



June 27, 2016

FILED

2016 JUN 27 P 4:09

PUBLIC UTILITIES
COMMISSION

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

Dear Commissioners:

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

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

JEFFREY T. ONO EXECUTIVE DIRECTOR DEPARTMENT OF COMMERCE AND CONSUMER AFFAIRS DIVISION OF CONSUMER ADVOCACY P.O. Box 541 Honolulu, HI 96809	2 Copies Via Hand Delivery
GREGG J. KINKLEY, ESQ. DEPARTMENT OF THE ATTORNEY GENERAL 425 Queen Street Honolulu, Hawaii 96813 Counsel for DBEDT	1 Copy Electronically Transmitted
DANIEL W.S. LAWRENCE, ESQ. DEPARTMENT OF THE CORPORATION COUNSEL CITY AND COUNTY OF HONOLULU 530 S. King Street, Room 110 Honolulu, HI 96813 Counsel for the CITY AND COUNTY OF HONOLULU	1 Copy Electronically Transmitted
MOLLY A. STEBBINS, ESQ. WILLIAM V. BRILHANTE, JR., ESQ. DEPARTMENT OF THE CORPORATION COUNSEL COUNTY OF HAWAII 101 Aupuni Street, Suite 325 Hilo, HI 96720 Counsel for the COUNTY OF HAWAII	1 Copy Electronically Transmitted
HENRY Q CURTIS VICE PRESIDENT FOR CONSUMER ISSUES LIFE OF THE LAND P.O. Box 37158 Honolulu, HI 96837-0158	1 Copy Electronically Transmitted
WARREN S. BOLLMEIER II PRESIDENT HAWAII RENEWABLE ENERGY ALLIANCE 46-040 Konane Place, #3816 Kaneohe, HI 96744	1 Copy Electronically Transmitted

SERVICE LIST
(Docket No. 2011-0206)

DOUGLAS A. CODIGA, ESQ.
SCHLACK ITO LLLC
Topa Financial Center
745 Fort Street, Suite 1500
Honolulu, HI 96813
Counsel for BLUE PLANET FOUNDATION

1 Copy
Electronically Transmitted

ISAAC MORIWAKE, ESQ.
DAVID HENKIN, ESQ.
EARTHJUSTICE
850 Richards Street, Suite 400
Honolulu, HI 96813-4501
Counsel for HAWAII SOLAR ENERGY ASSOCIATION

1 Copy
Electronically Transmitted

RICK REED
DIRECTOR
HAWAII SOLAR ENERGY ASSOCIATION
761 Ahua Street
Honolulu, HI 96819

1 Copy
Electronically Transmitted

KENT D. MORIHARA, ESQ.
KRIS N. NAKAGAWA, ESQ.
LAUREN M. IMADA-LEE, ESQ.
TANYA M. FERNANDES, ESQ.
Moriyara Lau & Fong LLP
841 Bishop Street, Suite 400
Honolulu, Hawaii 96813
Counsel for KAUAI ISLAND UTILITY COOPERATIVE

1 Copy
Electronically Transmitted

ERIK W. KVAM
CHIEF EXECUTIVE OFFICER
ZERO EMISSIONS LEASING LLC
4188-4 Keanu Street
Honolulu, HI 96816

1 Copy
Electronically Transmitted

SANDRA-ANN Y.H. WONG, ESQ.
ATTORNEY AT LAW, A LAW CORPORATION
1050 Bishop Street, #514
Honolulu, HI 96813
Counsel for TAWHIRI POWER LLC

1 Copy
Electronically Transmitted

RILEY SAITO
73-1294 Awakea Street
Kailua-Kona, HI 96740
For SOLAR ENERGY INDUSTRIES ASSOCIATION

1 Copy
Electronically Transmitted

SERVICE LIST
(Docket No. 2011-0206)

DEAN T. YAMAMOTO, ESQ.
YAMAMOTO & SETTLE
700 Bishop Street, Suite 200
Honolulu, HI 96813
Counsel for CASTLE & COOKE HOMES HAWAII, INC.,
CASTLE & COOKE RESORTS, LLC and
LANAI SUSTAINABILITY RESEARCH, LLC

1 Copy
Electronically Transmitted

MICHAEL J. HOPPER, ESQ.
DEPUTY CORPORATION COUNSEL
DEPARTMENT OF THE CORPORATION COUNSEL
COUNTY OF MAUI
200 S. High Street
Wailuku, HI 96793
Counsel for the COUNTY OF MAUI

1 Copy
Electronically Transmitted

CURTIS SEYMOUR
SENIOR MANAGER, GOVERNMENT AFFAIRS
SUN EDISON LLC
600 Clipper Drive
Belmont, CA 94002

1 Copy
Electronically Transmitted

MONA W. CLARK, ESQ.
OFFICE OF THE COUNTY ATTORNEY
COUNTY OF KAUAI
4444 Rice Street, Suite 200
Lihue, HI 96766-1300

1 Copy
Electronically Transmitted

BRADLEY ALBERT
PRESIDENT
HAWAII PV COALITION
P.O. Box 81501
Haiku, HI 96708

1 Copy
Electronically Transmitted

HILTON H. UNEMORI
ECM, INC.
130 N. Market Street
Wailuku, HI 96793-1716
For SOUTH MAUI RENEWABLE RESOURCES, LLC

1 Copy
Electronically Transmitted

SERVICE LIST
(Docket No. 2011-0206)

SKY STANFIELD
SHUTE, MIHALY & WEINBERGER LLP
396 Hayes Street
San Francisco, CA 94102
For the INTERSTATE RENEWABLE ENERGY COUNCIL

1 Copy
Electronically Transmitted

PETE COOPER
SOLARCITY CORPORATION
REGIONAL DIRECTOR, HAWAII
599 Kahelu Street
Mililani, HI 96789

1 Copy
Electronically Transmitted

STANLEY ALLEN GRAY, SENIOR DEVELOPER
Pier 1, Bay 3
San Francisco, CA 94111
For MOLOKAI RENEWABLES LLC

1 Copy
Electronically Transmitted

ALISON SILVERSTEIN
19213 Luedtke Lane
Pflugerville, TX 78660

1 Copy
Electronically Transmitted

BRENDAN KIRBY
12011 SW Pineapple Court
Palm City, FL 34990

1 Copy
Electronically Transmitted

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 May 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 May 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:

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

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 May 31, 2016):

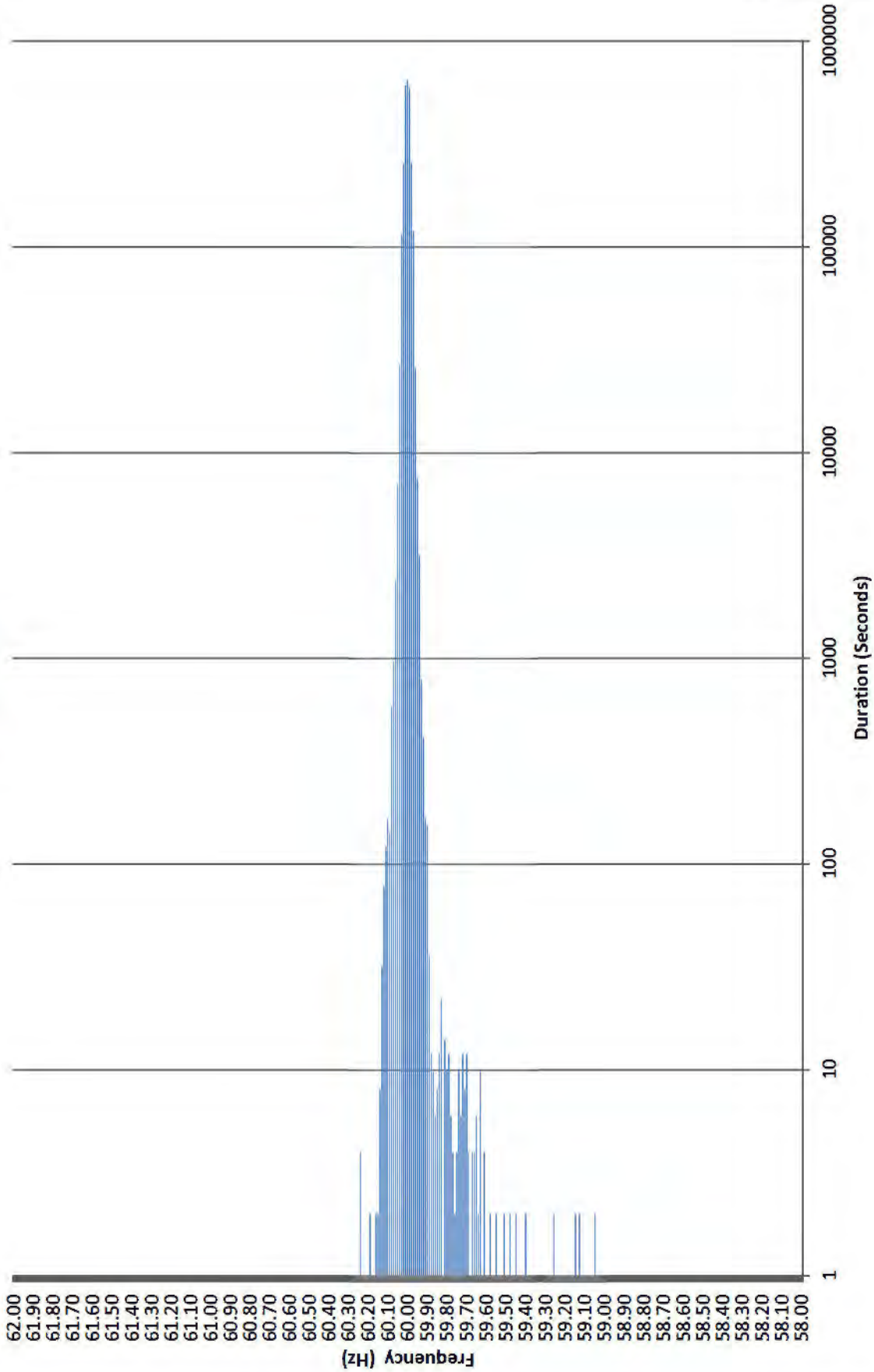
3a) Tabulation of each curtailment event for each resource including the starting date and time, duration, megawatt hours curtailed, peak MW curtailed, and reason for curtailment:

