



April 26, 2016

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
2016 APR 26 P 3:35
PUBLIC UTILITIES
COMMISSION

Dear Commissioners:

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

Pursuant to Ordering Paragraph 3 of the Commission's Order No. 30371, filed on May 4, 2012, in the above subject proceeding, enclosed as Exhibit A is the Hawaiian Electric Companies'¹ monthly report for March 2016 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 Company is 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@heco.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

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

SERVICE LIST
(Docket No. 2011-0206)

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SERVICE LIST
(Docket No. 2011-0206)

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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, 2016):

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, 2016):

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

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

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

Hawaiian Electric and Maui Electric's under frequency load shed activations are provided in Attachment 4. 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 is provided in Attachment 5. Hawai'i Electric Light currently does not have 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, 2016):

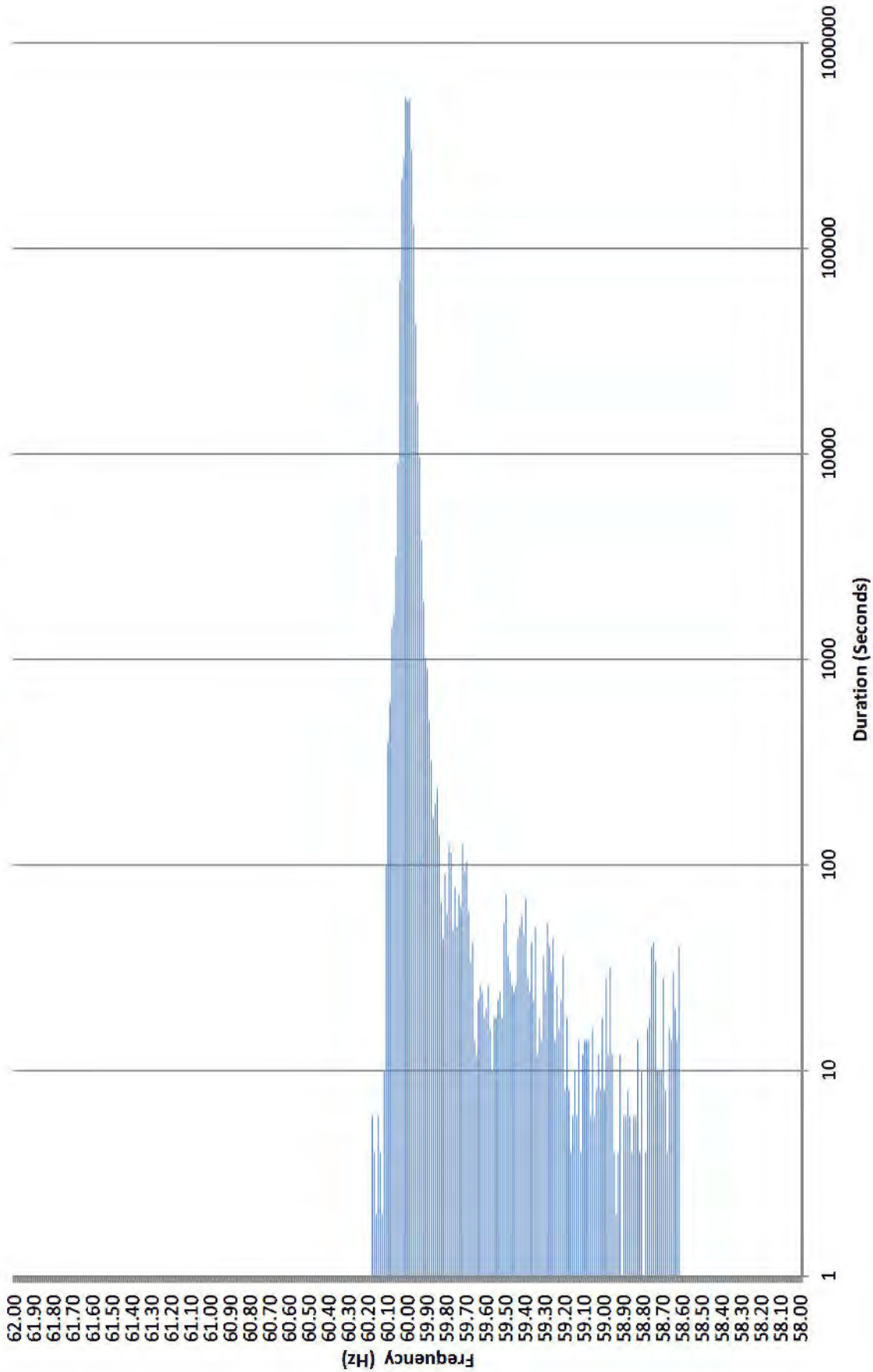
3a) Tabulation of each curtailment event for each resource including the starting date and time, duration, megawatt hours curtailed, peak MW curtailed, and reason for curtailment:

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

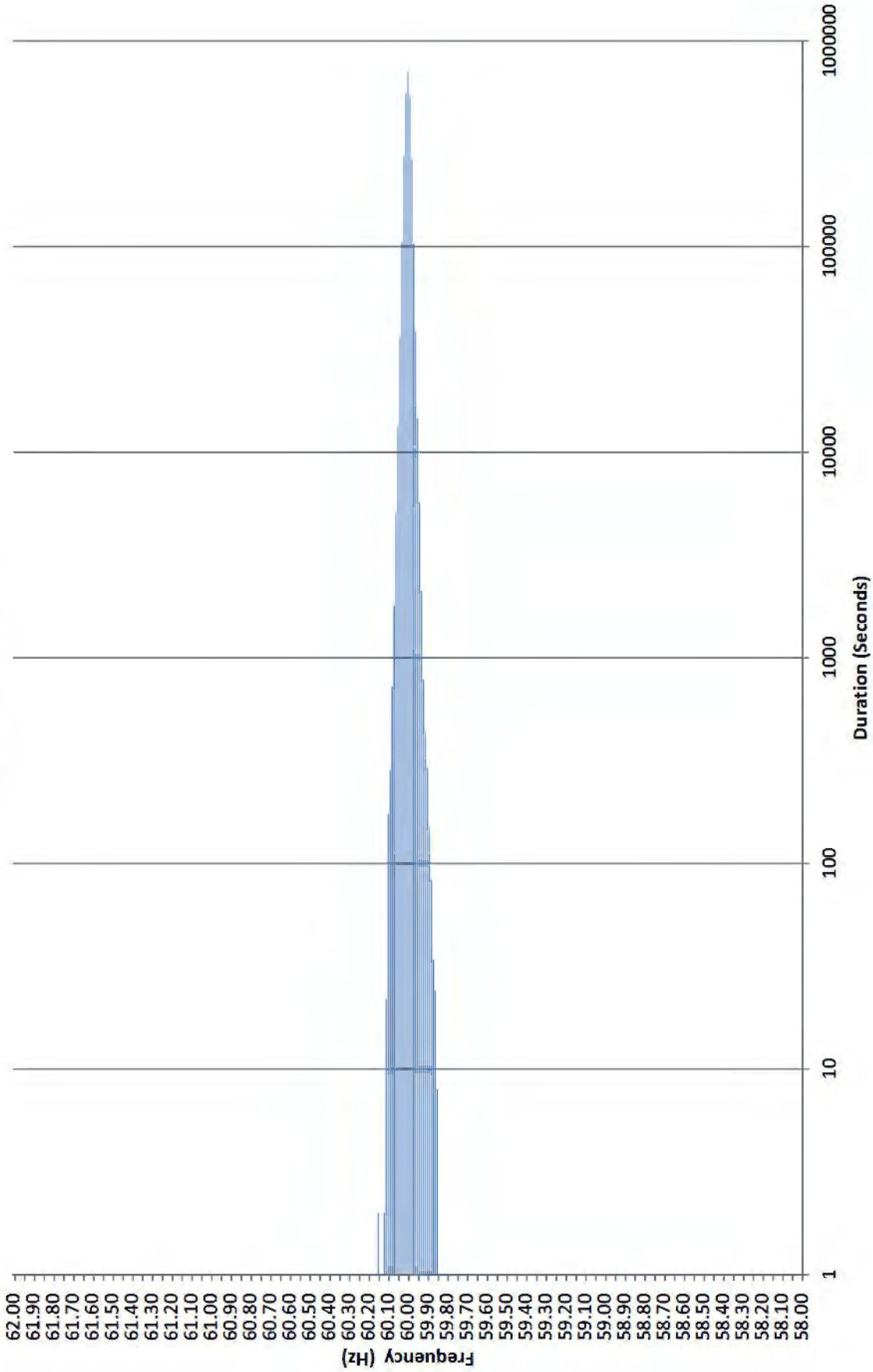
3b) Total MWh of non-dispatchable renewable resources curtailed for the month:

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.

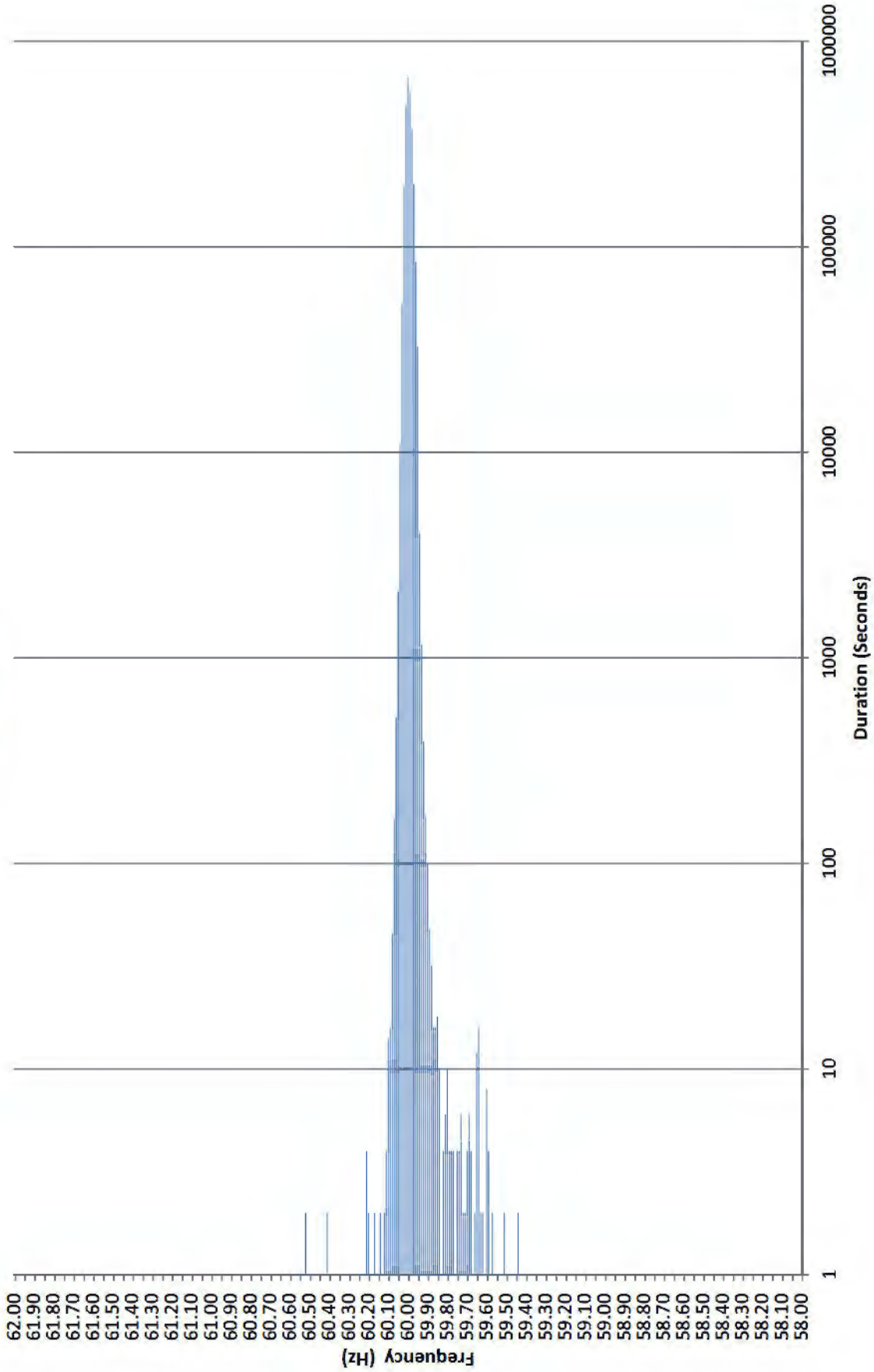
**Frequency Distribution Plot - Hawaiian Electric
March 2016**



