



November 20, 2018

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2018 NOV 20 P 3:43

PUBLIC UTILITIES  
COMMISSION

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

Dear Commissioners:

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

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'<sup>1</sup> monthly report for October 2018 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](mailto: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,

Kevin M. Katsura  
Director  
Regulatory Non-Rate Proceedings

Enclosure

c: Service List

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

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

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

The following provides information with respect to items 1a) through 1b) – (all statements are current as of the month ending October 31, 2018):

**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 October 31, 2018):

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

Hawaiian Electric did not have any contingency reserve activations for the month of October. Maui Electric and Hawai'i Electric Light do not operate with contingency reserve requirements. Therefore, Attachment 3 is not being provided for this reporting period

**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 October.

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

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

- (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 October 31, 2018):

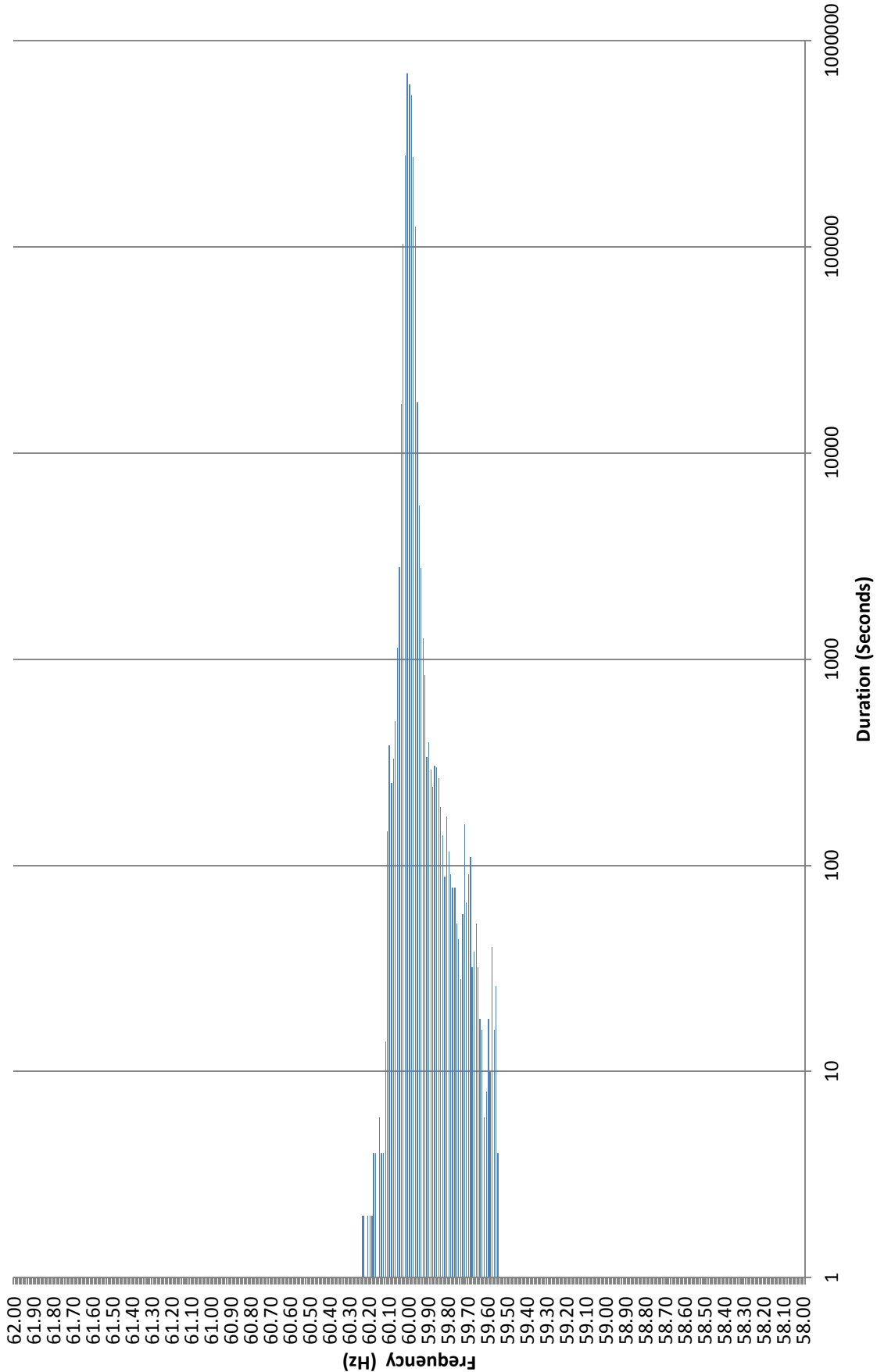
**3a) Tabulation of each curtailment event for each resource including the starting date and time, duration, megawatt hours curtailed, peak MW curtailed, and reason for curtailment:**

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

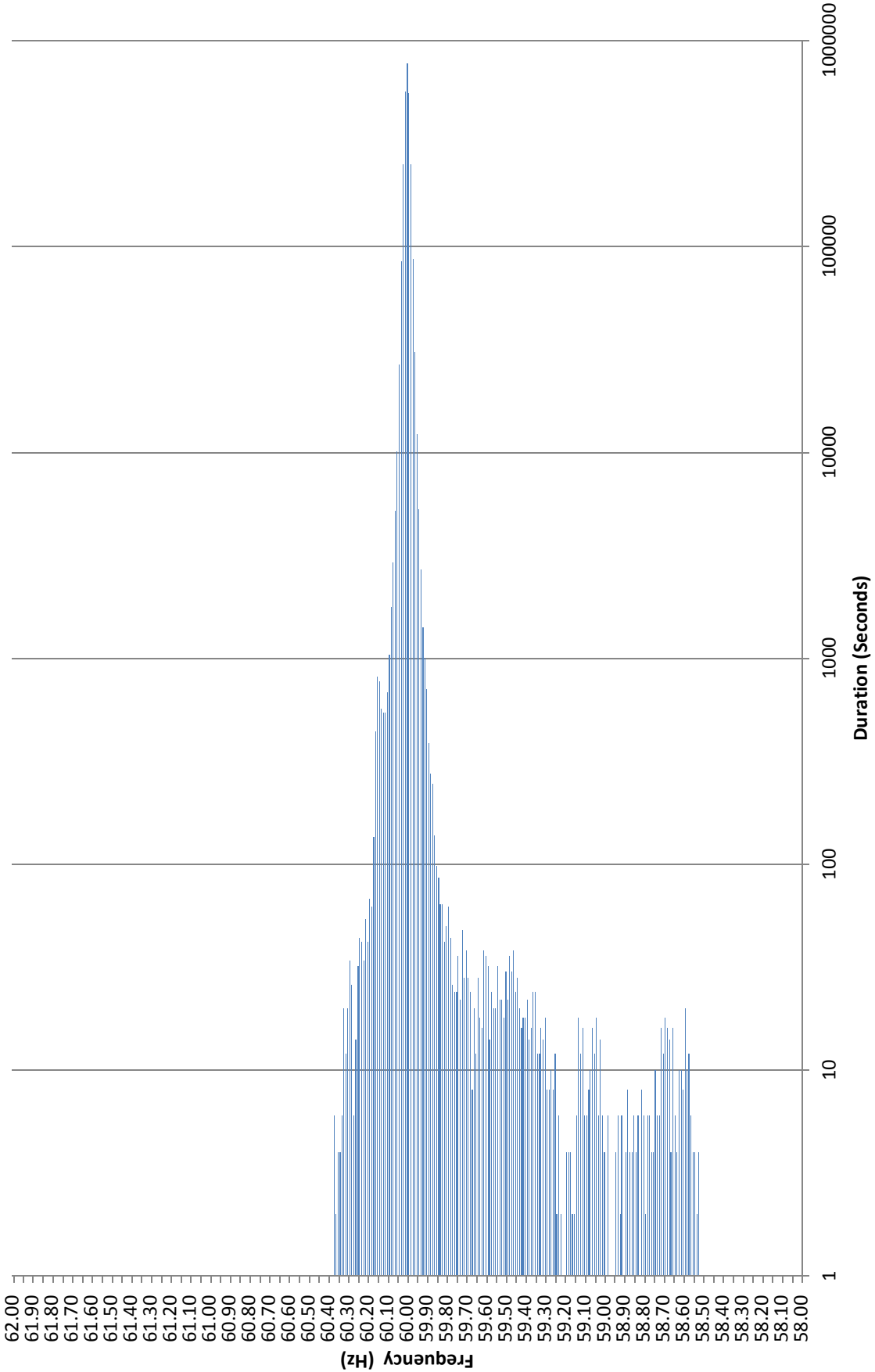
**3b) Total MWh of non-dispatchable renewable resources curtailed for the month:**

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.

