2017 11:36	0:01	LSR	Data is not available	Data is not available	Oversupply
11/17/2017 12:04	0:02	LSR	Data is not available	Data is not available	Oversupply
11/17/2017 12:33	0:21	LSR	Data is not available	Data is not available	Oversupply
11/17/2017 13:00	0:30	LSR	Data is not available	Data is not available	Oversupply
11/17/2017 13:32	0:10	LSR	Data is not available	Data is not available	Oversupply
11/17/2017 15:08	0:02	LSR	Data is not available	Data is not available	Oversupply
11/17/2017 15:14	0:08	LSR	Data is not available	Data is not available	Oversupply
11/17/2017 15:24	0:18	LSR	Data is not available	Data is not available	Oversupply
11/17/2017 15:48	0:01	LSR	Data is not available	Data is not available	Oversupply
11/17/2017 16:00	0:13	LSR	Data is not available	Data is not available	Oversupply
11/17/2017 16:15	0:22	LSR	Data is not available	Data is not available	Oversupply
11/18/2017 7:38	2:13	LSR	Data is not available	Data is not available	Oversupply
11/18/2017 9:57	0:10	LSR	Data is not available	Data is not available	Oversupply
11/18/2017 10:16	0:01	LSR	Data is not available	Data is not available	Oversupply
11/18/2017 10:34	0:05	LSR	Data is not available	Data is not available	Oversupply
11/18/2017 10:41	0:01	LSR	Data is not available	Data is not available	Oversupply
11/18/2017 10:47	0:03	LSR	Data is not available	Data is not available	Oversupply
11/18/2017 11:04	0:01	LSR	Data is not available	Data is not available	Oversupply
11/18/2017 11:19	0:05	LSR	Data is not available	Data is not available	Oversupply
11/18/2017 11:25	0:03	LSR	Data is not available	Data is not available	Oversupply
11/18/2017 17:02	0:09	LSR	Data is not available	Data is not available	Oversupply
11/19/2017 7:30	1:32	LSR	Data is not available	Data is not available	Oversupply
11/20/2017 8:09	0:01	LSR	Data is not available	Data is not available	Oversupply
11/20/2017 8:22	0:22	LSR	Data is not available	Data is not available	Oversupply
11/20/2017 8:45	1:07	LSR	Data is not available	Data is not available	Oversupply
11/20/2017 9:58	0:06	LSR	Data is not available	Data is not available	Oversupply
11/20/2017 10:07	0:32	LSR	Data is not available	Data is not available	Oversupply
11/20/2017 10:43	0:24	LSR	Data is not available	Data is not available	Oversupply
11/20/2017 11:10	0:08	LSR	Data is not available	Data is not available	Oversupply
11/20/2017 11:23	1:37	LSR	Data is not available	Data is not available	Oversupply
11/20/2017 13:06	0:44	LSR	Data is not available	Data is not available	Oversupply
11/20/2017 13:52	0:05	LSR	Data is not available	Data is not available	Oversupply
11/20/2017 14:01	1:02	LSR	Data is not available	Data is not available	Oversupply
11/20/2017 15:10	0:27	LSR	Data is not available	Data is not available	Oversupply
11/20/2017 15:43	0:02	LSR	Data is not available	Data is not available	Oversupply
11/21/2017 7:33	2:41	LSR	Data is not available	Data is not available	Oversupply
11/21/2017 10:25	0:01	LSR	Data is not available	Data is not available	Oversupply
11/21/2017 10:28	0:13	LSR	Data is not available	Data is not available	Oversupply
11/21/2017 10:43	2:58	LSR	Data is not available	Data is not available	Oversupply
11/21/2017 13:47	0:03	LSR	Data is not available	Data is not available	Oversupply
11/21/2017 14:05	0:10	LSR	Data is not available	Data is not available	Oversupply
11/21/2017 14:16	2:10	LSR	Data is not available	Data is not available	Oversupply
11/22/2017 7:45	0:04	LSR	Data is not available	Data is not available	Oversupply
11/22/2017 8:28	0:22	LSR	Data is not available	Data is not available	Oversupply
11/22/2017 9:40	0:48	LSR	Data is not available	Data is not available	Oversupply
11/22/2017 10:50	0:25	LSR	Data is not available	Data is not available	Oversupply
11/22/2017 11:16	0:04	LSR	Data is not available	Data is not available	Oversupply
11/22/2017 11:30	0:08	LSR	Data is not available	Data is not available	Oversupply
11/22/2017 11:40	3:12	LSR	Data is not available	Data is not available	Oversupply
11/22/2017 14:53	1:16	LSR	Data is not available	Data is not available	Oversupply
11/23/2017 7:41	1:07	LSR	Data is not available	Data is not available	Oversupply
11/23/2017 8:50	0:03	LSR	Data is not available	Data is not available	Oversupply
11/23/2017 8:56	0:03	LSR	Data is not available	Data is not available	Oversupply
11/23/2017 9:01	0:02	LSR	Data is not available	Data is not available	Oversupply
11/23/2017 9:06	0:05	LSR	Data is not available	Data is not available	Oversupply
11/23/2017 9:12	0:05	LSR	Data is not available	Data is not available	Oversupply
11/23/2017 9:18	0:04	LSR	Data is not available	Data is not available	Oversupply
11/23/2017 9:24	0:02	LSR	Data is not available	Data is not available	Oversupply
11/23/2017 9:28	0:05	LSR	Data is not available	Data is not available	Oversupply
11/23/2017 9:35	0:13	LSR	Data is not available	Data is not available	Oversupply
11/23/2017 9:49	1:31	LSR	Data is not available	Data is not available	Oversupply
11/23/2017 11:22	0:23	LSR	Data is not available	Data is not available	Oversupply
11/23/2017 11:47	0:20	LSR	Data is not available	Data is not available	Oversupply
11/23/2017 12:14	1:49	LSR	Data is not available	Data is not available	Oversupply
11/23/2017 14:04	0:15	LSR	Data is not available	Data is not available	Oversupply
11/23/2017 14:21	0:08	LSR	Data is not available	Data is not available	Oversupply
11/23/2017 14:31	0:03	LSR	Data is not available	Data is not available	Oversupply