**Maui Electric Frequency Distribution Plot - Maui
March 2016**



**Frequency Distribution Plot - Hawai'i Electric Light
March 2016**



Hawaiian Electric Frequency Excursion Statistics March 2016		
Data Rounded to the nearest	<59.95 Hz	>60.05 Hz
Number of Excursions	1508	676
Maximum Duration (sec)	2648	1012
Maximum Deviation (Hz)	58.616	60.18
Total Duration of Excursions (sec)	28328	9968

Maui Electric Frequency Excursion Statistics March 2016		
	<59.95 Hz	>60.05 Hz
Number of Excursions	2788	2064
Maximum Duration (sec)	282	260
Maximum Deviation (Hz)	59.8469	60.149
Total Duration of Excursions (sec)	15410	12932

Hawai'i Electric Light Frequency Excursion Statistics March 2016		
	<59.95 Hz	>60.05 Hz
Number of Excursions	4148	302
Maximum Duration (sec)	158	82
Maximum Deviation (Hz)	59.442	60.521
Total Duration of Excursions (sec)	20828	1464

Hawaiian Electric Curtailment Report March 2016

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
03/03/16 05:34	0.0	0.00	03/03/16 07:49	0	*	KWF	System constraints
03/03/16 05:35	0.0	0.00	03/03/16 07:50	0	*	Makai	System constraints
03/03/16 15:46	0.0	2.10	03/03/16 16:16	0	*	KWF	System constraints
03/03/16 15:46	0.0	2.70	03/03/16 16:16	0	*	Makai	System constraints
03/09/16 07:46	0.0	8.00	03/03/16 08:42	0	*	Makai	System constraints
03/09/16 07:46	0.0	22.00	03/09/16 08:43	0	*	Mauka	System constraints
03/09/16 07:47	0.0	16.00	03/09/16 08:42	0	*	KWF	System constraints
03/09/16 16:26	0.0	13.30	03/09/16 17:42	0	*	Makai	System constraints
03/09/16 16:26	0.0	32.30	03/09/16 17:51	0	*	Mauka	System constraints
03/09/16 16:26	0.0	21.00	03/09/16 18:05	0	*	KWF	System constraints
03/10/16 06:33	0.0	5.00	03/10/16 07:29	0	*	Makai	System constraints
03/10/16 06:33	0.0	22.00	03/10/16 07:29	0	*	Mauka	System constraints
03/10/16 06:49	0.0	24.00	03/10/16 07:29	0	*	KWF	System constraints
03/10/16 18:01	0.0	11.00	03/10/16 19:25	0	*	Makai	System constraints
03/10/16 18:12	0.0	30.00	03/10/16 19:15	0	*	KWF	System constraints
03/10/16 18:32	0.0	27.00	03/10/16 19:21	0	*	Mauka	System constraints
03/11/16 12:52	0.0	24.30	03/11/16 13:07	0	*	KWF	Facility requested
03/11/16 14:43	0.0	17.60	03/11/16 15:02	0	*	KWF	Facility requested
03/16/16 06:48	0.0	3.70	03/16/16 08:21	0	*	Makai	System constraints
03/16/16 06:49	0.0	12.10	03/16/16 08:21	0	*	Mauka	System constraints
03/16/16 06:49	0.0	12.90	03/16/16 08:21	0	*	KWF	System constraints
03/16/16 16:59	0.0	8.60	03/16/16 18:02	0	*	Makai	System constraints
03/16/16 17:00	0.0	5.50	03/16/16 18:02	0	*	KWF	System constraints
03/16/16 17:05	0.0	15.70	03/16/16 18:02	0	*	Mauka	System constraints
03/17/16 08:21	0.0	3.30	03/17/16 09:11	0	*	KWF	System constraints
03/17/16 08:22	0.0	8.60	03/17/16 09:12	0	*	Mauka	System constraints
03/17/16 08:22	0.0	5.70	03/17/16 09:12	0	*	Makai	System constraints
03/17/16 18:10	0.0	18.00	03/17/16 19:23	0	*	KWF	System constraints
03/17/16 18:20	0.0	14.00	03/17/16 19:34	0	*	Mauka	System constraints
03/17/16 18:28	0.0	8.00	03/17/16 19:45	0	*	Makai	System constraints
03/22/16 07:46	0.0	0.00	03/22/16 08:19	0	*	Makai	System constraints
03/22/16 07:47	0.0	0.00	03/22/16 08:19	0	*	Mauka	System constraints
03/22/16 07:47	0.0	0.00	03/22/16 08:19	0	*	KWF	System constraints
03/22/16 17:38	0.0	0.00	03/22/16 18:45	0	*	Makai	System constraints
03/22/16 17:38	0.0	0.00	03/22/16 18:45	0	*	Mauka	System constraints
03/22/16 17:39	0.0	0.00	03/22/16 18:45	0	*	KWF	System constraints
03/23/16 07:01	0.0	0.00	03/23/16 07:25	0	*	KWF	System constraints
03/23/16 07:03	0.0	0.00	03/23/16 07:25	0	*	Makai	System constraints
03/23/16 15:38	0.0	0.00	03/23/16 16:27	0	*	Makai	System constraints
03/23/16 15:38	0.0	0.00	03/23/16 16:28	0	*	KWF	System constraints
03/23/16 17:18	0.0	14.00	03/23/16 18:32	0	*	Makai	System constraints
03/28/16 17:19	0.0	10.00	03/28/16 18:32	0	*	KWF	System constraints
03/31/16 08:05	0.0	0.00	03/31/16 08:52	0	*	KWF	System constraints
03/31/16 08:06	0.0	0.00	04/01/16 07:48	0	*	Mauka	System constraints
03/31/16 08:06	0.0	0.00	03/31/16 08:52	0	*	Makai	System constraints

KLS2 = Kalaehoa Solar 2 PV Farm
KREP = Kalaehoa Renewable Energy Park
KWF = Kahuku Wind Farm
Makai = Kawaihōloa Makai Wind Farm
Mauka = Kawaihōloa Mauka Wind Farm

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

* Data has not been provided by IPP.