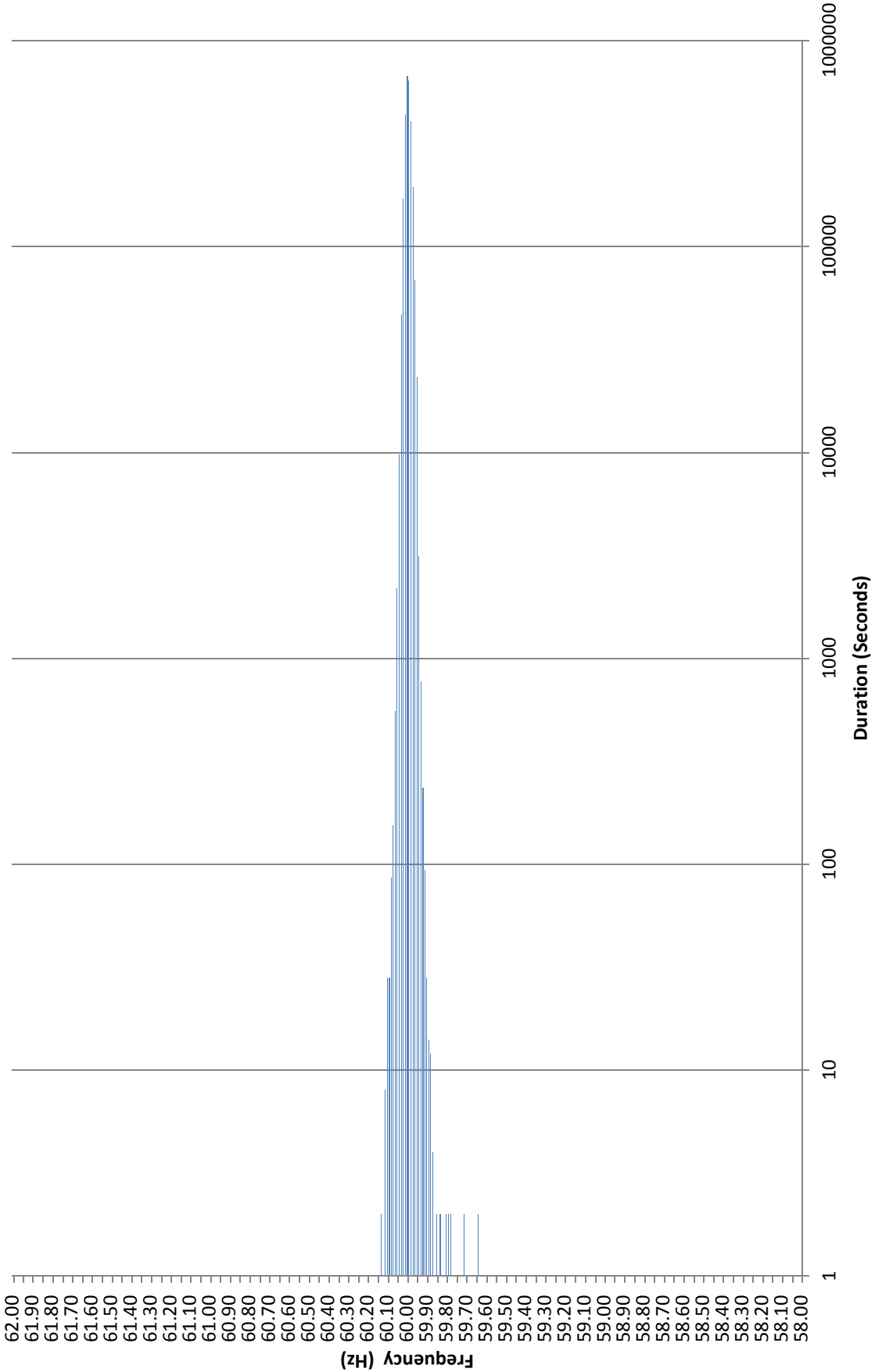
# Frequency Distribution Plot - Hawaiian Electric October 2018



# Frequency Distribution Plot - Maui Electric October 2018



**Frequency Distribution Plot - Hawai'i Electric Light  
October 2018**



Hawaiian Electric Frequency Excursion Statistics October 2018		
Data Rounded to the nearest	<59.95 Hz	>60.05 Hz
Number of Excursions	414	176
Maximum Duration (sec)	1016	1068
Maximum Deviation (Hz)	59.553	60.24
Total Duration of Excursions (sec)	10898	3528

Maui Electric Frequency Excursion Statistics October 2018		
	<59.95 Hz	>60.05 Hz
Number of Excursions	2565	1959
Maximum Duration (sec)	1538	2182
Maximum Deviation (Hz)	58.516	60.374
Total Duration of Excursions (sec)	19112	19876



Hawai'i Electric Light Frequency Excursion Statistics October 2018		
	<59.95 Hz	>60.05 Hz
Number of Excursions	2879	399
Maximum Duration (sec)	142	42
Maximum Deviation (Hz)	59.637	60.131
Total Duration of Excursions (sec)	14436	1590

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MAUI ELECTRIC COMPANY, LIMITED  
UNDERFREQUENCY LOADSHEDDING EVENTS  
October 2018

Event #	IR #	Island	Date & Time	Frequency (Hz)			Load Shed (MW)	Duration (HH:MM)	Description
				Prior to Event	Nadir	Levels UFLS Occurred			
1	820	Lana'i	10/16/2018 3:45 PM	60.00	53.53	58.65, 58.5, 57.5, 57.0	2.32	4:17	A frequency depression of 53.53 Hz occurred when construction workers dropped a tree across the 12kV primary conductors.
2	839	Maui	10/20/2018 3:56 PM	60.00	58.38	58.7, 58.5	37.57	2:45	A frequency depression of 58.38 Hz occurred when a sudden drop in as-available wind and solar generation occurred.
3	852	Maui	10/27/2018 11:42 AM	60.00	58.49	58.7, 58.5	39.05	1:15	A frequency depression of 58.49 Hz occurred when a sudden drop in as-available wind and solar generation occurred.

HAWAIIAN ELECTRIC COMPANY, INC.  
 DEMAND RESPONSE EVENTS  
 October 2018

Event #	Date & Time	Frequency (Hz)			Load Shed (MW)	Duration (HH:MM)	Description
		Prior to Event	Nadir	Trigger			
1	10/25/2018 16:34	59.76	59.69	59.70	NA	0:05	RDLC activated.
2	10/29/2018 22:35	59.96	59.55	59.70	NA	0:15	RDLC activated.