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

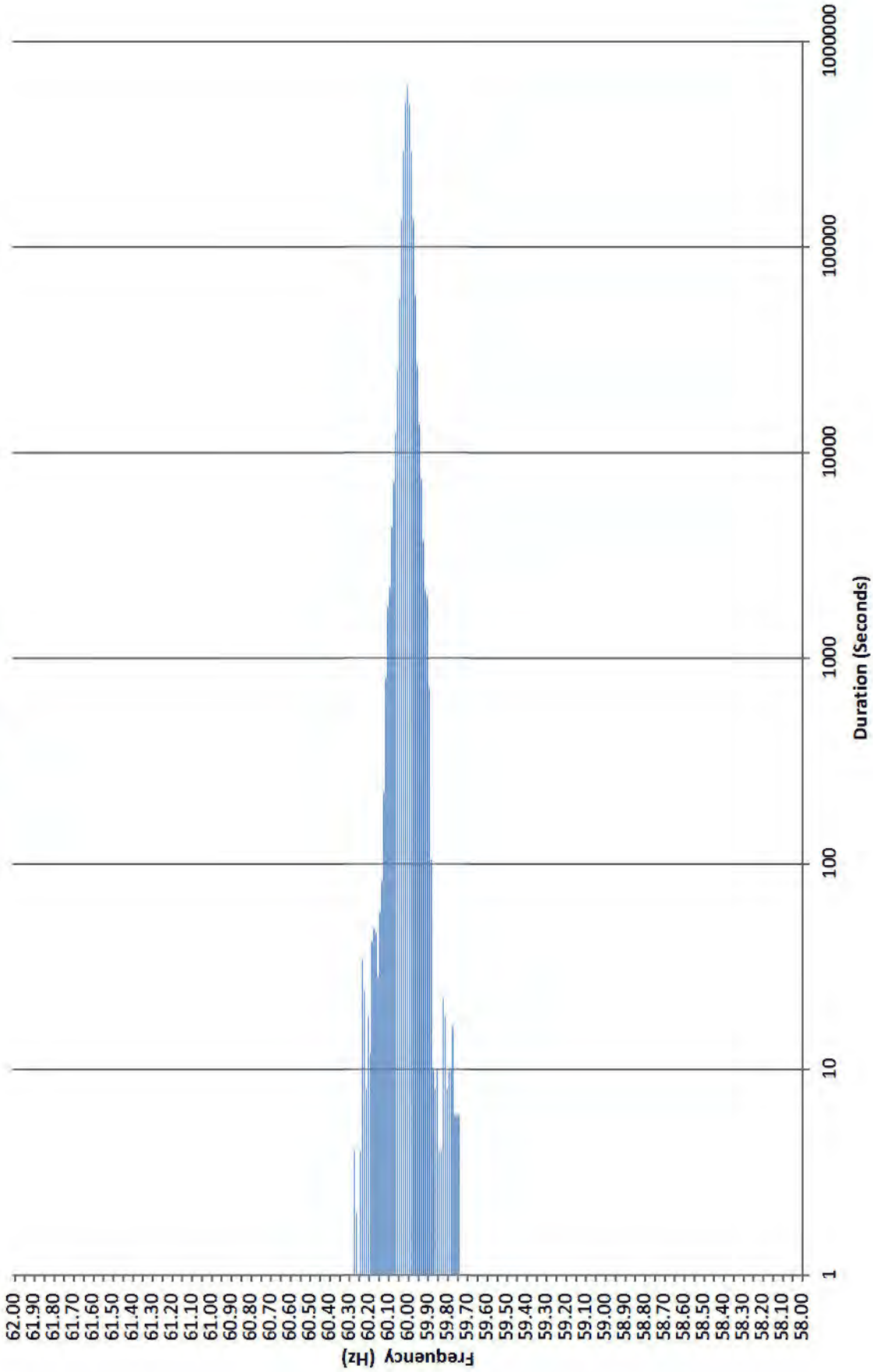
3b) Total MWh of non-dispatchable renewable resources curtailed for the month:

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.

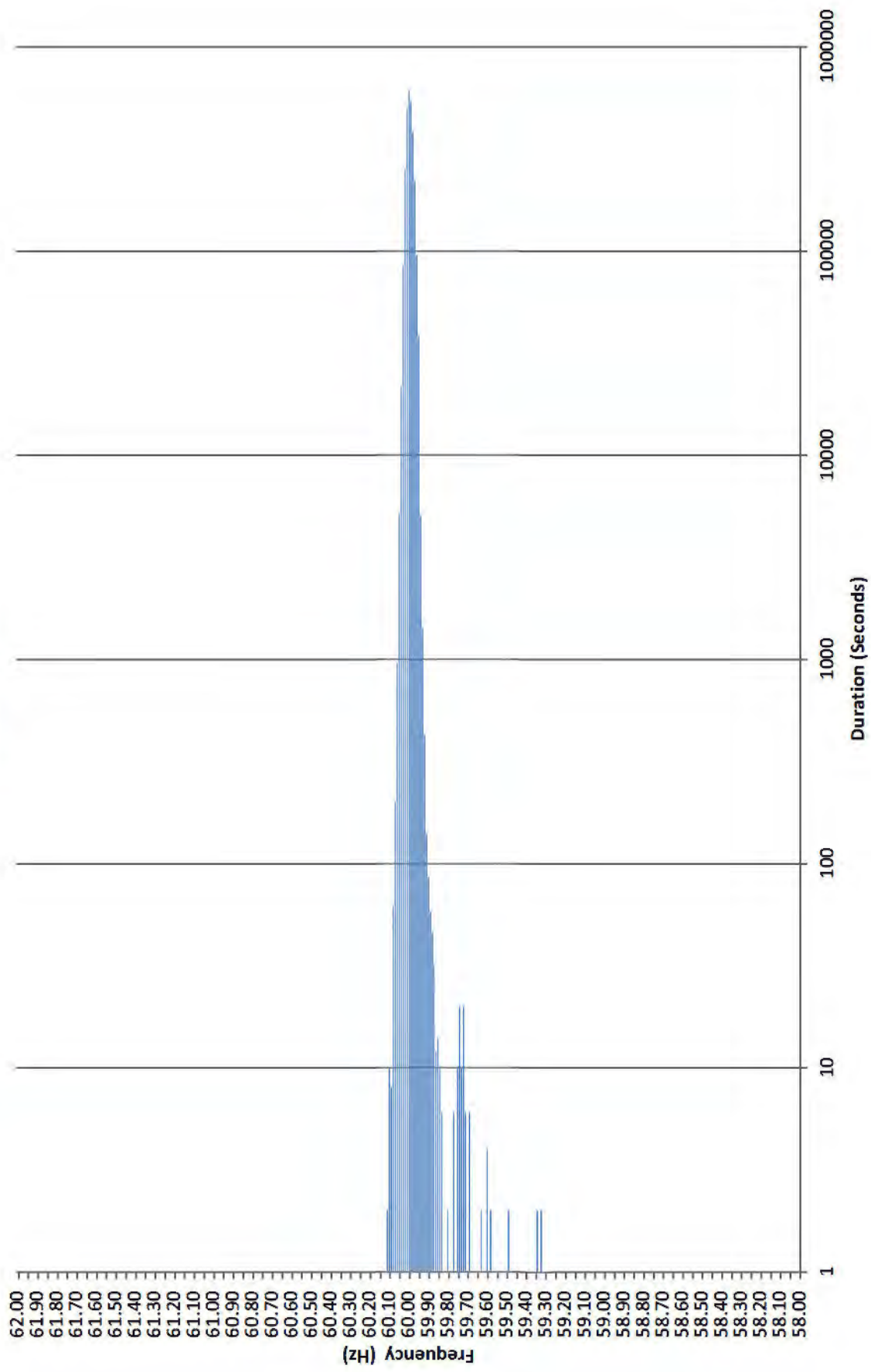
**Frequency Distribution Plot - Hawaiian Electric
May 2016**



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



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



Hawaiian Electric Frequency Excursion Statistics May 2016		
Data Rounded to the nearest	<59.95 Hz	>60.05 Hz
Number of Excursions	607	562
Maximum Duration (sec)	364	348
Maximum Deviation (Hz)	59.048	60.245
Total Duration of Excursions (sec)	7540	6458