Maui Curtailment Report March 2016

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
3/1/2016 0:00	0:02	KWP/II	0.040	7.554	Oversupply
3/1/2016 0:17	0:03	KWP/II	0.061	8.683	Oversupply
3/1/2016 0:34	0:01	KWP/II	0.010	6.612	Oversupply
3/1/2016 0:36	0:01	KWP/II	0.012	6.787	Oversupply
3/1/2016 0:39	0:09	KWP/II	0.407	8.793	Oversupply
3/1/2016 0:51	0:01	KWP/II	0.015	7.979	Oversupply
3/1/2016 0:53	0:05	KWP/II	0.108	7.564	Oversupply
3/1/2016 1:01	0:01	KWP/II	0.012	7.336	Oversupply
3/1/2016 1:06	0:01	KWP/II	0.006	6.616	Oversupply
3/1/2016 1:12	0:32	KWP/II	1.757	9.437	Oversupply
3/1/2016 1:17	0:01	AWE	0.000	8.853	Oversupply
3/1/2016 1:52	0:14	KWP/II	0.930	11.138	Oversupply
3/1/2016 2:20	0:02	KWP/II	0.033	6.387	Oversupply
3/1/2016 2:28	1:27	KWP/II	7.311	11.753	Oversupply
3/1/2016 4:15	0:10	KWP/II	0.410	9.717	Oversupply
3/1/2016 4:29	0:18	KWP/II	1.083	12.423	Oversupply
3/1/2016 4:40	0:08	KWP/II	0.451	10.894	Oversupply
3/1/2016 4:59	0:17	KWP/II	2.953	18.259	Oversupply
3/1/2016 5:18	0:08	KWP/II	0.539	16.054	Oversupply
3/1/2016 5:32	0:03	KWP/II	0.062	17.131	Oversupply
3/1/2016 5:36	0:01	KWP/II	0.003	17.257	Oversupply
3/1/2016 5:39	0:05	KWP/II	0.062	17.154	Oversupply
3/1/2016 5:52	0:06	KWP/II	0.161	15.326	Oversupply
3/1/2016 8:21	0:05	BS 250	Data is not available	Data is not available	Oversupply
3/1/2016 8:22	0:03	KWP/II	0.070	2.627	Oversupply
3/1/2016 8:24	0:01	AWE	0.041	14.593	Oversupply
3/1/2016 8:31	0:08	BS 250	Data is not available	Data is not available	Oversupply
3/1/2016 8:32	0:06	KWP/II	0.119	5.057	Oversupply
3/1/2016 8:48	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/1/2016 8:49	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/1/2016 8:57	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/1/2016 9:07	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/1/2016 9:10	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/1/2016 9:52	0:02	BS 250	Data is not available	Data is not available	Oversupply
3/1/2016 9:55	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/1/2016 10:31	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/1/2016 11:53	0:03	BS 250	Data is not available	Data is not available	Oversupply
3/1/2016 11:54	0:02	KWP/II	0.012	6.295	Oversupply
3/2/2016 12:05	0:07	BS 250	Data is not available	Data is not available	System constraint
3/2/2016 12:05	0:03	KWP/II	0.082	14.521	System constraint
3/2/2016 12:14	0:27	BS 250	Data is not available	Data is not available	System constraint
3/2/2016 12:15	0:15	KWP/II	0.316	13.584	System constraint
3/2/2016 12:34	0:05	KWP/II	0.100	13.584	System constraint
3/2/2016 12:42	0:08	BS 250	Data is not available	Data is not available	System constraint
3/2/2016 12:42	0:04	KWP/II	0.081	13.584	System constraint
3/2/2016 12:47	0:03	KWP/II	0.057	13.584	System constraint
3/2/2016 12:52	1:23	BS 250	Data is not available	Data is not available	System constraint
3/2/2016 12:52	0:01	KWP/II	0.003	13.584	System constraint
3/2/2016 12:56	0:04	KWP/II	0.075	13.584	System constraint
3/2/2016 13:01	1:12	KWP/II	4.741	13.584	System constraint
3/2/2016 14:20	0:05	BS 250	Data is not available	Data is not available	System constraint
3/2/2016 14:21	0:04	KWP/II	0.097	13.584	System constraint
3/2/2016 23:12	0:05	KWP/II	0.085	13.584	Oversupply
3/2/2016 23:18	0:01	KWP/II	0.004	13.584	Oversupply
3/3/2016 1:16	0:02	KWP/II	0.010	13.584	Oversupply
3/3/2016 1:19	0:02	KWP/II	0.012	13.584	Oversupply
3/4/2016 15:05	0:01	AWE	0.000	0.003	Oversupply
3/5/2016 1:29	0:01	AWE	0.000	0.007	Oversupply
3/6/2016 0:40	0:07	KWP/II	0.112	5.108	Oversupply
3/7/2016 0:27	0:01	KWP/II	0.000	0.006	Oversupply
3/7/2016 3:21	0:02	AWE	0.027	14.377	Oversupply
3/7/2016 7:02	0:16	AWE	0.471	8.947	Facility requested
3/8/2016 10:23	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/8/2016 10:27	0:04	BS 250	Data is not available	Data is not available	Oversupply
3/8/2016 10:44	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/8/2016 10:49	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/8/2016 11:15	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/8/2016 11:26	0:02	BS 250	Data is not available	Data is not available	Oversupply
3/8/2016 11:30	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/8/2016 11:32	0:28	BS 250	Data is not available	Data is not available	Oversupply
3/8/2016 11:34	0:08	KWP/II	0.518	14.872	Oversupply
3/8/2016 11:43	0:04	KWP/II	0.227	11.944	Oversupply
3/8/2016 11:49	0:11	KWP/II	0.832	12.564	Oversupply
3/8/2016 12:01	0:04	BS 250	Data is not available	Data is not available	Oversupply
3/8/2016 12:02	0:03	KWP/II	0.100	11.874	Oversupply
3/8/2016 12:06	0:28	BS 250	Data is not available	Data is not available	Oversupply
3/8/2016 12:08	0:28	KWP/II	2.050	11.704	Oversupply
3/8/2016 12:42	0:02	BS 250	Data is not available	Data is not available	Oversupply
3/8/2016 12:42	0:01	KWP/II	0.005	12.649	Oversupply
3/8/2016 12:48	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/8/2016 13:43	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/8/2016 13:49	0:03	BS 250	Data is not available	Data is not available	Oversupply
3/8/2016 15:35	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/8/2016 20:29	0:01	KWP/II	0.004	20.642	Oversupply
3/8/2016 21:53	0:01	KWP/II	0.000	20.642	Oversupply
3/8/2016 21:56	0:02	KWP/II	0.004	20.539	Oversupply
3/8/2016 22:00	0:01	KWP/II	0.016	19.752	Oversupply
3/8/2016 22:04	0:02	KWP/II	0.003	20.596	Oversupply
3/8/2016 22:26	7:53	KWP/II	116.199	20.708	Oversupply
3/9/2016 1:37	3:12	MH	Data is not available	Data is not available	Oversupply
3/9/2016 2:53	1:38	KWP	4.353	26.508	Oversupply
3/9/2016 6:19	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/9/2016 8:52	0:11	BS 250	Data is not available	Data is not available	Oversupply
3/9/2016 8:53	0:11	KWP/II	0.290	20.708	Oversupply
3/9/2016 9:07	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/9/2016 9:19	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/9/2016 9:22	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/9/2016 9:27	1:26	BS 250	Data is not available	Data is not available	Oversupply
3/9/2016 9:29	4:32	KWP/II	71.716	20.708	Oversupply
3/9/2016 11:05	2:57	BS 250	Data is not available	Data is not available	Oversupply
3/9/2016 11:06	0:12	BS	Data is not available	Data is not available	Oversupply
3/9/2016 11:06	0:12	5A	Data is not available	Data is not available	Oversupply
3/9/2016 11:06	0:11	KWP	0.306	27.998	Oversupply
3/9/2016 11:19	0:03	BS	Data is not available	Data is not available	Oversupply
3/9/2016 11:19	0:03	5A	Data is not available	Data is not available	Oversupply
3/9/2016 11:19	0:03	KWP	0.096	27.396	Oversupply
3/9/2016 11:48	0:01	BS	Data is not available	Data is not available	Oversupply
3/9/2016 11:48	0:01	5A	Data is not available	Data is not available	Oversupply



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Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
3/9/2016 12:27	0:07	BS	Data is not available	Data is not available	Oversupply
3/9/2016 12:27	0:07	5A	Data is not available	Data is not available	Oversupply
3/9/2016 12:30	0:03	KWP	0.034	29.523	Oversupply
3/9/2016 12:36	0:01	BS	Data is not available	Data is not available	Oversupply
3/9/2016 12:36	0:01	5A	Data is not available	Data is not available	Oversupply
3/9/2016 12:38	0:32	BS	Data is not available	Data is not available	Oversupply
3/9/2016 12:38	0:32	5A	Data is not available	Data is not available	Oversupply
3/9/2016 12:39	0:25	KWP	0.573	29.500	Oversupply
3/9/2016 13:05	0:05	KWP	0.151	28.775	Oversupply
3/9/2016 13:11	0:05	BS	Data is not available	Data is not available	Oversupply
3/9/2016 13:11	0:05	5A	Data is not available	Data is not available	Oversupply
3/9/2016 13:11	0:05	KWP	0.097	28.843	Oversupply
3/9/2016 13:17	0:12	BS	Data is not available	Data is not available	Oversupply
3/9/2016 13:17	0:12	5A	Data is not available	Data is not available	Oversupply
3/9/2016 13:18	0:11	KWP	0.275	29.119	Oversupply
3/9/2016 13:32	0:11	BS	Data is not available	Data is not available	Oversupply
3/9/2016 13:32	0:11	5A	Data is not available	Data is not available	Oversupply
3/9/2016 13:33	0:10	KWP	0.383	29.499	Oversupply
3/9/2016 13:44	0:09	BS	Data is not available	Data is not available	Oversupply
3/9/2016 13:44	0:09	5A	Data is not available	Data is not available	Oversupply
3/9/2016 13:44	0:02	KWP	0.036	27.814	Oversupply
3/9/2016 13:47	0:01	KWP	0.009	27.739	Oversupply
3/9/2016 13:51	0:01	KWP	0.006	28.939	Oversupply
3/9/2016 13:56	0:02	BS	Data is not available	Data is not available	Oversupply
3/9/2016 13:56	0:02	5A	Data is not available	Data is not available	Oversupply
3/9/2016 14:03	1:31	BS 250	Data is not available	Data is not available	Oversupply
3/9/2016 14:03	1:31	KWP	16.540	20.708	Oversupply
3/9/2016 21:41	8:32	KWP	125.309	20.708	Oversupply
3/10/2016 0:30	3:50	MH	Data is not available	Data is not available	Oversupply
3/10/2016 0:40	3:34	KWP	17.298	29.998	Oversupply
3/10/2016 7:55	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/10/2016 8:53	0:02	KWP	0.009	20.708	Oversupply
3/10/2016 8:54	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/10/2016 9:59	0:08	KWP	0.149	20.708	Oversupply
3/10/2016 10:00	0:04	BS 250	Data is not available	Data is not available	Oversupply
3/10/2016 10:05	0:02	BS 250	Data is not available	Data is not available	Oversupply
3/10/2016 10:09	0:03	BS 250	Data is not available	Data is not available	Oversupply
3/10/2016 10:09	0:03	KWP	0.020	20.708	Oversupply
3/10/2016 10:15	0:02	BS 250	Data is not available	Data is not available	Oversupply
3/10/2016 10:15	0:03	KWP	0.050	20.708	Oversupply
3/10/2016 10:31	0:10	BS 250	Data is not available	Data is not available	Oversupply
3/10/2016 10:31	0:10	KWP	0.775	20.708	Oversupply
3/10/2016 10:46	0:01	KWP	0.018	20.708	Oversupply
3/10/2016 10:53	0:42	KWP	6.161	20.708	Oversupply
3/10/2016 11:47	1:28	KWP	11.307	20.708	Oversupply
3/10/2016 13:14	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/10/2016 13:16	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/10/2016 13:16	0:01	KWP	0.026	19.211	Oversupply
3/10/2016 13:18	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/10/2016 13:22	0:07	BS 250	Data is not available	Data is not available	Oversupply
3/10/2016 13:22	0:06	KWP	0.256	19.211	Oversupply
3/10/2016 13:31	0:02	BS 250	Data is not available	Data is not available	Oversupply
3/10/2016 13:31	0:11	KWP	0.378	19.211	Oversupply
3/10/2016 13:44	0:19	BS 250	Data is not available	Data is not available	Oversupply
3/10/2016 13:44	0:19	KWP	1.138	19.211	Oversupply
3/10/2016 15:06	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/10/2016 15:06	0:01	KWP	0.009	19.211	Oversupply
3/10/2016 15:33	0:01	KWP	0.017	19.211	Oversupply
3/10/2016 20:56	0:01	KWP	0.015	16.217	Oversupply
3/10/2016 22:39	0:01	KWP	0.017	16.217	Oversupply
3/10/2016 22:49	0:02	KWP	0.022	16.217	Oversupply
3/10/2016 23:00	0:36	KWP	2.021	16.217	Oversupply
3/10/2016 23:45	1:21	KWP	13.357	17.714	Oversupply
3/11/2016 0:59	0:06	KWP	0.285	25.234	Oversupply
3/11/2016 1:17	4:45	KWP	46.862	20.708	Oversupply
3/11/2016 8:16	0:02	BS 250	Data is not available	Data is not available	Oversupply
3/11/2016 8:16	0:03	KWP	0.036	20.708	Oversupply
3/11/2016 8:26	0:50	BS 250	Data is not available	Data is not available	Oversupply
3/11/2016 8:26	0:50	KWP	6.903	20.708	Oversupply
3/11/2016 9:23	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/11/2016 9:23	3:53	KWP	67.029	20.708	Oversupply
3/11/2016 11:59	0:17	AWE	0.538	21.000	Oversupply
3/11/2016 12:29	0:42	AWE	1.062	21.000	Oversupply
3/11/2016 13:17	3:43	KWP	61.862	20.708	Oversupply
3/11/2016 14:06	0:02	BS 250	Data is not available	Data is not available	Oversupply
3/11/2016 14:06	1:21	AWE	2.782	21.000	Oversupply
3/11/2016 14:09	1:38	BS 250	Data is not available	Data is not available	Oversupply
3/11/2016 15:29	0:01	AWE	0.000	21.000	Oversupply
3/11/2016 15:31	0:01	AWE	0.002	21.000	Oversupply
3/11/2016 15:33	0:06	AWE	0.027	21.000	Oversupply
3/11/2016 15:48	1:11	BS 250	Data is not available	Data is not available	Oversupply
3/11/2016 21:50	17:20	KWP	317.465	20.708	Oversupply
3/11/2016 23:18	0:27	AWE	0.817	21.000	Oversupply
3/11/2016 23:50	6:24	AWE	75.153	21.000	Oversupply
3/12/2016 2:13	0:01	KWP	0.003	28.172	Oversupply
3/12/2016 2:15	0:02	KWP	0.004	28.174	Oversupply
3/12/2016 2:19	0:01	KWP	0.002	28.101	Oversupply
3/12/2016 2:22	0:01	KWP	0.010	28.138	Oversupply
3/12/2016 2:37	0:18	KWP	0.254	28.197	Oversupply
3/12/2016 6:19	7:15	BS 250	Data is not available	Data is not available	Oversupply
3/12/2016 6:19	5:49	AWE	37.454	21.000	Oversupply
3/12/2016 13:48	1:22	BS 250	Data is not available	Data is not available	Oversupply
3/12/2016 15:12	1:11	BS 250	Data is not available	Data is not available	Oversupply
3/12/2016 15:13	1:10	KWP	9.297	20.707	Oversupply
3/12/2016 21:47	0:05	KWP	0.045	20.707	Oversupply
3/12/2016 21:54	15:43	KWP	280.492	20.708	Oversupply
3/12/2016 23:36	6:55	AWE	70.060	21.000	Oversupply
3/13/2016 2:39	0:03	KWP	0.010	26.853	Oversupply
3/13/2016 2:47	0:05	KWP	0.044	26.811	Oversupply
3/13/2016 2:54	0:01	KWP	0.001	26.496	Oversupply
3/13/2016 2:56	0:03	KWP	0.038	26.745	Oversupply
3/13/2016 3:02	0:05	KWP	0.056	26.817	Oversupply
3/13/2016 6:19	7:18	BS 250	Data is not available	Data is not available	Oversupply
3/13/2016 6:33	0:01	AWE	0.013	19.610	Oversupply
3/13/2016 8:35	0:02	AWE	0.005	20.800	Oversupply
3/13/2016 8:40	0:02	AWE	0.011	20.370	Oversupply
3/13/2016 8:59	0:01	AWE	0.002	20.790	Oversupply
3/13/2016 9:10	3:45	AWE	38.404	21.000	Oversupply