Hawaiian Electric Curtailment Report October 2018

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
10/01/18 02:00	28.0	0.00	10/11/18 10:19	0	*	KWF	Facility Requested
10/01/18 06:10	0.0	0.00	10/01/18 06:56	0	*	Makai	System Constraints
10/01/18 06:10	0.0	0.00	10/01/18 09:16	0	*	Mauka	System Constraints
10/01/18 06:14	0.0	0.00	10/01/18 06:53	0	*	KWF	System Constraints
10/01/18 08:34	0.0	0.00	10/01/18 09:13	0	*	KWF	System Constraints
10/01/18 08:39	0.0	0.00	10/01/18 09:15	0	*	Makai	System Constraints
10/11/18 15:34	0.0	0.00	10/11/18 16:09	0	*	Mauka	System Constraints
10/11/18 15:38	0.0	0.50	10/11/18 16:07	0	*	North	System Constraints
10/11/18 15:39	0.0	0.10	10/11/18 16:07	0	*	South	System Constraints
10/13/18 06:00	0.0	0.00	10/13/18 07:19	0	*	Aloha	System Constraints
10/13/18 06:03	0.0	0.00	10/13/18 07:20	0	*	Waianae	System Constraints
10/13/18 14:39	0.0	6.30	10/13/18 15:27	0	*	Waianae	System Constraints
10/13/18 14:46	0.0	0.60	10/13/18 15:21	0	*	Aloha	System Constraints
10/16/18 05:48	0.0	0.00	10/16/18 08:17	0	*	Waianae	System Constraints
10/16/18 05:55	0.0	0.00	10/16/18 08:15	0	*	Aloha	System Constraints
10/16/18 14:58	0.0	27.20	10/16/18 19:50	0	*	Waianae	System Constraints
10/16/18 15:01	0.0	3.70	10/16/18 19:51	0	*	Aloha	System Constraints
10/17/18 05:26	0.0	0.00	10/17/18 07:58	0	*	Waianae	System Constraints
10/17/18 05:28	0.0	0.00	10/17/18 07:56	0	*	Aloha	System Constraints
10/17/18 11:43	0.0	12.40	10/17/18 12:06	0	*	Waianae	System Constraints
10/17/18 11:46	0.0	2.90	10/17/18 12:08	0	*	Aloha	System Constraints
10/23/18 05:07	0.0	5.00	10/23/18 05:35	0	*	KWF	System Constraints
10/23/18 05:10	0.0	0.20	10/23/18 05:34	0	*	Makai	System Constraints
10/23/18 05:10	0.0	8.30	10/23/18 13:38	0	*	Mauka	System Constraints
10/23/18 13:03	0.0	7.80	10/23/18 13:35	0	*	KWF	System Constraints
10/23/18 13:05	0.0	9.70	10/23/18 13:38	0	*	Makai	System Constraints
10/24/18 16:52	26.0	12.00	10/27/18 03:31	0	*	KWF	Facility Requested
10/25/18 20:23	0.0	0.00	10/26/18 08:41	0	*	Mauka	System Constraints
10/25/18 20:29	0.0	10.40	10/25/18 20:55	0	*	KWF	System Constraints
10/25/18 20:44	0.0	1.60	10/25/18 20:59	0	*	Makai	System Constraints
10/26/18 07:36	0.0	6.50	10/26/18 08:34	0	*	KWF	System Constraints
10/26/18 07:40	0.0	2.10	10/26/18 08:40	0	*	Makai	System Constraints
10/27/18 04:18	23.0	11.70	10/30/18 11:01	0	*	KWF	Facility Requested
10/29/18 07:29	0.0	8.60	10/29/18 08:00	0	*	KWF	System Constraints
10/29/18 07:32	0.0	1.90	10/29/18 08:04	0	*	Makai	System Constraints
10/29/18 07:32	0.0	4.80	10/29/18 13:49	0	*	Mauka	System Constraints
10/29/18 13:00	0.0	0.50	10/29/18 13:45	0	*	Makai	System Constraints
10/29/18 13:04	0.0	0.30	10/29/18 13:42	0	*	KWF	System Constraints
10/30/18 12:03	15.0	0.00	10/30/18 13:17	0	*	KWF	Facility Requested
10/30/18 13:42	22.0	0.00	10/31/18 23:46	0	*	KWF	Facility Requested

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

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

\* Data has not been provided by IPP.



**Maui Curtailment Report**

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
10/1/2018 7:05	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/1/2018 7:06	0:01	AWE	0.013	4.500	Oversupply
10/1/2018 7:07	0:55	KWP	0.000	0.000	Facility requested
10/2/2018 6:05	0:01	KWP/II	0.000	0.010	Oversupply
10/3/2018 2:22	0:01	KWP/II	0.001	0.037	Oversupply
10/3/2018 7:45	0:01	KWP/II	0.001	0.084	Oversupply
10/4/2018 6:17	11:56	KS	Data is not available	Data is not available	Oversupply
10/5/2018 6:17	11:56	KS	Data is not available	Data is not available	Oversupply
10/5/2018 18:08	0:04	SMRR	Data is not available	Data is not available	Oversupply
10/6/2018 6:17	11:56	KS	Data is not available	Data is not available	Oversupply
10/6/2018 6:17	1:04	SMRR	Data is not available	Data is not available	Oversupply
10/7/2018 0:21	0:15	KWP/II	0.766	11.062	Oversupply
10/7/2018 6:17	11:56	KS	Data is not available	Data is not available	Oversupply
10/8/2018 15:47	0:01	KWP/II	0.020	13.001	Oversupply
10/9/2018 0:11	0:01	KWP/II	0.001	20.153	Oversupply
10/9/2018 0:25	0:04	KWP/II	0.025	20.599	Oversupply
10/9/2018 0:33	0:07	KWP/II	0.089	20.636	Oversupply
10/9/2018 0:41	0:02	KWP/II	0.018	20.639	Oversupply
10/9/2018 0:49	0:04	KWP/II	0.069	20.644	Oversupply
10/9/2018 0:54	0:01	KWP/II	0.000	20.641	Oversupply
10/9/2018 1:10	0:01	KWP/II	0.002	20.673	Oversupply
10/9/2018 1:32	0:05	KWP/II	0.064	20.698	Oversupply
10/9/2018 1:44	0:02	KWP/II	0.007	20.678	Oversupply
10/9/2018 2:24	0:05	KWP/II	0.046	20.708	Oversupply
10/9/2018 2:36	0:04	KWP/II	0.047	20.707	Oversupply
10/9/2018 2:44	0:12	KWP/II	0.224	20.695	Oversupply
10/9/2018 3:28	0:05	KWP/II	0.063	20.675	Oversupply
10/9/2018 3:47	0:03	KWP/II	0.029	19.211	Oversupply
10/9/2018 6:21	0:01	KS	Data is not available	Data is not available	Oversupply
10/9/2018 6:21	3:21	KS	Data is not available	Data is not available	Oversupply
10/9/2018 9:42	0:01	KS	Data is not available	Data is not available	Oversupply
10/9/2018 9:43	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/9/2018 9:44	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/9/2018 9:44	0:01	KS	Data is not available	Data is not available	Oversupply
10/9/2018 9:44	0:45	KS	Data is not available	Data is not available	Oversupply
10/9/2018 10:30	0:01	KS	Data is not available	Data is not available	Oversupply
10/9/2018 10:30	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/9/2018 10:30	0:01	KS	Data is not available	Data is not available	Oversupply
10/9/2018 10:31	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/9/2018 10:31	0:01	KS	Data is not available	Data is not available	Oversupply
10/9/2018 10:32	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/9/2018 10:32	0:01	KS	Data is not available	Data is not available	Oversupply
10/9/2018 10:32	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/9/2018 10:32	0:01	KS	Data is not available	Data is not available	Oversupply
10/9/2018 10:33	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/9/2018 10:33	0:01	KS	Data is not available	Data is not available	Oversupply
10/9/2018 10:33	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/9/2018 10:33	0:01	KS	Data is not available	Data is not available	Oversupply
10/9/2018 10:34	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/9/2018 10:34	0:01	KS	Data is not available	Data is not available	Oversupply
10/9/2018 10:35	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/9/2018 10:35	0:01	KS	Data is not available	Data is not available	Oversupply
10/9/2018 10:35	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/9/2018 10:35	0:01	KS	Data is not available	Data is not available	Oversupply
10/9/2018 10:36	0:01	KS	Data is not available	Data is not available	Oversupply
10/9/2018 10:36	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/9/2018 10:36	0:01	KS	Data is not available	Data is not available	Oversupply
10/9/2018 10:37	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/9/2018 10:37	0:01	KS	Data is not available	Data is not available	Oversupply
10/9/2018 10:38	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/9/2018 10:38	0:01	KS	Data is not available	Data is not available	Oversupply
10/9/2018 10:38	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/9/2018 10:39	0:01	KS	Data is not available	Data is not available	Oversupply
10/9/2018 10:39	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/9/2018 10:39	0:01	KS	Data is not available	Data is not available	Oversupply
10/9/2018 10:40	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/9/2018 10:40	0:01	KS	Data is not available	Data is not available	Oversupply
10/9/2018 10:41	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/9/2018 10:41	0:01	KS	Data is not available	Data is not available	Oversupply
10/9/2018 10:42	0:14	BS250	Data is not available	Data is not available	Oversupply
10/9/2018 10:42	0:04	ESA	Data is not available	Data is not available	Oversupply
10/9/2018 10:42	0:04	ESA	Data is not available	Data is not available	Oversupply
10/9/2018 10:42	0:14	ESB	Data is not available	Data is not available	Oversupply
10/9/2018 10:42	0:15	SMRR	Data is not available	Data is not available	Oversupply
10/9/2018 10:42	0:14	KS	Data is not available	Data is not available	Oversupply
10/9/2018 10:43	0:14	KWP/II	0.422	20.253	Oversupply
10/9/2018 10:56	0:01	KS	Data is not available	Data is not available	Oversupply
10/9/2018 10:56	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/9/2018 10:57	0:01	KS	Data is not available	Data is not available	Oversupply
10/9/2018 10:57	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/9/2018 10:57	0:01	KS	Data is not available	Data is not available	Oversupply
10/9/2018 10:58	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/9/2018 10:58	0:01	KS	Data is not available	Data is not available	Oversupply
10/9/2018 10:58	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/9/2018 10:59	0:01	KS	Data is not available	Data is not available	Oversupply
10/9/2018 10:59	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/9/2018 11:00	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/9/2018 11:01	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/9/2018 11:01	0:01	SMRR	Data is not available	Data is not available	Oversupply