Maui Electric Frequency Excursion Statistics May 2016		
	<59.95 Hz	>60.05 Hz
Number of Excursions	7165	5908
Maximum Duration (sec)	612	398
Maximum Deviation (Hz)	59.7413	60.266
Total Duration of Excursions (sec)	40752	38950

Hawai'i Electric Light Frequency Excursion Statistics May 2016		
	<59.95 Hz	>60.05 Hz
Number of Excursions	5109	705
Maximum Duration (sec)	126	40
Maximum Deviation (Hz)	56.551	60.106
Total Duration of Excursions (sec)	24642	2834

Hawaiian Electric Curtailment Report May 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
05/14/16 06:57	0.0	0.20	05/14/16 08:53	0	*	KREP	System constraints
05/14/16 17:49	0.0	0.20	05/14/16 18:53	0	*	KREP	System constraints
05/17/16 07:17	0.0	22.00	05/17/16 09:13	0	*	KWF	System constraints
05/17/16 07:33	0.0	12.00	05/17/16 08:58	0	*	Makai	System constraints
05/17/16 14:59	0.0	19.90	05/17/16 15:32	0	*	KWF	System constraints
05/17/16 15:01	0.0	11.00	05/17/16 15:32	0	*	Makai	System constraints
05/26/16 08:03	0.0	3.20	05/26/16 14:40	0	*	Mauka	Facility Requested
05/26/16 08:03	0.0	0.10	05/26/16 14:40	0	*	Makai	Facility Requested
05/27/16 17:54	0.0	5.40	05/27/16 18:11	0	*	KWF	System constraints
05/27/16 18:03	0.0	0.00	05/27/16 18:12	0	*	Makai	System constraints
05/31/16 07:54	0.0	2.10	05/31/16 10:23	0	*	KLS2	System constraints

KLS2 = Kalaeloa Solar 2 PV Farm

KREP = Kalaeloa Renewable Energy Park

KWF = Kahuku Wind Farm

Makai = Kawaiiloa Makai Wind Farm

Mauka = Kawaiiloa Mauka Wind Farm

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

* Data has not been provided by IPP.



Maui Curtailment Report

May 2016

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
5/1/2016 0:00	0:49	KWP/II	2.878	20.708	Oversupply
5/1/2016 0:54	1:00	KWP/II	9.521	20.708	Oversupply
5/1/2016 1:56	0:01	KWP/II	0.008	15.128	Oversupply
5/1/2016 1:59	2:55	KWP/II	25.115	20.708	Oversupply
5/1/2016 4:56	0:11	KWP/II	0.163	20.708	Oversupply
5/1/2016 5:10	0:08	KWP/II	0.024	20.708	Oversupply
5/1/2016 5:19	0:01	KWP/II	0.002	20.708	Oversupply
5/1/2016 5:22	0:02	KWP/II	0.024	20.708	Oversupply
5/1/2016 5:27	0:02	KWP/II	0.010	20.708	Oversupply
5/1/2016 5:35	0:03	KWP/II	0.013	20.708	Oversupply
5/1/2016 6:38	0:01	BS 250	Data is not available	Data is not available	Oversupply
5/1/2016 6:41	0:01	BS 250	Data is not available	Data is not available	Oversupply
5/1/2016 6:56	0:01	BS 250	Data is not available	Data is not available	Oversupply
5/1/2016 6:57	8:18	KWP/II	91.512	20.890	Oversupply
5/1/2016 6:58	0:42	BS 250	Data is not available	Data is not available	Oversupply
5/1/2016 7:41	0:04	BS 250	Data is not available	Data is not available	Oversupply
5/1/2016 7:48	5:28	BS 250	Data is not available	Data is not available	Oversupply
5/1/2016 9:25	0:01	AWE	0.004	20.323	Oversupply
5/1/2016 9:30	0:01	AWE	0.000	19.753	Oversupply
5/1/2016 10:11	0:01	AWE	0.000	20.107	Oversupply
5/1/2016 10:34	0:02	AWE	0.005	19.080	Oversupply
5/1/2016 10:38	0:01	AWE	0.014	18.640	Oversupply
5/1/2016 10:40	0:01	AWE	0.019	19.420	Oversupply
5/1/2016 10:42	0:03	AWE	0.021	18.590	Oversupply
5/1/2016 10:48	0:01	AWE	0.003	17.473	Oversupply
5/1/2016 10:51	0:01	AWE	0.020	18.443	Oversupply
5/1/2016 10:54	0:38	AWE	1.995	20.137	Oversupply
5/1/2016 11:33	0:04	AWE	0.076	18.807	Oversupply
5/1/2016 11:38	0:02	AWE	0.019	18.900	Oversupply
5/1/2016 11:44	0:01	AWE	0.002	17.553	Oversupply
5/1/2016 11:47	0:04	AWE	0.181	19.887	Oversupply
5/1/2016 11:57	0:12	AWE	0.324	20.323	Oversupply
5/1/2016 12:16	0:03	AWE	0.014	20.713	Oversupply
5/1/2016 12:22	0:01	AWE	0.007	19.970	Oversupply
5/1/2016 12:24	0:02	AWE	0.004	20.400	Oversupply
5/1/2016 12:28	0:01	AWE	0.001	20.127	Oversupply
5/1/2016 12:30	0:02	AWE	0.008	19.843	Oversupply
5/1/2016 12:36	0:01	AWE	0.000	18.037	Oversupply
5/1/2016 12:42	0:01	AWE	0.002	18.833	Oversupply
5/1/2016 12:44	0:02	AWE	0.011	19.430	Oversupply
5/1/2016 12:47	0:05	AWE	0.038	20.170	Oversupply
5/1/2016 12:56	0:01	AWE	0.005	19.040	Oversupply
5/1/2016 12:58	0:02	AWE	0.003	20.480	Oversupply
5/1/2016 13:15	1:57	BS 250	Data is not available	Data is not available	Oversupply
5/1/2016 13:15	2:32	KWP/II	23.012	20.708	Oversupply
5/1/2016 15:13	0:27	BS 250	Data is not available	Data is not available	Oversupply
5/1/2016 15:41	0:08	BS 250	Data is not available	Data is not available	Oversupply
5/1/2016 15:48	0:11	BS 250	Data is not available	Data is not available	Oversupply
5/1/2016 15:48	0:11	KWP/II	0.240	20.703	Oversupply
5/1/2016 16:00	0:02	BS 250	Data is not available	Data is not available	Oversupply
5/1/2016 16:00	0:01	KWP/II	0.013	20.871	Oversupply
5/1/2016 16:02	0:01	KWP/II	0.001	20.872	Oversupply
5/2/2016 1:40	2:01	KWP/II	7.601	19.211	Oversupply
5/2/2016 3:44	0:27	KWP/II	0.732	19.211	Oversupply
5/2/2016 7:52	0:03	BS 250	Data is not available	Data is not available	Oversupply
5/2/2016 7:53	0:02	KWP/II	0.003	20.705	Oversupply
5/2/2016 7:56	0:01	BS 250	Data is not available	Data is not available	Oversupply
5/2/2016 8:21	0:01	BS 250	Data is not available	Data is not available	Oversupply
5/2/2016 8:23	0:18	BS 250	Data is not available	Data is not available	Oversupply
5/2/2016 8:23	0:18	KWP/II	0.917	20.890	Oversupply
5/2/2016 8:41	0:17	KWP/II	0.906	20.708	Oversupply
5/2/2016 8:42	0:15	BS 250	Data is not available	Data is not available	Oversupply
5/2/2016 9:01	0:02	BS 250	Data is not available	Data is not available	Oversupply
5/2/2016 9:01	0:02	KWP/II	0.000	20.640	Oversupply
5/2/2016 9:11	0:44	BS 250	Data is not available	Data is not available	Oversupply
5/2/2016 9:12	0:43	KWP/II	3.254	20.708	Oversupply
5/2/2016 9:38	0:03	KWP/II	0.014	20.703	Oversupply
5/2/2016 10:00	0:02	BS 250	Data is not available	Data is not available	Oversupply
5/2/2016 10:05	0:04	BS 250	Data is not available	Data is not available	Oversupply
5/2/2016 10:06	0:07	KWP/II	0.039	20.708	Oversupply
5/2/2016 10:11	0:01	BS 250	Data is not available	Data is not available	Oversupply
5/2/2016 10:16	0:04	BS 250	Data is not available	Data is not available	Oversupply
5/2/2016 10:16	0:11	KWP/II	0.133	20.692	Oversupply
5/2/2016 10:21	0:08	BS 250	Data is not available	Data is not available	Oversupply
5/2/2016 10:38	0:52	KWP/II	3.434	20.701	Oversupply
5/2/2016 10:39	0:51	BS 250	Data is not available	Data is not available	Oversupply
5/2/2016 11:42	0:03	BS 250	Data is not available	Data is not available	Oversupply
5/2/2016 11:42	0:03	KWP/II	0.041	20.515	Oversupply
5/2/2016 11:47	0:24	KWP/II	1.091	20.604	Oversupply
5/2/2016 11:48	0:23	BS 250	Data is not available	Data is not available	Oversupply
5/2/2016 12:32	0:01	BS 250	Data is not available	Data is not available	Oversupply
5/2/2016 12:56	0:08	BS 250	Data is not available	Data is not available	Oversupply
5/2/2016 12:57	0:07	KWP/II	0.229	20.697	Oversupply
5/2/2016 13:08	0:02	BS 250	Data is not available	Data is not available	Oversupply
5/2/2016 13:08	0:02	KWP/II	0.019	19.200	Oversupply
5/2/2016 13:11	0:03	BS 250	Data is not available	Data is not available	Oversupply
5/2/2016 13:12	0:02	KWP/II	0.016	19.200	Oversupply
5/2/2016 13:28	0:04	BS 250	Data is not available	Data is not available	Oversupply
5/2/2016 13:30	0:02	KWP/II	0.023	19.188	Oversupply
5/2/2016 13:33	0:03	BS 250	Data is not available	Data is not available	Oversupply
5/2/2016 13:33	0:03	KWP/II	0.006	19.000	Oversupply
5/2/2016 14:31	0:02	BS 250	Data is not available	Data is not available	Oversupply
5/2/2016 14:31	0:01	KWP/II	0.001	20.647	Oversupply
5/2/2016 14:33	0:01	KWP/II	0.003	20.694	Oversupply
5/2/2016 14:36	0:02	BS 250	Data is not available	Data is not available	Oversupply
5/2/2016 14:36	0:03	KWP/II	0.019	20.698	Oversupply
5/3/2016 2:09	0:01	KWP/II	0.001	19.211	Oversupply
5/3/2016 3:22	0:40	KWP/II	1.580	19.211	Oversupply
5/3/2016 4:08	0:12	KWP/II	0.670	19.211	Oversupply
5/3/2016 7:49	0:01	BS 250	Data is not available	Data is not available	Oversupply
5/3/2016 8:02	0:04	BS 250	Data is not available	Data is not available	Oversupply
5/3/2016 8:02	0:05	KWP/II	0.035	20.705	Oversupply
5/3/2016 8:17	0:02	KWP/II	0.000	20.704	Oversupply
5/3/2016 8:18	0:01	BS 250	Data is not available	Data is not available	Oversupply
5/3/2016 8:20	0:01	BS 250	Data is not available	Data is not available	Oversupply