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Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
3/13/2016 11:17	0:02	BS	Data is not available	Data is not available	Oversupply
3/13/2016 11:17	0:02	5A	Data is not available	Data is not available	Oversupply
3/13/2016 11:21	0:02	BS	Data is not available	Data is not available	Oversupply
3/13/2016 11:21	0:02	5A	Data is not available	Data is not available	Oversupply
3/13/2016 11:21	0:01	KWP		0.006	26.484 Oversupply
3/13/2016 11:25	0:01	BS	Data is not available	Data is not available	Oversupply
3/13/2016 11:25	0:01	5A	Data is not available	Data is not available	Oversupply
3/13/2016 11:28	0:01	BS	Data is not available	Data is not available	Oversupply
3/13/2016 11:28	0:01	5A	Data is not available	Data is not available	Oversupply
3/13/2016 11:31	0:01	BS	Data is not available	Data is not available	Oversupply
3/13/2016 11:31	0:01	5A	Data is not available	Data is not available	Oversupply
3/13/2016 13:00	0:07	AWE		0.081	20.937 Oversupply
3/13/2016 13:08	0:03	AWE		0.010	21.000 Oversupply
3/13/2016 13:12	0:03	AWE		0.020	20.747 Oversupply
3/13/2016 13:17	0:01	AWE		0.012	20.797 Oversupply
3/13/2016 13:19	0:04	AWE		0.030	20.813 Oversupply
3/13/2016 13:26	0:07	AWE		0.190	20.993 Oversupply
3/13/2016 13:40	1:07	BS 250	Data is not available	Data is not available	Oversupply
3/13/2016 13:40	1:06	KWP	16.240	17.898	Oversupply
3/13/2016 13:41	0:15	AWE	0.467	20.947	Oversupply
3/13/2016 13:57	0:12	AWE	0.626	20.067	Oversupply
3/13/2016 14:11	0:09	AWE	0.353	21.000	Oversupply
3/13/2016 14:22	0:01	AWE	0.001	20.913	Oversupply
3/13/2016 14:24	0:01	AWE	0.002	20.887	Oversupply
3/13/2016 14:27	0:03	AWE	0.036	20.890	Oversupply
3/13/2016 14:36	0:03	AWE	0.019	20.603	Oversupply
3/13/2016 14:41	0:02	AWE	0.006	20.860	Oversupply
3/13/2016 14:49	0:36	BS 250	Data is not available	Data is not available	Oversupply
3/13/2016 14:49	0:36	KWP	3.528	14.649	Oversupply
3/13/2016 15:06	0:02	AWE	0.003	21.000	Oversupply
3/13/2016 15:38	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/13/2016 15:38	0:01	KWP	0.005	12.737	Oversupply
3/13/2016 15:40	0:03	BS 250	Data is not available	Data is not available	Oversupply
3/13/2016 15:40	0:02	KWP	0.118	13.561	Oversupply
3/13/2016 16:04	0:09	BS 250	Data is not available	Data is not available	Oversupply
3/13/2016 16:04	0:10	KWP	0.505	17.957	Oversupply
3/13/2016 16:14	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/13/2016 16:28	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/13/2016 21:15	0:01	KWP	0.000	0.010	Oversupply
3/13/2016 21:52	0:05	KWP	0.130	12.026	Oversupply
3/13/2016 22:04	0:02	KWP	0.073	12.024	Oversupply
3/13/2016 22:29	0:11	KWP	0.656	12.436	Oversupply
3/13/2016 22:37	0:01	AWE	0.001	21.000	Oversupply
3/13/2016 22:48	0:28	KWP	2.162	13.820	Oversupply
3/13/2016 23:00	0:02	AWE	0.004	21.000	Oversupply
3/13/2016 23:20	0:07	KWP	0.369	11.102	Oversupply
3/13/2016 23:28	0:05	KWP	0.162	10.239	Oversupply
3/14/2016 6:42	0:01	KWP	0.000	0.015	Oversupply
3/14/2016 10:02	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/14/2016 10:46	0:03	BS 250	Data is not available	Data is not available	Oversupply
3/14/2016 10:46	0:02	KWP	0.006	2.441	Oversupply
3/14/2016 10:50	0:04	BS 250	Data is not available	Data is not available	Oversupply
3/14/2016 10:51	0:01	AWE	0.000	21.000	Oversupply
3/14/2016 10:51	0:02	KWP	0.016	1.930	Oversupply
3/14/2016 10:55	0:07	BS 250	Data is not available	Data is not available	Oversupply
3/14/2016 10:55	0:03	AWE	0.032	21.000	Oversupply
3/14/2016 10:55	0:07	KWP	0.146	1.959	Oversupply
3/14/2016 10:59	0:02	AWE	0.014	21.000	Oversupply
3/14/2016 11:06	0:23	BS 250	Data is not available	Data is not available	Oversupply
3/14/2016 11:06	0:02	AWE	0.003	20.893	Oversupply
3/14/2016 11:07	0:21	KWP	0.938	3.127	Oversupply
3/14/2016 11:09	0:02	AWE	0.021	20.640	Oversupply
3/14/2016 11:15	0:11	AWE	0.336	20.960	Oversupply
3/14/2016 11:33	0:07	BS 250	Data is not available	Data is not available	Oversupply
3/14/2016 11:36	0:03	KWP	0.073	2.454	Oversupply
3/14/2016 11:39	0:01	KWP	0.012	2.226	Oversupply
3/14/2016 12:10	0:02	BS 250	Data is not available	Data is not available	Oversupply
3/14/2016 12:30	0:04	BS 250	Data is not available	Data is not available	Oversupply
3/14/2016 12:32	0:02	KWP	0.021	2.533	Oversupply
3/14/2016 12:57	0:07	BS 250	Data is not available	Data is not available	Oversupply
3/14/2016 12:58	0:05	KWP	0.089	3.191	Oversupply
3/14/2016 13:01	0:01	AWE	0.001	21.000	Oversupply
3/14/2016 13:15	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/15/2016 0:12	0:15	AWE	0.398	14.920	Oversupply
3/15/2016 0:25	0:02	KWP	0.003	0.104	Oversupply
3/15/2016 0:43	0:14	AWE	0.596	14.350	Oversupply
3/15/2016 2:00	0:18	AWE	0.614	14.300	Oversupply
3/15/2016 2:19	0:03	AWE	0.083	12.827	Oversupply
3/15/2016 2:24	0:02	AWE	0.040	12.453	Oversupply
3/15/2016 2:37	0:25	AWE	1.134	14.180	Oversupply
3/15/2016 7:28	0:01	AWE	0.000	0.013	Oversupply
3/16/2016 11:21	0:06	BS 250	Data is not available	Data is not available	Oversupply
3/16/2016 11:21	0:04	KWP	0.205	17.621	Oversupply
3/16/2016 11:26	0:01	KWP	0.015	17.530	Oversupply
3/16/2016 11:36	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/16/2016 11:40	0:03	BS 250	Data is not available	Data is not available	Oversupply
3/16/2016 12:04	0:11	BS 250	Data is not available	Data is not available	Oversupply
3/16/2016 12:05	0:10	KWP	0.196	19.159	Oversupply
3/16/2016 12:17	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/16/2016 12:17	0:01	KWP	0.003	16.792	Oversupply
3/16/2016 12:20	0:05	BS 250	Data is not available	Data is not available	Oversupply
3/16/2016 12:21	0:01	KWP	0.014	15.516	Oversupply
3/16/2016 13:16	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/16/2016 13:23	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/16/2016 14:11	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/16/2016 14:11	0:01	KWP	0.005	19.417	Oversupply
3/16/2016 22:28	6:32	KWP	80.324	20.690	Oversupply
3/17/2016 2:15	0:11	KWP	0.392	25.014	Oversupply
3/17/2016 2:28	0:01	KWP	0.004	21.938	Oversupply
3/17/2016 2:31	0:02	KWP	0.047	24.682	Oversupply
3/17/2016 2:37	0:02	KWP	0.047	23.296	Oversupply
3/17/2016 2:54	0:02	KWP	0.043	23.402	Oversupply
3/17/2016 2:54	0:02	AWE	0.014	0.550	Oversupply
3/17/2016 2:57	0:02	KWP	0.027	23.456	Oversupply
3/17/2016 2:58	0:01	AWE	0.005	0.300	Oversupply
3/17/2016 3:00	0:01	KWP	0.014	22.914	Oversupply
3/17/2016 3:07	0:46	KWP	3.015	28.203	Oversupply
3/17/2016 3:07	0:46	AWE	0.440	0.887	Oversupply