**Maui Curtailment Report**

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
10/20/2018 10:43	0:01	KS	Data is not available	Data is not available	Oversupply
10/20/2018 10:44	1:13	BS250	Data is not available	Data is not available	Oversupply
10/20/2018 10:46	1:12	KWPPII	13.831	20.682	Oversupply
10/20/2018 11:34	0:19	AWE	0.149	16.100	Oversupply
10/20/2018 11:57	0:01	KS	Data is not available	Data is not available	Oversupply
10/20/2018 11:58	0:17	KS	Data is not available	Data is not available	Oversupply
10/20/2018 11:59	0:16	BS250	Data is not available	Data is not available	Oversupply
10/20/2018 11:59	0:17	KWPPII	1.901	20.375	Oversupply
10/20/2018 12:16	0:05	KS	Data is not available	Data is not available	Oversupply
10/20/2018 12:17	0:03	BS250	Data is not available	Data is not available	Oversupply
10/20/2018 12:17	0:04	KWPPII	0.087	18.024	Oversupply
10/20/2018 12:20	0:01	KS	Data is not available	Data is not available	Oversupply
10/20/2018 12:21	0:01	KS	Data is not available	Data is not available	Oversupply
10/20/2018 14:19	0:01	KS	Data is not available	Data is not available	Oversupply
10/20/2018 14:20	0:01	KS	Data is not available	Data is not available	Oversupply
10/20/2018 14:21	0:01	KS	Data is not available	Data is not available	Oversupply
10/20/2018 14:23	0:01	KS	Data is not available	Data is not available	Oversupply
10/20/2018 14:31	0:01	KS	Data is not available	Data is not available	Oversupply
10/20/2018 14:32	0:01	KS	Data is not available	Data is not available	Oversupply
10/20/2018 14:34	0:01	AWE	0.002	2.200	Oversupply
10/20/2018 14:41	0:01	KS	Data is not available	Data is not available	Oversupply
10/20/2018 14:47	0:01	KS	Data is not available	Data is not available	Oversupply
10/20/2018 14:47	0:01	KS	Data is not available	Data is not available	Oversupply
10/20/2018 14:49	0:01	KWPPII	0.015	19.899	Oversupply
10/20/2018 14:49	0:02	KS	Data is not available	Data is not available	Oversupply
10/20/2018 14:50	0:01	AWE	0.001	3.000	Oversupply
10/20/2018 14:52	0:05	AWE	0.009	3.700	Oversupply
10/20/2018 15:00	0:07	AWE	0.017	3.300	Oversupply
10/21/2018 8:56	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 8:57	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 8:58	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 8:59	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 8:59	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 9:00	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 9:01	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 9:02	0:07	KWPPII	0.346	19.847	Facility Requested
10/21/2018 9:02	9:11	SMRR	Data is not available	Data is not available	Oversupply
10/21/2018 9:02	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 9:02	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 9:03	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 9:05	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 9:08	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 9:12	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 9:27	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 9:27	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 9:28	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 9:29	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 9:30	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 9:30	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 9:31	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 9:32	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 9:33	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 9:33	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 9:34	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 9:35	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 9:36	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 9:37	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 9:37	0:17	KS	Data is not available	Data is not available	Oversupply
10/21/2018 9:38	0:12	BS250	Data is not available	Data is not available	Oversupply
10/21/2018 9:38	0:37	KWPPII	0.980	20.523	Oversupply
10/21/2018 9:51	0:04	BS250	Data is not available	Data is not available	Oversupply
10/21/2018 9:55	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 9:55	0:08	KS	Data is not available	Data is not available	Oversupply
10/21/2018 9:56	0:08	BS250	Data is not available	Data is not available	Oversupply
10/21/2018 10:04	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 10:04	0:09	KS	Data is not available	Data is not available	Oversupply
10/21/2018 10:05	0:09	BS250	Data is not available	Data is not available	Oversupply
10/21/2018 10:13	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 10:14	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 10:15	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 10:16	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 10:16	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 10:17	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 10:18	0:04	BS250	Data is not available	Data is not available	Oversupply
10/21/2018 10:18	0:03	KS	Data is not available	Data is not available	Oversupply
10/21/2018 10:19	0:03	KWPPII	0.068	17.501	Oversupply
10/21/2018 10:21	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 10:22	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 10:22	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 10:23	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 10:24	1:02	BS250	Data is not available	Data is not available	Oversupply
10/21/2018 10:24	0:01	KWPPII	0.008	17.755	Oversupply
10/21/2018 10:24	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 10:25	1:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 10:26	1:02	KWPPII	12.961	20.234	Oversupply
10/21/2018 10:59	0:03	AWE	0.028	17.400	Oversupply





Maui Curtailment Report

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
10/21/2018 13:24	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 13:25	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 13:26	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 13:26	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 13:27	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 13:28	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 13:29	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 13:29	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 13:30	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 13:31	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 13:32	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 13:33	0:01	KS	Data is not available	Data is not available	Oversupply
10/21/2018 22:58	0:09	KWP/II	0.071	19.183	Oversupply
10/21/2018 23:11	0:01	KWP/II	0.003	19.197	Oversupply
10/21/2018 23:16	0:01	KWP/II	0.000	19.141	Oversupply
10/21/2018 23:26	0:02	KWP/II	0.004	19.105	Oversupply
10/22/2018 1:05	0:20	KWP/II	0.740	19.189	Oversupply
10/22/2018 1:46	0:03	KWP/II	0.013	19.062	Oversupply
10/22/2018 1:56	0:03	KWP/II	0.040	19.160	Oversupply
10/22/2018 2:00	0:01	KWP/II	0.013	18.920	Oversupply
10/22/2018 2:02	0:32	KWP/II	1.020	18.822	Oversupply
10/22/2018 2:38	0:01	KWP/II	0.004	18.860	Oversupply
10/22/2018 2:40	0:23	KWP/II	0.625	18.960	Oversupply
10/22/2018 3:10	0:01	KWP/II	0.001	18.790	Oversupply
10/22/2018 3:28	0:09	KWP/II	0.160	18.962	Oversupply
10/22/2018 3:38	0:01	KWP/II	0.003	19.047	Oversupply
10/22/2018 3:43	0:02	KWP/II	0.011	19.036	Oversupply
10/22/2018 6:17	0:34	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 6:59	0:02	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 8:38	0:01	KS	Data is not available	Data is not available	Oversupply
10/22/2018 8:39	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 8:44	0:01	KS	Data is not available	Data is not available	Oversupply
10/22/2018 8:44	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 8:44	0:01	KS	Data is not available	Data is not available	Oversupply
10/22/2018 8:45	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 8:45	0:01	KS	Data is not available	Data is not available	Oversupply
10/22/2018 8:45	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 8:46	1:31	BS250	Data is not available	Data is not available	Oversupply
10/22/2018 8:46	1:43	KS	Data is not available	Data is not available	Oversupply
10/22/2018 8:46	1:44	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 8:47	3:51	KWP/II	50.940	19.211	Facility Requested
10/22/2018 9:42	0:02	AWE	0.026	16.400	Oversupply
10/22/2018 9:49	0:05	AWE	0.121	17.400	Oversupply
10/22/2018 9:55	0:15	AWE	0.603	17.800	Oversupply
10/22/2018 10:18	0:12	BS250	Data is not available	Data is not available	Oversupply
10/22/2018 10:29	0:01	KS	Data is not available	Data is not available	Oversupply
10/22/2018 10:30	0:01	KS	Data is not available	Data is not available	Oversupply
10/22/2018 10:30	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 10:31	1:16	AWE	5.482	17.900	System constraint
10/22/2018 10:31	0:01	KS	Data is not available	Data is not available	Oversupply
10/22/2018 10:31	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 10:31	0:01	KS	Data is not available	Data is not available	Oversupply
10/22/2018 10:32	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 10:32	0:01	KS	Data is not available	Data is not available	Oversupply
10/22/2018 10:32	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 10:33	0:01	KS	Data is not available	Data is not available	Oversupply
10/22/2018 10:33	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 10:34	0:01	KS	Data is not available	Data is not available	Oversupply
10/22/2018 10:34	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 10:34	0:01	KS	Data is not available	Data is not available	Oversupply
10/22/2018 10:35	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 10:35	0:01	KS	Data is not available	Data is not available	Oversupply
10/22/2018 10:35	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 10:36	0:01	KS	Data is not available	Data is not available	Oversupply
10/22/2018 10:36	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 10:37	0:01	KS	Data is not available	Data is not available	Oversupply
10/22/2018 10:37	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 10:37	0:01	KS	Data is not available	Data is not available	Oversupply
10/22/2018 10:38	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 10:38	0:01	KS	Data is not available	Data is not available	Oversupply
10/22/2018 10:38	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 10:39	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 10:40	0:01	KS	Data is not available	Data is not available	Oversupply
10/22/2018 10:40	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 10:41	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 10:54	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 10:55	0:01	KS	Data is not available	Data is not available	Oversupply
10/22/2018 10:57	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 10:57	0:01	KS	Data is not available	Data is not available	Oversupply
10/22/2018 10:57	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 10:58	0:01	KS	Data is not available	Data is not available	Oversupply
10/22/2018 10:58	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 10:58	0:01	KS	Data is not available	Data is not available	Oversupply
10/22/2018 10:59	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 10:59	0:01	KS	Data is not available	Data is not available	Oversupply
10/22/2018 11:00	0:01	BS250	Data is not available	Data is not available	Oversupply