Maui Curtailment Report

May 2016

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
5/3/2016 8:20	0:59	KWP/II	8.058	20.703	Oversupply
5/3/2016 8:22	0:57	BS 250	Data is not available	Data is not available	Oversupply
5/3/2016 8:20	0:01	BS 250	Data is not available	Data is not available	Oversupply
5/3/2016 8:23	0:01	BS 250	Data is not available	Data is not available	Oversupply
5/3/2016 8:55	0:01	BS 250	Data is not available	Data is not available	Oversupply
5/3/2016 8:55	0:01	KWP/II	0.014	17.778	Oversupply
5/3/2016 10:39	0:03	BS 250	Data is not available	Data is not available	Oversupply
5/3/2016 10:52	0:02	BS 250	Data is not available	Data is not available	Oversupply
5/3/2016 10:52	0:02	KWP/II	0.057	17.379	Oversupply
5/3/2016 10:58	0:02	BS 250	Data is not available	Data is not available	Oversupply
5/3/2016 10:58	0:02	KWP/II	0.131	18.520	Oversupply
5/3/2016 11:58	0:04	BS 250	Data is not available	Data is not available	Oversupply
5/3/2016 11:58	0:04	KWP/II	0.248	17.171	Oversupply
5/3/2016 12:13	0:12	BS 250	Data is not available	Data is not available	Oversupply
5/3/2016 12:13	0:12	KWP/II	1.541	18.017	Oversupply
5/3/2016 12:28	0:05	BS 250	Data is not available	Data is not available	Oversupply
5/3/2016 12:28	0:05	KWP/II	0.514	18.285	Oversupply
5/3/2016 12:55	0:05	BS 250	Data is not available	Data is not available	Oversupply
5/3/2016 12:57	0:03	KWP/II	0.050	17.070	Oversupply
5/3/2016 13:01	0:12	KWP/II	1.048	19.315	Oversupply
5/3/2016 13:02	0:07	BS 250	Data is not available	Data is not available	Oversupply
5/3/2016 13:10	0:01	BS 250	Data is not available	Data is not available	Oversupply
5/3/2016 13:12	0:01	BS 250	Data is not available	Data is not available	Oversupply
5/3/2016 13:18	0:04	BS 250	Data is not available	Data is not available	Oversupply
5/3/2016 13:18	0:04	KWP/II	0.230	17.582	Oversupply
5/3/2016 13:40	0:01	BS 250	Data is not available	Data is not available	Oversupply
5/3/2016 22:58	0:03	KWP/II	0.057	19.380	Oversupply
5/3/2016 23:06	0:03	KWP/II	0.037	19.592	Oversupply
5/3/2016 23:23	0:05	KWP/II	0.077	20.124	Oversupply
5/3/2016 23:43	0:03	KWP/II	0.047	20.247	Oversupply
5/4/2016 0:14	0:08	KWP/II	0.342	18.457	Oversupply
5/4/2016 0:23	0:03	KWP/II	0.082	18.598	Oversupply
5/4/2016 0:28	0:01	KWP/II	0.033	15.345	Oversupply
5/4/2016 0:43	0:05	KWP/II	0.125	11.908	Oversupply
5/4/2016 0:49	0:01	KWP/II	0.025	11.489	Oversupply
5/4/2016 0:53	0:07	KWP/II	0.319	11.919	Oversupply
5/4/2016 1:02	0:21	KWP/II	0.883	14.335	Oversupply
5/4/2016 1:27	0:02	KWP/II	0.088	10.011	Oversupply
5/4/2016 1:30	0:02	KWP/II	0.091	9.971	Oversupply
5/4/2016 1:50	0:03	KWP/II	0.049	9.407	Oversupply
5/4/2016 1:54	0:01	KWP/II	0.013	9.289	Oversupply
5/4/2016 2:00	0:03	KWP/II	0.062	10.787	Oversupply
5/4/2016 2:13	0:19	KWP/II	1.334	18.252	Oversupply
5/4/2016 2:33	0:31	KWP/II	3.302	16.494	Oversupply
5/4/2016 3:05	0:18	KWP/II	1.514	18.885	Oversupply
5/4/2016 3:26	0:01	KWP/II	0.011	16.380	Oversupply
5/4/2016 3:43	0:11	KWP/II	0.554	16.994	Oversupply
5/4/2016 3:55	0:01	KWP/II	0.045	13.997	Oversupply
5/4/2016 4:26	0:05	KWP/II	0.134	15.173	Oversupply
5/4/2016 7:24	0:01	BS 250	Data is not available	Data is not available	Oversupply
5/4/2016 7:37	0:28	KWP/II	3.271	20.437	Oversupply
5/4/2016 7:38	0:25	BS 250	Data is not available	Data is not available	Oversupply
5/4/2016 8:04	0:02	BS 250	Data is not available	Data is not available	Oversupply
5/4/2016 8:04	0:01	KWP/II	0.000	19.923	Oversupply
5/4/2016 8:08	0:11	BS 250	Data is not available	Data is not available	Oversupply
5/4/2016 8:08	0:04	KWP/II	0.379	20.240	Oversupply
5/4/2016 22:00	0:05	KWP/II	0.147	12.288	Oversupply
5/4/2016 22:30	0:10	KWP/II	0.385	17.974	Oversupply
5/4/2016 22:47	0:57	KWP/II	6.583	20.537	Oversupply
5/5/2016 0:03	0:07	KWP/II	0.305	18.705	Oversupply
5/5/2016 0:33	1:28	KWP/II	5.705	19.047	Oversupply
5/5/2016 2:00	0:58	KWP/II	8.172	18.482	Oversupply
5/5/2016 2:01	0:01	AWE	0.000	0.007	Oversupply
5/5/2016 2:58	0:08	KWP/II	0.248	18.155	Oversupply
5/5/2016 3:05	0:01	KWP/II	0.026	14.900	Oversupply
5/5/2016 3:41	0:01	KWP/II	0.005	8.784	Oversupply
5/5/2016 6:16	0:01	KWP/II	0.000	0.001	System constraint
5/5/2016 8:33	0:01	BS 250	Data is not available	Data is not available	System constraint
5/5/2016 8:33	0:01	AWE	0.014	17.317	System constraint
5/5/2016 8:38	4:02	BS 250	Data is not available	Data is not available	System constraint
5/5/2016 8:41	3:21	AWE	28.061	21.000	System constraint
5/5/2016 10:00	3:05	KWP/II	4.988	3.354	System constraint
5/5/2016 12:03	1:10	AWE	2.938	20.730	System constraint
5/5/2016 13:15	0:02	KWP/II	0.048	1.945	System constraint
5/8/2016 9:56	1:56	KWP/II	12.100	19.210	System constraint
5/8/2016 11:53	0:37	KWP/II	2.505	19.211	System constraint
5/8/2016 12:34	0:01	KWP/II	0.001	17.710	System constraint
5/8/2016 12:36	0:01	KWP/II	0.004	17.701	System constraint
5/8/2016 12:41	0:02	KWP/II	0.031	17.705	System constraint
5/8/2016 14:59	0:01	AWE	0.000	0.010	Oversupply
5/8/2016 15:46	0:01	AWE	0.000	0.003	Oversupply
5/8/2016 16:22	0:01	AWE	0.000	0.007	Oversupply
5/8/2016 23:31	4:28	KWP/II	51.880	17.712	Oversupply
5/9/2016 2:50:00	0:01	MH	Data is not available	Data is not available	Oversupply
5/9/2016 3:02:00	0:01	MH	Data is not available	Data is not available	Oversupply
5/9/2016 3:14:00	0:01	MH	Data is not available	Data is not available	Oversupply
5/9/2016 3:16:00	0:01	MH	Data is not available	Data is not available	Oversupply
5/9/2016 3:21:00	0:01	MH	Data is not available	Data is not available	Oversupply
5/9/2016 3:26:00	0:01	MH	Data is not available	Data is not available	Oversupply
5/9/2016 3:33:00	0:01	MH	Data is not available	Data is not available	Oversupply
5/9/2016 3:38:00	0:01	MH	Data is not available	Data is not available	Oversupply
5/9/2016 3:37:00	0:02	MH	Data is not available	Data is not available	Oversupply
5/9/2016 3:43:00	0:04	MH	Data is not available	Data is not available	Oversupply
5/9/2016 4:01	1:38	KWP/II	12.526	17.713	Oversupply
5/9/2016 5:40	0:01	KWP/II	0.011	17.679	Oversupply
5/9/2016 10:51	0:07	KWP/II	0.142	17.682	Oversupply
5/9/2016 11:00	0:14	KWP/II	0.720	17.701	Oversupply
5/9/2016 11:15	0:01	KWP/II	0.038	17.611	Oversupply
5/9/2016 11:19	0:04	KWP/II	0.091	17.437	Oversupply
5/9/2016 11:43	0:30	KWP/II	1.529	17.711	Oversupply
5/9/2016 11:46	0:01	AWE	0.000	0.007	Oversupply
5/9/2016 12:15	0:01	KWP/II	0.007	17.704	Oversupply
5/9/2016 12:17	0:01	KWP/II	0.001	17.707	Oversupply
5/9/2016 12:24	0:01	AWE	0.000	0.007	Oversupply
5/9/2016 12:25	0:49	KWP/II	4.861	17.714	Oversupply