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Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
3/17/2016 3:54	0:35	KWP	1.802	29.420	Oversupply
3/17/2016 3:54	0:40	AWE	0.501	1.350	Oversupply
3/17/2016 4:32	0:02	KWP	0.040	28.739	Oversupply
3/17/2016 4:40	0:01	KWP	0.000	28.810	Oversupply
3/17/2016 4:40	0:01	AWE	0.006	0.390	Oversupply
3/17/2016 4:45	0:01	AWE	0.000	0.020	Oversupply
3/17/2016 4:45	0:02	KWP	0.017	28.803	Oversupply
3/17/2016 5:01	1:36	KWPPI	12.937	20.700	Oversupply
3/17/2016 6:19	0:13	BS 250	Data is not available	Data is not available	Oversupply
3/17/2016 6:33	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/17/2016 6:35	0:02	BS 250	Data is not available	Data is not available	Oversupply
3/17/2016 6:48	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/17/2016 6:55	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/17/2016 6:59	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/17/2016 7:38	0:04	BS 250	Data is not available	Data is not available	Oversupply
3/17/2016 7:38	0:37	KWPPI	1.236	20.329	Oversupply
3/17/2016 7:43	0:04	BS 250	Data is not available	Data is not available	Oversupply
3/17/2016 7:48	0:28	BS 250	Data is not available	Data is not available	Oversupply
3/17/2016 8:17	0:03	BS 250	Data is not available	Data is not available	Oversupply
3/17/2016 8:17	0:02	KWPPI	0.079	19.473	Oversupply
3/17/2016 8:22	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/17/2016 8:22	0:01	KWPPI	0.009	19.902	Oversupply
3/17/2016 8:25	0:06	BS 250	Data is not available	Data is not available	Oversupply
3/17/2016 8:25	0:06	KWPPI	0.109	20.594	Oversupply
3/17/2016 8:33	0:02	BS 250	Data is not available	Data is not available	Oversupply
3/17/2016 8:33	0:07	KWPPI	0.199	20.508	Oversupply
3/17/2016 8:36	0:04	BS 250	Data is not available	Data is not available	Oversupply
3/17/2016 8:42	0:03	BS 250	Data is not available	Data is not available	Oversupply
3/17/2016 8:42	0:03	KWPPI	0.101	20.173	Oversupply
3/17/2016 8:47	0:02	BS 250	Data is not available	Data is not available	Oversupply
3/17/2016 8:47	0:02	KWPPI	0.043	19.698	Oversupply
3/17/2016 8:50	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/17/2016 8:50	0:02	KWPPI	0.013	20.057	Oversupply
3/17/2016 8:54	4:30	BS 250	Data is not available	Data is not available	Oversupply
3/17/2016 8:54	4:30	KWPPI	42.880	20.688	Oversupply
3/17/2016 12:42	0:01	AWE	0.010	9.277	Oversupply
3/17/2016 12:45	0:01	AWE	0.010	10.253	Oversupply
3/17/2016 12:49	0:01	AWE	0.013	7.327	Oversupply
3/17/2016 13:07	0:02	AWE	0.014	9.000	Oversupply
3/17/2016 13:16	0:01	AWE	0.002	8.073	Oversupply
3/17/2016 13:26	3:08	BS 250	Data is not available	Data is not available	Oversupply
3/17/2016 13:26	3:08	KWPPI	27.356	20.698	Oversupply
3/17/2016 16:36	0:02	BS 250	Data is not available	Data is not available	Oversupply
3/17/2016 16:36	0:05	KWPPI	0.067	20.175	Oversupply
3/17/2016 16:39	0:02	BS 250	Data is not available	Data is not available	Oversupply
3/17/2016 16:43	0:12	BS 250	Data is not available	Data is not available	Oversupply
3/17/2016 16:43	0:12	KWPPI	0.355	20.267	Oversupply
3/17/2016 20:55	0:01	AWE	0.000	0.007	Oversupply
3/17/2016 21:26	0:35	KWPPI	2.592	20.698	Oversupply
3/17/2016 22:07	0:06	KWPPI	0.267	20.509	Oversupply
3/17/2016 22:15	0:08	KWPPI	0.231	20.296	Oversupply
3/17/2016 22:41	0:01	KWPPI	0.017	20.318	Oversupply
3/17/2016 22:46	4:39	KWPPI	58.901	20.689	Oversupply
3/18/2016 2:57	0:01	AWE	0.019	2.220	Oversupply
3/18/2016 3:02	0:06	AWE	0.085	2.690	Oversupply
3/18/2016 3:10	0:01	AWE	0.009	1.423	Oversupply
3/18/2016 3:19	0:02	AWE	0.021	1.290	Oversupply
3/18/2016 3:27	0:59	KWPPI	9.195	19.842	Oversupply
3/18/2016 4:51	1:06	KWPPI	7.762	19.797	Oversupply
3/18/2016 7:53	0:16	BS 250	Data is not available	Data is not available	Oversupply
3/18/2016 7:53	0:02	KWPPI	0.009	18.918	Oversupply
3/18/2016 7:56	0:14	KWPPI	0.671	19.598	Oversupply
3/18/2016 8:10	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/18/2016 8:12	0:04	BS 250	Data is not available	Data is not available	Oversupply
3/18/2016 8:12	0:03	KWPPI	0.082	17.644	Oversupply
3/18/2016 8:18	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/18/2016 8:21	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/18/2016 8:34	0:32	BS 250	Data is not available	Data is not available	Oversupply
3/18/2016 8:34	0:32	KWPPI	1.890	20.050	Oversupply
3/18/2016 9:07	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/18/2016 9:07	0:17	KWPPI	0.606	20.096	Oversupply
3/18/2016 9:09	0:15	BS 250	Data is not available	Data is not available	Oversupply
3/18/2016 9:25	0:17	BS 250	Data is not available	Data is not available	Oversupply
3/18/2016 9:25	0:17	KWPPI	1.399	20.690	Oversupply
3/18/2016 9:43	0:04	BS 250	Data is not available	Data is not available	Oversupply
3/18/2016 9:43	0:13	KWPPI	0.290	20.501	Oversupply
3/18/2016 9:48	0:02	BS 250	Data is not available	Data is not available	Oversupply
3/18/2016 9:51	0:05	BS 250	Data is not available	Data is not available	Oversupply
3/18/2016 9:57	1:15	BS 250	Data is not available	Data is not available	Oversupply
3/18/2016 9:57	1:15	KWPPI	7.912	20.292	Oversupply
3/18/2016 11:13	0:49	BS 250	Data is not available	Data is not available	Oversupply
3/18/2016 11:13	0:48	KWPPI	5.033	18.702	Oversupply
3/18/2016 11:34	0:02	AWE	0.015	18.883	Oversupply
3/18/2016 12:07	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/18/2016 12:09	0:04	BS 250	Data is not available	Data is not available	Oversupply
3/18/2016 12:10	0:03	KWPPI	0.100	15.288	Oversupply
3/18/2016 12:23	0:02	BS 250	Data is not available	Data is not available	Oversupply
3/18/2016 12:33	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/18/2016 12:36	0:55	BS 250	Data is not available	Data is not available	Oversupply
3/18/2016 12:37	0:01	KWPPI	0.028	12.521	Oversupply
3/18/2016 12:40	0:57	KWPPI	4.331	18.444	Oversupply
3/18/2016 13:32	0:06	BS 250	Data is not available	Data is not available	Oversupply
3/18/2016 13:39	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/18/2016 13:42	0:02	BS 250	Data is not available	Data is not available	Oversupply
3/18/2016 13:43	1:21	KWPPI	17.437	20.657	Oversupply
3/18/2016 13:45	1:19	BS 250	Data is not available	Data is not available	Oversupply
3/18/2016 14:45	0:02	AWE	0.039	17.120	Oversupply
3/18/2016 14:49	0:01	AWE	0.007	15.140	Oversupply
3/18/2016 14:57	0:01	AWE	0.006	15.193	Oversupply
3/18/2016 15:06	1:22	BS 250	Data is not available	Data is not available	Oversupply
3/18/2016 15:06	1:22	KWPPI	12.380	20.643	Oversupply
3/18/2016 16:34	0:05	BS 250	Data is not available	Data is not available	Oversupply
3/18/2016 16:34	0:07	KWPPI	0.234	19.517	Oversupply
3/18/2016 16:40	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/18/2016 16:44	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/18/2016 17:18	0:01	AWE	0.000	0.007	Oversupply
3/18/2016 17:59	0:02	BS 250	Data is not available	Data is not available	Oversupply
3/18/2016 17:59	0:07	KWPPI	0.099	20.641	Oversupply