Maui Curtailment Report

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
10/22/2018 12:48	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 12:48	0:01	KS	Data is not available	Data is not available	Oversupply
10/22/2018 12:49	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 12:49	0:01	KS	Data is not available	Data is not available	Oversupply
10/22/2018 12:50	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 12:50	0:01	KS	Data is not available	Data is not available	Oversupply
10/22/2018 12:51	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 12:51	0:01	KS	Data is not available	Data is not available	Oversupply
10/22/2018 12:52	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 12:52	0:01	KS	Data is not available	Data is not available	Oversupply
10/22/2018 12:53	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 12:55	0:01	KS	Data is not available	Data is not available	Oversupply
10/22/2018 12:56	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 12:57	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 12:57	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 13:02	0:01	KS	Data is not available	Data is not available	Oversupply
10/22/2018 13:04	0:01	KS	Data is not available	Data is not available	Oversupply
10/22/2018 13:04	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 13:05	0:01	KS	Data is not available	Data is not available	Oversupply
10/22/2018 13:05	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 13:06	0:01	KS	Data is not available	Data is not available	Oversupply
10/22/2018 13:06	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 13:07	0:01	KS	Data is not available	Data is not available	Oversupply
10/22/2018 13:07	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 13:07	0:01	KS	Data is not available	Data is not available	Oversupply
10/22/2018 13:07	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 13:08	0:01	KS	Data is not available	Data is not available	Oversupply
10/22/2018 13:08	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 13:09	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 13:10	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 13:46	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 13:46	0:01	KS	Data is not available	Data is not available	Oversupply
10/22/2018 13:46	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 13:49	0:01	KS	Data is not available	Data is not available	Oversupply
10/22/2018 13:50	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 13:50	0:01	KS	Data is not available	Data is not available	Oversupply
10/22/2018 13:51	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 13:52	0:01	KS	Data is not available	Data is not available	Oversupply
10/22/2018 13:52	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 13:53	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/22/2018 13:54	0:41	KWP/II		6.789	19.133 Facility Requested
10/22/2018 14:37	0:53	KWP/II		5.791	20.696 Facility Requested
10/22/2018 22:49	0:36	KWP/II		1.398	19.211 Oversupply
10/22/2018 23:29	0:13	KWP/II		0.714	19.211 Oversupply
10/22/2018 23:44	0:22	KWP/II		1.025	19.185 Oversupply
10/23/2018 0:07	0:01	KWP/II		0.001	19.136 Oversupply
10/23/2018 0:16	0:01	KWP/II		0.000	19.095 Oversupply
10/23/2018 0:22	4:28	KWP/II		38.510	19.211 Oversupply
10/23/2018 4:55	0:11	KWP/II		0.310	19.120 Oversupply
10/23/2018 7:50	0:25	BS250	Data is not available	Data is not available	Oversupply
10/23/2018 7:50	2:33	KWP/II		15.003	19.070 Facility Requested
10/23/2018 7:50	0:24	KS	Data is not available	Data is not available	Oversupply
10/23/2018 7:50	0:24	SMRR	Data is not available	Data is not available	Oversupply
10/23/2018 8:16	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/23/2018 8:17	0:01	KS	Data is not available	Data is not available	Oversupply
10/23/2018 8:17	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/23/2018 8:18	0:01	KS	Data is not available	Data is not available	Oversupply
10/23/2018 8:18	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/23/2018 8:19	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/23/2018 8:20	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/23/2018 8:21	0:10	AWE		0.554	18.300 Oversupply
10/23/2018 8:30	1:04	BS250	Data is not available	Data is not available	Oversupply
10/23/2018 8:30	1:03	KS	Data is not available	Data is not available	Oversupply
10/23/2018 8:30	1:03	SMRR	Data is not available	Data is not available	Oversupply
10/23/2018 9:28	0:38	AWE		3.361	19.200 Oversupply
10/23/2018 9:33	0:01	KS	Data is not available	Data is not available	Oversupply
10/23/2018 9:34	0:01	KS	Data is not available	Data is not available	Oversupply
10/23/2018 9:34	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/23/2018 9:34	0:01	KS	Data is not available	Data is not available	Oversupply
10/23/2018 9:35	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/23/2018 9:35	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/23/2018 9:36	0:01	KS	Data is not available	Data is not available	Oversupply
10/23/2018 9:36	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/23/2018 9:48	0:01	KS	Data is not available	Data is not available	Oversupply
10/23/2018 10:05	0:17	BS250	Data is not available	Data is not available	Oversupply
10/23/2018 10:05	0:17	KS	Data is not available	Data is not available	Oversupply
10/23/2018 10:05	0:16	SMRR	Data is not available	Data is not available	Oversupply
10/23/2018 10:18	0:04	AWE		0.205	20.100 Oversupply
10/23/2018 10:21	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/23/2018 10:22	0:01	KS	Data is not available	Data is not available	Oversupply
10/23/2018 10:22	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/23/2018 10:23	0:01	KS	Data is not available	Data is not available	Oversupply
10/23/2018 10:23	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/23/2018 10:23	0:52	KS	Data is not available	Data is not available	Oversupply
10/23/2018 10:24	0:52	BS250	Data is not available	Data is not available	Oversupply