Maui Curtailment Report

May 2016

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
5/9/2016 13:15	0:01	KWP/II	0.005	17.595	Oversupply
5/9/2016 13:17	0:01	KWP/II	0.018	17.638	Oversupply
5/9/2016 13:36	0:01	KWP/II	0.013	17.616	Oversupply
5/9/2016 16:58	0:32	KWP/II	4.282	20.890	Oversupply
5/9/2016 17:42	0:01	KWP/II	0.008	20.644	Oversupply
5/9/2016 23:02	6:08	KWP/II	58.710	20.708	Oversupply
5/10/2016 7:50	0:01	AW/E	0.000	0.003	Oversupply
5/10/2016 10:25	0:10	KWP/II	0.300	19.724	Oversupply
5/10/2016 10:37	0:08	KWP/II	0.379	19.720	Oversupply
5/10/2016 10:52	0:51	KWP/II	3.448	20.002	Oversupply
5/10/2016 12:57	0:09	KWP/II	0.284	20.520	Oversupply
5/10/2016 13:08	0:03	KWP/II	0.105	20.613	Oversupply
5/10/2016 13:15	0:13	KWP/II	0.507	20.657	Oversupply
5/10/2016 15:49	0:04	KWP/II	0.042	20.481	Oversupply
5/10/2016 18:09	0:01	KWP/II	0.009	20.492	Oversupply
5/10/2016 21:35	0:01	AW/E	0.000	0.010	Oversupply
5/11/2016 0:15	0:07	KWP/II	0.071	20.187	Oversupply
5/11/2016 0:23	0:39	KWP/II	1.603	20.188	Oversupply
5/11/2016 1:20	4:35	KWP/II	24.022	20.618	Oversupply
5/11/2016 6:16	0:05	KWP/II	0.113	19.837	Oversupply
5/11/2016 9:22	0:08	KWP/II	0.113	20.458	Oversupply
5/11/2016 11:27	0:02	KWP/II	0.058	17.981	Oversupply
5/12/2016 13:41	0:02	KWP/II	0.043	14.013	Oversupply
5/12/2016 13:44	0:01	KWP/II	0.008	13.030	Oversupply
5/13/2016 18:30	0:01	AW/E	0.000	0.007	Oversupply
5/15/2016 23:13	0:01	KWP/II	0.000	0.001	Oversupply
5/16/2016 4:08	0:02	KWP/II	0.025	2.494	Oversupply
5/16/2016 4:10	0:05	AW/E	0.125	21.000	Oversupply
5/16/2016 4:12	0:01	KWP/II	0.034	2.028	Oversupply
5/16/2016 7:30	0:53	KWP/II	5.306	17.585	Oversupply
5/16/2016 9:14	0:03	KWP/II	0.077	11.581	Oversupply
5/16/2016 9:18	0:07	KWP/II	0.280	12.026	Oversupply
5/16/2016 9:26	0:58	KWP/II	6.062	18.693	Oversupply
5/16/2016 10:23	0:12	KWP/II	0.688	18.147	Oversupply
5/16/2016 10:38	2:48	KWP/II	28.293	18.958	Oversupply
5/16/2016 11:38	0:02	AW/E	0.002	21.000	Oversupply
5/16/2016 11:41	0:01	AW/E	0.001	21.000	Oversupply
5/16/2016 11:47	0:01	AW/E	0.002	21.000	Oversupply
5/16/2016 11:56	0:01	AW/E	0.002	21.000	Oversupply
5/16/2016 12:47	0:03	AW/E	0.006	21.000	Oversupply
5/16/2016 12:52	0:03	AW/E	0.014	21.000	Oversupply
5/16/2016 12:56	0:20	AW/E	0.400	21.000	Oversupply
5/16/2016 13:19	0:01	AW/E	0.002	21.000	Oversupply
5/16/2016 13:26	0:01	AW/E	0.002	20.913	Oversupply
5/16/2016 13:26	2:49	KWP/II	30.280	19.211	Oversupply
5/16/2016 13:29	0:02	AW/E	0.030	19.400	Oversupply
5/16/2016 13:33	0:07	AW/E	0.009	21.000	Oversupply
5/16/2016 13:44	0:02	AW/E	0.001	21.000	Oversupply
5/16/2016 14:22	0:07	AW/E	0.075	21.000	Oversupply
5/16/2016 14:34	0:05	AW/E	0.011	21.000	Oversupply
5/16/2016 18:17	0:09	KWP/II	0.144	20.708	Oversupply
5/16/2016 18:29	0:17	KWP/II	0.307	20.708	Oversupply
5/16/2016 18:47	0:01	KWP/II	0.006	20.708	Oversupply
5/16/2016 21:53	6:13	KWP/II	101.800	20.708	Oversupply
5/16/2016 22:50	0:04	AW/E	0.011	21.000	Oversupply
5/17/2016 0:07	1:08	AW/E	3.392	21.000	Oversupply
5/17/2016 1:14	0:05	AW/E	0.007	21.000	Oversupply
5/17/2016 1:20	0:02	AW/E	0.002	21.000	Oversupply
5/17/2016 1:24	0:02	AW/E	0.005	21.000	Oversupply
5/17/2016 1:34	0:08	AW/E	0.083	21.000	Oversupply
5/17/2016 1:41	1:04	AW/E	2.543	21.000	Oversupply
5/17/2016 2:51	0:01	AW/E	0.001	21.000	Oversupply
5/17/2016 2:53	0:12	AW/E	0.148	21.000	Oversupply
5/17/2016 3:06	0:03	AW/E	0.038	18.813	Oversupply
5/17/2016 3:10	0:02	AW/E	0.020	19.610	Oversupply
5/17/2016 3:20	0:25	AW/E	1.602	21.000	Oversupply
5/17/2016 3:36	0:02	AW/E	0.002	21.000	Oversupply
5/17/2016 4:01	0:01	AW/E	0.002	21.000	Oversupply
5/17/2016 4:10	1:10	KWP/II	11.507	18.761	Oversupply
5/17/2016 4:15	0:01	AW/E	0.001	21.000	Oversupply
5/17/2016 4:38	0:02	AW/E	0.003	21.000	Oversupply
5/17/2016 4:41	0:12	AW/E	0.212	21.000	Oversupply
5/17/2016 4:56	0:01	AW/E	0.000	21.000	Oversupply
5/17/2016 4:57	0:02	AW/E	0.007	21.000	Oversupply
5/17/2016 5:01	0:03	AW/E	0.004	21.000	Oversupply
5/17/2016 5:05	0:12	AW/E	0.025	21.000	Oversupply
5/17/2016 5:22	0:35	KWP/II	4.801	19.927	Oversupply
5/17/2016 6:59	0:48	KWP/II	3.628	19.500	Oversupply
5/17/2016 7:36	0:07	KWP/II	0.488	11.396	Oversupply
5/17/2016 10:34	0:01	AW/E	0.001	21.000	Oversupply
5/17/2016 10:39	0:02	KWP/II	0.037	3.982	Oversupply
5/17/2016 10:38	0:02	AW/E	0.003	21.000	Oversupply
5/17/2016 10:47	0:03	AW/E	0.029	21.000	Oversupply
5/17/2016 10:47	0:03	KWP/II	0.067	3.832	Oversupply
5/17/2016 10:52	0:02	KWP/II	0.066	5.178	Oversupply
5/17/2016 10:56	0:01	KWP/II	0.010	4.242	Oversupply
5/17/2016 11:00	0:01	AW/E	0.001	21.000	Oversupply
5/17/2016 11:00	0:03	KWP/II	0.182	7.372	Oversupply
5/17/2016 11:42	0:02	AW/E	0.003	21.000	Oversupply
5/17/2016 11:43	0:01	KWP/II	0.004	4.118	Oversupply
5/17/2016 11:46	0:01	KWP/II	0.036	8.081	Oversupply
5/17/2016 11:48	0:01	AW/E	0.001	21.000	Oversupply
5/17/2016 12:39	0:02	KWP/II	0.026	8.467	Oversupply
5/17/2016 12:58	0:13	KWP/II	0.589	13.948	Oversupply
5/17/2016 13:17	0:02	KWP/II	0.062	11.916	Oversupply
5/17/2016 13:39	1:18	KWP/II	10.419	18.900	Oversupply
5/17/2016 15:08	0:01	KWP/II	0.011	17.712	Oversupply
5/17/2016 19:47	0:04	KWP/II	0.040	20.192	Oversupply
5/17/2016 22:46	2:34	KWP/II	20.452	20.708	Oversupply
5/18/2016 1:20	0:02	KWP/II	0.028	12.487	Oversupply
5/18/2016 1:39	0:02	KWP/II	0.076	12.304	Oversupply
5/18/2016 1:50	0:02	KWP/II	0.063	4.698	Oversupply
5/18/2016 2:03	0:52	KWP/II	8.421	18.603	Oversupply
5/18/2016 2:33	0:19	AW/E	0.324	20.940	Oversupply
5/18/2016 2:58	1:43	KWP/II	21.396	19.400	Oversupply



