



April 20, 2018

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

FILED  
2018 APR 20 P 3:13  
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'<sup>1</sup> monthly report for March 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,

Daniel G. Brown  
Manager  
Regulatory Non-Rate Proceedings

Enclosure

c: Service List

<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 March 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 March 31, 2018):

**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 March.

**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 March 31, 2018):

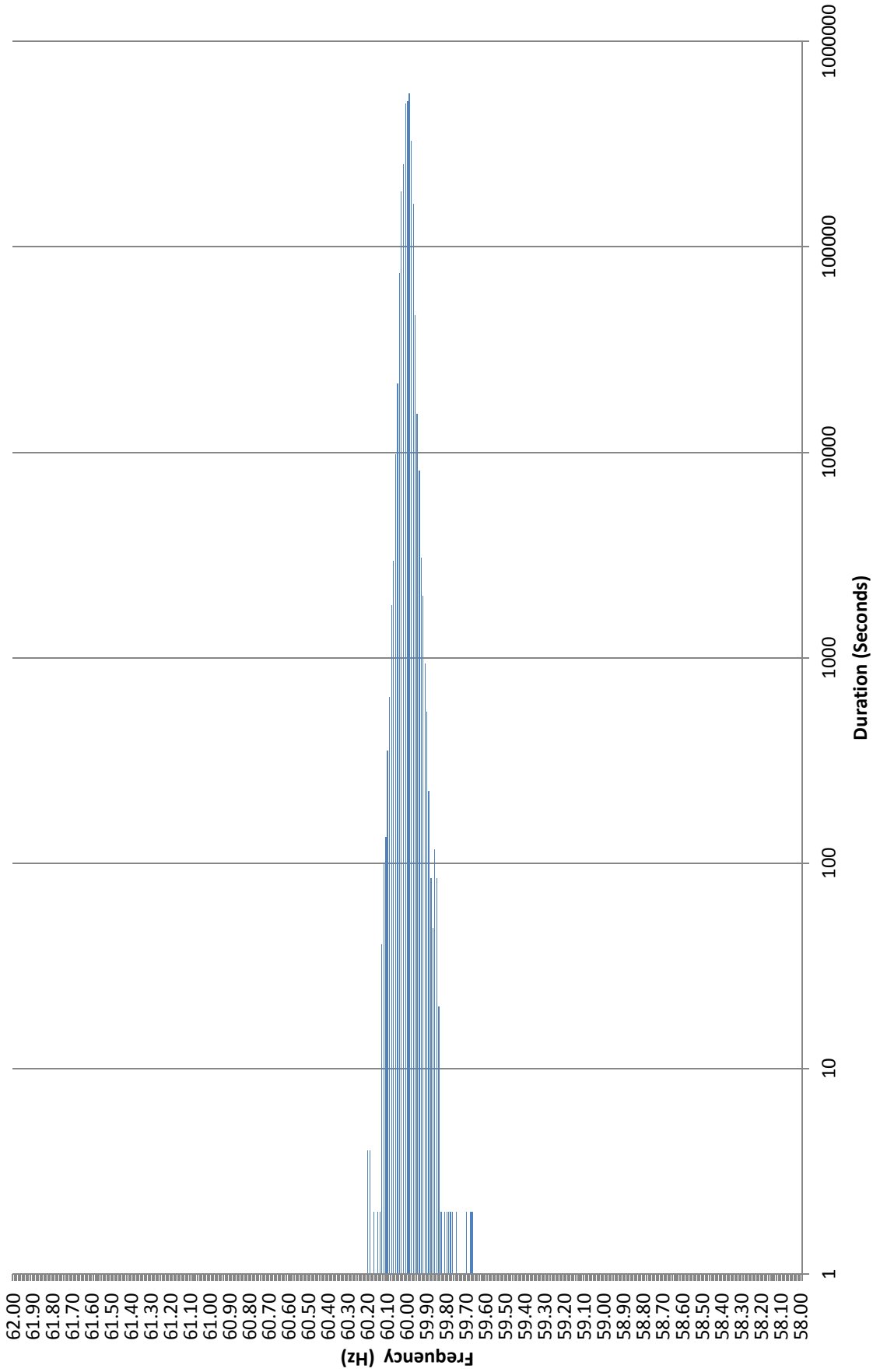
**3a) Tabulation of each curtailment event for each resource including the starting date and time, duration, megawatt hours curtailed, peak MW curtailed, and reason for curtailment:**

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

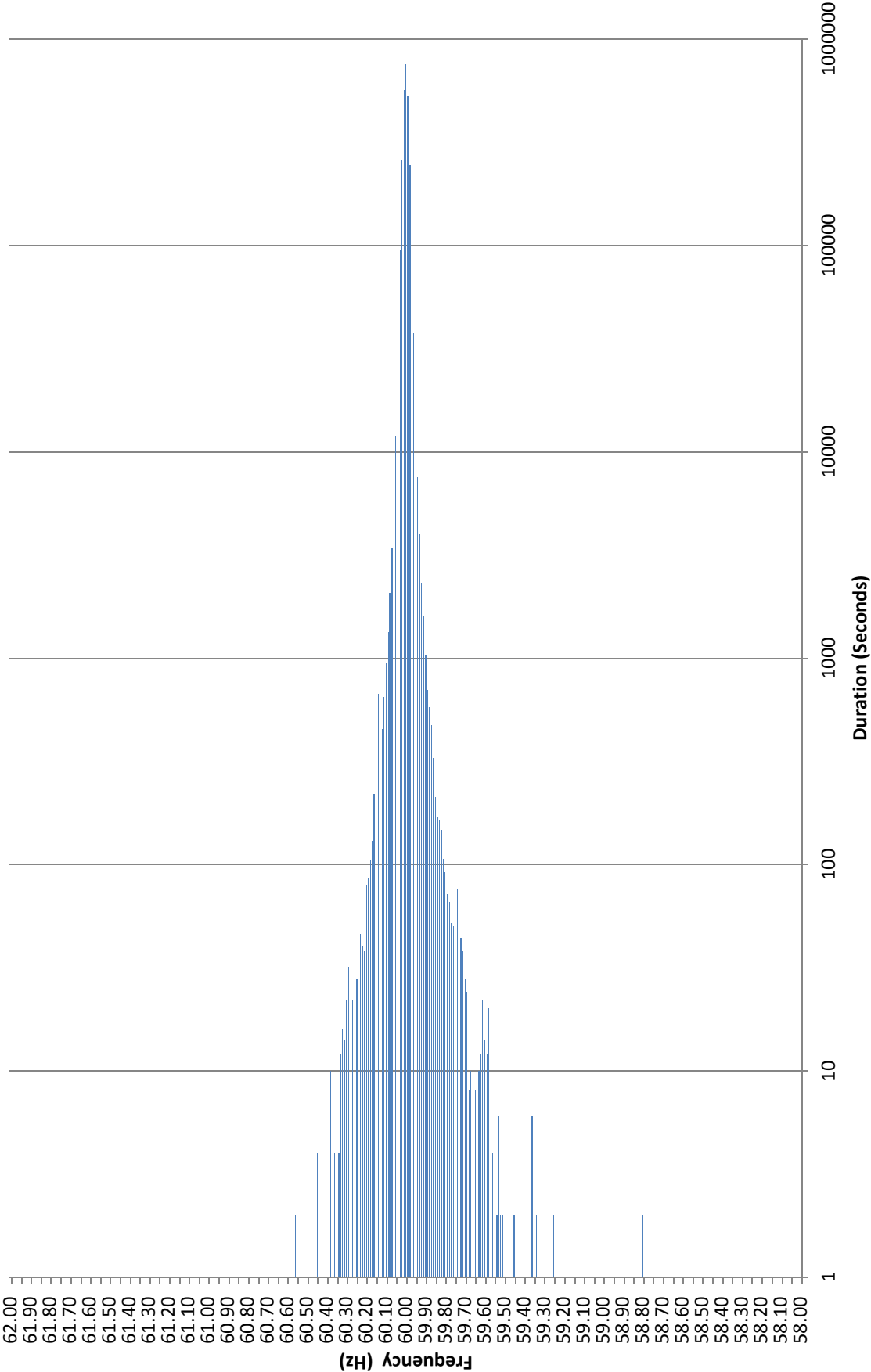
**3b) Total MWh of non-dispatchable renewable resources curtailed for the month:**

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.

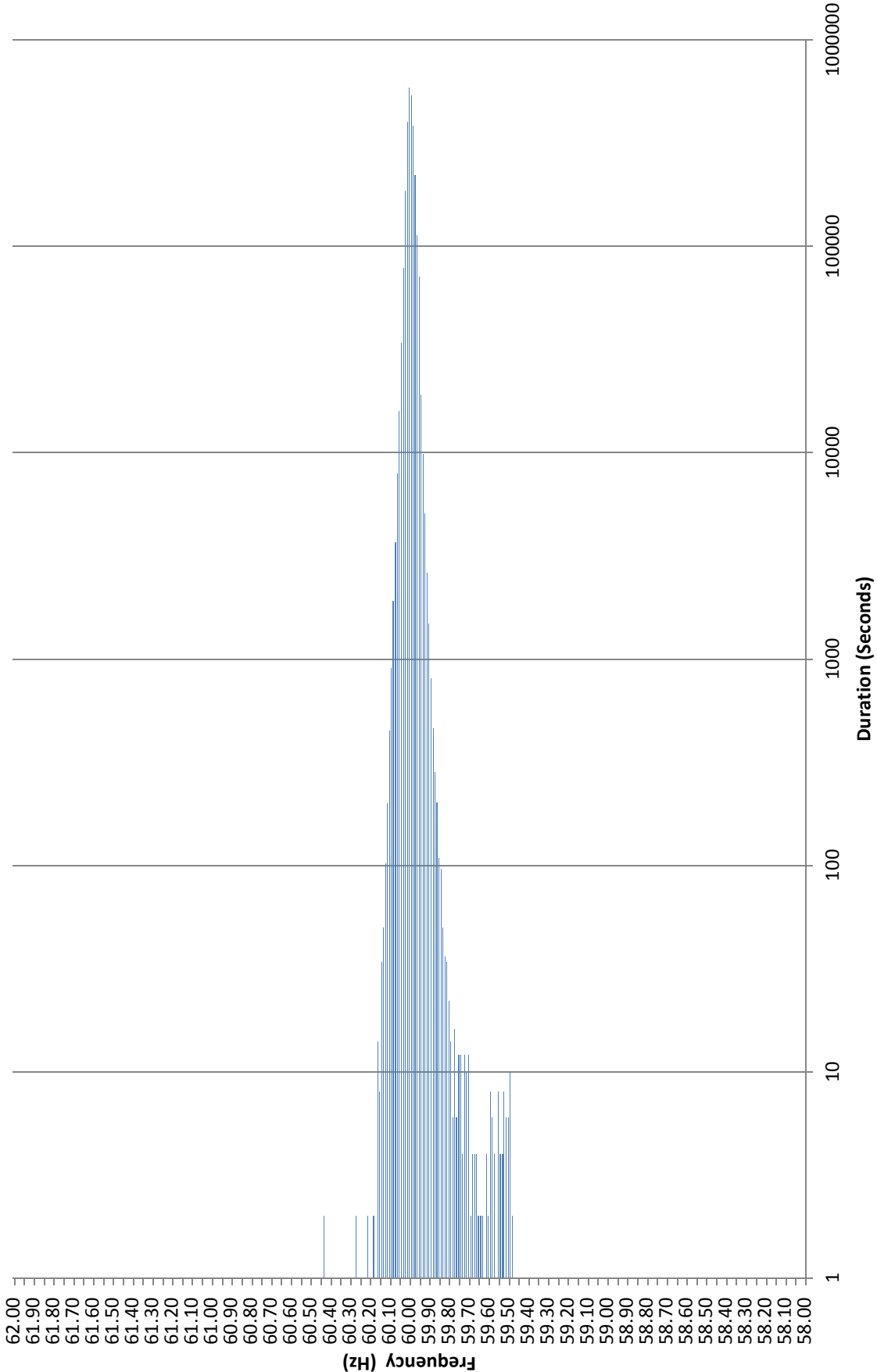
# Frequency Distribution Plot - Hawaiian Electric March 2018



**Frequency Distribution Plot - Maui Electric  
March 2018**



# Frequency Distribution Plot - Hawai'i Electric Light March 2018



Hawaiian Electric Frequency Excursion Statistics March 2018		
Data Rounded to the nearest	<59.95 Hz	>60.05 Hz
Number of Excursions	1535	2218
Maximum Duration (sec)	708	278
Maximum Deviation (Hz)	59.672	60.201
Total Duration of Excursions (sec)	20344	22568

Maui Electric Frequency Excursion Statistics March 2018		
	<59.95 Hz	>60.05 Hz
Number of Excursions	3584	2402
Maximum Duration (sec)	532	776
Maximum Deviation (Hz)	58.798	60.555
Total Duration of Excursions (sec)	26528	22130



Hawai'i Electric Light Frequency Excursion Statistics March 2018		
	<59.95 Hz	>60.05 Hz
Number of Excursions	10945	3264
Maximum Duration (sec)	210	176
Maximum Deviation (Hz)	59.481	60.433
Total Duration of Excursions (sec)	78632	21812