**Maui Curtailment Report**

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
10/25/2018 10:55	0:01	KS	Data is not available	Data is not available	Oversupply
10/25/2018 10:56	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/25/2018 10:56	0:01	KS	Data is not available	Data is not available	Oversupply
10/25/2018 10:57	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/25/2018 10:57	0:01	KS	Data is not available	Data is not available	Oversupply
10/25/2018 10:57	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/25/2018 10:57	0:01	KS	Data is not available	Data is not available	Oversupply
10/25/2018 10:58	0:02	BS250	Data is not available	Data is not available	Oversupply
10/25/2018 10:58	0:02	SMRR	Data is not available	Data is not available	Oversupply
10/25/2018 10:58	0:01	KS	Data is not available	Data is not available	Oversupply
10/25/2018 10:59	0:01	KWPPII	0.013	17.690	Oversupply
10/25/2018 10:59	0:01	KS	Data is not available	Data is not available	Oversupply
10/25/2018 11:00	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/25/2018 11:00	0:01	KS	Data is not available	Data is not available	Oversupply
10/25/2018 11:00	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/25/2018 11:00	0:01	KS	Data is not available	Data is not available	Oversupply
10/25/2018 11:01	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/25/2018 11:01	0:01	KS	Data is not available	Data is not available	Oversupply
10/25/2018 11:02	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/25/2018 11:02	0:01	KS	Data is not available	Data is not available	Oversupply
10/25/2018 11:03	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/25/2018 11:03	0:01	KS	Data is not available	Data is not available	Oversupply
10/25/2018 11:03	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/25/2018 11:04	0:01	KS	Data is not available	Data is not available	Oversupply
10/25/2018 11:04	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/25/2018 11:05	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/25/2018 11:05	0:01	KS	Data is not available	Data is not available	Oversupply
10/25/2018 11:06	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/25/2018 11:07	0:01	KS	Data is not available	Data is not available	Oversupply
10/25/2018 11:07	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/25/2018 11:08	0:01	KS	Data is not available	Data is not available	Oversupply
10/25/2018 11:08	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/25/2018 11:09	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/25/2018 13:18	0:01	KS	Data is not available	Data is not available	Oversupply
10/25/2018 13:19	0:01	KS	Data is not available	Data is not available	Oversupply
10/25/2018 13:19	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/25/2018 13:20	0:01	KS	Data is not available	Data is not available	Oversupply
10/25/2018 13:20	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/25/2018 13:21	0:01	KS	Data is not available	Data is not available	Oversupply
10/25/2018 13:21	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/25/2018 13:21	0:01	KS	Data is not available	Data is not available	Oversupply
10/25/2018 13:22	0:06	BS250	Data is not available	Data is not available	Oversupply
10/25/2018 13:22	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/25/2018 13:22	0:02	KS	Data is not available	Data is not available	Oversupply
10/25/2018 13:23	0:02	KWPPII	0.030	17.014	Oversupply
10/25/2018 13:23	0:02	SMRR	Data is not available	Data is not available	Oversupply
10/25/2018 13:25	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/25/2018 13:25	0:03	KS	Data is not available	Data is not available	Oversupply
10/25/2018 13:26	0:03	KWPPII	0.017	17.018	Oversupply
10/25/2018 13:26	0:03	SMRR	Data is not available	Data is not available	Oversupply
10/25/2018 13:29	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/25/2018 16:23	0:22	KWPPII	1.264	17.714	System constraint
10/25/2018 16:59	0:24	KWPPII	0.553	17.714	System constraint
10/25/2018 17:46	0:04	KWPPII	0.222	19.159	Facility Requested
10/25/2018 23:37	0:02	KWPPII	0.004	19.060	Oversupply
10/25/2018 23:43	0:19	KWPPII	0.492	19.197	Oversupply
10/26/2018 0:03	0:03	KWPPII	0.033	18.247	Oversupply
10/26/2018 0:07	0:09	KWPPII	0.186	17.236	Oversupply
10/26/2018 1:58	0:02	KWPPII	0.041	10.116	Oversupply
10/26/2018 2:30	0:54	KWPPII	4.313	16.126	Oversupply
10/26/2018 3:44	0:55	KWPPII	2.390	16.175	Oversupply
10/26/2018 7:57	0:01	AWE	0.005	0.300	Oversupply
10/26/2018 9:53	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/26/2018 9:53	0:01	KS	Data is not available	Data is not available	Oversupply
10/26/2018 9:54	0:01	BS250	Data is not available	Data is not available	Oversupply
10/26/2018 9:54	0:02	KWPPII	0.012	15.927	Oversupply
10/26/2018 9:54	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/26/2018 9:54	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/26/2018 9:54	0:01	KS	Data is not available	Data is not available	Oversupply
10/26/2018 9:55	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/26/2018 9:55	0:01	KS	Data is not available	Data is not available	Oversupply
10/26/2018 9:56	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/26/2018 9:57	0:01	KS	Data is not available	Data is not available	Oversupply
10/26/2018 9:57	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/26/2018 9:57	0:01	KS	Data is not available	Data is not available	Oversupply
10/26/2018 9:58	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/26/2018 9:58	0:01	KS	Data is not available	Data is not available	Oversupply
10/26/2018 9:59	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/26/2018 9:59	0:01	KS	Data is not available	Data is not available	Oversupply
10/26/2018 10:00	0:01	KWPPII	0.004	15.770	Oversupply
10/26/2018 10:00	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/26/2018 10:00	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/26/2018 10:03	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/26/2018 10:03	0:01	KS	Data is not available	Data is not available	Oversupply
10/26/2018 10:04	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/26/2018 10:15	0:01	KS	Data is not available	Data is not available	Oversupply



**Maui Curtailment Report**

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment	
10/26/2018 10:16	0:01	SMRR	Data is not available	Data is not available	Oversupply	
10/26/2018 10:38	0:01	KS	Data is not available	Data is not available	Oversupply	
10/26/2018 10:39	0:01	KS	Data is not available	Data is not available	Oversupply	
10/26/2018 10:39	0:01	SMRR	Data is not available	Data is not available	Oversupply	
10/26/2018 10:40	0:01	KS	Data is not available	Data is not available	Oversupply	
10/26/2018 10:40	0:01	SMRR	Data is not available	Data is not available	Oversupply	
10/26/2018 10:41	0:01	KS	Data is not available	Data is not available	Oversupply	
10/26/2018 10:42	0:01	SMRR	Data is not available	Data is not available	Oversupply	
10/26/2018 10:44	0:01	KS	Data is not available	Data is not available	Oversupply	
10/26/2018 10:45	0:01	SMRR	Data is not available	Data is not available	Oversupply	
10/26/2018 10:47	0:01	KS	Data is not available	Data is not available	Oversupply	
10/26/2018 10:48	0:01	SMRR	Data is not available	Data is not available	Oversupply	
10/26/2018 10:48	0:01	KS	Data is not available	Data is not available	Oversupply	
10/26/2018 10:49	0:01	SMRR	Data is not available	Data is not available	Oversupply	
10/26/2018 10:49	0:01	KS	Data is not available	Data is not available	Oversupply	
10/26/2018 10:49	0:01	SMRR	Data is not available	Data is not available	Oversupply	
10/26/2018 10:49	0:01	KS	Data is not available	Data is not available	Oversupply	
10/26/2018 10:50	0:01	SMRR	Data is not available	Data is not available	Oversupply	
10/26/2018 10:50	0:01	KS	Data is not available	Data is not available	Oversupply	
10/26/2018 10:51	0:01	SMRR	Data is not available	Data is not available	Oversupply	
10/26/2018 10:51	0:01	KS	Data is not available	Data is not available	Oversupply	
10/26/2018 10:52	0:01	SMRR	Data is not available	Data is not available	Oversupply	
10/26/2018 10:52	0:01	KS	Data is not available	Data is not available	Oversupply	
10/26/2018 10:52	0:01	SMRR	Data is not available	Data is not available	Oversupply	
10/26/2018 10:53	0:01	SMRR	Data is not available	Data is not available	Oversupply	
10/26/2018 10:53	0:01	KS	Data is not available	Data is not available	Oversupply	
10/26/2018 10:54	0:01	SMRR	Data is not available	Data is not available	Oversupply	
10/26/2018 11:25	0:01	KS	Data is not available	Data is not available	Oversupply	
10/26/2018 11:26	0:01	SMRR	Data is not available	Data is not available	Oversupply	
10/26/2018 11:26	0:01	KS	Data is not available	Data is not available	Oversupply	
10/26/2018 11:27	0:01	SMRR	Data is not available	Data is not available	Oversupply	
10/26/2018 11:28	0:01	SMRR	Data is not available	Data is not available	Oversupply	
10/26/2018 11:31	0:01	KS	Data is not available	Data is not available	Oversupply	
10/26/2018 14:56	0:01	KS	Data is not available	Data is not available	Oversupply	
10/26/2018 14:57	0:01	SMRR	Data is not available	Data is not available	Oversupply	
10/26/2018 22:52	0:08	KWP/II		0.053	17.714	Oversupply
10/26/2018 23:53	0:01	KWP/II		0.001	17.698	Oversupply
10/27/2018 0:08	0:17	KWP/II		0.309	17.714	Oversupply
10/27/2018 0:26	1:10	KWP/II		5.831	17.714	Oversupply
10/27/2018 1:37	0:12	KWP/II		0.274	17.714	Oversupply
10/27/2018 1:54	0:05	KWP/II		0.060	17.714	Oversupply
10/27/2018 2:05	0:10	KWP/II		0.289	17.714	Oversupply
10/27/2018 2:26	0:09	KWP/II		0.175	17.687	Oversupply
10/27/2018 2:41	0:11	KWP/II		0.364	16.217	Oversupply
10/27/2018 3:19	1:50	KWP/II		7.083	16.217	Oversupply
10/27/2018 5:15	0:01	KWP/II		0.002	16.174	Oversupply
10/27/2018 5:17	0:01	KWP/II		0.004	16.139	Oversupply
10/27/2018 7:55	0:01	SMRR	Data is not available	Data is not available	Oversupply	
10/27/2018 7:55	0:01	KS	Data is not available	Data is not available	Oversupply	
10/27/2018 7:56	0:01	SMRR	Data is not available	Data is not available	Oversupply	
10/27/2018 8:07	0:01	KS	Data is not available	Data is not available	Oversupply	
10/27/2018 8:07	0:01	KS	Data is not available	Data is not available	Oversupply	
10/27/2018 8:08	0:01	SMRR	Data is not available	Data is not available	Oversupply	
10/27/2018 8:08	0:01	KS	Data is not available	Data is not available	Oversupply	
10/27/2018 8:08	0:01	SMRR	Data is not available	Data is not available	Oversupply	
10/27/2018 8:09	0:04	BS250	Data is not available	Data is not available	Oversupply	
10/27/2018 8:09	0:04	KS	Data is not available	Data is not available	Oversupply	
10/27/2018 8:09	0:01	SMRR	Data is not available	Data is not available	Oversupply	
10/27/2018 8:10	0:03	SMRR	Data is not available	Data is not available	Oversupply	
10/27/2018 8:11	0:02	KWP/II		0.007	16.207	Oversupply
10/27/2018 8:13	0:01	KS	Data is not available	Data is not available	Oversupply	
10/27/2018 8:13	0:01	SMRR	Data is not available	Data is not available	Oversupply	
10/27/2018 8:13	0:01	KS	Data is not available	Data is not available	Oversupply	
10/27/2018 8:14	0:01	SMRR	Data is not available	Data is not available	Oversupply	
10/27/2018 8:14	0:13	KS	Data is not available	Data is not available	Oversupply	
10/27/2018 8:14	0:13	SMRR	Data is not available	Data is not available	Oversupply	
10/27/2018 8:15	0:13	BS250	Data is not available	Data is not available	Oversupply	
10/27/2018 8:17	0:35	KWP/II		1.615	16.217	Oversupply
10/27/2018 8:27	0:01	KS	Data is not available	Data is not available	Oversupply	
10/27/2018 8:27	0:01	SMRR	Data is not available	Data is not available	Oversupply	
10/27/2018 8:28	0:01	KS	Data is not available	Data is not available	Oversupply	
10/27/2018 8:28	0:01	SMRR	Data is not available	Data is not available	Oversupply	
10/27/2018 8:29	0:23	SMRR	Data is not available	Data is not available	Oversupply	
10/27/2018 8:30	0:22	BS250	Data is not available	Data is not available	Oversupply	
10/27/2018 8:51	0:01	KS	Data is not available	Data is not available	Oversupply	
10/27/2018 8:52	0:01	SMRR	Data is not available	Data is not available	Oversupply	
10/27/2018 8:54	0:01	SMRR	Data is not available	Data is not available	Oversupply	
10/27/2018 8:54	0:02	KS	Data is not available	Data is not available	Oversupply	
10/27/2018 8:54	0:02	KS	Data is not available	Data is not available	Oversupply	
10/27/2018 8:55	0:01	SMRR	Data is not available	Data is not available	Oversupply	
10/27/2018 8:56	0:07	BS250	Data is not available	Data is not available	Oversupply	
10/27/2018 8:56	0:01	SMRR	Data is not available	Data is not available	Oversupply	
10/27/2018 8:56	0:08	KS	Data is not available	Data is not available	Oversupply	
10/27/2018 8:56	0:07	SMRR	Data is not available	Data is not available	Oversupply	
10/27/2018 8:57	0:07	KWP/II		0.160	16.213	Oversupply
10/27/2018 9:03	0:01	KS	Data is not available	Data is not available	Oversupply	