Lanai Curtailment Report

Start Date and Time	Duration	IPP Curtailed	Estimated MWh Curtailed	Peak MW Curtailed	Reasons for Curtailment
11/23/2017 14:36	0:08	LSR	Data is not available	Data is not available	Oversupply
11/23/2017 14:47	0:05	LSR	Data is not available	Data is not available	Oversupply
11/23/2017 14:53	0:16	LSR	Data is not available	Data is not available	Oversupply
11/23/2017 15:10	1:30	LSR	Data is not available	Data is not available	Oversupply
11/24/2017 7:39	1:21	LSR	Data is not available	Data is not available	Oversupply
11/24/2017 9:01	0:05	LSR	Data is not available	Data is not available	Oversupply
11/24/2017 9:07	1:05	LSR	Data is not available	Data is not available	Oversupply
11/24/2017 10:14	0:56	LSR	Data is not available	Data is not available	Oversupply
11/24/2017 11:11	4:33	LSR	Data is not available	Data is not available	Oversupply
11/24/2017 15:45	0:55	LSR	Data is not available	Data is not available	Oversupply
11/25/2017 7:49	0:03	LSR	Data is not available	Data is not available	Oversupply
11/25/2017 7:54	0:01	LSR	Data is not available	Data is not available	Oversupply
11/25/2017 7:57	0:01	LSR	Data is not available	Data is not available	Oversupply
11/25/2017 8:01	0:05	LSR	Data is not available	Data is not available	Oversupply
11/25/2017 8:07	0:20	LSR	Data is not available	Data is not available	Oversupply
11/25/2017 8:28	1:35	LSR	Data is not available	Data is not available	Oversupply
11/25/2017 10:28	0:47	LSR	Data is not available	Data is not available	Oversupply
11/25/2017 11:17	0:14	LSR	Data is not available	Data is not available	Oversupply
11/25/2017 11:32	0:02	LSR	Data is not available	Data is not available	Oversupply
11/25/2017 11:36	0:15	LSR	Data is not available	Data is not available	Oversupply
11/25/2017 11:54	0:01	LSR	Data is not available	Data is not available	Oversupply
11/25/2017 11:57	0:03	LSR	Data is not available	Data is not available	Oversupply
11/25/2017 12:01	0:43	LSR	Data is not available	Data is not available	Oversupply
11/25/2017 12:45	0:46	LSR	Data is not available	Data is not available	Oversupply
11/25/2017 13:32	0:08	LSR	Data is not available	Data is not available	Oversupply
11/25/2017 13:41	0:02	LSR	Data is not available	Data is not available	Oversupply
11/25/2017 13:47	0:27	LSR	Data is not available	Data is not available	Oversupply
11/25/2017 14:20	0:02	LSR	Data is not available	Data is not available	Oversupply
11/25/2017 14:23	0:42	LSR	Data is not available	Data is not available	Oversupply
11/25/2017 15:07	0:12	LSR	Data is not available	Data is not available	Oversupply
11/25/2017 15:21	0:26	LSR	Data is not available	Data is not available	Oversupply
11/25/2017 15:54	0:01	LSR	Data is not available	Data is not available	Oversupply
11/25/2017 15:59	0:06	LSR	Data is not available	Data is not available	Oversupply
11/25/2017 16:07	0:05	LSR	Data is not available	Data is not available	Oversupply
11/25/2017 16:16	0:02	LSR	Data is not available	Data is not available	Oversupply