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Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
3/18/2016 18:02	0:04	BS 250	Data is not available	Data is not available	Oversupply
3/18/2016 18:07	0:02	KWP/II	0.007	20.502	Oversupply
3/18/2016 18:10	0:06	BS 250	Data is not available	Data is not available	Oversupply
3/18/2016 18:10	0:06	KWP/II	0.120	20.579	Oversupply
3/18/2016 18:17	0:02	BS 250	Data is not available	Data is not available	Oversupply
3/18/2016 18:19	0:02	KWP/II	0.005	20.518	Oversupply
3/18/2016 21:51	0:03	KWP/II	0.036	20.349	Oversupply
3/18/2016 21:56	0:03	KWP/II	0.034	20.562	Oversupply
3/18/2016 22:10	0:04	KWP/II	0.084	20.667	Oversupply
3/18/2016 22:16	0:04	KWP/II	0.075	20.550	Oversupply
3/18/2016 22:22	0:04	KWP/II	0.049	20.623	Oversupply
3/18/2016 22:28	0:01	KWP/II	0.016	20.606	Oversupply
3/18/2016 22:35	0:01	KWP/II	0.000	20.563	Oversupply
3/18/2016 22:50	0:10	KWP/II	0.140	20.687	Oversupply
3/18/2016 23:03	7:43	KWP/II	121.073	20.708	Oversupply
3/19/2016 1:17	0:01	AWE	0.009	1.000	Oversupply
3/19/2016 1:30	0:01	KWP	0.003	28.158	Oversupply
3/19/2016 1:32	0:01	KWP	0.005	27.978	Oversupply
3/19/2016 1:32	0:02	AWE	0.003	0.177	Oversupply
3/19/2016 1:34	0:01	KWP	0.000	28.460	Oversupply
3/19/2016 1:39	0:02	KWP	0.016	27.948	Oversupply
3/19/2016 1:48	0:07	KWP	0.143	28.849	Oversupply
3/19/2016 2:02	0:04	KWP	0.056	28.189	Oversupply
3/19/2016 2:09	1:53	KWP	7.574	29.635	Oversupply
3/19/2016 2:11	0:25	AWE	0.156	0.687	Oversupply
3/19/2016 4:03	0:01	KWP	0.000	25.885	Oversupply
3/19/2016 4:12	0:01	KWP	0.001	27.052	Oversupply
3/19/2016 4:20	0:01	KWP	0.002	27.774	Oversupply
3/19/2016 6:19	0:27	BS 250	Data is not available	Data is not available	Oversupply
3/19/2016 6:47	0:14	BS 250	Data is not available	Data is not available	Oversupply
3/19/2016 6:47	0:22	KWP/II	0.403	20.635	Oversupply
3/19/2016 7:02	0:06	BS 250	Data is not available	Data is not available	Oversupply
3/19/2016 7:20	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/19/2016 8:10	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/19/2016 8:15	0:01	KWP/II	0.005	19.717	Oversupply
3/19/2016 8:17	0:01	KWP/II	0.009	19.923	Oversupply
3/19/2016 8:19	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/19/2016 8:22	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/19/2016 8:24	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/19/2016 8:50	0:01	KWP/II	0.018	19.883	Oversupply
3/19/2016 8:53	0:02	KWP/II	0.006	20.200	Oversupply
3/19/2016 8:54	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/19/2016 8:56	0:05	BS 250	Data is not available	Data is not available	Oversupply
3/19/2016 8:56	6:37	KWP/II	118.069	20.617	Oversupply
3/19/2016 9:02	0:02	BS 250	Data is not available	Data is not available	Oversupply
3/19/2016 9:05	0:06	BS 250	Data is not available	Data is not available	Oversupply
3/19/2016 9:15	0:05	BS 250	Data is not available	Data is not available	Oversupply
3/19/2016 9:21	6:12	BS 250	Data is not available	Data is not available	Oversupply
3/19/2016 9:59	0:01	AWE	0.018	8.857	Oversupply
3/19/2016 10:04	0:03	AWE	0.070	14.520	Oversupply
3/19/2016 10:10	0:01	AWE	0.019	14.627	Oversupply
3/19/2016 10:12	5:12	AWE	38.102	21.000	Oversupply
3/19/2016 15:36	0:36	BS 250	Data is not available	Data is not available	Oversupply
3/19/2016 15:36	0:36	KWP/II	4.221	20.582	Oversupply
3/19/2016 16:13	0:05	BS 250	Data is not available	Data is not available	Oversupply
3/19/2016 16:13	0:07	KWP/II	0.167	20.546	Oversupply
3/19/2016 16:19	0:02	BS 250	Data is not available	Data is not available	Oversupply
3/19/2016 17:21	0:29	BS 250	Data is not available	Data is not available	Oversupply
3/19/2016 17:21	0:30	KWP/II	3.224	20.708	Oversupply
3/19/2016 18:15	0:20	BS 250	Data is not available	Data is not available	Oversupply
3/19/2016 18:16	0:26	KWP/II	1.347	20.708	Oversupply
3/19/2016 18:49	0:15	KWP/II	0.611	20.705	Oversupply
3/19/2016 19:58	1:00	KWP/II	5.108	20.708	Oversupply
3/19/2016 21:11	0:11	KWP/II	0.329	20.704	Oversupply
3/19/2016 21:23	0:01	KWP/II	0.001	20.684	Oversupply
3/19/2016 21:26	0:01	KWP/II	0.001	20.707	Oversupply
3/19/2016 21:29	0:01	KWP/II	0.001	20.708	Oversupply
3/19/2016 21:32	2:30	KWP/II	28.827	20.708	Oversupply
3/19/2016 23:40	0:13	AWE	0.536	13.210	Oversupply
3/19/2016 23:54	0:01	AWE	0.009	7.240	Oversupply
3/20/2016 0:04	11:43	KWP/II	230.458	20.708	Oversupply
3/20/2016 0:40	0:08	AWE	0.565	8.857	Oversupply
3/20/2016 0:51	0:08	AWE	0.182	6.140	Oversupply
3/20/2016 0:55	0:07	KWP	0.153	28.550	Oversupply
3/20/2016 1:00	0:02	AWE	0.015	0.487	Oversupply
3/20/2016 1:03	0:01	AWE	0.001	0.193	Oversupply
3/20/2016 1:03	1:18	KWP	5.570	29.233	Oversupply
3/20/2016 2:03	9:40	AWE	82.461	21.000	Oversupply
3/20/2016 2:22	0:02	KWP	0.021	22.972	Oversupply
3/20/2016 2:25	2:23	KWP	9.435	27.078	Oversupply
3/20/2016 4:54	0:02	KWP	0.025	25.690	Oversupply
3/20/2016 5:02	0:01	KWP	0.009	27.604	Oversupply
3/20/2016 6:14	5:33	BS 250	Data is not available	Data is not available	Oversupply
3/20/2016 9:53	0:04	BS	Data is not available	Data is not available	Oversupply
3/20/2016 9:53	0:04	5A	Data is not available	Data is not available	Oversupply
3/20/2016 9:55	0:01	KWP	0.006	26.910	Oversupply
3/20/2016 10:02	0:02	BS	Data is not available	Data is not available	Oversupply
3/20/2016 10:02	0:02	5A	Data is not available	Data is not available	Oversupply
3/20/2016 10:08	0:01	BS	Data is not available	Data is not available	Oversupply
3/20/2016 10:08	0:01	5A	Data is not available	Data is not available	Oversupply
3/20/2016 10:12	0:01	BS	Data is not available	Data is not available	Oversupply
3/20/2016 10:12	0:01	5A	Data is not available	Data is not available	Oversupply
3/20/2016 10:16	0:02	BS	Data is not available	Data is not available	Oversupply
3/20/2016 10:16	0:02	5A	Data is not available	Data is not available	Oversupply
3/20/2016 10:19	0:07	BS	Data is not available	Data is not available	Oversupply
3/20/2016 10:19	0:07	5A	Data is not available	Data is not available	Oversupply
3/20/2016 10:20	0:02	KWP	0.040	25.790	Oversupply
3/20/2016 10:24	0:02	KWP	0.080	25.357	Oversupply
3/20/2016 10:28	0:11	BS	Data is not available	Data is not available	Oversupply
3/20/2016 10:28	0:11	5A	Data is not available	Data is not available	Oversupply
3/20/2016 10:28	0:09	KWP	0.416	25.316	Oversupply
3/20/2016 10:38	0:01	KWP	0.051	22.512	Oversupply
3/20/2016 10:41	0:01	BS	Data is not available	Data is not available	Oversupply
3/20/2016 10:41	0:01	5A	Data is not available	Data is not available	Oversupply
3/20/2016 11:49	2:30	BS 250	Data is not available	Data is not available	Oversupply
3/20/2016 11:49	2:29	KWP/II	23.233	18.139	Oversupply
3/20/2016 13:39	0:01	AWE	0.001	21.000	Oversupply
3/20/2016 14:05	0:08	AWE	0.034	21.000	Oversupply