Hawaiian Electric Curtailment Report March 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
03/01/18 06:29	0.0	0.00	03/01/18 19:51	0	*	North	System constraints
03/01/18 06:30	0.0	0.00	03/01/18 19:52	0	*	South	System constraints
03/01/18 18:59	0.0	28.00	03/01/18 19:55	0	*	Mauka	System constraints
03/02/18 05:13	0.0	0.10	03/02/18 07:01	0	*	Waianae	System constraints
03/02/18 05:16	0.0	0.00	03/02/18 07:03	0	*	Aloha1	System constraints
03/02/18 05:27	0.0	0.00	03/02/18 08:42	0	*	North	System constraints
03/02/18 05:28	0.0	0.00	03/02/18 08:43	0	*	South	System constraints
03/03/18 06:28	0.0	0.00	03/03/18 07:20	0	*	Waianae	System constraints
03/03/18 06:29	0.0	0.00	03/03/18 07:12	0	*	Aloha1	System constraints
03/03/18 05:19	0.0	0.00	03/03/18 20:36	0	*	North	System constraints
03/03/18 05:20	0.0	0.00	03/03/18 20:37	0	*	South	System constraints
03/03/18 19:17	0.0	0.00	03/04/18 08:20	0	*	Waianae	System constraints
03/03/18 19:22	0.0	0.00	03/03/18 20:06	0	*	Aloha1	System constraints
03/03/18 19:38	0.0	20.00	03/03/18 20:34	0	*	Mauka	System constraints
03/09/18 06:55	0.0	0.00	03/09/18 07:56	0	*	KREP	System constraints
03/09/18 14:09	15.0	27.23	03/09/18 15:04	0	*	Waianae	Oversupply
03/09/18 15:29	0.0	3.50	03/09/18 16:04	0	*	KREP	System constraints
03/10/18 05:03	0.0	0.00	03/10/18 10:04	0	*	Aloha1	System constraints
03/10/18 05:05	0.0	0.00	03/10/18 10:07	0	*	North	System constraints
03/10/18 05:05	0.0	0.00	03/10/18 10:06	0	*	South	System constraints
03/10/18 05:07	0.0	0.00	03/10/18 10:09	0	*	KLS2	System constraints
03/10/18 05:08	0.0	0.00	03/10/18 10:13	0	*	KREP	System constraints
03/10/18 05:50	0.0	4.50	03/10/18 10:37	0	*	Mauka	System constraints
03/10/18 05:50	0.0	0.10	03/10/18 10:36	0	*	Makai	System constraints
03/10/18 05:52	0.0	8.10	03/10/18 10:19	0	*	KWF	System constraints
03/10/18 11:37	0.0	13.30	03/10/18 15:06	0	*	Waianae	Oversupply
03/10/18 11:46	0.0	4.30	03/10/18 14:58	0	*	Aloha1	Oversupply
03/10/18 11:59	0.0	1.90	03/10/18 14:26	0	*	North	Oversupply
03/10/18 12:00	0.0	0.50	03/10/18 14:27	0	*	South	Oversupply
03/10/18 12:04	0.0	4.70	03/10/18 14:11	0	*	KREP	Oversupply
03/10/18 12:55	0.0	4.60	03/10/18 14:45	0	*	KLS2	Oversupply
03/11/18 05:15	0.0	0.00	03/11/18 10:16	0	*	Aloha1	System constraints
03/11/18 05:18	0.0	0.00	03/11/18 10:19	0	*	North	System constraints
03/11/18 05:18	0.0	0.00	03/11/18 10:18	0	*	KLS2	System constraints
03/11/18 05:18	0.0	0.00	03/11/18 10:18	0	*	KREP	System constraints
03/11/18 05:19	0.0	0.00	03/11/18 10:19	0	*	South	System constraints
03/11/18 05:47	0.0	0.00	03/11/18 11:29	0	*	Mauka	System constraints
03/11/18 05:47	0.0	0.00	03/11/18 11:29	0	*	Makai	System constraints
03/11/18 05:49	0.0	7.00	03/11/18 11:41	0	*	KWF	System constraints
03/18/18 05:39	0.0	0.00	03/18/18 21:18	0	*	KREP	System constraints
03/18/18 06:14	0.0	0.00	03/18/18 07:25	0	*	Waianae	System constraints
03/18/18 06:17	0.0	0.00	03/18/18 07:26	0	*	Aloha1	System constraints
03/18/18 15:08	0.0	13.00	03/18/18 16:03	0	*	Waianae	System constraints
03/18/18 15:11	0.0	2.00	03/18/18 16:05	0	*	Aloha1	System constraints
03/19/18 07:40	0.0	0.00	03/19/18 20:00	0	*	KREP	System constraints
03/20/18 06:23	0.0	0.00	03/20/18 07:02	0	*	KLS2	System constraints
03/20/18 15:34	0.0	0.00	03/20/18 17:02	0	*	KLS2	System constraints
03/21/18 09:36	0.0	4.00	03/21/18 10:38	0	*	KLS2	System constraints
03/21/18 09:43	0.0	1.70	03/22/18 08:08	0	*	KREP	System constraints
03/21/18 14:43	0.0	1.30	03/21/18 15:56	0	*	KLS2	System constraints
03/22/18 06:00	0.0	0.00	03/22/18 15:32	0	*	North	System constraints
03/22/18 06:01	0.0	0.00	03/22/18 15:34	0	*	South	System constraints
03/22/18 14:50	0.0	0.00	03/22/18 15:28	0	*	Mauka	System constraints
03/23/18 06:51	0.0	0.00	03/23/18 08:14	0	*	KREP	System constraints
03/23/18 13:42	0.0	0.00	03/23/18 15:12	0	*	KREP	System constraints
03/31/18 06:42	0.0	0.00	03/31/18 07:10	0	*	KREP	System constraints
03/31/18 16:40	0.0	2.70	03/31/18 17:59	0	*	KLS2	System constraints
03/31/18 19:43	0.0	0.00	03/31/18 19:54	0	*	KREP	System constraints

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

\* Data has not been provided by IPP.



Maui Curtailment Report

March 2018

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
3/1/2018 3:23	0:01	KWP/II	0.004	0.342	Oversupply
3/1/2018 3:25	0:01	AWE	0.001	20.700	Oversupply
3/1/2018 3:25	0:07	KWP/II	0.036	0.531	Oversupply
3/1/2018 3:29	0:01	AWE	0.004	20.800	Oversupply
3/1/2018 3:34	0:01	KWP/II	0.005	0.678	Oversupply
3/1/2018 10:29:00	0:24	BS250	Data is not available	Data is not available	Oversupply
3/1/2018 10:30	0:01	AWE	0.013	20.700	Oversupply
3/1/2018 10:30	1:34	KWP/II	7.535	8.127	Oversupply
3/1/2018 10:32	1:31	AWE	14.135	21.000	Oversupply
3/1/2018 12:03:00	0:01	BS250	Data is not available	Data is not available	Oversupply
3/1/2018 12:05	0:02	KWP/II	0.094	4.898	Oversupply
3/1/2018 12:09	0:12	KWP/II	0.735	4.549	Oversupply
3/1/2018 12:10	0:05	AWE	0.135	20.800	Oversupply
3/1/2018 12:53:00	0:01	BS250	Data is not available	Data is not available	Oversupply
3/1/2018 12:58:00	0:04	BS250	Data is not available	Data is not available	Oversupply
3/1/2018 12:58	0:04	KWP/II	0.069	2.010	Oversupply
3/1/2018 12:59	0:02	AWE	0.010	20.800	Oversupply
3/2/2018 11:21:00	0:12	BS250	Data is not available	Data is not available	Oversupply
3/2/2018 11:21	0:13	KWP/II	0.498	3.857	Oversupply
3/2/2018 11:34:00	0:03	BS250	Data is not available	Data is not available	Oversupply
3/2/2018 11:35	0:02	KWP/II	0.044	3.223	Oversupply
3/2/2018 11:46:00	0:05	BS250	Data is not available	Data is not available	Oversupply
3/2/2018 11:46	0:12	KWP/II	0.229	3.162	Oversupply
3/2/2018 11:48	0:02	AWE	0.021	17.500	Oversupply
3/2/2018 11:52:00	0:05	BS250	Data is not available	Data is not available	Oversupply
3/2/2018 12:50:00	0:01	BS250	Data is not available	Data is not available	Oversupply
3/2/2018 12:57:00	0:03	BS250	Data is not available	Data is not available	Oversupply
3/2/2018 12:57	0:47	AWE	6.310	17.800	Oversupply
3/2/2018 12:57	0:50	KWP/II	3.457	11.876	Oversupply
3/2/2018 13:28:00	0:19	BS250	Data is not available	Data is not available	Oversupply
3/2/2018 16:35	0:01	KWP/II	0.018	7.565	Oversupply
3/2/2018 16:38:00	0:20	BS250	Data is not available	Data is not available	Oversupply
3/2/2018 16:39	0:19	KWP/II	1.316	11.406	Oversupply
3/2/2018 16:59:00	0:01	BS250	Data is not available	Data is not available	Oversupply
3/2/2018 17:00	0:01	KWP/II	0.006	9.067	Oversupply
3/2/2018 17:12:00	0:22	BS250	Data is not available	Data is not available	Oversupply
3/2/2018 17:13	0:21	KWP/II	1.187	11.519	Oversupply
3/2/2018 20:16	0:01	KWP/II	0.010	9.420	Oversupply
3/2/2018 20:20	0:06	KWP/II	0.250	10.892	Oversupply
3/2/2018 22:42	0:39	KWP/II	5.249	18.633	Oversupply
3/2/2018 22:45	0:01	AWE	0.010	19.600	Oversupply
3/2/2018 22:49	0:06	AWE	0.037	19.900	Oversupply
3/2/2018 22:58	0:09	AWE	0.322	20.100	Oversupply
3/2/2018 23:09	0:08	AWE	0.287	20.600	Oversupply
3/2/2018 23:23	0:03	KWP/II	0.172	11.171	Oversupply
3/2/2018 23:27	0:01	KWP/II	0.007	9.394	Oversupply
3/2/2018 23:30	0:02	KWP/II	0.019	8.926	Oversupply
3/2/2018 23:33	0:12	KWP/II	0.626	11.774	Oversupply
3/2/2018 23:47	0:43	KWP/II	5.837	13.558	Oversupply
3/3/2018 0:08	0:14	AWE	0.508	20.800	Oversupply
3/3/2018 14:05	0:01	KWP/II	0.000	0.857	Oversupply
3/3/2018 17:25:00	0:01	BS250	Data is not available	Data is not available	Oversupply
3/3/2018 17:26	0:01	KWP/II	0.047	18.899	Oversupply
3/3/2018 17:28:00	0:01	BS250	Data is not available	Data is not available	Oversupply
3/3/2018 17:51	0:01	KWP/II	0.003	19.167	Oversupply
3/3/2018 21:47	0:16	KWP/II	0.105	18.808	Oversupply
3/3/2018 22:06	0:31	KWP/II	2.092	19.053	Oversupply
3/4/2018 0:05	0:54	KWP/II	12.901	18.911	Oversupply
3/4/2018 0:09	0:04	AWE	0.086	19.900	Oversupply
3/4/2018 0:33	0:23	AWE	0.484	20.100	Oversupply
3/4/2018 1:49	1:39	AWE	9.078	19.700	Oversupply
3/4/2018 1:55	1:45	KWP/II	21.433	17.585	Oversupply
3/4/2018 3:32	0:01	AWE	0.002	20.300	Oversupply
3/4/2018 4:51	1:42	KWP/II	17.670	17.273	Oversupply
3/4/2018 5:03	0:02	AWE	0.004	20.800	Oversupply
3/4/2018 5:06	0:40	AWE	1.826	20.000	Oversupply
3/4/2018 5:47	0:01	AWE	0.006	18.700	Oversupply
3/4/2018 5:49	0:01	AWE	0.002	18.000	Oversupply
3/4/2018 5:57	0:02	AWE	0.004	18.900	Oversupply
3/4/2018 6:20:00	0:13	BS250	Data is not available	Data is not available	Oversupply
3/4/2018 6:35:00	0:05	BS250	Data is not available	Data is not available	Oversupply
3/4/2018 6:35	0:04	KWP/II	0.062	16.795	Oversupply
3/4/2018 9:19	0:01	KWP/II	0.006	15.499	Oversupply
3/4/2018 9:22	0:01	KWP/II	0.059	15.550	Oversupply
3/4/2018 9:51:00	0:01	BS250	Data is not available	Data is not available	Oversupply
3/4/2018 9:52	0:04	KWP/II	0.216	7.805	Oversupply
3/4/2018 9:59:00	0:05	BS250	Data is not available	Data is not available	Oversupply
3/4/2018 9:59	0:02	KWP/II	0.046	8.244	Oversupply
3/4/2018 10:02	0:03	KWP/II	0.224	10.631	Oversupply
3/4/2018 10:13	0:05	AWE	0.166	20.600	Oversupply
3/4/2018 10:13	0:05	KWP/II	0.451	10.901	Oversupply
3/4/2018 10:17:00	0:01	BS250	Data is not available	Data is not available	Oversupply



Maui Curtailment Report

March 2018

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
3/4/2018 10:23:00	0:03	BS250	Data is not available	Data is not available	Oversupply
3/4/2018 10:24	0:02	KWP	0.052	7.417	Oversupply
3/4/2018 10:30:00	0:10	BS250	Data is not available	Data is not available	Oversupply
3/4/2018 10:31	0:04	AWE	0.137	20.200	Oversupply
3/4/2018 10:31	0:37	KWP	3.181	7.528	Oversupply
3/4/2018 10:37	0:30	AWE	2.320	20.900	Oversupply
3/4/2018 10:50	0:04	KWP	0.103	6.808	Oversupply
3/4/2018 11:05	0:01	KWP	0.007	7.331	Oversupply
3/4/2018 11:06:00	0:01	BS250	Data is not available	Data is not available	Oversupply
3/4/2018 11:09	0:01	KWP	0.052	4.007	Oversupply
3/4/2018 11:13	1:13	AWE	9.754	20.800	Oversupply
3/4/2018 11:14	1:14	KWP	2.904	6.418	Oversupply
3/4/2018 11:19	0:03	KWP	0.076	9.775	Oversupply
3/4/2018 12:27	1:27	AWE	13.165	20.900	Oversupply
3/4/2018 12:31	1:23	KWP	2.726	5.757	Oversupply
3/4/2018 13:54:00	0:04	BS250	Data is not available	Data is not available	Oversupply
3/4/2018 13:55	0:03	KWP	0.169	10.206	Oversupply
3/4/2018 14:00:00	0:01	BS250	Data is not available	Data is not available	Oversupply
3/4/2018 14:01	0:01	KWP	0.018	6.110	Oversupply
3/4/2018 14:07:00	0:01	BS250	Data is not available	Data is not available	Oversupply
3/4/2018 14:08	0:06	KWP	0.496	6.620	Oversupply
3/4/2018 14:09	0:30	AWE	2.324	20.300	Oversupply
3/4/2018 14:17	0:27	KWP	2.578	7.216	Oversupply
3/4/2018 20:09	0:01	KWP	0.001	18.874	Oversupply
3/4/2018 20:13	0:07	KWP	0.199	19.186	Oversupply
3/4/2018 22:09	0:01	KWP	0.001	19.207	Oversupply
3/4/2018 22:11	0:29	KWP	1.428	19.205	Oversupply
3/4/2018 22:54	5:20	KWP	78.471	19.211	Oversupply
3/5/2018 0:54	0:16	AWE	0.511	17.700	Oversupply
3/5/2018 1:27	0:01	AWE	0.004	16.100	Oversupply
3/5/2018 1:32	0:01	AWE	0.001	16.000	Oversupply
3/5/2018 1:44	0:10	AWE	0.360	18.300	Oversupply
3/5/2018 2:05	0:44	AWE	2.618	19.800	Oversupply
3/5/2018 2:50	0:06	AWE	0.054	12.300	Oversupply
3/5/2018 2:58	0:02	AWE	0.003	11.600	Oversupply
3/5/2018 3:01	0:08	AWE	0.112	13.600	Oversupply
3/5/2018 3:10	0:03	AWE	0.023	12.600	Oversupply
3/5/2018 3:14	0:02	AWE	0.027	13.200	Oversupply
3/5/2018 3:18	0:01	AWE	0.005	11.900	Oversupply
3/5/2018 3:24	0:37	AWE	3.013	19.600	Oversupply
3/5/2018 4:02	0:04	AWE	0.098	15.900	Oversupply
3/5/2018 4:16	0:57	KWP	4.937	19.211	Oversupply
3/5/2018 5:15	0:01	KWP	0.002	19.159	Oversupply
3/5/2018 5:33	0:04	KWP	0.077	18.836	Oversupply
3/5/2018 5:43	0:01	KWP	0.001	18.933	Oversupply
3/5/2018 5:46	0:02	KWP	0.012	19.181	Oversupply
3/5/2018 5:56	0:03	KWP	0.033	19.209	Oversupply
3/5/2018 6:38:00	0:01	BS250	Data is not available	Data is not available	Oversupply
3/5/2018 6:39	0:02	AWE	0.043	8.400	Oversupply
3/5/2018 6:45	0:03	AWE	0.076	14.300	Oversupply
3/5/2018 6:57	0:03	AWE	0.019	15.400	Oversupply
3/5/2018 7:20	0:22	KWP	0.952	19.211	Oversupply
3/5/2018 8:29	8:09	KWP	142.170	19.211	Oversupply
3/5/2018 8:31	0:15	AWE	0.744	11.300	Oversupply
3/5/2018 8:49	0:05	AWE	0.116	9.400	Oversupply
3/5/2018 8:57	0:01	AWE	0.002	6.100	Oversupply
3/5/2018 9:00	0:01	AWE	0.003	6.200	Oversupply
3/5/2018 9:09	0:01	AWE	0.006	5.300	Oversupply
3/5/2018 9:11	0:02	AWE	0.003	4.100	Oversupply
3/5/2018 9:15	6:22	AWE	77.511	20.400	Oversupply
3/5/2018 9:59	0:10	KWP	0.624	27.572	Oversupply
3/5/2018 10:11	3:59	KWP	52.685	27.664	Oversupply
3/5/2018 13:14:00	1:03	BS	Data is not available	Data is not available	Oversupply
3/5/2018 13:14:00	1:03	BS	Data is not available	Data is not available	Oversupply
3/5/2018 14:23:00	2:15	BS250	Data is not available	Data is not available	Oversupply
3/5/2018 15:40	0:01	AWE	0.004	18.100	Oversupply
3/5/2018 15:42	0:09	AWE	0.200	20.700	Oversupply
3/5/2018 16:41:00	0:01	BS250	Data is not available	Data is not available	Oversupply
3/5/2018 16:41	0:01	KWP	0.002	19.197	Oversupply
3/5/2018 17:12	0:05	KWP	0.100	19.173	Oversupply
3/5/2018 18:29:00	0:01	BS250	Data is not available	Data is not available	Oversupply
3/5/2018 23:28	6:26	KWP	58.621	19.211	Oversupply
3/6/2018 6:16	0:07	KWP	0.244	19.211	Oversupply
3/6/2018 6:51:00	0:01	BS250	Data is not available	Data is not available	Oversupply
3/6/2018 7:29	6:27	KWP	96.365	19.211	Oversupply
3/6/2018 9:26	0:01	AWE	0.007	8.400	Oversupply
3/6/2018 9:36	2:41	AWE	27.829	18.900	Oversupply
3/6/2018 10:03	0:01	KWP	0.023	26.696	Oversupply
3/6/2018 10:05	1:33	KWP	12.132	26.650	Oversupply
3/6/2018 12:40	0:01	AWE	0.006	17.200	Oversupply
3/6/2018 12:49	0:25	AWE	0.548	17.100	Oversupply
3/6/2018 13:15	0:37	AWE	1.492	16.900	Oversupply