Maui Curtailment Report

May 2016

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
5/18/2016 3:51	0:02	AWE	0.048	17.787	Oversupply
5/18/2016 3:54	0:01	AWE	0.015	18.283	Oversupply
5/18/2016 3:57	0:02	AWE	0.003	18.457	Oversupply
5/18/2016 4:01	0:02	AWE	0.057	18.137	Oversupply
5/18/2016 4:04	0:12	AWE	0.486	17.260	Oversupply
5/18/2016 4:30	0:05	AWE	0.117	19.010	Oversupply
5/18/2016 5:28	0:01	KWPPI	0.000	14.001	Oversupply
5/18/2016 5:30	0:01	KWPPI	0.003	14.520	Oversupply
5/18/2016 0:24	0:08	KWPPI	0.238	10.381	Oversupply
5/18/2016 0:55	0:02	KWPPI	0.177	18.170	Oversupply
5/18/2016 1:03	0:05	KWPPI	0.389	19.915	Oversupply
5/18/2016 1:12	1:39	KWPPI	20.827	20.608	Oversupply
5/18/2016 2:30	0:03	AWE	0.077	18.907	Oversupply
5/18/2016 2:35	0:01	AWE	0.014	18.847	Oversupply
5/18/2016 2:43	0:01	AWE	0.014	18.387	Oversupply
5/18/2016 2:45	0:01	AWE	0.005	18.607	Oversupply
5/18/2016 2:52	0:08	AWE	0.187	20.110	Oversupply
5/18/2016 2:52	1:48	KWPPI	23.700	18.259	Oversupply
5/18/2016 2:59	0:08	AWE	0.087	19.200	Oversupply
5/18/2016 3:33	1:02	AWE	2.681	21.000	Oversupply
5/18/2016 4:42	0:18	KWPPI	1.788	13.300	Oversupply
5/18/2016 4:55	0:01	AWE	0.002	20.933	Oversupply
5/18/2016 5:01	0:03	KWPPI	0.003	9.805	Oversupply
5/18/2016 5:05	0:01	KWPPI	0.026	7.731	Oversupply
5/18/2016 5:40	0:18	KWPPI	1.115	18.388	Oversupply
5/18/2016 5:57	0:04	KWPPI	0.081	11.027	Oversupply
5/18/2016 6:02	0:01	KWPPI	0.011	11.588	Oversupply
5/18/2016 6:08	0:07	KWPPI	0.330	15.881	Oversupply
5/18/2016 6:21	0:07	KWPPI	0.178	15.218	Oversupply
5/18/2016 6:32	0:03	KWPPI	0.081	13.881	Oversupply
5/18/2016 8:39	0:01	KWPPI	0.033	12.272	Oversupply
5/18/2016 8:42	0:02	KWPPI	0.065	15.154	Oversupply
5/18/2016 8:48	0:01	KWPPI	0.040	18.778	Oversupply
5/18/2016 8:55	0:01	KWPPI	0.015	18.247	Oversupply
5/19/2016 12:06	0:15	KWPPI	0.980	9.650	Oversupply
5/19/2016 12:14	0:02	AWE	0.002	21.000	Oversupply
5/19/2016 12:18	0:01	AWE	0.001	21.000	Oversupply
5/19/2016 22:51	0:08	KWPPI	0.180	20.704	Oversupply
5/19/2016 23:25	0:08	KWPPI	0.159	20.671	Oversupply
5/19/2016 23:36	0:02	KWPPI	0.010	20.596	Oversupply
5/19/2016 23:44	4:14	KWPPI	44.058	20.708	Oversupply
5/20/2016 4:02	0:02	KWPPI	0.033	7.781	Oversupply
5/20/2016 4:07	0:02	KWPPI	0.015	10.344	Oversupply
5/20/2016 6:33	0:05	KWPPI	0.222	19.586	Oversupply
5/20/2016 6:41	0:02	KWPPI	0.027	19.121	Oversupply
5/20/2016 6:44	0:23	KWPPI	0.919	20.625	Oversupply
5/20/2016 7:09	0:01	KWPPI	0.005	20.883	Oversupply
5/20/2016 7:13	0:39	KWPPI	2.046	20.696	Oversupply
5/20/2016 7:53	0:02	KWPPI	0.017	20.892	Oversupply
5/20/2016 7:57	5:48	KWPPI	88.722	20.708	Oversupply
5/20/2016 10:25	0:07	AWE	0.024	21.000	Oversupply
5/20/2016 10:39	0:07	AWE	0.046	21.000	Oversupply
5/20/2016 10:42	0:05	AWE	0.025	21.000	Oversupply
5/20/2016 10:51	0:07	AWE	0.134	21.000	Oversupply
5/20/2016 10:59	2:12	AWE	9.298	21.000	Oversupply
5/20/2016 13:12	0:05	AWE	0.010	21.000	Oversupply
5/20/2016 13:31	0:03	AWE	0.005	21.000	Oversupply
5/20/2016 13:35	0:03	AWE	0.006	21.000	Oversupply
5/20/2016 13:40	0:01	AWE	0.001	21.000	Oversupply
5/20/2016 13:47	1:37	KWPPI	14.883	20.705	Oversupply
5/20/2016 20:30	0:01	AWE	0.000	0.013	Oversupply
5/20/2016 22:09	0:08	KWPPI	0.180	20.708	Oversupply
5/20/2016 22:31	0:01	KWPPI	0.000	20.708	Oversupply
5/20/2016 23:06	0:08	KWPPI	0.118	20.707	Oversupply
5/20/2016 23:21	0:13	KWPPI	0.387	20.708	Oversupply
5/21/2016 0:09	10:52	KWPPI	182.337	20.708	Oversupply
5/21/2016 1:40	1:08	AWE	2.596	21.000	Oversupply
5/21/2016 2:47	2:12	AWE	5.259	21.000	Oversupply
5/21/2016 10:23	0:05	AWE	0.026	21.000	Oversupply
5/21/2016 10:33	0:08	AWE	0.010	21.000	Oversupply
5/21/2016 10:40	0:08	AWE	0.012	21.000	Oversupply
5/21/2016 10:47	0:04	AWE	0.010	21.000	Oversupply
5/21/2016 10:58	2:14	KWPPI	37.503	20.708	Oversupply
5/21/2016 12:06	0:03	AWE	0.007	21.000	Oversupply
5/21/2016 12:32	0:38	AWE	0.808	21.000	Oversupply
5/21/2016 13:14	2:15	KWPPI	24.325	20.708	Oversupply
5/21/2016 13:33	0:01	AWE	0.001	21.000	Oversupply
5/21/2016 15:30	0:07	KWPPI	0.006	20.645	Oversupply
5/21/2016 22:36	0:03	KWPPI	0.042	20.708	Oversupply
5/21/2016 22:43	2:47	KWPPI	22.186	20.708	Oversupply
5/22/2016 1:31	0:03	KWPPI	0.001	14.483	Oversupply
5/22/2016 1:35	0:04	KWPPI	0.143	15.984	Oversupply
5/22/2016 1:42	0:03	KWPPI	0.133	15.742	Oversupply
5/22/2016 1:46	0:01	KWPPI	0.014	18.095	Oversupply
5/22/2016 2:10	0:04	KWPPI	0.118	11.273	Oversupply
5/22/2016 2:16	0:02	KWPPI	0.085	8.948	Oversupply
5/22/2016 2:19	0:02	KWPPI	0.080	9.607	Oversupply
5/22/2016 2:22	0:01	KWPPI	0.004	8.742	Oversupply
5/22/2016 2:39	4:04	KWPPI	41.831	20.708	Oversupply
5/22/2016 4:44	0:01	AWE	0.002	20.580	Oversupply
5/22/2016 4:46	0:01	AWE	0.002	20.970	Oversupply
5/22/2016 6:39	0:01	KWPPI	0.001	20.707	Oversupply
5/22/2016 6:43	0:08	KWPPI	0.249	20.708	Oversupply
5/22/2016 10:40	0:11	AWE	0.034	21.000	Oversupply
5/22/2016 10:53	0:01	AWE	0.000	21.000	Oversupply
5/22/2016 10:56	0:02	AWE	0.019	21.000	Oversupply
5/22/2016 11:00	0:01	AWE	0.001	21.000	Oversupply
5/22/2016 11:05	0:02	AWE	0.006	21.000	Oversupply
5/22/2016 11:08	0:03	AWE	0.013	21.000	Oversupply
5/22/2016 12:53	0:04	KWPPI	0.077	20.685	Oversupply
5/22/2016 13:01	1:40	KWPPI	12.741	20.708	Oversupply
5/22/2016 22:30	0:12	KWPPI	0.280	20.708	Oversupply
5/22/2016 23:11	0:23	KWPPI	0.786	20.707	Oversupply
5/22/2016 23:38	4:23	KWPPI	48.237	20.708	Oversupply
5/23/2016 2:09	0:04	AWE	0.011	21.000	Oversupply