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Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
3/20/2016 14:20	1:01	BS 250	Data is not available	Data is not available	Oversupply
3/20/2016 14:20	1:01	KWPPI	5.051	17.716	Oversupply
3/20/2016 15:23	0:03	BS 250	Data is not available	Data is not available	Oversupply
3/20/2016 15:23	0:02	KWPPI	0.028	14.701	Oversupply
3/20/2016 15:27	0:09	BS 250	Data is not available	Data is not available	Oversupply
3/20/2016 15:28	0:01	KWPPI	0.002	13.451	Oversupply
3/20/2016 15:30	0:05	KWPPI	0.129	14.772	Oversupply
3/20/2016 15:40	0:02	BS 250	Data is not available	Data is not available	Oversupply
3/20/2016 15:56	0:29	BS 250	Data is not available	Data is not available	Oversupply
3/20/2016 15:56	0:03	KWPPI	0.067	17.950	Oversupply
3/20/2016 16:01	0:23	KWPPI	1.393	19.216	Oversupply
3/20/2016 17:04	0:02	BS 250	Data is not available	Data is not available	Oversupply
3/20/2016 17:04	0:02	KWPPI	0.021	15.226	Oversupply
3/20/2016 18:26	0:02	BS 250	Data is not available	Data is not available	Oversupply
3/20/2016 18:26	0:02	KWPPI	0.053	17.684	Oversupply
3/20/2016 18:50	0:02	KWPPI	0.032	15.502	Oversupply
3/20/2016 18:01	0:04	KWPPI	0.174	16.021	Oversupply
3/20/2016 19:07	0:07	KWPPI	0.418	16.112	Oversupply
3/20/2016 19:25	0:03	KWPPI	0.122	16.676	Oversupply
3/20/2016 19:32	0:03	KWPPI	0.087	16.422	Oversupply
3/20/2016 19:41	0:01	KWPPI	0.026	13.680	Oversupply
3/20/2016 20:25	0:06	KWPPI	0.171	20.556	Oversupply
3/20/2016 20:35	0:02	KWPPI	0.024	20.147	Oversupply
3/20/2016 20:39	0:01	KWPPI	0.016	20.221	Oversupply
3/20/2016 21:03	0:03	KWPPI	0.042	20.615	Oversupply
3/20/2016 21:07	0:07	KWPPI	0.173	20.674	Oversupply
3/20/2016 21:22	0:01	KWPPI	0.004	20.449	Oversupply
3/20/2016 21:24	1:10	KWPPI	15.253	20.708	Oversupply
3/20/2016 22:23	0:05	AWE	0.136	17.480	Oversupply
3/20/2016 22:36	0:32	KWPPI	10.027	20.662	Oversupply
3/20/2016 22:44	0:24	AWE	2.388	19.217	Oversupply
3/20/2016 23:09	0:13	KWPPI	3.845	20.349	Oversupply
3/20/2016 23:09	0:13	AWE	1.048	21.000	Oversupply
3/20/2016 23:23	0:03	KWPPI	0.467	19.779	Oversupply
3/20/2016 23:24	0:01	AWE	0.015	20.053	Oversupply
3/20/2016 23:27	0:08	KWPPI	2.325	19.583	Oversupply
3/20/2016 23:31	0:02	AWE	0.002	21.000	Oversupply
3/20/2016 23:39	0:02	AWE	0.003	21.000	Oversupply
3/20/2016 23:39	0:25	KWPPI	2.898	17.181	Oversupply
3/21/2016 0:56	0:56	KWPPI	1.961	4.207	Oversupply
3/21/2016 0:56	0:05	AWE	0.166	20.410	Oversupply
3/21/2016 1:07	2:57	AWE	8.124	21.000	Oversupply
3/21/2016 6:53	0:02	BS 250	Data is not available	Data is not available	Oversupply
3/21/2016 6:58	0:03	BS 250	Data is not available	Data is not available	Oversupply
3/21/2016 6:58	0:03	KWPPI	0.031	6.438	Oversupply
3/21/2016 7:04	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/21/2016 7:06	0:05	BS 250	Data is not available	Data is not available	Oversupply
3/21/2016 7:06	0:05	KWPPI	0.120	7.583	Oversupply
3/21/2016 11:16	0:09	BS 250	Data is not available	Data is not available	Oversupply
3/21/2016 11:16	0:09	AWE	0.129	21.000	Oversupply
3/21/2016 11:30	0:10	BS 250	Data is not available	Data is not available	Oversupply
3/21/2016 11:30	0:10	AWE	0.376	21.000	Oversupply
3/21/2016 11:41	0:02	BS 250	Data is not available	Data is not available	Oversupply
3/21/2016 11:41	0:02	AWE	0.016	20.987	Oversupply
3/21/2016 11:44	0:15	AWE	0.484	21.000	Oversupply
3/21/2016 11:46	0:13	BS 250	Data is not available	Data is not available	Oversupply
3/21/2016 14:32	0:02	BS 250	Data is not available	Data is not available	Oversupply
3/21/2016 14:33	0:01	AWE	0.026	16.317	Oversupply
3/21/2016 15:21	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/22/2016 6:51	0:01	AWE	0.000	0.007	Oversupply
3/24/2016 11:17	0:01	AWE	0.000	0.003	Oversupply
3/25/2016 23:11	0:01	KWP	0.000	0.007	Oversupply
3/26/2016 7:21	0:01	KWP	0.000	0.001	Oversupply
3/26/2016 14:47	0:01	AWE	0.000	0.003	Oversupply
3/28/2016 10:29	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/28/2016 10:38	0:02	BS 250	Data is not available	Data is not available	Oversupply
3/28/2016 10:47	0:02	BS 250	Data is not available	Data is not available	Oversupply
3/28/2016 10:53	0:07	BS 250	Data is not available	Data is not available	Oversupply
3/28/2016 10:54	0:01	KWPPI	0.005	7.990	Oversupply
3/28/2016 10:56	0:04	KWPPI	0.089	8.067	Oversupply
3/28/2016 11:06	0:02	BS 250	Data is not available	Data is not available	Oversupply
3/28/2016 11:06	0:01	KWPPI	0.013	6.891	Oversupply
3/28/2016 11:12	0:12	BS 250	Data is not available	Data is not available	Oversupply
3/28/2016 11:12	0:12	KWPPI	1.026	12.128	Oversupply
3/28/2016 11:31	0:02	BS 250	Data is not available	Data is not available	Oversupply
3/28/2016 11:31	0:01	KWPPI	0.007	11.320	Oversupply
3/28/2016 11:36	0:41	BS 250	Data is not available	Data is not available	Oversupply
3/28/2016 11:36	3:40	KWPPI	37.837	15.495	Oversupply
3/28/2016 12:11	0:01	BS	Data is not available	Data is not available	Oversupply
3/28/2016 12:11	0:01	5A	Data is not available	Data is not available	Oversupply
3/28/2016 12:11	0:01	AWE	0.005	1.500	Oversupply
3/28/2016 12:13	0:01	BS	Data is not available	Data is not available	Oversupply
3/28/2016 12:13	0:01	5A	Data is not available	Data is not available	Oversupply
3/28/2016 12:46	0:02	BS	Data is not available	Data is not available	Oversupply
3/28/2016 12:46	0:02	5A	Data is not available	Data is not available	Oversupply
3/28/2016 12:46	0:02	BS 250	Data is not available	Data is not available	Oversupply
3/28/2016 12:46	0:01	KWP	0.014	18.615	Oversupply
3/28/2016 12:46	0:10	AWE	0.077	1.120	Oversupply
3/28/2016 12:48	0:01	BS	Data is not available	Data is not available	Oversupply
3/28/2016 12:48	0:01	5A	Data is not available	Data is not available	Oversupply
3/28/2016 12:48	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/28/2016 12:50	0:11	BS	Data is not available	Data is not available	Oversupply
3/28/2016 12:50	0:11	5A	Data is not available	Data is not available	Oversupply
3/28/2016 12:50	0:11	BS 250	Data is not available	Data is not available	Oversupply
3/28/2016 12:53	0:17	KWP	0.655	22.220	Oversupply
3/28/2016 12:56	0:18	AWE	0.127	0.787	Oversupply
3/28/2016 13:02	0:08	BS	Data is not available	Data is not available	Oversupply
3/28/2016 13:02	0:08	5A	Data is not available	Data is not available	Oversupply
3/28/2016 13:02	0:08	BS 250	Data is not available	Data is not available	Oversupply
3/28/2016 13:11	0:29	BS	Data is not available	Data is not available	Oversupply
3/28/2016 13:11	0:29	5A	Data is not available	Data is not available	Oversupply
3/28/2016 13:11	1:33	BS 250	Data is not available	Data is not available	Oversupply
3/28/2016 13:11	0:09	KWP	0.404	21.686	Oversupply
3/28/2016 13:15	0:07	AWE	0.079	0.950	Oversupply
3/28/2016 13:21	0:02	KWP	0.051	21.524	Oversupply
3/28/2016 13:23	0:08	AWE	0.089	0.900	Oversupply
3/28/2016 13:24	0:07	KWP	0.172	21.719	Oversupply
3/28/2016 13:32	0:05	AWE	0.051	0.737	Oversupply