Maui Curtailment Report

March 2018

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
3/6/2018 13:51:00	0:05	BS250	Data is not available	Data is not available	Oversupply
3/6/2018 13:57:00	1:46	BS250	Data is not available	Data is not available	Oversupply
3/6/2018 13:57	1:48	KWP/II	18.012	19.193	Oversupply
3/6/2018 23:41	0:01	KWP/II	0.002	18.703	Oversupply
3/6/2018 23:43	0:30	KWP/II	1.475	19.058	Oversupply
3/7/2018 0:15	0:11	KWP/II	0.252	18.355	Oversupply
3/7/2018 0:28	0:05	KWP/II	0.048	17.544	Oversupply
3/7/2018 0:49	0:01	KWP/II	0.007	17.020	Oversupply
3/7/2018 0:58	0:08	KWP/II	0.116	17.299	Oversupply
3/7/2018 1:16	0:04	KWP/II	0.027	17.261	Oversupply
3/7/2018 1:21	0:09	KWP/II	0.082	16.461	Oversupply
3/7/2018 1:37	2:26	KWP/II	6.467	17.506	Oversupply
3/7/2018 4:05	0:17	KWP/II	0.446	17.349	Oversupply
3/7/2018 4:23	0:04	KWP/II	0.045	17.083	Oversupply
3/7/2018 4:39	0:05	KWP/II	0.074	17.114	Oversupply
3/7/2018 4:55	0:05	KWP/II	0.056	17.786	Oversupply
3/7/2018 9:44:00	0:15	BS250	Data is not available	Data is not available	Oversupply
3/7/2018 9:45	0:15	KWP/II	0.237	11.345	Oversupply
3/7/2018 10:01	0:07	KWP/II	0.223	11.942	Oversupply
3/7/2018 10:03:00	0:04	BS250	Data is not available	Data is not available	Oversupply
3/7/2018 10:26:00	3:57	BS250	Data is not available	Data is not available	Oversupply
3/7/2018 10:26	3:57	KWP/II	55.147	18.881	Oversupply
3/7/2018 11:16	0:02	AWE	0.008	8.200	Oversupply
3/7/2018 11:26	0:01	AWE	0.001	9.100	Oversupply
3/7/2018 11:29	0:08	AWE	0.151	9.700	Oversupply
3/7/2018 11:38	0:03	AWE	0.061	9.100	Oversupply
3/7/2018 11:43	0:01	AWE	0.025	10.800	Oversupply
3/7/2018 11:45	0:01	AWE	0.015	9.200	Oversupply
3/7/2018 11:54	0:01	AWE	0.013	11.100	Oversupply
3/7/2018 12:02	0:02	AWE	0.014	12.400	Oversupply
3/7/2018 12:07	0:02	AWE	0.017	11.400	Oversupply
3/7/2018 12:14	0:04	AWE	0.022	12.100	Oversupply
3/7/2018 12:19	0:43	AWE	1.617	14.000	Oversupply
3/7/2018 13:03	0:01	AWE	0.003	7.600	Oversupply
3/7/2018 13:05	0:56	AWE	2.289	15.400	Oversupply
3/7/2018 14:03	0:02	AWE	0.008	14.200	Oversupply
3/7/2018 14:06	0:03	AWE	0.053	15.300	Oversupply
3/7/2018 14:16	0:03	AWE	0.026	16.300	Oversupply
3/7/2018 14:25:00	0:58	BS250	Data is not available	Data is not available	Oversupply
3/7/2018 14:25	0:59	KWP/II	10.266	18.392	Oversupply
3/7/2018 14:33	0:01	AWE	0.005	15.300	Oversupply
3/7/2018 15:25:00	0:06	BS250	Data is not available	Data is not available	Oversupply
3/7/2018 15:25	0:07	KWP/II	0.164	18.123	Oversupply
3/7/2018 15:34	0:01	KWP/II	0.016	18.115	Oversupply
3/7/2018 23:02	1:22	KWP/II	7.266	18.113	Oversupply
3/8/2018 0:25	0:02	KWP/II	0.010	16.741	Oversupply
3/8/2018 0:31	5:10	KWP/II	42.770	19.033	Oversupply
3/8/2018 7:23:00	0:02	BS250	Data is not available	Data is not available	Oversupply
3/8/2018 7:24	0:01	KWP/II	0.009	19.058	Oversupply
3/8/2018 7:27:00	0:01	BS250	Data is not available	Data is not available	Oversupply
3/8/2018 7:28	0:02	KWP/II	0.008	19.117	Oversupply
3/8/2018 7:29:00	0:01	BS250	Data is not available	Data is not available	Oversupply
3/8/2018 7:31:00	0:02	BS250	Data is not available	Data is not available	Oversupply
3/8/2018 7:34:00	0:03	BS250	Data is not available	Data is not available	Oversupply
3/8/2018 7:34	2:35	KWP/II	12.213	19.190	Oversupply
3/8/2018 7:38:00	0:23	BS250	Data is not available	Data is not available	Oversupply
3/8/2018 8:02:00	0:26	BS250	Data is not available	Data is not available	Oversupply
3/8/2018 8:29:00	1:40	BS250	Data is not available	Data is not available	Oversupply
3/8/2018 10:32:00	1:54	BS250	Data is not available	Data is not available	Oversupply
3/8/2018 10:33	1:53	KWP/II	18.890	19.049	Oversupply
3/8/2018 11:00:00	0:07	5A	Data is not available	Data is not available	Oversupply
3/8/2018 11:00:00	0:07	BS	Data is not available	Data is not available	Oversupply
3/8/2018 11:00:00	0:07	ESA	Data is not available	Data is not available	Oversupply
3/8/2018 11:01:00	0:02	MH	Data is not available	Data is not available	Oversupply
3/8/2018 11:01	0:02	AWE	0.025	0.800	Oversupply
3/8/2018 11:04:00	0:03	MH	Data is not available	Data is not available	Oversupply
3/8/2018 11:04	0:03	AWE	0.008	0.400	Oversupply
3/8/2018 11:06	0:01	KWP	0.011	17.459	Oversupply
3/8/2018 11:09:00	0:02	5A	Data is not available	Data is not available	Oversupply
3/8/2018 11:09:00	0:02	BS	Data is not available	Data is not available	Oversupply
3/8/2018 11:09:00	0:02	ESA	Data is not available	Data is not available	Oversupply
3/8/2018 11:09:00	0:02	MH	Data is not available	Data is not available	Oversupply
3/8/2018 11:10	0:04	AWE	0.017	0.400	Oversupply
3/8/2018 11:11	0:01	KWP	0.039	18.581	Oversupply
3/8/2018 11:12:00	0:02	5A	Data is not available	Data is not available	Oversupply
3/8/2018 11:12:00	0:02	BS	Data is not available	Data is not available	Oversupply
3/8/2018 11:12:00	0:02	ESA	Data is not available	Data is not available	Oversupply
3/8/2018 11:12:00	0:02	MH	Data is not available	Data is not available	Oversupply
3/8/2018 11:15	0:01	AWE	0.004	0.300	Oversupply
3/8/2018 11:17:00	0:01	5A	Data is not available	Data is not available	Oversupply
3/8/2018 11:17:00	0:01	BS	Data is not available	Data is not available	Oversupply
3/8/2018 11:17:00	0:01	ESA	Data is not available	Data is not available	Oversupply





Maui Curtailment Report

March 2018

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
3/8/2018 11:19	0:01	AWE	0.003	0.200	Oversupply
3/8/2018 11:20:00	0:05	5A	Data is not available	Data is not available	Oversupply
3/8/2018 11:20:00	0:05	BS	Data is not available	Data is not available	Oversupply
3/8/2018 11:20:00	0:05	ESA	Data is not available	Data is not available	Oversupply
3/8/2018 11:20:00	0:05	MH	Data is not available	Data is not available	Oversupply
3/8/2018 11:21	0:01	KWP	0.001	15.015	Oversupply
3/8/2018 11:22	0:03	AWE	0.007	0.300	Oversupply
3/8/2018 11:23	0:02	KWP	0.008	13.494	Oversupply
3/8/2018 12:27	0:22	KWP	4.680	17.433	Oversupply
3/8/2018 12:33	0:03	AWE	0.068	5.100	Oversupply
3/8/2018 12:37:00	0:11	BS250	Data is not available	Data is not available	Oversupply
3/8/2018 12:40	0:01	AWE	0.011	4.700	Oversupply
3/8/2018 12:50:00	1:31	BS250	Data is not available	Data is not available	Oversupply
3/8/2018 12:51	1:30	KWP	22.886	18.523	Oversupply
3/8/2018 13:03	0:01	AWE	0.021	4.100	Oversupply
3/8/2018 13:05	0:26	AWE	0.610	5.500	Oversupply
3/8/2018 13:10:00	0:17	5A	Data is not available	Data is not available	Oversupply
3/8/2018 13:10:00	0:17	BS	Data is not available	Data is not available	Oversupply
3/8/2018 13:10:00	0:17	ESA	Data is not available	Data is not available	Oversupply
3/8/2018 13:11:00	0:08	MH	Data is not available	Data is not available	Oversupply
3/8/2018 13:11	0:02	KWP	0.010	14.493	Oversupply
3/8/2018 13:14	0:03	KWP	0.200	16.967	Oversupply
3/8/2018 13:18	0:02	KWP	0.153	14.355	Oversupply
3/8/2018 13:21	0:04	KWP	0.256	13.601	Oversupply
3/8/2018 13:27	0:04	KWP	0.238	11.081	Oversupply
3/8/2018 13:29:00	0:02	5A	Data is not available	Data is not available	Oversupply
3/8/2018 13:29:00	0:02	BS	Data is not available	Data is not available	Oversupply
3/8/2018 13:29:00	0:02	ESA	Data is not available	Data is not available	Oversupply
3/8/2018 13:32:00	0:01	5A	Data is not available	Data is not available	Oversupply
3/8/2018 13:32:00	0:01	BS	Data is not available	Data is not available	Oversupply
3/8/2018 13:32:00	0:01	ESA	Data is not available	Data is not available	Oversupply
3/8/2018 13:32	0:01	KWP	0.035	9.098	Oversupply
3/8/2018 13:32	0:10	AWE	0.147	2.300	Oversupply
3/8/2018 13:35:00	0:04	5A	Data is not available	Data is not available	Oversupply
3/8/2018 13:35:00	0:04	BS	Data is not available	Data is not available	Oversupply
3/8/2018 13:35:00	0:04	ESA	Data is not available	Data is not available	Oversupply
3/8/2018 13:36	0:04	KWP	0.106	14.047	Oversupply
3/8/2018 13:40:00	0:02	5A	Data is not available	Data is not available	Oversupply
3/8/2018 13:40:00	0:02	BS	Data is not available	Data is not available	Oversupply
3/8/2018 13:40:00	0:02	ESA	Data is not available	Data is not available	Oversupply
3/8/2018 13:41	0:01	KWP	0.041	13.694	Oversupply
3/8/2018 13:43:00	0:05	5A	Data is not available	Data is not available	Oversupply
3/8/2018 13:43:00	0:05	BS	Data is not available	Data is not available	Oversupply
3/8/2018 13:43:00	0:05	ESA	Data is not available	Data is not available	Oversupply
3/8/2018 13:43	0:04	KWP	0.324	14.616	Oversupply
3/8/2018 13:43	0:07	AWE	0.070	0.900	Oversupply
3/8/2018 13:48	0:02	KWP	0.085	11.819	Oversupply
3/8/2018 13:49:00	0:01	5A	Data is not available	Data is not available	Oversupply
3/8/2018 13:49:00	0:01	BS	Data is not available	Data is not available	Oversupply
3/8/2018 13:49:00	0:01	ESA	Data is not available	Data is not available	Oversupply
3/8/2018 13:51:00	0:07	5A	Data is not available	Data is not available	Oversupply
3/8/2018 13:51:00	0:07	BS	Data is not available	Data is not available	Oversupply
3/8/2018 13:51:00	0:07	ESA	Data is not available	Data is not available	Oversupply
3/8/2018 13:51	0:13	AWE	0.097	1.100	Oversupply
3/8/2018 13:52	0:06	KWP	0.427	14.862	Oversupply
3/8/2018 13:59:00	0:02	5A	Data is not available	Data is not available	Oversupply
3/8/2018 13:59:00	0:02	BS	Data is not available	Data is not available	Oversupply
3/8/2018 13:59:00	0:02	ESA	Data is not available	Data is not available	Oversupply
3/8/2018 14:00	0:02	KWP	0.074	12.987	Oversupply
3/8/2018 14:02:00	0:01	5A	Data is not available	Data is not available	Oversupply
3/8/2018 14:02:00	0:01	BS	Data is not available	Data is not available	Oversupply
3/8/2018 14:02:00	0:01	ESA	Data is not available	Data is not available	Oversupply
3/8/2018 14:03	0:01	KWP	0.011	11.311	Oversupply
3/8/2018 14:07	0:01	AWE	0.000	1.900	Oversupply
3/8/2018 14:17	0:01	AWE	0.004	0.700	Oversupply
3/8/2018 14:22:00	0:15	BS250	Data is not available	Data is not available	Oversupply
3/8/2018 14:23	0:14	KWP	1.844	18.348	Oversupply
3/8/2018 14:38:00	0:02	BS250	Data is not available	Data is not available	Oversupply
3/8/2018 14:38	0:03	KWP	0.121	17.239	Oversupply
3/8/2018 15:03:00	0:04	BS250	Data is not available	Data is not available	Oversupply
3/8/2018 15:04	0:24	KWP	4.485	17.598	Oversupply
3/8/2018 15:07	0:10	KWP	0.470	10.420	Oversupply
3/8/2018 15:09	0:03	AWE	0.013	1.300	Oversupply
3/8/2018 15:14	0:01	AWE	0.005	1.300	Oversupply
3/8/2018 15:22	0:01	AWE	0.002	0.100	Oversupply
3/8/2018 15:29:00	0:07	BS250	Data is not available	Data is not available	Oversupply
3/8/2018 15:29	0:07	KWP	0.604	18.759	Oversupply
3/8/2018 15:51	0:59	KWP	6.197	19.175	Oversupply
3/8/2018 16:59:00	0:02	BS250	Data is not available	Data is not available	Oversupply
3/8/2018 17:59	0:01	AWE	0.002	0.100	Oversupply
3/8/2018 23:02	0:17	KWP	0.276	19.203	Oversupply
3/9/2018 0:15	0:03	KWP	0.006	19.135	Oversupply