Maui Curtailment Report

May 2016

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
5/23/2016 2:14	0:02	AWE	0.007	20.450	Oversupply
5/23/2016 2:17	0:01	AWE	0.005	20.910	Oversupply
5/23/2016 2:20	0:01	AWE	0.007	20.597	Oversupply
5/23/2016 2:24	0:03	AWE	0.031	20.323	Oversupply
5/23/2016 2:28	0:04	AWE	0.044	19.993	Oversupply
5/23/2016 2:35	0:01	AWE	0.006	18.117	Oversupply
5/23/2016 2:37	0:08	AWE	0.273	20.340	Oversupply
5/23/2016 2:46	0:23	AWE	0.382	21.000	Oversupply
5/23/2016 3:10	0:08	AWE	0.183	21.000	Oversupply
5/23/2016 3:17	0:02	AWE	0.043	19.990	Oversupply
5/23/2016 3:29	0:02	AWE	0.031	18.297	Oversupply
5/23/2016 3:32	0:02	AWE	0.016	18.340	Oversupply
5/23/2016 3:35	0:01	AWE	0.005	17.470	Oversupply
5/23/2016 3:37	0:09	AWE	0.210	19.820	Oversupply
5/23/2016 3:48	0:03	AWE	0.036	18.480	Oversupply
5/23/2016 3:59	0:31	KWP/II	8.727	19.158	Oversupply
5/23/2016 4:05	0:19	AWE	0.370	21.000	Oversupply
5/23/2016 4:32	0:45	KWP/II	9.841	20.201	Oversupply
5/23/2016 4:41	0:04	AWE	0.009	21.000	Oversupply
5/23/2016 6:35	0:10	KWP/II	0.225	20.572	Oversupply
5/23/2016 6:55	0:33	KWP/II	2.570	20.695	Oversupply
5/23/2016 7:31	0:01	KWP/II	0.001	20.697	Oversupply
5/23/2016 8:02	0:27	KWP/II	2.262	20.583	Oversupply
5/23/2016 8:31	0:08	KWP/II	0.344	20.246	Oversupply
5/23/2016 8:38	0:01	KWP/II	0.021	18.600	Oversupply
5/23/2016 8:40	0:05	KWP/II	0.160	20.132	Oversupply
5/23/2016 8:57	0:04	KWP/II	0.109	19.954	Oversupply
5/23/2016 9:02	0:04	KWP/II	0.170	18.448	Oversupply
5/23/2016 9:07	0:01	KWP/II	0.023	17.580	Oversupply
5/23/2016 9:10	0:01	KWP/II	0.032	18.488	Oversupply
5/23/2016 9:14	0:04	KWP/II	0.075	18.954	Oversupply
5/23/2016 9:25	0:03	KWP/II	0.029	17.475	Oversupply
5/23/2016 9:31	0:02	KWP/II	0.043	18.080	Oversupply
5/23/2016 9:34	0:01	KWP/II	0.001	17.513	Oversupply
5/23/2016 9:55	0:01	KWP/II	0.003	18.313	Oversupply
5/23/2016 10:01	0:04	KWP/II	0.034	17.510	Oversupply
5/23/2016 10:12	1:18	KWP/II	4.433	18.416	Oversupply
5/23/2016 11:31	0:02	KWP/II	0.089	17.185	Oversupply
5/23/2016 11:36	0:04	KWP/II	0.118	17.838	Oversupply
5/23/2016 11:53	0:01	KWP/II	0.033	16.038	Oversupply
5/23/2016 12:10	0:01	KWP/II	0.027	13.750	Oversupply
5/23/2016 12:21	0:21	KWP/II	0.809	14.423	Oversupply
5/23/2016 12:59	0:01	KWP/II	0.025	14.940	Oversupply
5/23/2016 13:16	0:05	KWP/II	0.042	15.618	Oversupply
5/23/2016 13:37	0:03	KWP/II	0.089	16.011	Oversupply
5/23/2016 13:43	0:02	KWP/II	0.049	15.401	Oversupply
5/23/2016 13:54	0:02	KWP/II	0.030	14.993	Oversupply
5/23/2016 13:57	0:01	KWP/II	0.027	14.683	Oversupply
5/23/2016 15:43	0:07	KWP/II	0.211	14.382	Oversupply
5/23/2016 22:09	0:01	KWP/II	0.012	15.178	Oversupply
5/23/2016 22:12	0:04	KWP/II	0.131	17.251	Oversupply
5/23/2016 22:24	0:08	KWP/II	0.280	19.121	Oversupply
5/23/2016 22:36	0:03	KWP/II	0.034	15.273	Oversupply
5/23/2016 22:46	0:03	KWP/II	0.058	15.951	Oversupply
5/23/2016 23:06	0:35	KWP/II	3.000	17.345	Oversupply
5/23/2016 23:42	1:10	KWP/II	7.073	19.420	Oversupply
5/24/2016 1:31	0:01	KWP/II	0.025	13.540	Oversupply
5/24/2016 1:31	4:48	KWP	Data is not available	Data is not available	System constraint
5/24/2016 1:36	0:07	KWP/II	0.738	9.780	Oversupply
5/24/2016 1:42	0:01	AWE	0.016	4.420	Oversupply
5/24/2016 3:26	0:11	KWP/II	0.186	7.575	Oversupply
5/24/2016 3:40	0:12	KWP/II	0.310	7.980	Oversupply
5/24/2016 7:53	0:14	KWP/II	1.821	17.615	Oversupply
5/26/2016 16:54	0:02	KWP/II	0.020	20.380	Oversupply
5/26/2016 17:09	0:32	KWP/II	2.139	20.622	Oversupply
5/26/2016 17:44	0:08	KWP/II	0.223	20.216	Oversupply
5/26/2016 23:43	0:07	AWE	0.121	18.470	Oversupply
5/25/2016 0:01	0:01	AWE	0.007	10.727	Oversupply
5/26/2016 14:13	0:01	AWE	0.002	21.000	Oversupply
5/26/2016 21:39	0:14	AWE	0.257	21.000	Oversupply
5/31/2016 10:13	0:02	KWP/II	0.007	18.880	Oversupply
5/31/2016 10:21	0:02	KWP/II	0.031	18.996	Oversupply

NOTES:
 - Curtailment for Kaneohe Wind Power ("KWP"), Mauna Hydroelectric ("MH"), AAAAAA Renewable-A-Space Maui LTD ("SA"), Bioreal Solar, LLC ("BS"), AOWANI Wind Energy ("AWE"), Kaneohe Wind Power II ("KWP/II"), Bioreal Solar 200, LLC ("BS200") 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 SA, BS, BS 200 or MH.
 - Curtailment signals sent to SA, BS, or BS200 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 merits.
 - The Bioreal Solar 200, LLC circuit breaker failed on May 5, 2016. Bioreal Solar 200, LLC plan to replace the circuit breaker and resume production.