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Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
3/28/2016 13:32	0:10	KWP	0.239	22.211	Oversupply
3/28/2016 13:38	0:04	AWE	0.051	0.883	Oversupply
3/28/2016 13:41	0:05	BS	Data is not available	Data is not available	Oversupply
3/28/2016 13:41	0:05	5A	Data is not available	Data is not available	Oversupply
3/28/2016 13:43	0:03	KWP	0.102	22.870	Oversupply
3/28/2016 13:43	0:03	AWE	0.048	1.107	Oversupply
3/28/2016 13:48	0:06	BS	Data is not available	Data is not available	Oversupply
3/28/2016 13:48	0:06	5A	Data is not available	Data is not available	Oversupply
3/28/2016 13:48	0:06	KWP	0.215	23.821	Oversupply
3/28/2016 13:48	0:08	AWE	0.104	1.110	Oversupply
3/28/2016 13:55	0:04	BS	Data is not available	Data is not available	Oversupply
3/28/2016 13:55	0:04	5A	Data is not available	Data is not available	Oversupply
3/28/2016 13:55	0:01	KWP	0.026	22.843	Oversupply
3/28/2016 13:58	0:01	KWP	0.005	22.883	Oversupply
3/28/2016 13:58	0:01	AWE	0.013	0.793	Oversupply
3/28/2016 14:00	0:04	BS	Data is not available	Data is not available	Oversupply
3/28/2016 14:00	0:04	5A	Data is not available	Data is not available	Oversupply
3/28/2016 14:00	0:02	KWP	0.032	23.029	Oversupply
3/28/2016 14:00	0:02	AWE	0.025	0.783	Oversupply
3/28/2016 14:05	0:05	BS	Data is not available	Data is not available	Oversupply
3/28/2016 14:05	0:05	5A	Data is not available	Data is not available	Oversupply
3/28/2016 14:05	0:02	KWP	0.061	23.508	Oversupply
3/28/2016 14:05	0:02	AWE	0.023	0.880	Oversupply
3/28/2016 14:11	0:01	BS	Data is not available	Data is not available	Oversupply
3/28/2016 14:11	0:01	5A	Data is not available	Data is not available	Oversupply
3/28/2016 14:25	0:01	BS	Data is not available	Data is not available	Oversupply
3/28/2016 14:25	0:01	5A	Data is not available	Data is not available	Oversupply
3/28/2016 14:37	0:03	AWE	0.035	3.150	Oversupply
3/28/2016 14:45	0:04	BS 250	Data is not available	Data is not available	Oversupply
3/28/2016 14:52	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/28/2016 14:56	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/28/2016 15:00	0:03	BS 250	Data is not available	Data is not available	Oversupply
3/28/2016 15:04	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/28/2016 15:09	0:07	BS 250	Data is not available	Data is not available	Oversupply
3/28/2016 15:18	0:58	BS 250	Data is not available	Data is not available	Oversupply
3/28/2016 15:18	0:58	KWP/II	6.295	20.113	Oversupply
3/28/2016 16:20	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/28/2016 16:20	0:01	KWP/II	0.022	20.094	Oversupply
3/28/2016 21:58	0:03	KWP/II	0.027	19.450	Oversupply
3/28/2016 22:02	0:01	KWP/II	0.002	19.170	Oversupply
3/28/2016 22:04	0:09	KWP/II	0.203	19.152	Oversupply
3/28/2016 22:23	0:01	KWP/II	0.014	19.573	Oversupply
3/28/2016 22:31	0:01	KWP/II	0.001	19.005	Oversupply
3/28/2016 22:38	0:06	KWP/II	0.140	19.921	Oversupply
3/28/2016 22:59	0:01	KWP/II	0.005	19.845	Oversupply
3/28/2016 23:01	0:05	KWP/II	0.099	19.757	Oversupply
3/28/2016 23:07	0:03	KWP/II	0.045	19.455	Oversupply
3/28/2016 23:11	0:03	KWP/II	0.095	18.870	Oversupply
3/28/2016 23:16	0:05	KWP/II	0.157	19.080	Oversupply
3/28/2016 23:28	0:05	KWP/II	0.076	18.534	Oversupply
3/28/2016 23:36	0:01	KWP/II	0.001	17.509	Oversupply
3/28/2016 23:43	4:23	KWP/II	53.329	20.459	Oversupply
3/29/2016 3:50	0:07	AWE	0.243	16.780	Oversupply
3/29/2016 4:09	0:48	KWP/II	12.547	18.999	Oversupply
3/29/2016 4:19	0:34	AWE	2.508	21.000	Oversupply
3/29/2016 4:59	0:43	KWP/II	11.584	18.104	Oversupply
3/29/2016 5:02	0:32	AWE	0.311	21.000	Oversupply
3/29/2016 5:35	0:01	AWE	0.001	21.000	Oversupply
3/29/2016 5:44	0:22	KWP/II	2.639	18.198	Oversupply
3/29/2016 6:07	0:01	KWP/II	0.012	18.382	Oversupply
3/29/2016 6:09	0:01	KWP/II	0.002	18.704	Oversupply
3/29/2016 6:30	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/29/2016 6:35	0:02	BS 250	Data is not available	Data is not available	Oversupply
3/29/2016 6:35	0:01	KWP/II	0.016	19.374	Oversupply
3/29/2016 6:38	0:03	BS 250	Data is not available	Data is not available	Oversupply
3/29/2016 6:42	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/29/2016 6:56	0:06	BS 250	Data is not available	Data is not available	Oversupply
3/29/2016 6:57	0:06	KWP/II	0.094	17.518	Oversupply
3/29/2016 7:03	0:03	BS 250	Data is not available	Data is not available	Oversupply
3/29/2016 7:07	0:05	BS 250	Data is not available	Data is not available	Oversupply
3/29/2016 7:08	0:02	KWP/II	0.043	16.125	Oversupply
3/29/2016 7:14	0:04	BS 250	Data is not available	Data is not available	Oversupply
3/29/2016 7:14	0:01	KWP/II	0.020	15.590	Oversupply
3/29/2016 7:19	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/29/2016 7:24	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/29/2016 7:26	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/29/2016 8:22	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/29/2016 8:24	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/29/2016 8:24	0:01	KWP/II	0.013	15.139	Oversupply
3/29/2016 8:28	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/29/2016 8:33	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/29/2016 8:36	D:14	BS 250	Data is not available	Data is not available	Oversupply
3/29/2016 8:37	0:13	KWP/II	0.845	15.705	Oversupply
3/29/2016 8:51	0:28	BS 250	Data is not available	Data is not available	Oversupply
3/29/2016 8:51	0:28	KWP/II	1.435	17.938	Oversupply
3/29/2016 9:20	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/29/2016 9:20	0:01	KWP/II	0.031	16.572	Oversupply
3/29/2016 9:22	0:04	BS 250	Data is not available	Data is not available	Oversupply
3/29/2016 9:22	0:04	KWP/II	0.115	16.121	Oversupply
3/29/2016 9:27	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/29/2016 9:27	0:06	KWP/II	0.189	16.329	Oversupply
3/29/2016 9:29	1:02	BS 250	Data is not available	Data is not available	Oversupply
3/29/2016 9:34	0:57	KWP/II	4.821	16.198	Oversupply
3/29/2016 10:36	0:35	BS 250	Data is not available	Data is not available	Oversupply
3/29/2016 10:36	0:34	KWP/II	4.879	12.899	Oversupply
3/29/2016 10:42	0:01	AWE	0.004	18.203	Oversupply
3/29/2016 10:48	0:01	AWE	0.010	19.207	Oversupply
3/29/2016 10:59	0:01	AWE	0.013	19.517	Oversupply
3/29/2016 11:02	0:02	AWE	0.014	20.947	Oversupply
3/29/2016 11:12	0:04	BS 250	Data is not available	Data is not available	Oversupply
3/29/2016 11:12	0:25	KWP/II	1.339	14.754	Oversupply
3/29/2016 11:18	0:20	BS 250	Data is not available	Data is not available	Oversupply
3/29/2016 11:47	0:14	BS 250	Data is not available	Data is not available	Oversupply
3/29/2016 11:47	0:04	KWP/II	0.129	11.806	Oversupply
3/29/2016 11:52	0:01	KWP/II	0.012	11.561	Oversupply
3/29/2016 11:54	0:01	KWP/II	0.029	11.732	Oversupply
3/29/2016 11:58	0:03	KWP/II	0.077	10.941	Oversupply
3/29/2016 12:02	0:02	BS 250	Data is not available	Data is not available	Oversupply



Maui Curtailment Report March 2016

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
3/29/2016 12:34	0:02	BS 250	Data is not available	Data is not available	Oversupply
3/29/2016 13:08	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/29/2016 13:08	0:01	KWP/II	0.014	13.747	Oversupply
3/29/2016 13:11	0:07	BS 250	Data is not available	Data is not available	Oversupply
3/29/2016 13:14	0:03	KWP/II	0.088	14.410	Oversupply
3/29/2016 13:24	0:04	BS 250	Data is not available	Data is not available	Oversupply
3/29/2016 13:24	0:03	KWP/II	0.085	13.636	Oversupply
3/29/2016 13:29	0:03	BS 250	Data is not available	Data is not available	Oversupply
3/29/2016 13:30	0:02	KWP/II	0.052	13.818	Oversupply
3/29/2016 14:42	0:03	BS 250	Data is not available	Data is not available	Oversupply
3/29/2016 14:44	0:01	KWP/II	0.025	14.300	Oversupply
3/29/2016 14:46	0:35	BS 250	Data is not available	Data is not available	Oversupply
3/29/2016 14:46	0:18	KWP/II	0.842	15.740	Oversupply
3/29/2016 15:05	0:10	KWP/II	0.375	16.132	Oversupply
3/29/2016 15:18	0:02	KWP/II	0.058	16.247	Oversupply
3/29/2016 15:24	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/29/2016 15:24	0:04	KWP/II	0.074	15.490	Oversupply
3/29/2016 15:26	0:02	BS 250	Data is not available	Data is not available	Oversupply
3/29/2016 15:29	0:02	BS 250	Data is not available	Data is not available	Oversupply
3/29/2016 15:29	0:02	KWP/II	0.042	15.660	Oversupply
3/29/2016 15:33	0:02	BS 250	Data is not available	Data is not available	Oversupply
3/29/2016 15:34	0:01	KWP/II	0.044	15.721	Oversupply
3/29/2016 15:44	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/29/2016 15:51	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/29/2016 15:54	0:01	BS 250	Data is not available	Data is not available	Oversupply
3/29/2016 15:54	0:01	KWP/II	0.014	16.380	Oversupply
3/29/2016 15:58	0:02	BS 250	Data is not available	Data is not available	Oversupply
3/30/2016 1:54	0:06	KWP/II	0.092	1.377	Oversupply
3/30/2016 1:55	0:01	AWE	0.004	17.473	Oversupply
3/30/2016 1:57	0:01	AWE	0.022	17.843	Oversupply
3/30/2016 2:04	0:01	KWP/II	0.008	0.594	Oversupply
3/30/2016 2:09	0:02	KWP/II	0.039	1.385	Oversupply
3/30/2016 23:25	0:01	KWP	0.000	0.003	Oversupply
3/31/2016 13:52	0:01	KWP	0.000	0.005	Oversupply

Notes:
 - Curtailment for Kaheawa Wind Power ("KWP"), Makila Hydroelectric ("MH"), AAAAA Rent-A-Space Maui LTD ("5A"), Bioreal Solar, LLC ("BS"), Auwahi Wind Energy ("AWE"), Kaheawa Wind Power II ("KWPII"), Bioreal Solar 250, LLC ("BS250") may now be controlled by Maui Electric's Automatic Generation Control System ("AGC") or a Maui Electric operator-entered curtailment limit. The AGC curtailment control automatically calculates the amount of Maximum Allowable Variable Generation ("MAVG") that Maui Electric can accept into the Maui system, based on the system current available variable generation ("CAVG"), regulating reserve down requirement ("RRDR"), and available regulating reserve down ("ARRD"). Thus, the AGC MAVG - calculated is equal to CAVG less (RRDR less ARRD). Additionally, the AGC curtailment control allows the Maui Electric operator to enter an AGC MAVG value. The AGC curtailment control will employ the lesser of the AGC MAVG - calculated and AGC MAVG - entered values in the control logic.
 - The Estimated Curtailed MWH and Peak MW Curtailed are calculated with information provided by AWE, KWP, and KWPII. Maui Electric does not make any representation as to its accuracy.
 - The data to calculate the Estimated Curtailed MWH and Peak MW Curtailed is not provided by 5A, BS, BS 250 or MH.
 - Curtailment signals sent to 5A, BS, or BS250 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

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Start Date and Time	Duration	IPP Curtailed	Estimated MWh Curtailed	Peak MW Curtailed	Reasons for Curtailment
3/28/2016 11:19	0:01	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 11:27	0:03	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 11:31	0:02	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 11:35	0:02	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 11:41	0:13	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 11:55	0:02	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 11:59	0:08	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 12:09	0:04	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 12:15	0:01	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 12:18	0:01	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 12:20	0:01	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 12:22	0:01	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 12:24	0:04	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 12:32	0:01	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 12:34	0:03	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 12:40	0:02	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 12:44	0:02	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 12:47	0:06	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 12:55	0:02	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 12:59	0:06	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 13:11	0:05	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 13:17	0:04	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 13:22	0:02	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 13:30	0:02	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 13:33	0:02	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 13:36	0:05	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 13:47	0:01	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 13:49	0:01	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 13:52	0:03	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 13:58	0:02	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 14:01	0:03	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 14:06	0:01	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 14:11	0:01	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 14:14	0:02	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 14:17	0:01	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 14:19	0:06	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 14:28	0:04	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 14:37	0:02	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 14:40	0:03	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 15:09	0:01	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 15:22	0:01	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 15:31	0:01	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 15:58	0:01	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 16:17	0:01	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 16:21	0:01	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 16:24	0:01	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 16:35	0:01	LSR	Data is not available	Data is not available	Oversupply
3/28/2016 17:00	0:01	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 2016

Start Date/Time	MW output prior to start of curtailment	End Date/Time	MW output after curtailment released ¹	IPP	Reason for Curtailment
03/10/16 15:05	12.8 MW	03/10/16 18:28	12.3 MW	Tawhiri	Facility requested
03/10/16 19:57	12.8 MW	03/11/16 06:13	12.7 MW	Tawhiri	Facility requested
03/11/16 09:00	15.7 MW	03/11/16 16:21	15.8 MW	Tawhiri	Facility requested
03/11/16 17:10	15.7 MW	03/12/16 06:12	13.3 MW	Tawhiri	Facility requested

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