Maui Curtailment Report

March 2018

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
3/9/2018 0:21	0:02	KWP	0.003	18.906	Oversupply
3/9/2018 0:24	0:01	KWP	0.001	18.985	Oversupply
3/9/2018 0:27	4:50	KWP	25.767	19.195	Oversupply
3/9/2018 5:36	0:05	KWP	0.059	19.188	Oversupply
3/9/2018 9:50:00	0:18	BS250	Data is not available	Data is not available	Oversupply
3/9/2018 9:50	0:18	KWP	0.576	19.205	Oversupply
3/9/2018 10:11:00	0:04	BS250	Data is not available	Data is not available	Oversupply
3/9/2018 10:12	0:03	KWP	0.032	19.205	Oversupply
3/9/2018 10:34:00	2:37	BS250	Data is not available	Data is not available	Oversupply
3/9/2018 10:36	1:33	KWP	9.051	19.211	Oversupply
3/9/2018 12:10	0:16	KWP	1.199	19.192	Oversupply
3/9/2018 12:28	3:37	KWP	36.892	19.211	Oversupply
3/9/2018 13:21	0:04	KWP	0.193	23.945	Oversupply
3/9/2018 13:35	0:02	KWP	0.064	22.408	Oversupply
3/9/2018 13:52	0:03	AWE	0.016	2.600	Oversupply
3/9/2018 14:01	0:01	KWP	0.003	20.348	Oversupply
3/9/2018 14:03	0:01	KWP	0.021	20.548	Oversupply
3/9/2018 14:04	0:04	AWE	0.084	2.900	Oversupply
3/9/2018 14:05	0:02	KWP	0.023	19.964	Oversupply
3/9/2018 14:27	0:03	AWE	0.028	1.700	Oversupply
3/9/2018 14:41	0:09	AWE	0.077	3.200	Oversupply
3/9/2018 15:07	0:06	AWE	0.048	1.200	Oversupply
3/9/2018 15:08	0:03	KWP	0.047	23.222	Oversupply
3/9/2018 15:14	0:01	AWE	0.002	1.100	Oversupply
3/10/2018 0:18	0:05	KWP	0.032	19.128	Oversupply
3/10/2018 0:36	3:02	KWP	18.160	19.199	Oversupply
3/10/2018 3:39	1:24	KWP	6.413	19.191	Oversupply
3/10/2018 5:23	0:02	KWP	0.005	19.131	Oversupply
3/10/2018 8:41	0:01	KWP	0.002	19.204	Oversupply
3/10/2018 8:45:00	0:01	BS250	Data is not available	Data is not available	Oversupply
3/10/2018 9:13:00	4:34	BS250	Data is not available	Data is not available	Oversupply
3/10/2018 9:14	5:49	KWP	103.506	19.211	Oversupply
3/10/2018 9:42	0:02	AWE	0.033	8.100	Oversupply
3/10/2018 9:52	0:02	AWE	0.033	10.500	Oversupply
3/10/2018 9:58	0:28	AWE	1.477	11.100	Oversupply
3/10/2018 10:23:00	0:01	5A	Data is not available	Data is not available	Oversupply
3/10/2018 10:23:00	0:01	BS	Data is not available	Data is not available	Oversupply
3/10/2018 10:23:00	0:01	ESA	Data is not available	Data is not available	Oversupply
3/10/2018 10:23:00	0:01	MH	Data is not available	Data is not available	Oversupply
3/10/2018 10:27:00	0:05	5A	Data is not available	Data is not available	Oversupply
3/10/2018 10:27:00	0:05	BS	Data is not available	Data is not available	Oversupply
3/10/2018 10:27:00	0:05	ESA	Data is not available	Data is not available	Oversupply
3/10/2018 10:27:00	0:05	MH	Data is not available	Data is not available	Oversupply
3/10/2018 10:27	0:47	AWE	1.709	8.000	Oversupply
3/10/2018 10:30	0:02	KWP	0.083	24.851	Oversupply
3/10/2018 10:33:00	0:04	5A	Data is not available	Data is not available	Oversupply
3/10/2018 10:33:00	0:04	BS	Data is not available	Data is not available	Oversupply
3/10/2018 10:33:00	0:04	ESA	Data is not available	Data is not available	Oversupply
3/10/2018 10:33:00	0:03	MH	Data is not available	Data is not available	Oversupply
3/10/2018 10:33	0:02	KWP	0.110	23.899	Oversupply
3/10/2018 10:36	0:01	KWP	0.079	22.823	Oversupply
3/10/2018 10:38:00	0:03	5A	Data is not available	Data is not available	Oversupply
3/10/2018 10:38:00	0:03	BS	Data is not available	Data is not available	Oversupply
3/10/2018 10:38:00	0:03	ESA	Data is not available	Data is not available	Oversupply
3/10/2018 10:38:00	0:01	MH	Data is not available	Data is not available	Oversupply
3/10/2018 10:40:00	0:01	MH	Data is not available	Data is not available	Oversupply
3/10/2018 10:40	0:02	KWP	0.043	22.162	Oversupply
3/10/2018 10:43:00	0:02	5A	Data is not available	Data is not available	Oversupply
3/10/2018 10:43:00	0:02	BS	Data is not available	Data is not available	Oversupply
3/10/2018 10:43:00	0:02	ESA	Data is not available	Data is not available	Oversupply
3/10/2018 10:43:00	0:02	MH	Data is not available	Data is not available	Oversupply
3/10/2018 10:44	0:02	KWP	0.027	21.870	Oversupply
3/10/2018 10:46:00	0:04	5A	Data is not available	Data is not available	Oversupply
3/10/2018 10:46:00	0:04	BS	Data is not available	Data is not available	Oversupply
3/10/2018 10:46:00	0:04	ESA	Data is not available	Data is not available	Oversupply
3/10/2018 10:47	0:05	KWP	0.217	22.346	Oversupply
3/10/2018 10:51:00	0:01	5A	Data is not available	Data is not available	Oversupply
3/10/2018 10:51:00	0:01	BS	Data is not available	Data is not available	Oversupply
3/10/2018 10:51:00	0:01	ESA	Data is not available	Data is not available	Oversupply
3/10/2018 10:53:00	0:03	5A	Data is not available	Data is not available	Oversupply
3/10/2018 10:53:00	0:03	BS	Data is not available	Data is not available	Oversupply
3/10/2018 10:53:00	0:03	ESA	Data is not available	Data is not available	Oversupply
3/10/2018 10:53	0:03	KWP	0.284	23.991	Oversupply
3/10/2018 10:57:00	0:02	5A	Data is not available	Data is not available	Oversupply
3/10/2018 10:57:00	0:02	BS	Data is not available	Data is not available	Oversupply
3/10/2018 10:57:00	0:02	ESA	Data is not available	Data is not available	Oversupply
3/10/2018 10:57	0:02	KWP	0.141	20.348	Oversupply
3/10/2018 11:00:00	0:05	5A	Data is not available	Data is not available	Oversupply
3/10/2018 11:00:00	0:05	BS	Data is not available	Data is not available	Oversupply
3/10/2018 11:00:00	0:05	ESA	Data is not available	Data is not available	Oversupply
3/10/2018 11:00	0:01	KWP	0.035	19.042	Oversupply
3/10/2018 11:02	0:01	KWP	0.056	19.611	Oversupply



Maui Curtailment Report

March 2018

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
3/10/2018 11:04	0:02	KWP	0.138	19.580	Oversupply
3/10/2018 11:08:00	0:02	5A	Data is not available	Data is not available	Oversupply
3/10/2018 11:08:00	0:02	BS	Data is not available	Data is not available	Oversupply
3/10/2018 11:08:00	0:02	ESA	Data is not available	Data is not available	Oversupply
3/10/2018 11:08	0:03	KWP	0.190	22.792	Oversupply
3/10/2018 11:12:00	0:01	5A	Data is not available	Data is not available	Oversupply
3/10/2018 11:12:00	0:01	BS	Data is not available	Data is not available	Oversupply
3/10/2018 11:12:00	0:01	ESA	Data is not available	Data is not available	Oversupply
3/10/2018 11:13	0:01	KWP	0.094	22.469	Oversupply
3/10/2018 11:15:00	0:02	5A	Data is not available	Data is not available	Oversupply
3/10/2018 11:15:00	0:02	BS	Data is not available	Data is not available	Oversupply
3/10/2018 11:15:00	0:02	ESA	Data is not available	Data is not available	Oversupply
3/10/2018 11:15	0:02	AWE	0.101	3.600	Oversupply
3/10/2018 11:16	0:01	KWP	0.013	20.686	Oversupply
3/10/2018 11:18	1:50	AWE	12.435	17.200	Oversupply
3/10/2018 11:23:00	0:03	5A	Data is not available	Data is not available	Oversupply
3/10/2018 11:23:00	0:03	BS	Data is not available	Data is not available	Oversupply
3/10/2018 11:23:00	0:03	ESA	Data is not available	Data is not available	Oversupply
3/10/2018 11:25	0:02	KWP	0.021	23.975	Oversupply
3/10/2018 11:29:00	0:03	5A	Data is not available	Data is not available	Oversupply
3/10/2018 11:29:00	0:03	BS	Data is not available	Data is not available	Oversupply
3/10/2018 11:29:00	0:03	ESA	Data is not available	Data is not available	Oversupply
3/10/2018 11:45:00	0:01	5A	Data is not available	Data is not available	Oversupply
3/10/2018 11:45:00	0:01	BS	Data is not available	Data is not available	Oversupply
3/10/2018 11:45:00	0:01	ESA	Data is not available	Data is not available	Oversupply
3/10/2018 11:47:00	0:06	5A	Data is not available	Data is not available	Oversupply
3/10/2018 11:47:00	0:06	BS	Data is not available	Data is not available	Oversupply
3/10/2018 11:47:00	0:06	ESA	Data is not available	Data is not available	Oversupply
3/10/2018 11:49	0:04	KWP	0.176	23.591	Oversupply
3/10/2018 11:55:00	0:01	5A	Data is not available	Data is not available	Oversupply
3/10/2018 11:55:00	0:01	BS	Data is not available	Data is not available	Oversupply
3/10/2018 11:55:00	0:01	ESA	Data is not available	Data is not available	Oversupply
3/10/2018 11:55	0:01	KWP	0.009	19.764	Oversupply
3/10/2018 11:58:00	0:03	5A	Data is not available	Data is not available	Oversupply
3/10/2018 11:58:00	0:03	BS	Data is not available	Data is not available	Oversupply
3/10/2018 11:58:00	0:03	ESA	Data is not available	Data is not available	Oversupply
3/10/2018 12:00	0:02	KWP	0.145	25.174	Oversupply
3/10/2018 12:03:00	0:01	5A	Data is not available	Data is not available	Oversupply
3/10/2018 12:03:00	0:01	BS	Data is not available	Data is not available	Oversupply
3/10/2018 12:03:00	0:01	ESA	Data is not available	Data is not available	Oversupply
3/10/2018 12:03	0:01	KWP	0.026	22.869	Oversupply
3/10/2018 12:06:00	0:03	5A	Data is not available	Data is not available	Oversupply
3/10/2018 12:06:00	0:03	BS	Data is not available	Data is not available	Oversupply
3/10/2018 12:06:00	0:03	ESA	Data is not available	Data is not available	Oversupply
3/10/2018 12:07	0:03	KWP	0.113	23.822	Oversupply
3/10/2018 12:16:00	0:02	5A	Data is not available	Data is not available	Oversupply
3/10/2018 12:16:00	0:02	BS	Data is not available	Data is not available	Oversupply
3/10/2018 12:16:00	0:02	ESA	Data is not available	Data is not available	Oversupply
3/10/2018 12:19:00	0:05	5A	Data is not available	Data is not available	Oversupply
3/10/2018 12:19:00	0:05	BS	Data is not available	Data is not available	Oversupply
3/10/2018 12:19:00	0:05	ESA	Data is not available	Data is not available	Oversupply
3/10/2018 12:21	0:03	KWP	0.179	24.590	Oversupply
3/10/2018 12:25	0:01	KWP	0.041	20.026	Oversupply
3/10/2018 12:27	0:01	KWP	0.043	21.347	Oversupply
3/10/2018 12:34:00	0:03	5A	Data is not available	Data is not available	Oversupply
3/10/2018 12:34:00	0:03	BS	Data is not available	Data is not available	Oversupply
3/10/2018 12:34:00	0:03	ESA	Data is not available	Data is not available	Oversupply
3/10/2018 12:41:00	0:02	5A	Data is not available	Data is not available	Oversupply
3/10/2018 12:41:00	0:02	BS	Data is not available	Data is not available	Oversupply
3/10/2018 12:41:00	0:02	ESA	Data is not available	Data is not available	Oversupply
3/10/2018 12:47:00	0:02	5A	Data is not available	Data is not available	Oversupply
3/10/2018 12:47:00	0:02	BS	Data is not available	Data is not available	Oversupply
3/10/2018 12:47:00	0:02	ESA	Data is not available	Data is not available	Oversupply
3/10/2018 12:48	0:02	KWP	0.065	24.098	Oversupply
3/10/2018 12:54:00	0:02	5A	Data is not available	Data is not available	Oversupply
3/10/2018 12:54:00	0:02	BS	Data is not available	Data is not available	Oversupply
3/10/2018 12:54:00	0:02	ESA	Data is not available	Data is not available	Oversupply
3/10/2018 12:56	0:02	KWP	0.092	23.422	Oversupply
3/10/2018 12:57:00	0:01	5A	Data is not available	Data is not available	Oversupply
3/10/2018 12:57:00	0:01	BS	Data is not available	Data is not available	Oversupply
3/10/2018 12:57:00	0:01	ESA	Data is not available	Data is not available	Oversupply
3/10/2018 13:09	0:06	AWE	0.451	12.700	Oversupply
3/10/2018 13:16	0:10	AWE	0.564	13.400	Oversupply
3/10/2018 13:27	0:25	AWE	2.802	14.700	Oversupply
3/10/2018 13:42:00	0:01	5A	Data is not available	Data is not available	Oversupply
3/10/2018 13:42:00	0:01	BS	Data is not available	Data is not available	Oversupply
3/10/2018 13:42:00	0:01	ESA	Data is not available	Data is not available	Oversupply
3/10/2018 13:43	0:01	KWP	0.032	20.348	Oversupply
3/10/2018 13:45:00	0:02	5A	Data is not available	Data is not available	Oversupply
3/10/2018 13:45:00	0:02	BS	Data is not available	Data is not available	Oversupply
3/10/2018 13:45:00	0:02	ESA	Data is not available	Data is not available	Oversupply
3/10/2018 13:47	0:05	KWP	0.367	22.761	Oversupply