11/25/2017 16:19	0:03	LSR	Data is not available	Data is not available	Oversupply
11/25/2017 16:23	0:18	LSR	Data is not available	Data is not available	Oversupply
11/26/2017 7:30	3:16	LSR	Data is not available	Data is not available	Oversupply
11/26/2017 10:48	0:28	LSR	Data is not available	Data is not available	Oversupply
11/26/2017 11:18	0:18	LSR	Data is not available	Data is not available	Oversupply
11/26/2017 11:55	0:25	LSR	Data is not available	Data is not available	Oversupply
11/26/2017 12:22	0:50	LSR	Data is not available	Data is not available	Oversupply
11/26/2017 13:33	1:33	LSR	Data is not available	Data is not available	Oversupply
11/26/2017 15:17	0:18	LSR	Data is not available	Data is not available	Oversupply
11/26/2017 15:36	0:01	LSR	Data is not available	Data is not available	Oversupply
11/26/2017 15:38	0:07	LSR	Data is not available	Data is not available	Oversupply
11/26/2017 15:54	0:02	LSR	Data is not available	Data is not available	Oversupply
11/26/2017 16:12	0:02	LSR	Data is not available	Data is not available	Oversupply
11/26/2017 16:16	0:01	LSR	Data is not available	Data is not available	Oversupply
11/26/2017 16:20	0:01	LSR	Data is not available	Data is not available	Oversupply
11/26/2017 16:23	0:08	LSR	Data is not available	Data is not available	Oversupply
11/27/2017 12:38	0:05	LSR	Data is not available	Data is not available	Oversupply
11/27/2017 14:30	0:02	LSR	Data is not available	Data is not available	Oversupply
11/28/2017 8:44	0:02	LSR	Data is not available	Data is not available	Oversupply
11/28/2017 8:47	0:01	LSR	Data is not available	Data is not available	Oversupply
11/28/2017 9:19	0:21	LSR	Data is not available	Data is not available	Oversupply
11/28/2017 10:43	0:10	LSR	Data is not available	Data is not available	Oversupply
11/28/2017 12:18	0:04	LSR	Data is not available	Data is not available	Oversupply
11/28/2017 14:12	0:05	LSR	Data is not available	Data is not available	Oversupply
11/28/2017 14:32	0:02	LSR	Data is not available	Data is not available	Oversupply
11/29/2017 7:41	1:49	LSR	Data is not available	Data is not available	Oversupply
11/29/2017 9:35	0:01	LSR	Data is not available	Data is not available	Oversupply
11/29/2017 9:39	0:13	LSR	Data is not available	Data is not available	Oversupply
11/29/2017 9:59	0:48	LSR	Data is not available	Data is not available	Oversupply
11/29/2017 10:49	0:01	LSR	Data is not available	Data is not available	Oversupply
11/29/2017 10:55	0:02	LSR	Data is not available	Data is not available	Oversupply
11/29/2017 11:15	0:01	LSR	Data is not available	Data is not available	Oversupply
11/29/2017 11:27	0:04	LSR	Data is not available	Data is not available	Oversupply
11/29/2017 11:37	0:02	LSR	Data is not available	Data is not available	Oversupply
11/29/2017 11:50	0:01	LSR	Data is not available	Data is not available	Oversupply
11/29/2017 11:53	0:03	LSR	Data is not available	Data is not available	Oversupply
11/29/2017 12:03	0:02	LSR	Data is not available	Data is not available	Oversupply