**Maui Curtailment Report**

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
10/27/2018 11:18	0:01	KS	Data is not available	Data is not available	Oversupply
10/27/2018 11:18	0:01	KS	Data is not available	Data is not available	Oversupply
10/27/2018 11:19	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/27/2018 11:19	0:01	KS	Data is not available	Data is not available	Oversupply
10/27/2018 11:19	0:01	KS	Data is not available	Data is not available	Oversupply
10/27/2018 11:19	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/27/2018 11:20	0:01	KS	Data is not available	Data is not available	Oversupply
10/27/2018 11:20	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/27/2018 11:21	0:01	KS	Data is not available	Data is not available	Oversupply
10/27/2018 11:21	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/27/2018 11:21	0:01	KS	Data is not available	Data is not available	Oversupply
10/27/2018 11:21	0:01	KS	Data is not available	Data is not available	Oversupply
10/27/2018 11:27	0:01	KS	Data is not available	Data is not available	Oversupply
10/27/2018 12:19	0:17	BS250	Data is not available	Data is not available	Oversupply
10/27/2018 12:20	0:16	KWP/II	1.745	12.809	Oversupply
10/27/2018 12:22	0:01	AWE	0.038	19.800	Oversupply
10/27/2018 12:27	0:02	AWE	0.008	20.500	Oversupply
10/27/2018 12:37	0:18	BS250	Data is not available	Data is not available	Oversupply
10/27/2018 12:38	0:17	KWP/II	1.591	12.828	Oversupply
10/27/2018 12:51	0:01	AWE	0.004	19.400	Oversupply
10/27/2018 12:57	0:23	BS250	Data is not available	Data is not available	Oversupply
10/27/2018 12:57	0:02	KWP/II	0.026	12.324	Oversupply
10/27/2018 13:00	0:21	KWP/II	1.665	13.363	Oversupply
10/27/2018 13:24	0:01	KWP/II	0.002	9.573	Oversupply
10/27/2018 13:26	0:02	BS250	Data is not available	Data is not available	Oversupply
10/27/2018 13:26	0:02	KWP/II	0.023	9.842	Oversupply
10/27/2018 13:31	0:01	BS250	Data is not available	Data is not available	Oversupply
10/27/2018 13:31	0:02	KWP/II	0.010	9.917	Oversupply
10/27/2018 15:47	0:01	KWP/II	0.001	0.057	Oversupply
10/28/2018 1:01	0:03	KWP/II	0.044	11.414	Oversupply
10/28/2018 1:06	0:02	KWP/II	0.020	11.731	Oversupply
10/28/2018 1:09	0:21	KWP/II	0.656	14.679	Oversupply
10/28/2018 1:39	1:19	KWP/II	6.553	16.013	Oversupply
10/28/2018 2:41	0:01	AWE	0.003	20.300	Oversupply
10/28/2018 3:15	0:05	KWP/II	0.130	15.533	Oversupply
10/28/2018 3:27	0:28	KWP/II	1.462	15.434	Oversupply
10/28/2018 4:06	0:03	KWP/II	0.063	13.919	Oversupply
10/28/2018 4:17	1:50	KWP/II	9.610	16.207	Oversupply
10/28/2018 6:11	0:01	KWP/II	0.002	16.176	Oversupply
10/28/2018 7:11	0:04	BS250	Data is not available	Data is not available	Oversupply
10/28/2018 7:11	0:04	KWP/II	0.034	16.214	Oversupply
10/28/2018 8:41	0:01	KWP/II	0.013	15.117	Oversupply
10/28/2018 8:42	0:19	BS250	Data is not available	Data is not available	Oversupply
10/28/2018 8:43	0:19	KWP/II	0.984	15.465	Oversupply
10/28/2018 9:07	0:02	BS250	Data is not available	Data is not available	Oversupply
10/28/2018 9:08	0:01	KWP/II	0.017	10.141	Oversupply
10/28/2018 12:18	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/29/2018 9:38	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/29/2018 9:41	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/29/2018 12:19	0:15	KWP/II	0.175	2.662	Facility Requested
10/30/2018 13:12	0:30	KWP/II	2.711	9.733	Facility Requested
10/30/2018 13:44	0:27	KWP/II	2.201	14.379	Facility Requested
10/30/2018 14:18	0:09	BS250	Data is not available	Data is not available	Oversupply
10/30/2018 14:18	0:08	KS	Data is not available	Data is not available	Oversupply
10/30/2018 14:18	0:08	KS	Data is not available	Data is not available	Oversupply
10/30/2018 14:18	0:08	SMRR	Data is not available	Data is not available	Oversupply
10/30/2018 15:21	0:15	KWP/II	1.950	14.084	Facility Requested
10/30/2018 15:37	0:10	KWP/II	0.980	15.319	Facility Requested
10/30/2018 16:17	0:01	BS250	Data is not available	Data is not available	Oversupply
10/30/2018 16:18	0:01	SMRR	Data is not available	Data is not available	Oversupply
10/30/2018 16:29	0:57	KWP/II	3.372	19.036	System constraint