Maui Curtailment Report

March 2018

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment	
3/10/2018 13:52:00	0:28	BS250	Data is not available	Data is not available	Oversupply	
3/10/2018 13:53	0:08	AWE		0.528	13.000	Oversupply
3/10/2018 14:05	0:02	AWE		0.033	5.700	Oversupply
3/10/2018 14:08	0:01	AWE		0.003	4.300	Oversupply
3/10/2018 14:14	0:01	AWE		0.002	4.100	Oversupply
3/10/2018 14:17	0:17	AWE		0.974	9.300	Oversupply
3/10/2018 14:19:00	0:01	5A	Data is not available	Data is not available	Oversupply	
3/10/2018 14:19:00	0:01	BS	Data is not available	Data is not available	Oversupply	
3/10/2018 14:19:00	0:01	ESA	Data is not available	Data is not available	Oversupply	
3/10/2018 14:21	0:13	KWP		0.921	22.715	Oversupply
3/10/2018 14:34:00	0:02	BS250	Data is not available	Data is not available	Oversupply	
3/10/2018 14:37	0:16	AWE		1.163	11.700	Oversupply
3/10/2018 14:39	0:01	KWP		0.027	22.239	Oversupply
3/10/2018 14:40:00	0:01	BS250	Data is not available	Data is not available	Oversupply	
3/10/2018 14:55	0:03	AWE		0.068	3.000	Oversupply
3/10/2018 15:06	0:57	KWP		11.458	19.194	Oversupply
3/10/2018 15:12	0:02	AWE		0.021	0.800	Oversupply
3/10/2018 15:20	0:01	AWE		0.013	5.900	Oversupply
3/10/2018 15:22	0:03	AWE		0.079	6.700	Oversupply
3/10/2018 16:06	0:10	KWP		0.648	19.106	Oversupply
3/10/2018 16:08	0:03	AWE		0.022	3.100	Oversupply
3/11/2018 0:35	0:01	KWP		0.006	18.760	Oversupply
3/11/2018 0:44	0:01	KWP		0.007	18.951	Oversupply
3/11/2018 0:46	0:07	KWP		0.111	18.892	Oversupply
3/11/2018 0:55	0:05	KWP		0.056	18.897	Oversupply
3/11/2018 1:01	0:03	KWP		0.016	18.961	Oversupply
3/11/2018 1:07	0:03	KWP		0.014	18.929	Oversupply
3/11/2018 1:54	0:43	KWP		2.608	19.085	Oversupply
3/11/2018 2:38	0:01	KWP		0.003	17.333	Oversupply
3/11/2018 2:46	0:16	KWP		0.290	17.475	Oversupply
3/11/2018 3:08	1:56	KWP		8.539	19.170	Oversupply
3/11/2018 8:03	0:01	AWE		0.004	0.500	Oversupply
3/11/2018 10:02:00	0:01	BS250	Data is not available	Data is not available	Oversupply	
3/11/2018 10:06	0:49	KWP		7.188	19.211	Oversupply
3/11/2018 10:42:00	0:12	BS250	Data is not available	Data is not available	Oversupply	
3/11/2018 10:57:00	0:02	BS250	Data is not available	Data is not available	Oversupply	
3/11/2018 10:57	0:03	KWP		0.020	19.211	Oversupply
3/11/2018 12:57	0:01	KWP		0.001	18.843	Oversupply
3/11/2018 13:02:00	0:08	BS250	Data is not available	Data is not available	Oversupply	
3/11/2018 13:02	1:29	KWP		19.049	19.164	Oversupply
3/11/2018 13:11:00	0:09	BS250	Data is not available	Data is not available	Oversupply	
3/11/2018 13:23	0:01	KWP		0.003	18.181	Oversupply
3/11/2018 13:27	0:01	KWP		0.010	19.933	Oversupply
3/11/2018 13:34:00	0:02	BS250	Data is not available	Data is not available	Oversupply	
3/11/2018 13:46	0:40	AWE		0.742	4.000	Oversupply
3/11/2018 13:54	0:25	KWP		1.454	21.685	Oversupply
3/11/2018 14:33	0:02	KWP		0.505	19.155	Oversupply
3/11/2018 14:34:00	0:03	BS250	Data is not available	Data is not available	Oversupply	
3/11/2018 14:36	0:02	KWP		0.171	19.190	Oversupply
3/11/2018 14:38:00	0:02	BS250	Data is not available	Data is not available	Oversupply	
3/11/2018 14:39	0:01	KWP		0.017	19.177	Oversupply
3/11/2018 22:19	0:03	KWP		0.002	19.197	Oversupply
3/11/2018 23:03	0:01	AWE		0.005	0.300	Oversupply
3/11/2018 23:23	0:19	KWP		0.798	19.207	Oversupply
3/11/2018 23:43	0:02	KWP		0.014	19.201	Oversupply
3/11/2018 23:48	0:22	KWP		1.384	19.211	Oversupply
3/12/2018 0:12	0:01	AWE		0.002	0.100	Oversupply
3/12/2018 0:25	0:20	KWP		0.411	19.207	Oversupply
3/12/2018 0:46	0:05	KWP		0.088	19.137	Oversupply
3/12/2018 0:52	3:06	KWP		16.928	19.194	Oversupply
3/12/2018 4:00	0:11	KWP		0.338	19.184	Oversupply
3/12/2018 4:14	0:25	KWP		0.915	19.205	Oversupply
3/12/2018 4:41	0:09	KWP		0.112	19.203	Oversupply
3/12/2018 4:58	0:18	KWP		0.798	19.176	Oversupply
3/12/2018 7:22:00	0:01	BS250	Data is not available	Data is not available	System Constraint	
3/12/2018 7:22	0:01	KWP		0.001	19.202	System Constraint
3/12/2018 7:24:00	0:18	BS250	Data is not available	Data is not available	System Constraint	
3/12/2018 7:27	0:03	KWP		0.024	19.207	System Constraint
3/12/2018 7:31	0:12	KWP		0.113	19.211	System Constraint
3/12/2018 7:43:00	0:01	BS250	Data is not available	Data is not available	System Constraint	
3/12/2018 7:45:00	0:09	BS250	Data is not available	Data is not available	System Constraint	
3/12/2018 7:48	0:05	KWP		0.045	19.211	System Constraint
3/12/2018 7:54	0:01	KWP		0.006	19.211	System Constraint
3/12/2018 7:55:00	0:01	BS250	Data is not available	Data is not available	System Constraint	
3/12/2018 7:56	0:38	KWP		2.986	19.211	System Constraint
3/12/2018 7:57:00	0:03	BS250	Data is not available	Data is not available	System Constraint	
3/12/2018 8:01:00	0:32	BS250	Data is not available	Data is not available	System Constraint	
3/12/2018 8:54:00	0:02	BS250	Data is not available	Data is not available	System Constraint	
3/12/2018 9:17:00	0:01	BS250	Data is not available	Data is not available	System Constraint	
3/12/2018 9:19:00	0:39	BS250	Data is not available	Data is not available	System Constraint	
3/12/2018 9:22	0:37	KWP		1.366	19.211	System Constraint
3/12/2018 10:07:00	0:03	BS250	Data is not available	Data is not available	System Constraint	



Maui Curtailment Report

March 2018

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
3/12/2018 10:28:00	0:01	BS250	Data is not available	Data is not available	System Constraint
3/12/2018 10:33:00	0:59	BS250	Data is not available	Data is not available	System Constraint
3/12/2018 10:36	0:57	KWPPI	2.701	19.211	System Constraint
3/12/2018 11:35:00	0:06	BS250	Data is not available	Data is not available	System Constraint
3/12/2018 11:39	0:01	KWPPI	0.005	19.204	System Constraint
3/12/2018 11:41	0:01	KWPPI	0.001	19.211	System Constraint
3/12/2018 11:44:00	0:01	BS250	Data is not available	Data is not available	System Constraint
3/12/2018 12:01:00	2:00	BS250	Data is not available	Data is not available	System Constraint
3/12/2018 12:02	0:01	KWPPI	0.002	19.160	System Constraint
3/12/2018 12:04	1:59	KWPPI	17.512	19.211	System Constraint
3/12/2018 14:02:00	0:01	BS250	Data is not available	Data is not available	System Constraint
3/12/2018 14:08:00	0:18	BS250	Data is not available	Data is not available	System Constraint
3/12/2018 14:11	0:20	KWPPI	0.534	19.193	System Constraint
3/12/2018 14:27:00	0:04	BS250	Data is not available	Data is not available	System Constraint
3/12/2018 22:34	0:01	KWPPI	0.011	19.093	Oversupply
3/12/2018 22:36	7:31	KWPPI	111.800	19.211	Oversupply
3/13/2018 0:16	0:02	AWE	0.026	20.500	Oversupply
3/13/2018 0:22	0:12	AWE	0.341	20.700	Oversupply
3/13/2018 0:35	0:02	AWE	0.012	19.900	Oversupply
3/13/2018 0:40	0:04	AWE	0.039	20.600	Oversupply
3/13/2018 0:53	0:24	AWE	1.045	20.700	Oversupply
3/13/2018 1:20	0:27	AWE	1.419	20.300	Oversupply
3/13/2018 1:50	2:28	AWE	14.419	21.000	Oversupply
3/13/2018 4:21	0:01	AWE	0.003	20.700	Oversupply
3/13/2018 4:23	0:03	AWE	0.027	19.400	Oversupply
3/13/2018 4:28	0:04	AWE	0.035	20.200	Oversupply
3/13/2018 4:37	0:08	AWE	0.179	19.300	Oversupply
3/13/2018 4:48	0:03	AWE	0.012	19.900	Oversupply
3/13/2018 4:52	0:04	AWE	0.021	19.300	Oversupply
3/13/2018 7:34:00	0:06	BS250	Data is not available	Data is not available	Oversupply
3/13/2018 7:35	0:05	KWPPI	0.058	19.196	Oversupply
3/13/2018 7:41:00	0:01	BS250	Data is not available	Data is not available	Oversupply
3/13/2018 11:00	0:03	KWPPI	0.074	18.813	Oversupply
3/13/2018 11:01:00	0:02	BS250	Data is not available	Data is not available	Oversupply
3/14/2018 9:50:00	0:12	BS250	Data is not available	Data is not available	Oversupply
3/14/2018 9:50	0:13	AWE	0.469	20.700	Oversupply
3/15/2018 9:23:00	0:03	BS250	Data is not available	Data is not available	Oversupply
3/15/2018 9:23	0:02	AWE	0.010	17.500	Oversupply
3/15/2018 9:26	0:01	AWE	0.004	16.800	Oversupply
3/15/2018 9:31	0:19	AWE	0.186	16.300	Oversupply
3/15/2018 9:51	0:06	AWE	0.048	14.700	Oversupply
3/15/2018 9:58	0:09	AWE	0.095	16.300	Oversupply
3/15/2018 10:29	0:14	AWE	0.157	18.900	Oversupply
3/15/2018 11:28:00	0:01	BS250	Data is not available	Data is not available	Oversupply
3/15/2018 11:30:00	0:01	BS250	Data is not available	Data is not available	Oversupply
3/15/2018 11:30	0:01	AWE	0.005	17.400	Oversupply
3/15/2018 11:36:00	0:03	BS250	Data is not available	Data is not available	Oversupply
3/15/2018 11:39	0:01	AWE	0.004	18.200	Oversupply
3/15/2018 11:44	0:05	AWE	0.054	19.500	Oversupply
3/15/2018 11:50	0:05	AWE	0.048	18.900	Oversupply
3/15/2018 11:57	0:11	AWE	0.132	19.700	Oversupply
3/15/2018 12:11	0:03	AWE	0.024	19.100	Oversupply
3/15/2018 12:15	0:20	AWE	0.209	20.400	Oversupply
3/15/2018 12:37	0:05	AWE	0.041	19.000	Oversupply
3/15/2018 12:41:00	0:01	BS250	Data is not available	Data is not available	Oversupply
3/15/2018 14:44	0:02	AWE	0.050	18.300	Oversupply
3/15/2018 16:20	0:01	KWPPI	0.002	0.097	Oversupply
3/15/2018 17:17	0:01	KWPPI	0.001	0.042	Oversupply
3/17/2018 9:11:00	0:02	BS250	Data is not available	Data is not available	Oversupply
3/17/2018 9:12	0:01	AWE	0.013	12.100	Oversupply
3/17/2018 9:15:00	0:04	BS250	Data is not available	Data is not available	Oversupply
3/17/2018 9:15	0:04	AWE	0.087	11.800	Oversupply
3/17/2018 9:20:00	0:03	BS250	Data is not available	Data is not available	Oversupply
3/17/2018 9:20	0:04	AWE	0.053	11.200	Oversupply
3/17/2018 10:30:00	0:08	BS250	Data is not available	Data is not available	Oversupply
3/17/2018 10:31	0:05	AWE	0.096	9.600	Oversupply
3/17/2018 10:36	0:01	KWPPI	0.001	0.192	Oversupply
3/17/2018 10:43:00	0:03	BS250	Data is not available	Data is not available	Oversupply
3/17/2018 10:44	0:01	AWE	0.015	7.800	Oversupply
3/17/2018 10:44	0:01	KWPPI	0.004	0.235	Oversupply
3/17/2018 10:46	0:01	KWPPI	0.004	0.443	Oversupply
3/17/2018 10:47:00	2:41	BS250	Data is not available	Data is not available	Oversupply
3/17/2018 10:48	0:04	AWE	0.042	8.900	Oversupply
3/17/2018 10:48	1:24	KWPPI	1.215	2.388	Oversupply
3/17/2018 10:53	0:02	AWE	0.023	8.300	Oversupply
3/17/2018 10:56	2:36	AWE	6.305	11.300	Oversupply
3/17/2018 13:06:00	0:08	5A	Data is not available	Data is not available	Oversupply
3/17/2018 13:06:00	0:08	BS	Data is not available	Data is not available	Oversupply
3/17/2018 13:29:00	0:03	BS250	Data is not available	Data is not available	Oversupply
3/17/2018 16:57	0:01	AWE	0.002	0.100	Oversupply
3/17/2018 17:09	0:01	KWPPI	0.001	0.048	Oversupply
3/18/2018 10:44:00	0:01	BS250	Data is not available	Data is not available	Oversupply