Lanai Curtailment Report

Start Date and Time	Duration	IPP Curtailed	Estimated MWh Curtailed	Peak MW Curtailed	Reasons for Curtailment
11/29/2017 12:12	2:34	LSR	Data is not available	Data is not available	Oversupply
11/29/2017 14:50	0:04	LSR	Data is not available	Data is not available	Oversupply
11/29/2017 14:56	0:01	LSR	Data is not available	Data is not available	Oversupply
11/29/2017 15:16	0:10	LSR	Data is not available	Data is not available	Oversupply
11/29/2017 15:27	0:26	LSR	Data is not available	Data is not available	Oversupply
11/29/2017 15:56	0:06	LSR	Data is not available	Data is not available	Oversupply
11/29/2017 16:05	0:13	LSR	Data is not available	Data is not available	Oversupply
11/29/2017 16:37	0:03	LSR	Data is not available	Data is not available	Oversupply
11/30/2017 7:41	1:14	LSR	Data is not available	Data is not available	Oversupply
11/30/2017 9:00	0:01	LSR	Data is not available	Data is not available	Oversupply
11/30/2017 9:05	0:04	LSR	Data is not available	Data is not available	Oversupply
11/30/2017 9:22	0:07	LSR	Data is not available	Data is not available	Oversupply
11/30/2017 9:33	0:17	LSR	Data is not available	Data is not available	Oversupply
11/30/2017 10:52	0:02	LSR	Data is not available	Data is not available	Oversupply
11/30/2017 11:01	0:23	LSR	Data is not available	Data is not available	Oversupply
11/30/2017 11:27	0:15	LSR	Data is not available	Data is not available	Oversupply
11/30/2017 11:58	0:09	LSR	Data is not available	Data is not available	Oversupply
11/30/2017 12:22	0:02	LSR	Data is not available	Data is not available	Oversupply
11/30/2017 15:25	0:14	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 November 2017

Start Date/Time	MW Output Prior to Start of Curtailment	End Date/Time	MW Output After Curtailment Released ¹	IPP	Reason for Curtailment
11/05/17 12:09	0.4 MW	11/05/17 13:41	0.0 MW	TGUH11	Oversupply
11/06/17 01:50	19.6 MW	11/06/17 04:09	8.3 MW	Tawhiri	Oversupply
11/11/17 07:33	0.4 MW	11/11/17 14:42	0.0 MW	HRD	System constraint
11/24/17 12:11	0.6 MW	11/24/17 14:09	0.0 MW	TGUH11	Oversupply
11/24/17 12:18	0.2 MW	11/24/17 14:18	0.0 MW	WHCC	
11/24/17 12:12	19.9 MW	11/24/17 14:03	19.6 MW	Tawhiri	Facility Requested
11/25/17 20:09	18.7 MW	11/27/17 05:48	18.7 MW	Tawhiri	
11/26/17 01:19	18.5 MW	11/26/17 05:07	18.5 MW	Tawhiri	Oversupply
11/27/17 01:12	18.5 MW	11/27/17 04:27	18.5 MW	Tawhiri	Oversupply

¹ 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.

SERVICE LIST
(Docket No. 2011-0206)

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