Lanai Curtailment Report

Start Date and Time	Duration	IPP Curtailed	Estimated MWh Curtailed	Peak MW Curtailed	Reasons for Curtailment
10/2/2018 14:00	0:16	LSR	Data is not available	Data is not available	Oversupply
10/2/2018 15:01	0:11	LSR	Data is not available	Data is not available	Oversupply
10/3/2018 15:36	0:01	LSR	Data is not available	Data is not available	Oversupply
10/3/2018 15:38	0:01	LSR	Data is not available	Data is not available	Oversupply
10/3/2018 15:57	0:18	LSR	Data is not available	Data is not available	Oversupply
10/3/2018 16:00	0:02	LSR	Data is not available	Data is not available	Oversupply
10/3/2018 16:15	0:13	LSR	Data is not available	Data is not available	Oversupply
10/3/2018 16:18	0:02	LSR	Data is not available	Data is not available	Oversupply
10/4/2018 9:46	1:46	LSR	Data is not available	Data is not available	Oversupply
10/8/2018 14:59	0:08	LSR	Data is not available	Data is not available	Oversupply
10/8/2018 15:15	0:13	LSR	Data is not available	Data is not available	Oversupply
10/9/2018 8:50	0:04	LSR	Data is not available	Data is not available	Oversupply
10/9/2018 8:57	0:05	LSR	Data is not available	Data is not available	Oversupply
10/9/2018 9:06	0:06	LSR	Data is not available	Data is not available	Oversupply
10/9/2018 9:15	0:06	LSR	Data is not available	Data is not available	Oversupply
10/9/2018 9:29	0:04	LSR	Data is not available	Data is not available	Oversupply
10/9/2018 9:52	0:05	LSR	Data is not available	Data is not available	Oversupply
10/9/2018 10:02	0:01	LSR	Data is not available	Data is not available	Oversupply
10/9/2018 10:07	0:02	LSR	Data is not available	Data is not available	Oversupply
10/9/2018 10:10	0:01	LSR	Data is not available	Data is not available	Oversupply
10/9/2018 10:18	0:03	LSR	Data is not available	Data is not available	Oversupply
10/9/2018 10:21	0:01	LSR	Data is not available	Data is not available	Oversupply
10/9/2018 10:26	0:04	LSR	Data is not available	Data is not available	Oversupply
10/9/2018 11:12	0:36	LSR	Data is not available	Data is not available	Oversupply
10/9/2018 11:25	0:11	LSR	Data is not available	Data is not available	Oversupply
10/9/2018 11:38	0:07	LSR	Data is not available	Data is not available	Oversupply
10/9/2018 11:53	0:02	LSR	Data is not available	Data is not available	Oversupply
10/9/2018 12:03	0:09	LSR	Data is not available	Data is not available	Oversupply
10/9/2018 12:17	0:01	LSR	Data is not available	Data is not available	Oversupply
10/9/2018 12:25	0:04	LSR	Data is not available	Data is not available	Oversupply
10/9/2018 12:32	0:06	LSR	Data is not available	Data is not available	Oversupply
10/9/2018 14:44	0:44	LSR	Data is not available	Data is not available	Oversupply
10/10/2018 11:11	0:03	LSR	Data is not available	Data is not available	Oversupply
10/10/2018 11:23	0:01	LSR	Data is not available	Data is not available	Oversupply
10/10/2018 11:27	0:03	LSR	Data is not available	Data is not available	Oversupply
10/10/2018 12:36	0:03	LSR	Data is not available	Data is not available	Oversupply
10/10/2018 13:24	0:05	LSR	Data is not available	Data is not available	Oversupply
10/10/2018 14:07	0:01	LSR	Data is not available	Data is not available	Oversupply
10/11/2018 11:16	0:01	LSR	Data is not available	Data is not available	Oversupply
10/11/2018 11:32	0:03	LSR	Data is not available	Data is not available	Oversupply
10/11/2018 13:02	0:04	LSR	Data is not available	Data is not available	Oversupply
10/11/2018 13:08	0:01	LSR	Data is not available	Data is not available	Oversupply
10/11/2018 13:14	0:01	LSR	Data is not available	Data is not available	Oversupply
10/13/2018 12:28	0:05	LSR	Data is not available	Data is not available	Oversupply
10/13/2018 12:45	0:04	LSR	Data is not available	Data is not available	Oversupply
10/13/2018 12:51	0:02	LSR	Data is not available	Data is not available	Oversupply
10/13/2018 13:01	0:01	LSR	Data is not available	Data is not available	Oversupply
10/13/2018 13:03	0:01	LSR	Data is not available	Data is not available	Oversupply
10/13/2018 13:12	0:05	LSR	Data is not available	Data is not available	Oversupply
10/13/2018 13:40	0:02	LSR	Data is not available	Data is not available	Oversupply
10/13/2018 13:54	0:08	LSR	Data is not available	Data is not available	Oversupply
10/13/2018 13:56	0:01	LSR	Data is not available	Data is not available	Oversupply
10/13/2018 14:12	0:01	LSR	Data is not available	Data is not available	Oversupply
10/13/2018 14:19	0:01	LSR	Data is not available	Data is not available	Oversupply
10/13/2018 14:31	0:04	LSR	Data is not available	Data is not available	Oversupply
10/13/2018 14:42	0:08	LSR	Data is not available	Data is not available	Oversupply
10/14/2018 9:18	1:37	LSR	Data is not available	Data is not available	Oversupply
10/14/2018 9:23	0:03	LSR	Data is not available	Data is not available	Oversupply
10/14/2018 9:30	0:06	LSR	Data is not available	Data is not available	Oversupply
10/14/2018 11:58	0:05	LSR	Data is not available	Data is not available	Oversupply
10/14/2018 12:02	0:03	LSR	Data is not available	Data is not available	Oversupply
10/14/2018 12:06	0:01	LSR	Data is not available	Data is not available	Oversupply
10/14/2018 12:10	0:01	LSR	Data is not available	Data is not available	Oversupply
10/14/2018 12:34	0:03	LSR	Data is not available	Data is not available	Oversupply
10/14/2018 12:38	0:03	LSR	Data is not available	Data is not available	Oversupply
10/14/2018 12:40	0:01	LSR	Data is not available	Data is not available	Oversupply
10/14/2018 13:45	0:09	LSR	Data is not available	Data is not available	Oversupply
10/16/2018 9:17	0:02	LSR	Data is not available	Data is not available	Oversupply
10/16/2018 9:28	0:08	LSR	Data is not available	Data is not available	Oversupply
10/16/2018 12:16	1:30	LSR	Data is not available	Data is not available	Oversupply
10/16/2018 12:42	0:21	LSR	Data is not available	Data is not available	Oversupply
10/16/2018 13:52	1:04	LSR	Data is not available	Data is not available	Oversupply
10/16/2018 13:55	0:02	LSR	Data is not available	Data is not available	Oversupply
10/16/2018 14:02	0:02	LSR	Data is not available	Data is not available	Oversupply
10/23/2018 11:12	0:18	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 October 2018

Start Date/Time	MW output prior to start of curtailment	End Date/Time	MW output after curtailment released <sup>1</sup>	IPP	Reason for Curtailment
10/02/18 13:17	4.8 MW	10/02/18 18:32	2.8 MW	Hawi Renewable Dev	System constraint
10/02/18 19:00	4.9 MW	10/03/18 17:42	1.9 MW	Hawi Renewable Dev	System constraint
10/04/18 14:04	4.5 MW	10/04/18 16:56	2.4 MW	Hawi Renewable Dev	Facility requested
10/21/18 22:18	13.0 MW	10/21/18 22:38	12.2 MW	Pakini Nui Windfarm	System constraint
10/26/18 08:09	9.1 MW	10/26/18 09:00	9.0 MW	Pakini Nui Windfarm	System constraint
10/26/18 12:58	18.1 MW	10/26/18 16:11	9.8 MW	Pakini Nui Windfarm	System constraint
10/30/18 08:06	17.5 MW	10/30/18 08:50	17.5 MW	Pakini Nui Windfarm	System constraint
10/30/18 11:32	17.5 MW	10/30/18 12:20	17.5 MW	Pakini Nui Windfarm	System constraint

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



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