Maui Curtailment Report

March 2018

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment	
3/18/2018 10:49:00	0:26	BS250	Data is not available	Data is not available	Oversupply	
3/18/2018 10:50	0:25	KWPPI		1.267	12.126	Oversupply
3/18/2018 11:16:00	0:19	BS250	Data is not available	Data is not available	Oversupply	
3/18/2018 11:16	0:20	KWPPI		2.747	11.624	Oversupply
3/18/2018 11:22	0:02	AWE		0.022	7.800	Oversupply
3/18/2018 11:37:00	0:03	BS250	Data is not available	Data is not available	Oversupply	
3/18/2018 11:38	0:05	KWPPI		0.233	9.750	Oversupply
3/18/2018 11:41:00	0:01	BS250	Data is not available	Data is not available	Oversupply	
3/18/2018 11:44:00	0:01	BS250	Data is not available	Data is not available	Oversupply	
3/18/2018 11:44	0:02	KWPPI		0.081	9.885	Oversupply
3/18/2018 12:39:00	0:24	BS250	Data is not available	Data is not available	Oversupply	
3/18/2018 12:40	0:24	KWPPI		2.993	14.315	Oversupply
3/18/2018 12:55	0:05	AWE		0.080	10.000	Oversupply
3/18/2018 13:05:00	0:17	BS250	Data is not available	Data is not available	Oversupply	
3/18/2018 13:06	0:15	KWPPI		1.396	13.206	Oversupply
3/18/2018 13:22	0:16	KWPPI		1.629	14.166	Oversupply
3/18/2018 13:36:00	0:20	BS250	Data is not available	Data is not available	Oversupply	
3/18/2018 13:39	0:18	KWPPI		1.847	15.333	Oversupply
3/18/2018 14:20:00	0:01	BS250	Data is not available	Data is not available	Oversupply	
3/18/2018 14:23:00	0:02	BS250	Data is not available	Data is not available	Oversupply	
3/18/2018 14:24	0:01	KWPPI		0.016	11.805	Oversupply
3/18/2018 15:13:00	0:09	BS250	Data is not available	Data is not available	Oversupply	
3/18/2018 15:13	0:10	KWPPI		0.596	16.671	Oversupply
3/18/2018 15:26:00	0:01	BS250	Data is not available	Data is not available	Oversupply	
3/18/2018 15:27	0:01	KWPPI		0.000	16.205	Oversupply
3/18/2018 15:45:00	0:53	BS250	Data is not available	Data is not available	Oversupply	
3/18/2018 15:46	1:01	KWPPI		4.623	17.714	Oversupply
3/18/2018 17:38:00	0:01	BS250	Data is not available	Data is not available	Oversupply	
3/18/2018 19:30	0:09	KWPPI		0.293	17.714	Oversupply
3/18/2018 19:40	0:06	KWPPI		0.127	17.703	Oversupply
3/18/2018 22:58	0:02	KWPPI		0.002	17.657	Oversupply
3/18/2018 23:04	0:51	KWPPI		3.573	17.672	Oversupply
3/18/2018 23:56	0:15	KWPPI		0.389	17.472	Oversupply
3/19/2018 0:15	0:05	KWPPI		0.131	17.001	Oversupply
3/19/2018 0:21	0:05	KWPPI		0.042	16.811	Oversupply
3/19/2018 0:59	0:01	KWPPI		0.006	14.240	Oversupply
3/19/2018 1:24	0:36	KWPPI		1.966	16.589	Oversupply
3/19/2018 2:01	0:02	KWPPI		0.027	14.333	Oversupply
3/19/2018 2:04	0:16	KWPPI		0.343	15.142	Oversupply
3/19/2018 3:40	0:35	KWPPI		1.556	16.617	Oversupply
3/19/2018 5:36	0:22	KWPPI		0.519	16.161	Oversupply
3/19/2018 5:59	0:03	KWPPI		0.016	15.850	Oversupply
3/19/2018 6:04	0:02	KWPPI		0.018	16.602	Oversupply
3/19/2018 7:57:00	0:03	BS250	Data is not available	Data is not available	System Constraint	
3/19/2018 7:58	0:03	KWPPI		0.013	17.645	System Constraint
3/19/2018 8:35	0:01	AWE		0.002	0.100	System Constraint
3/19/2018 9:00	0:01	AWE		0.002	0.100	System Constraint
3/19/2018 9:22:00	0:34	BS250	Data is not available	Data is not available	System Constraint	
3/19/2018 9:23	0:33	KWPPI		1.440	17.688	System Constraint
3/19/2018 9:31	0:01	AWE		0.003	0.200	System Constraint
3/19/2018 9:57:00	3:18	BS250	Data is not available	Data is not available	System Constraint	
3/19/2018 9:58	3:18	KWPPI		31.509	17.702	System Constraint
3/19/2018 11:09	0:01	AWE		0.002	3.000	System Constraint
3/19/2018 14:41:00	0:02	BS250	Data is not available	Data is not available	System Constraint	
3/19/2018 14:42	0:02	KWPPI		0.020	19.190	System Constraint
3/19/2018 15:05:00	0:02	BS250	Data is not available	Data is not available	System Constraint	
3/19/2018 15:06	0:01	KWPPI		0.013	16.992	System Constraint
3/19/2018 15:17:00	0:17	BS250	Data is not available	Data is not available	System Constraint	
3/19/2018 15:17	0:35	KWPPI		2.017	19.003	System Constraint
3/19/2018 15:35:00	0:16	BS250	Data is not available	Data is not available	System Constraint	
3/19/2018 16:57	0:01	KWPPI		0.000	19.199	System Constraint
3/19/2018 17:00	1:06	KWPPI		3.528	19.211	System Constraint
3/20/2018 1:49	0:56	KWPPI		12.553	18.081	System Constraint
3/20/2018 2:47	6:19	KWPPI		111.070	20.708	System Constraint
3/20/2018 7:51	0:19	AWE		0.458	21.000	System Constraint
3/20/2018 8:13	0:02	AWE		0.017	21.000	System Constraint
3/20/2018 8:19:00	0:01	BS250	Data is not available	Data is not available	System Constraint	
3/20/2018 8:21:00	0:01	5A	Data is not available	Data is not available	System Constraint	
3/20/2018 8:21:00	0:01	BS	Data is not available	Data is not available	System Constraint	
3/20/2018 8:21:00	0:01	BS250	Data is not available	Data is not available	System Constraint	
3/20/2018 8:23:00	0:09	5A	Data is not available	Data is not available	System Constraint	
3/20/2018 8:23:00	0:09	BS	Data is not available	Data is not available	System Constraint	
3/20/2018 8:23:00	0:09	BS250	Data is not available	Data is not available	System Constraint	
3/20/2018 8:23	0:10	KWPPI		1.900	14.535	System Constraint
3/20/2018 8:25	0:01	AWE		0.011	21.000	System Constraint
3/20/2018 8:28	0:26	AWE		1.476	21.000	System Constraint
3/20/2018 8:29	0:15	AWE		0.833	21.000	System Constraint
3/20/2018 8:34	0:32	KWPPI		8.009	17.132	System Constraint
3/20/2018 8:44:00	0:14	5A	Data is not available	Data is not available	System Constraint	
3/20/2018 8:44:00	0:14	BS	Data is not available	Data is not available	System Constraint	
3/20/2018 8:44:00	0:22	BS250	Data is not available	Data is not available	System Constraint	
3/20/2018 8:51	0:04	AWE		0.042	18.400	System Constraint



Maui Curtailment Report

March 2018

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
3/20/2018 8:56	0:02	AWE	0.035	20.600	System Constraint
3/20/2018 8:57	0:01	AWE	0.004	21.000	System Constraint
3/20/2018 9:08:00	1:45	BS250	Data is not available	Data is not available	System Constraint
3/20/2018 9:08	5:14	KWPPII	74.180	20.428	System Constraint
3/20/2018 9:09	1:16	KWPPII	12.108	16.913	System Constraint
3/20/2018 9:35	0:04	AWE	0.046	20.700	System Constraint
3/20/2018 9:42	0:03	AWE	0.022	20.500	System Constraint
3/20/2018 9:50	0:03	AWE	0.034	20.400	System Constraint
3/20/2018 9:52:00	0:04	5A	Data is not available	Data is not available	System Constraint
3/20/2018 9:52:00	0:04	BS	Data is not available	Data is not available	System Constraint
3/20/2018 9:55	0:06	AWE	0.147	20.400	System Constraint
3/20/2018 10:02	1:20	AWE	9.974	21.000	System Constraint
3/20/2018 10:05:00	0:01	5A	Data is not available	Data is not available	System Constraint
3/20/2018 10:05:00	0:01	BS	Data is not available	Data is not available	System Constraint
3/20/2018 10:09:00	0:05	5A	Data is not available	Data is not available	System Constraint
3/20/2018 10:09:00	0:05	BS	Data is not available	Data is not available	System Constraint
3/20/2018 10:17:00	0:03	5A	Data is not available	Data is not available	System Constraint
3/20/2018 10:17:00	0:03	BS	Data is not available	Data is not available	System Constraint
3/20/2018 10:24:00	0:23	5A	Data is not available	Data is not available	System Constraint
3/20/2018 10:24:00	0:23	BS	Data is not available	Data is not available	System Constraint
3/20/2018 10:26	0:27	KWPPII	5.908	16.727	System Constraint
3/20/2018 10:28	0:19	AWE	0.625	21.000	System Constraint
3/20/2018 10:54:00	0:40	BS250	Data is not available	Data is not available	System Constraint
3/20/2018 10:55	0:39	KWPPII	6.154	14.796	System Constraint
3/20/2018 10:57:00	0:01	5A	Data is not available	Data is not available	System Constraint
3/20/2018 10:57:00	0:01	BS	Data is not available	Data is not available	System Constraint
3/20/2018 11:19:00	0:01	5A	Data is not available	Data is not available	System Constraint
3/20/2018 11:19:00	0:01	BS	Data is not available	Data is not available	System Constraint
3/20/2018 11:21:00	0:07	5A	Data is not available	Data is not available	System Constraint
3/20/2018 11:21:00	0:07	BS	Data is not available	Data is not available	System Constraint
3/20/2018 11:22	0:06	AWE	0.104	21.000	System Constraint
3/20/2018 11:28	0:06	AWE	0.098	20.300	System Constraint
3/20/2018 11:35	0:05	AWE	0.048	20.900	System Constraint
3/20/2018 11:36:00	0:33	BS250	Data is not available	Data is not available	System Constraint
3/20/2018 11:36	1:13	KWPPII	16.833	17.760	System Constraint
3/20/2018 11:49:00	0:04	5A	Data is not available	Data is not available	System Constraint
3/20/2018 11:49:00	0:04	BS	Data is not available	Data is not available	System Constraint
3/20/2018 11:56:00	0:01	5A	Data is not available	Data is not available	System Constraint
3/20/2018 11:56:00	0:01	BS	Data is not available	Data is not available	System Constraint
3/20/2018 11:58:00	0:03	5A	Data is not available	Data is not available	System Constraint
3/20/2018 11:58:00	0:03	BS	Data is not available	Data is not available	System Constraint
3/20/2018 12:07:00	0:02	5A	Data is not available	Data is not available	System Constraint
3/20/2018 12:07:00	0:02	BS	Data is not available	Data is not available	System Constraint
3/20/2018 12:10:00	0:38	BS250	Data is not available	Data is not available	System Constraint
3/20/2018 12:10:00	0:05	5A	Data is not available	Data is not available	System Constraint
3/20/2018 12:10:00	0:05	BS	Data is not available	Data is not available	System Constraint
3/20/2018 12:16:00	0:01	5A	Data is not available	Data is not available	System Constraint
3/20/2018 12:16:00	0:01	BS	Data is not available	Data is not available	System Constraint
3/20/2018 12:18:00	0:02	5A	Data is not available	Data is not available	System Constraint
3/20/2018 12:18:00	0:02	BS	Data is not available	Data is not available	System Constraint
3/20/2018 12:24:00	0:11	5A	Data is not available	Data is not available	System Constraint
3/20/2018 12:24:00	0:11	BS	Data is not available	Data is not available	System Constraint
3/20/2018 12:31	0:04	AWE	0.109	21.000	System Constraint
3/20/2018 12:36:00	0:08	5A	Data is not available	Data is not available	System Constraint
3/20/2018 12:36:00	0:08	BS	Data is not available	Data is not available	System Constraint
3/20/2018 12:37	0:08	AWE	0.282	21.000	System Constraint
3/20/2018 12:51:00	1:14	BS250	Data is not available	Data is not available	System Constraint
3/20/2018 12:51	1:14	KWPPII	7.260	19.506	System Constraint
3/20/2018 13:17	0:04	AWE	0.091	20.100	System Constraint
3/20/2018 13:23	0:08	AWE	0.365	20.600	System Constraint
3/20/2018 13:35	0:01	AWE	0.004	20.300	System Constraint
3/20/2018 14:08:00	0:03	BS250	Data is not available	Data is not available	System Constraint
3/20/2018 14:09	0:03	KWPPII	0.054	18.251	System Constraint
3/20/2018 14:30	0:01	KWPPII	0.016	19.417	System Constraint
3/20/2018 22:13	0:01	KWPPII	0.010	16.815	System Constraint
3/20/2018 22:16	0:35	AWE	1.209	14.900	System Constraint
3/20/2018 22:16	0:48	KWPPII	6.171	19.068	System Constraint
3/21/2018 6:19:00	0:02	5A	Data is not available	Data is not available	System Constraint
3/21/2018 6:20:00	0:01	BS	Data is not available	Data is not available	System Constraint
3/21/2018 6:20:00	2:46	BS250	Data is not available	Data is not available	System Constraint
3/21/2018 6:22:00	0:02	5A	Data is not available	Data is not available	System Constraint
3/21/2018 6:22:00	0:02	BS	Data is not available	Data is not available	System Constraint
3/21/2018 6:25:00	0:01	5A	Data is not available	Data is not available	System Constraint
3/21/2018 6:25:00	0:01	BS	Data is not available	Data is not available	System Constraint
3/21/2018 6:27:00	0:03	5A	Data is not available	Data is not available	System Constraint
3/21/2018 6:27:00	0:03	BS	Data is not available	Data is not available	System Constraint
3/21/2018 6:31:00	0:02	5A	Data is not available	Data is not available	System Constraint
3/21/2018 6:31:00	0:02	BS	Data is not available	Data is not available	System Constraint
3/21/2018 6:36:00	0:07	5A	Data is not available	Data is not available	System Constraint
3/21/2018 6:36:00	0:07	BS	Data is not available	Data is not available	System Constraint
3/21/2018 6:44:00	0:03	5A	Data is not available	Data is not available	System Constraint
3/21/2018 6:44:00	0:03	BS	Data is not available	Data is not available	System Constraint



**Maui Curtailment Report**

March 2018

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
3/21/2018 6:48:00	0:02	5A	Data is not available	Data is not available	System Constraint
3/21/2018 6:48:00	0:02	BS	Data is not available	Data is not available	System Constraint
3/21/2018 6:51:00	0:13	5A	Data is not available	Data is not available	System Constraint
3/21/2018 6:51:00	0:13	BS	Data is not available	Data is not available	System Constraint
3/21/2018 7:05:00	0:01	5A	Data is not available	Data is not available	System Constraint
3/21/2018 7:05:00	0:01	BS	Data is not available	Data is not available	System Constraint
3/21/2018 7:08:00	0:01	5A	Data is not available	Data is not available	System Constraint
3/21/2018 7:08:00	0:01	BS	Data is not available	Data is not available	System Constraint
3/21/2018 7:14:00	0:01	5A	Data is not available	Data is not available	System Constraint
3/21/2018 7:14:00	0:01	BS	Data is not available	Data is not available	System Constraint
3/21/2018 7:16:00	0:02	5A	Data is not available	Data is not available	System Constraint
3/21/2018 7:16:00	0:02	BS	Data is not available	Data is not available	System Constraint
3/21/2018 7:19:00	0:03	5A	Data is not available	Data is not available	System Constraint
3/21/2018 7:19:00	0:03	BS	Data is not available	Data is not available	System Constraint
3/21/2018 7:23:00	0:03	5A	Data is not available	Data is not available	System Constraint
3/21/2018 7:23:00	0:03	BS	Data is not available	Data is not available	System Constraint
3/21/2018 7:27:00	0:09	5A	Data is not available	Data is not available	System Constraint
3/21/2018 7:27:00	0:09	BS	Data is not available	Data is not available	System Constraint
3/21/2018 7:37:00	0:07	5A	Data is not available	Data is not available	System Constraint
3/21/2018 7:37:00	0:07	BS	Data is not available	Data is not available	System Constraint
3/21/2018 7:47:00	0:01	5A	Data is not available	Data is not available	System Constraint
3/21/2018 7:47:00	0:01	BS	Data is not available	Data is not available	System Constraint
3/21/2018 7:49:00	0:02	5A	Data is not available	Data is not available	System Constraint
3/21/2018 7:49:00	0:02	BS	Data is not available	Data is not available	System Constraint
3/21/2018 9:08:00	0:55	BS250	Data is not available	Data is not available	System Constraint
3/21/2018 10:11:00	4:10	BS250	Data is not available	Data is not available	System Constraint
3/21/2018 10:30	0:01	KWP/II	0.008	3.532	System Constraint
3/21/2018 10:32	0:15	KWP/II	0.670	4.632	System Constraint
3/21/2018 10:41	0:06	AWE	0.166	20.100	System Constraint
3/21/2018 10:48	0:08	KWP/II	0.282	3.833	System Constraint
3/21/2018 10:49	0:04	AWE	0.022	20.700	System Constraint
3/21/2018 11:24	0:04	AWE	0.053	20.400	System Constraint
3/21/2018 11:24	0:02	KWP/II	0.016	0.689	System Constraint
3/21/2018 11:39	0:05	AWE	0.078	20.600	System Constraint
3/21/2018 11:42	0:01	KWP/II	0.000	0.125	System Constraint
3/21/2018 14:28:00	0:02	BS250	Data is not available	Data is not available	System Constraint
3/21/2018 17:10	0:01	KWP/II	0.001	0.043	System Constraint
3/22/2018 3:01	0:01	KWP/II	0.004	0.218	Oversupply
3/22/2018 10:28:00	0:01	BS250	Data is not available	Data is not available	Oversupply
3/22/2018 10:31:00	0:02	BS250	Data is not available	Data is not available	Oversupply
3/22/2018 10:47:00	0:08	BS250	Data is not available	Data is not available	Oversupply
3/22/2018 11:23:00	0:04	BS250	Data is not available	Data is not available	Oversupply
3/22/2018 11:38:00	0:05	BS250	Data is not available	Data is not available	Oversupply
3/22/2018 14:00:00	0:01	BS250	Data is not available	Data is not available	Oversupply
3/23/2018 10:31	0:01	AWE	0.003	0.200	Oversupply
3/24/2018 2:44	0:03	AWE	0.052	5.100	Oversupply
3/24/2018 2:48	0:02	AWE	0.015	3.700	Oversupply
3/24/2018 12:52	0:01	KWP/II	0.000	0.013	Oversupply
3/25/2018 11:35:00	0:02	5A	Data is not available	Data is not available	Oversupply
3/25/2018 11:35:00	0:02	BS	Data is not available	Data is not available	Oversupply
3/25/2018 11:35:00	0:02	BS250	Data is not available	Data is not available	Oversupply
3/25/2018 11:49	0:01	KWP/II	0.006	6.954	Oversupply
3/25/2018 11:53	0:05	KWP/II	0.119	7.941	Oversupply
3/25/2018 11:59	0:01	KWP/II	0.016	8.040	Oversupply
3/25/2018 12:21	0:01	KWP/II	0.004	11.246	Oversupply
3/26/2018 11:42:00	0:01	BS250	Data is not available	Data is not available	Oversupply
3/26/2018 11:48:00	0:01	BS250	Data is not available	Data is not available	Oversupply
3/26/2018 11:52:00	0:04	BS250	Data is not available	Data is not available	Oversupply
3/26/2018 11:58:00	0:01	BS250	Data is not available	Data is not available	Oversupply
3/26/2018 12:54	0:02	KWP/II	0.022	13.305	Oversupply
3/26/2018 12:59	0:01	KWP/II	0.001	13.627	Oversupply
3/27/2018 12:53:00	0:02	BS250	Data is not available	Data is not available	Oversupply
3/27/2018 12:58:00	0:02	BS250	Data is not available	Data is not available	Oversupply
3/28/2018 9:16	0:01	KWP/II	0.000	0.005	Oversupply
3/29/2018 11:00	0:01	KWP/II	0.023	4.032	Oversupply
3/30/2018 10:59:00	0:01	BS250	Data is not available	Data is not available	Oversupply
3/30/2018 11:03	0:04	AWE	0.106	14.100	Oversupply
3/31/2018 11:03:00	0:03	BS250	Data is not available	Data is not available	System Constraint
<b>Total Estimated Curtailed MWh</b>			<b>1,756.634</b>		

**Notes:**

- Curtailment for Kaheawa Wind Power ("KWP"), Makila Hydroelectric ("MH"), AAAAA Rent-A-Space Maui LTD ("5A"), Bioreal Solar, LLC ("BS"), Auwahi Wind Energy ("AWE"), Kaheawa Wind Power II ("KWP/II") 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 KWP/II. 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 5A, BS, BS 250, ESA, ESB, or MH.
- Curtailment signals sent to 5A, 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

March 2018

Start Date and Time	Duration	IPP Curtailed	Estimated MWh Curtailed	Peak MW Curtailed	Reasons for Curtailment
3/1/2018 8:25	0:01	LSR	Data is not available	Data is not available	Oversupply
3/1/2018 8:29	2:47	LSR	Data is not available	Data is not available	Oversupply
3/1/2018 11:23	0:04	LSR	Data is not available	Data is not available	Oversupply
3/1/2018 11:31	1:49	LSR	Data is not available	Data is not available	Oversupply
3/1/2018 13:22	1:07	LSR	Data is not available	Data is not available	Oversupply
3/1/2018 14:31	0:52	LSR	Data is not available	Data is not available	Oversupply
3/1/2018 15:24	0:10	LSR	Data is not available	Data is not available	Oversupply
3/1/2018 15:56	0:01	LSR	Data is not available	Data is not available	Oversupply
3/1/2018 15:59	0:13	LSR	Data is not available	Data is not available	Oversupply
3/2/2018 7:36	0:02	LSR	Data is not available	Data is not available	Oversupply
3/2/2018 7:43	0:48	LSR	Data is not available	Data is not available	Oversupply
3/2/2018 8:51	0:02	LSR	Data is not available	Data is not available	Oversupply
3/2/2018 9:11	0:04	LSR	Data is not available	Data is not available	Oversupply
3/2/2018 9:37	0:01	LSR	Data is not available	Data is not available	Oversupply
3/2/2018 9:54	0:02	LSR	Data is not available	Data is not available	Oversupply
3/2/2018 10:25	1:12	LSR	Data is not available	Data is not available	Oversupply
3/2/2018 11:39	0:20	LSR	Data is not available	Data is not available	Oversupply
3/2/2018 12:01	0:03	LSR	Data is not available	Data is not available	Oversupply
3/2/2018 12:20	0:49	LSR	Data is not available	Data is not available	Oversupply
3/2/2018 13:11	0:40	LSR	Data is not available	Data is not available	Oversupply
3/2/2018 13:52	0:29	LSR	Data is not available	Data is not available	Oversupply
3/2/2018 14:47	0:02	LSR	Data is not available	Data is not available	Oversupply
3/2/2018 14:52	0:01	LSR	Data is not available	Data is not available	Oversupply
3/3/2018 7:11	0:02	LSR	Data is not available	Data is not available	Oversupply
3/3/2018 7:37	3:00	LSR	Data is not available	Data is not available	Oversupply
3/3/2018 10:38	0:01	LSR	Data is not available	Data is not available	Oversupply
3/3/2018 10:40	0:13	LSR	Data is not available	Data is not available	Oversupply
3/3/2018 11:21	0:20	LSR	Data is not available	Data is not available	Oversupply
3/3/2018 11:42	0:28	LSR	Data is not available	Data is not available	Oversupply
3/3/2018 12:11	0:29	LSR	Data is not available	Data is not available	Oversupply
3/3/2018 12:41	0:15	LSR	Data is not available	Data is not available	Oversupply
3/3/2018 12:59	0:32	LSR	Data is not available	Data is not available	Oversupply
3/3/2018 13:32	0:12	LSR	Data is not available	Data is not available	Oversupply
3/4/2018 8:59	0:03	LSR	Data is not available	Data is not available	Oversupply
3/4/2018 9:03	0:05	LSR	Data is not available	Data is not available	Oversupply
3/4/2018 9:26	0:30	LSR	Data is not available	Data is not available	Oversupply
3/4/2018 9:58	0:25	LSR	Data is not available	Data is not available	Oversupply
3/4/2018 10:25	0:07	LSR	Data is not available	Data is not available	Oversupply
3/4/2018 10:36	0:07	LSR	Data is not available	Data is not available	Oversupply
3/4/2018 10:48	2:37	LSR	Data is not available	Data is not available	Oversupply
3/4/2018 13:31	0:08	LSR	Data is not available	Data is not available	Oversupply
3/4/2018 13:44	0:15	LSR	Data is not available	Data is not available	Oversupply
3/4/2018 14:00	0:01	LSR	Data is not available	Data is not available	Oversupply
3/4/2018 14:04	0:29	LSR	Data is not available	Data is not available	Oversupply
3/4/2018 14:34	0:01	LSR	Data is not available	Data is not available	Oversupply
3/4/2018 14:41	0:11	LSR	Data is not available	Data is not available	Oversupply
3/5/2018 7:42	0:34	LSR	Data is not available	Data is not available	Oversupply
3/5/2018 8:26	0:02	LSR	Data is not available	Data is not available	Oversupply
3/5/2018 8:29	0:01	LSR	Data is not available	Data is not available	Oversupply
3/5/2018 8:33	1:58	LSR	Data is not available	Data is not available	Oversupply
3/5/2018 10:32	0:57	LSR	Data is not available	Data is not available	Oversupply
3/5/2018 11:30	1:09	LSR	Data is not available	Data is not available	Oversupply
3/5/2018 12:41	0:02	LSR	Data is not available	Data is not available	Oversupply
3/5/2018 12:45	0:18	LSR	Data is not available	Data is not available	Oversupply
3/5/2018 13:11	0:01	LSR	Data is not available	Data is not available	Oversupply
3/5/2018 13:16	0:10	LSR	Data is not available	Data is not available	Oversupply
3/5/2018 13:44	0:06	LSR	Data is not available	Data is not available	Oversupply
3/5/2018 13:52	0:08	LSR	Data is not available	Data is not available	Oversupply
3/5/2018 14:02	0:07	LSR	Data is not available	Data is not available	Oversupply
3/5/2018 14:10	3:08	LSR	Data is not available	Data is not available	Oversupply
3/6/2018 7:42	0:01	LSR	Data is not available	Data is not available	Oversupply
3/6/2018 7:44	0:32	LSR	Data is not available	Data is not available	Oversupply
3/6/2018 8:17	3:03	LSR	Data is not available	Data is not available	Oversupply
3/6/2018 11:24	0:08	LSR	Data is not available	Data is not available	Oversupply
3/6/2018 11:36	3:09	LSR	Data is not available	Data is not available	Oversupply
3/6/2018 14:47	1:11	LSR	Data is not available	Data is not available	Oversupply
3/6/2018 16:00	0:08	LSR	Data is not available	Data is not available	Oversupply
3/6/2018 16:09	0:15	LSR	Data is not available	Data is not available	Oversupply
3/7/2018 7:39	1:03	LSR	Data is not available	Data is not available	Oversupply
3/7/2018 8:43	0:40	LSR	Data is not available	Data is not available	Oversupply
3/7/2018 9:24	0:43	LSR	Data is not available	Data is not available	Oversupply
3/7/2018 10:08	0:04	LSR	Data is not available	Data is not available	Oversupply
3/7/2018 10:14	0:07	LSR	Data is not available	Data is not available	Oversupply
3/7/2018 10:25	0:02	LSR	Data is not available	Data is not available	Oversupply
3/7/2018 10:39	0:02	LSR	Data is not available	Data is not available	Oversupply
3/8/2018 7:09	0:17	LSR	Data is not available	Data is not available	Oversupply
3/8/2018 7:32	0:02	LSR	Data is not available	Data is not available	Oversupply
3/8/2018 7:35	0:01	LSR	Data is not available	Data is not available	Oversupply
3/8/2018 7:37	0:09	LSR	Data is not available	Data is not available	Oversupply
3/8/2018 7:50	1:35	LSR	Data is not available	Data is not available	Oversupply
3/8/2018 9:28	0:25	LSR	Data is not available	Data is not available	Oversupply
3/8/2018 9:57	0:08	LSR	Data is not available	Data is not available	Oversupply
3/8/2018 10:06	0:02	LSR	Data is not available	Data is not available	Oversupply
3/8/2018 10:11	0:03	LSR	Data is not available	Data is not available	Oversupply
3/8/2018 10:17	0:04	LSR	Data is not available	Data is not available	Oversupply
3/8/2018 15:37	0:17	LSR	Data is not available	Data is not available	Oversupply
3/8/2018 16:09	0:05	LSR	Data is not available	Data is not available	Oversupply
3/8/2018 16:16	0:35	LSR	Data is not available	Data is not available	Oversupply
3/8/2018 17:12	0:46	LSR	Data is not available	Data is not available	Oversupply
3/9/2018 8:26	0:04	LSR	Data is not available	Data is not available	Oversupply
3/9/2018 9:02	2:04	LSR	Data is not available	Data is not available	Oversupply
3/9/2018 11:07	0:01	LSR	Data is not available	Data is not available	Oversupply
3/9/2018 11:41	4:02	LSR	Data is not available	Data is not available	Oversupply
3/9/2018 15:57	1:04	LSR	Data is not available	Data is not available	Oversupply
3/10/2018 7:48	0:01	LSR	Data is not available	Data is not available	Oversupply
3/10/2018 7:59	0:02	LSR	Data is not available	Data is not available	Oversupply
3/10/2018 8:02	8:55	LSR	Data is not available	Data is not available	Oversupply
3/10/2018 16:59	0:26	LSR	Data is not available	Data is not available	Oversupply



Lanai Curtailment Report

March 2018

Start Date and Time	Duration	IPP Curtailed	Estimated MWh Curtailed	Peak MW Curtailed	Reasons for Curtailment
3/11/2018 9:40	0:41	LSR	Data is not available	Data is not available	Oversupply
3/11/2018 13:27	1:23	LSR	Data is not available	Data is not available	Oversupply
3/11/2018 15:27	1:39	LSR	Data is not available	Data is not available	Oversupply
3/12/2018 8:21	1:04	LSR	Data is not available	Data is not available	Oversupply
3/12/2018 9:26	0:06	LSR	Data is not available	Data is not available	Oversupply
3/12/2018 9:53	0:02	LSR	Data is not available	Data is not available	Oversupply
3/12/2018 11:33	0:20	LSR	Data is not available	Data is not available	Oversupply
3/12/2018 12:05	0:08	LSR	Data is not available	Data is not available	Oversupply
3/12/2018 12:48	0:40	LSR	Data is not available	Data is not available	Oversupply
3/12/2018 15:52	0:08	LSR	Data is not available	Data is not available	Oversupply
3/13/2018 12:06	0:06	LSR	Data is not available	Data is not available	Oversupply
3/13/2018 12:44	0:10	LSR	Data is not available	Data is not available	Oversupply
3/13/2018 16:41	0:13	LSR	Data is not available	Data is not available	Oversupply
3/14/2018 9:14	0:01	LSR	Data is not available	Data is not available	Oversupply
3/14/2018 10:28	0:15	LSR	Data is not available	Data is not available	Oversupply
3/14/2018 15:07	0:06	LSR	Data is not available	Data is not available	Oversupply
3/14/2018 15:59	0:01	LSR	Data is not available	Data is not available	Oversupply
3/14/2018 16:09	0:11	LSR	Data is not available	Data is not available	Oversupply
3/14/2018 16:22	0:06	LSR	Data is not available	Data is not available	Oversupply
3/14/2018 16:43	0:28	LSR	Data is not available	Data is not available	Oversupply
3/14/2018 17:40	0:01	LSR	Data is not available	Data is not available	Oversupply
3/15/2018 6:54	0:42	LSR	Data is not available	Data is not available	Oversupply
3/15/2018 7:58	0:02	LSR	Data is not available	Data is not available	Oversupply
3/15/2018 8:01	1:56	LSR	Data is not available	Data is not available	Oversupply
3/15/2018 9:59	0:14	LSR	Data is not available	Data is not available	Oversupply
3/15/2018 10:16	0:08	LSR	Data is not available	Data is not available	Oversupply
3/15/2018 10:25	0:07	LSR	Data is not available	Data is not available	Oversupply
3/15/2018 10:33	0:07	LSR	Data is not available	Data is not available	Oversupply
3/15/2018 13:18	0:01	LSR	Data is not available	Data is not available	Oversupply
3/15/2018 14:57	0:11	LSR	Data is not available	Data is not available	Oversupply
3/15/2018 15:17	0:02	LSR	Data is not available	Data is not available	Oversupply
3/15/2018 15:38	0:02	LSR	Data is not available	Data is not available	Oversupply
3/15/2018 15:52	0:02	LSR	Data is not available	Data is not available	Oversupply
3/16/2018 7:39	0:01	LSR	Data is not available	Data is not available	Oversupply
3/16/2018 7:44	0:03	LSR	Data is not available	Data is not available	Oversupply
3/16/2018 7:51	0:03	LSR	Data is not available	Data is not available	Oversupply
3/16/2018 8:06	0:06	LSR	Data is not available	Data is not available	Oversupply
3/16/2018 8:26	0:24	LSR	Data is not available	Data is not available	Oversupply
3/16/2018 8:52	0:03	LSR	Data is not available	Data is not available	Oversupply
3/16/2018 9:04	0:01	LSR	Data is not available	Data is not available	Oversupply
3/16/2018 9:18	0:01	LSR	Data is not available	Data is not available	Oversupply
3/16/2018 10:00	0:08	LSR	Data is not available	Data is not available	Oversupply
3/16/2018 10:11	0:03	LSR	Data is not available	Data is not available	Oversupply
3/16/2018 10:16	0:02	LSR	Data is not available	Data is not available	Oversupply
3/16/2018 10:22	0:01	LSR	Data is not available	Data is not available	Oversupply
3/16/2018 10:33	0:01	LSR	Data is not available	Data is not available	Oversupply
3/16/2018 10:48	0:30	LSR	Data is not available	Data is not available	Oversupply
3/16/2018 11:20	0:01	LSR	Data is not available	Data is not available	Oversupply
3/16/2018 11:24	0:24	LSR	Data is not available	Data is not available	Oversupply
3/16/2018 11:51	0:06	LSR	Data is not available	Data is not available	Oversupply
3/16/2018 11:59	0:10	LSR	Data is not available	Data is not available	Oversupply
3/16/2018 12:11	0:05	LSR	Data is not available	Data is not available	Oversupply
3/16/2018 12:17	0:02	LSR	Data is not available	Data is not available	Oversupply
3/16/2018 12:21	0:07	LSR	Data is not available	Data is not available	Oversupply
3/16/2018 12:34	0:03	LSR	Data is not available	Data is not available	Oversupply
3/16/2018 12:38	0:05	LSR	Data is not available	Data is not available	Oversupply
3/16/2018 12:46	0:04	LSR	Data is not available	Data is not available	Oversupply
3/16/2018 12:53	0:39	LSR	Data is not available	Data is not available	Oversupply
3/16/2018 13:33	1:13	LSR	Data is not available	Data is not available	Oversupply
3/16/2018 14:47	0:03	LSR	Data is not available	Data is not available	Oversupply
3/16/2018 14:52	0:11	LSR	Data is not available	Data is not available	Oversupply
3/16/2018 15:04	0:01	LSR	Data is not available	Data is not available	Oversupply
3/16/2018 15:06	0:24	LSR	Data is not available	Data is not available	Oversupply
3/16/2018 15:31	0:10	LSR	Data is not available	Data is not available	Oversupply
3/16/2018 15:43	0:08	LSR	Data is not available	Data is not available	Oversupply
3/16/2018 15:52	0:26	LSR	Data is not available	Data is not available	Oversupply
3/16/2018 16:20	0:35	LSR	Data is not available	Data is not available	Oversupply
3/16/2018 16:57	0:36	LSR	Data is not available	Data is not available	Oversupply
3/17/2018 7:47	1:26	LSR	Data is not available	Data is not available	Oversupply
3/17/2018 9:18	0:02	LSR	Data is not available	Data is not available	Oversupply
3/17/2018 9:49	0:01	LSR	Data is not available	Data is not available	Oversupply
3/17/2018 10:33	0:26	LSR	Data is not available	Data is not available	Oversupply
3/17/2018 11:01	0:21	LSR	Data is not available	Data is not available	Oversupply
3/17/2018 11:26	0:06	LSR	Data is not available	Data is not available	Oversupply
3/17/2018 11:34	0:27	LSR	Data is not available	Data is not available	Oversupply
3/17/2018 12:05	0:12	LSR	Data is not available	Data is not available	Oversupply
3/17/2018 12:20	0:02	LSR	Data is not available	Data is not available	Oversupply
3/17/2018 12:37	0:02	LSR	Data is not available	Data is not available	Oversupply
3/17/2018 12:41	0:46	LSR	Data is not available	Data is not available	Oversupply
3/17/2018 13:28	0:10	LSR	Data is not available	Data is not available	Oversupply
3/17/2018 13:39	1:17	LSR	Data is not available	Data is not available	Oversupply
3/17/2018 15:01	0:15	LSR	Data is not available	Data is not available	Oversupply
3/17/2018 15:19	0:13	LSR	Data is not available	Data is not available	Oversupply
3/17/2018 15:35	0:02	LSR	Data is not available	Data is not available	Oversupply
3/17/2018 16:40	0:01	LSR	Data is not available	Data is not available	Oversupply
3/17/2018 16:52	0:02	LSR	Data is not available	Data is not available	Oversupply
3/17/2018 17:04	0:05	LSR	Data is not available	Data is not available	Oversupply
3/18/2018 7:26	1:38	LSR	Data is not available	Data is not available	Oversupply
3/18/2018 9:06	0:01	LSR	Data is not available	Data is not available	Oversupply
3/18/2018 9:26	0:04	LSR	Data is not available	Data is not available	Oversupply
3/18/2018 9:31	0:07	LSR	Data is not available	Data is not available	Oversupply
3/18/2018 16:07	0:01	LSR	Data is not available	Data is not available	Oversupply



Lanai Curtailment Report

March 2018

Start Date and Time	Duration	IPP Curtailed	Estimated MWh Curtailed	Peak MW Curtailed	Reasons for Curtailment
3/18/2018 16:11	0:05	LSR	Data is not available	Data is not available	Oversupply
3/18/2018 16:17	0:51	LSR	Data is not available	Data is not available	Oversupply
3/18/2018 17:12	0:02	LSR	Data is not available	Data is not available	Oversupply
3/18/2018 17:15	0:04	LSR	Data is not available	Data is not available	Oversupply
3/18/2018 17:22	0:11	LSR	Data is not available	Data is not available	Oversupply
3/19/2018 7:58	0:01	LSR	Data is not available	Data is not available	Oversupply
3/19/2018 8:42	1:59	LSR	Data is not available	Data is not available	Oversupply
3/19/2018 11:32	0:02	LSR	Data is not available	Data is not available	Oversupply
3/19/2018 16:28	0:41	LSR	Data is not available	Data is not available	Oversupply
3/20/2018 16:16	0:01	LSR	Data is not available	Data is not available	Oversupply
3/21/2018 12:20	1:46	LSR	Data is not available	Data is not available	Oversupply
3/21/2018 15:58	0:17	LSR	Data is not available	Data is not available	Oversupply
3/22/2018 9:34	0:04	LSR	Data is not available	Data is not available	Oversupply
3/22/2018 9:44	0:08	LSR	Data is not available	Data is not available	Oversupply
3/22/2018 10:49	0:03	LSR	Data is not available	Data is not available	Oversupply
3/22/2018 11:00	0:08	LSR	Data is not available	Data is not available	Oversupply
3/22/2018 11:12	0:45	LSR	Data is not available	Data is not available	Oversupply
3/22/2018 11:58	0:30	LSR	Data is not available	Data is not available	Oversupply
3/22/2018 12:59	0:10	LSR	Data is not available	Data is not available	Oversupply
3/22/2018 13:15	3:15	LSR	Data is not available	Data is not available	Oversupply
3/23/2018 10:27	0:19	LSR	Data is not available	Data is not available	Oversupply
3/23/2018 10:50	1:05	LSR	Data is not available	Data is not available	Oversupply
3/23/2018 11:58	0:01	LSR	Data is not available	Data is not available	Oversupply
3/23/2018 12:05	0:14	LSR	Data is not available	Data is not available	Oversupply
3/23/2018 12:31	0:17	LSR	Data is not available	Data is not available	Oversupply
3/23/2018 13:14	0:05	LSR	Data is not available	Data is not available	Oversupply
3/23/2018 13:40	0:03	LSR	Data is not available	Data is not available	Oversupply
3/23/2018 13:49	0:01	LSR	Data is not available	Data is not available	Oversupply
3/25/2018 8:26	0:06	LSR	Data is not available	Data is not available	Oversupply
3/25/2018 8:33	0:01	LSR	Data is not available	Data is not available	Oversupply
3/25/2018 8:38	0:01	LSR	Data is not available	Data is not available	Oversupply
3/25/2018 8:42	0:03	LSR	Data is not available	Data is not available	Oversupply
3/25/2018 8:46	0:32	LSR	Data is not available	Data is not available	Oversupply
3/25/2018 9:19	6:31	LSR	Data is not available	Data is not available	Oversupply
3/25/2018 15:53	0:43	LSR	Data is not available	Data is not available	Oversupply
3/25/2018 16:38	0:04	LSR	Data is not available	Data is not available	Oversupply
3/25/2018 16:46	0:04	LSR	Data is not available	Data is not available	Oversupply
3/25/2018 16:52	0:02	LSR	Data is not available	Data is not available	Oversupply
3/25/2018 16:57	0:06	LSR	Data is not available	Data is not available	Oversupply
3/25/2018 17:05	0:07	LSR	Data is not available	Data is not available	Oversupply
3/25/2018 17:14	0:29	LSR	Data is not available	Data is not available	Oversupply
3/26/2018 7:34	0:05	LSR	Data is not available	Data is not available	Oversupply
3/26/2018 7:40	0:03	LSR	Data is not available	Data is not available	Oversupply
3/26/2018 7:49	0:20	LSR	Data is not available	Data is not available	Oversupply
3/26/2018 8:15	0:51	LSR	Data is not available	Data is not available	Oversupply
3/26/2018 9:07	0:54	LSR	Data is not available	Data is not available	Oversupply
3/26/2018 10:03	0:03	LSR	Data is not available	Data is not available	Oversupply
3/26/2018 10:07	0:03	LSR	Data is not available	Data is not available	Oversupply
3/26/2018 10:11	0:04	LSR	Data is not available	Data is not available	Oversupply
3/26/2018 10:18	0:01	LSR	Data is not available	Data is not available	Oversupply
3/26/2018 10:25	0:01	LSR	Data is not available	Data is not available	Oversupply
3/26/2018 10:28	0:47	LSR	Data is not available	Data is not available	Oversupply
3/26/2018 11:16	0:07	LSR	Data is not available	Data is not available	Oversupply
3/26/2018 11:24	2:15	LSR	Data is not available	Data is not available	Oversupply
3/26/2018 13:40	0:23	LSR	Data is not available	Data is not available	Oversupply
3/26/2018 14:06	0:14	LSR	Data is not available	Data is not available	Oversupply
3/26/2018 14:21	0:01	LSR	Data is not available	Data is not available	Oversupply
3/27/2018 8:05	0:02	LSR	Data is not available	Data is not available	Oversupply
3/27/2018 8:08	0:06	LSR	Data is not available	Data is not available	Oversupply
3/27/2018 8:15	1:17	LSR	Data is not available	Data is not available	Oversupply
3/27/2018 9:33	2:30	LSR	Data is not available	Data is not available	Oversupply
3/27/2018 13:51	0:03	LSR	Data is not available	Data is not available	Oversupply
3/27/2018 13:56	0:10	LSR	Data is not available	Data is not available	Oversupply
3/27/2018 14:09	2:48	LSR	Data is not available	Data is not available	Oversupply
3/27/2018 16:59	0:34	LSR	Data is not available	Data is not available	Oversupply
3/28/2018 7:11	2:01	LSR	Data is not available	Data is not available	Oversupply
3/28/2018 10:02	1:29	LSR	Data is not available	Data is not available	Oversupply
3/28/2018 11:38	0:39	LSR	Data is not available	Data is not available	Oversupply
3/28/2018 12:18	2:19	LSR	Data is not available	Data is not available	Oversupply
3/28/2018 14:38	0:47	LSR	Data is not available	Data is not available	Oversupply
3/28/2018 15:28	0:01	LSR	Data is not available	Data is not available	Oversupply
3/28/2018 15:34	1:09	LSR	Data is not available	Data is not available	Oversupply
3/28/2018 16:44	0:33	LSR	Data is not available	Data is not available	Oversupply
3/29/2018 7:11	0:05	LSR	Data is not available	Data is not available	Oversupply
3/29/2018 7:18	0:08	LSR	Data is not available	Data is not available	Oversupply
3/29/2018 7:28	1:02	LSR	Data is not available	Data is not available	Oversupply
3/29/2018 8:31	2:48	LSR	Data is not available	Data is not available	Oversupply
3/29/2018 11:39	2:08	LSR	Data is not available	Data is not available	Oversupply
3/29/2018 13:50	0:51	LSR	Data is not available	Data is not available	Oversupply
3/29/2018 14:43	0:13	LSR	Data is not available	Data is not available	Oversupply
3/29/2018 15:00	0:06	LSR	Data is not available	Data is not available	Oversupply
3/29/2018 15:07	0:12	LSR	Data is not available	Data is not available	Oversupply
3/29/2018 15:26	0:10	LSR	Data is not available	Data is not available	Oversupply
3/29/2018 15:40	0:06	LSR	Data is not available	Data is not available	Oversupply
3/29/2018 15:48	0:02	LSR	Data is not available	Data is not available	Oversupply
3/29/2018 16:02	0:01	LSR	Data is not available	Data is not available	Oversupply
3/29/2018 16:16	0:01	LSR	Data is not available	Data is not available	Oversupply
3/29/2018 16:19	0:06	LSR	Data is not available	Data is not available	Oversupply
3/29/2018 16:40	0:03	LSR	Data is not available	Data is not available	Oversupply
3/29/2018 16:53	0:03	LSR	Data is not available	Data is not available	Oversupply



Lanai Curtailment Report

March 2018

Start Date and Time	Duration	IPP Curtailed	Estimated MWh Curtailed	Peak MW Curtailed	Reasons for Curtailment
3/29/2018 17:35	0:02	LSR	Data is not available	Data is not available	Oversupply
3/29/2018 17:49	0:03	LSR	Data is not available	Data is not available	Oversupply
3/30/2018 6:59	3:20	LSR	Data is not available	Data is not available	Oversupply
3/30/2018 10:20	4:46	LSR	Data is not available	Data is not available	Oversupply
3/30/2018 15:07	1:19	LSR	Data is not available	Data is not available	Oversupply
3/30/2018 16:42	0:52	LSR	Data is not available	Data is not available	Oversupply
3/31/2018 6:53	1:49	LSR	Data is not available	Data is not available	Oversupply
3/31/2018 9:03	0:09	LSR	Data is not available	Data is not available	Oversupply
3/31/2018 9:37	0:23	LSR	Data is not available	Data is not available	Oversupply
3/31/2018 10:03	0:07	LSR	Data is not available	Data is not available	Oversupply
3/31/2018 10:39	0:12	LSR	Data is not available	Data is not available	Oversupply
3/31/2018 11:13	0:03	LSR	Data is not available	Data is not available	Oversupply
3/31/2018 11:36	0:25	LSR	Data is not available	Data is not available	Oversupply
3/31/2018 12:41	0:11	LSR	Data is not available	Data is not available	Oversupply
3/31/2018 13:14	0:05	LSR	Data is not available	Data is not available	Oversupply
3/31/2018 16:46	0:21	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 March 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
03/01/18 02:23	19.9 MW	03/01/18 04:42	19.7 MW	Pakini Nui Windfarm	Oversupply
03/01/18 07:45	18.7 MW	03/01/18 08:16	18.5 MW	Pakini Nui Windfarm	System constraint
03/01/18 13:21	18.7 MW	03/01/18 14:26	18.7 MW	Pakini Nui Windfarm	System constraint
03/02/18 00:57	19.9 MW	03/02/18 05:06	19.5 MW	Pakini Nui Windfarm	Oversupply
03/03/18 01:01	19.8 MW	03/03/18 05:21	19.8 MW	Pakini Nui Windfarm	Oversupply
03/03/18 11:06	1.1 MW	03/03/18 11:46	0.0 MW	TGUH11	Oversupply
03/03/18 11:14	19.2 MW	03/03/18 11:43	18.6 MW	Pakini Nui Windfarm	
03/04/18 02:41	19.8 MW	03/04/18 05:09	17.5 MW	Pakini Nui Windfarm	Oversupply
03/05/18 00:55	19.4 MW	03/05/18 04:41	19.2 MW	Pakini Nui Windfarm	Oversupply
03/06/18 01:58	14.1 MW	03/06/18 04:47	11.9 MW	Pakini Nui Windfarm	Oversupply
03/07/18 01:21	19.8 MW	03/07/18 04:32	19.2 MW	Pakini Nui Windfarm	Oversupply
03/08/18 09:08	6.4 MW	03/08/18 09:14	2.9 MW	Wailuku River Hydro	System constraint <sup>2</sup>
03/13/18 01:53	19.8 MW	03/13/18 02:41	8.4 MW	Pakini Nui Windfarm	Oversupply
03/14/18 02:15	18.7 MW	03/14/18 04:14	17.1 MW	Pakini Nui Windfarm	Oversupply
03/21/18 02:55	19.9 MW	03/21/18 04:41	18.9 MW	Pakini Nui Windfarm	Oversupply
03/22/18 01:12	19.9 MW	03/22/18 04:32	19.9 MW	Pakini Nui Windfarm	Oversupply

<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.

<sup>2</sup> On March 8, 2018 Wailuku River hydro was inadvertently curtailed during an EMS model update. The curtailment controls were reviewed and corrected so that future model updates should not cause a curtailment issue.

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