Lanai Curtailment Report

May 2016

Start Date and Time	Duration	IPP Curtailed	Estimated MWh Curtailed	Peak MW Curtailed	Reasons for Curtailment
5/1/2016 14:31	0:07	LSR	Data is not available	Data is not available	Oversupply
5/1/2016 14:42	0:01	LSR	Data is not available	Data is not available	Oversupply
5/1/2016 14:47	0:01	LSR	Data is not available	Data is not available	Oversupply
5/1/2016 14:50	0:06	LSR	Data is not available	Data is not available	Oversupply
5/1/2016 14:59	0:02	LSR	Data is not available	Data is not available	Oversupply
5/1/2016 15:37	0:01	LSR	Data is not available	Data is not available	Oversupply
5/1/2016 16:10	0:18	LSR	Data is not available	Data is not available	Oversupply
5/1/2016 16:29	0:02	LSR	Data is not available	Data is not available	Oversupply
5/1/2016 16:35	0:01	LSR	Data is not available	Data is not available	Oversupply
5/1/2016 16:38	0:10	LSR	Data is not available	Data is not available	Oversupply
5/2/2016 6:18	0:51	LSR	Data is not available	Data is not available	Oversupply
5/2/2016 7:10	0:02	LSR	Data is not available	Data is not available	Oversupply
5/2/2016 7:14	0:27	LSR	Data is not available	Data is not available	Oversupply
5/2/2016 7:43	0:01	LSR	Data is not available	Data is not available	Oversupply
5/2/2016 7:48	0:12	LSR	Data is not available	Data is not available	Oversupply
5/2/2016 8:07	0:03	LSR	Data is not available	Data is not available	Oversupply
5/2/2016 8:35	0:28	LSR	Data is not available	Data is not available	Oversupply
5/2/2016 9:11	0:04	LSR	Data is not available	Data is not available	Oversupply
5/2/2016 9:16	0:13	LSR	Data is not available	Data is not available	Oversupply
5/2/2016 9:30	0:02	LSR	Data is not available	Data is not available	Oversupply
5/2/2016 9:38	0:02	LSR	Data is not available	Data is not available	Oversupply
5/2/2016 9:50	0:21	LSR	Data is not available	Data is not available	Oversupply
5/2/2016 10:13	0:53	LSR	Data is not available	Data is not available	Oversupply
5/2/2016 11:07	0:12	LSR	Data is not available	Data is not available	Oversupply
5/2/2016 11:21	1:33	LSR	Data is not available	Data is not available	Oversupply
5/2/2016 12:53	4:01	LSR	Data is not available	Data is not available	Oversupply
5/2/2016 16:56	0:03	LSR	Data is not available	Data is not available	Oversupply
5/2/2016 17:00	0:45	LSR	Data is not available	Data is not available	Oversupply
5/2/2016 17:51	0:12	LSR	Data is not available	Data is not available	Oversupply
5/3/2016 6:52	1:14	LSR	Data is not available	Data is not available	Oversupply
5/3/2016 8:10	0:06	LSR	Data is not available	Data is not available	Oversupply
5/3/2016 8:21	0:01	LSR	Data is not available	Data is not available	Oversupply
5/3/2016 8:33	0:03	LSR	Data is not available	Data is not available	Oversupply
5/3/2016 8:38	0:35	LSR	Data is not available	Data is not available	Oversupply
5/3/2016 9:15	0:30	LSR	Data is not available	Data is not available	Oversupply
5/3/2016 11:22	0:05	LSR	Data is not available	Data is not available	Oversupply
5/3/2016 11:29	0:10	LSR	Data is not available	Data is not available	Oversupply
5/3/2016 11:43	0:02	LSR	Data is not available	Data is not available	Oversupply
5/3/2016 11:49	0:12	LSR	Data is not available	Data is not available	Oversupply
5/3/2016 12:06	0:06	LSR	Data is not available	Data is not available	Oversupply
5/3/2016 12:17	0:12	LSR	Data is not available	Data is not available	Oversupply
5/3/2016 12:34	0:03	LSR	Data is not available	Data is not available	Oversupply
5/3/2016 12:40	0:41	LSR	Data is not available	Data is not available	Oversupply
5/3/2016 13:39	0:02	LSR	Data is not available	Data is not available	Oversupply
5/3/2016 14:07	1:04	LSR	Data is not available	Data is not available	Oversupply
5/3/2016 15:41	0:02	LSR	Data is not available	Data is not available	Oversupply
5/3/2016 16:47	0:02	LSR	Data is not available	Data is not available	Oversupply
5/3/2016 16:50	0:01	LSR	Data is not available	Data is not available	Oversupply
5/3/2016 17:18	0:05	LSR	Data is not available	Data is not available	Oversupply
5/3/2016 17:32	0:03	LSR	Data is not available	Data is not available	Oversupply
5/3/2016 17:39	0:14	LSR	Data is not available	Data is not available	Oversupply
5/3/2016 17:54	0:06	LSR	Data is not available	Data is not available	Oversupply
5/3/2016 18:01	0:07	LSR	Data is not available	Data is not available	Oversupply
5/4/2016 7:06	1:46	LSR	Data is not available	Data is not available	Oversupply
5/4/2016 8:54	0:21	LSR	Data is not available	Data is not available	Oversupply
5/4/2016 9:20	0:12	LSR	Data is not available	Data is not available	Oversupply
5/4/2016 9:34	0:05	LSR	Data is not available	Data is not available	Oversupply
5/4/2016 9:40	0:03	LSR	Data is not available	Data is not available	Oversupply
5/4/2016 9:45	0:09	LSR	Data is not available	Data is not available	Oversupply
5/4/2016 9:55	0:18	LSR	Data is not available	Data is not available	Oversupply
5/4/2016 10:14	0:02	LSR	Data is not available	Data is not available	Oversupply
5/4/2016 10:28	0:10	LSR	Data is not available	Data is not available	Oversupply
5/4/2016 10:40	0:06	LSR	Data is not available	Data is not available	Oversupply
5/4/2016 10:47	0:07	LSR	Data is not available	Data is not available	Oversupply
5/4/2016 11:23	0:01	LSR	Data is not available	Data is not available	Oversupply
5/4/2016 12:11	0:55	LSR	Data is not available	Data is not available	Oversupply
5/4/2016 13:26	0:11	LSR	Data is not available	Data is not available	Oversupply
5/4/2016 13:48	0:04	LSR	Data is not available	Data is not available	Oversupply
5/4/2016 13:58	0:09	LSR	Data is not available	Data is not available	Oversupply
5/4/2016 14:05	0:20	LSR	Data is not available	Data is not available	Oversupply
5/4/2016 14:28	0:03	LSR	Data is not available	Data is not available	Oversupply
5/4/2016 14:33	0:20	LSR	Data is not available	Data is not available	Oversupply
5/4/2016 16:30	0:49	LSR	Data is not available	Data is not available	Oversupply
5/5/2016 6:44	0:25	LSR	Data is not available	Data is not available	Oversupply
5/5/2016 7:16	0:01	LSR	Data is not available	Data is not available	Oversupply
5/5/2016 7:30	0:26	LSR	Data is not available	Data is not available	Oversupply
5/5/2016 8:22	0:52	LSR	Data is not available	Data is not available	Oversupply
5/5/2016 10:16	0:05	LSR	Data is not available	Data is not available	Oversupply
5/5/2016 10:51	0:05	LSR	Data is not available	Data is not available	Oversupply
5/5/2016 11:02	0:59	LSR	Data is not available	Data is not available	Oversupply
5/5/2016 12:03	0:01	LSR	Data is not available	Data is not available	Oversupply
5/5/2016 12:05	0:02	LSR	Data is not available	Data is not available	Oversupply
5/5/2016 12:22	0:03	LSR	Data is not available	Data is not available	Oversupply
5/5/2016 12:32	0:09	LSR	Data is not available	Data is not available	Oversupply
5/5/2016 12:41	0:02	LSR	Data is not available	Data is not available	Oversupply
5/5/2016 12:45	0:16	LSR	Data is not available	Data is not available	Oversupply
5/5/2016 13:03	1:13	LSR	Data is not available	Data is not available	Oversupply
5/5/2016 14:19	1:04	LSR	Data is not available	Data is not available	Oversupply
5/5/2016 16:41	0:07	LSR	Data is not available	Data is not available	Oversupply
5/5/2016 16:59	0:04	LSR	Data is not available	Data is not available	Oversupply
5/5/2016 17:16	0:02	LSR	Data is not available	Data is not available	Oversupply
5/6/2016 6:52	0:04	LSR	Data is not available	Data is not available	Oversupply
5/6/2016 6:57	0:04	LSR	Data is not available	Data is not available	Oversupply
5/6/2016 7:04	0:08	LSR	Data is not available	Data is not available	Oversupply
5/6/2016 7:13	0:04	LSR	Data is not available	Data is not available	Oversupply
5/6/2016 7:21	0:02	LSR	Data is not available	Data is not available	Oversupply
5/6/2016 10:51	0:16	LSR	Data is not available	Data is not available	Oversupply
5/6/2016 11:40	1:22	LSR	Data is not available	Data is not available	Oversupply
5/6/2016 13:12	3:46	LSR	Data is not available	Data is not available	Oversupply
5/6/2016 17:00	0:07	LSR	Data is not available	Data is not available	Oversupply



Lanai Curtailment Report

May 2016

Start Date and Time	Duration	IPP Curtailed	Estimated MWh Curtailed	Peak MW Curtailed	Reasons for Curtailment
5/6/2016 17:13	0:01	LSR	Data is not available	Data is not available	Oversupply
5/7/2016 10:01	0:01	LSR	Data is not available	Data is not available	Oversupply
5/7/2016 10:04	0:03	LSR	Data is not available	Data is not available	Oversupply
5/7/2016 10:29	0:10	LSR	Data is not available	Data is not available	Oversupply
5/7/2016 10:41	0:10	LSR	Data is not available	Data is not available	Oversupply
5/7/2016 11:11	0:36	LSR	Data is not available	Data is not available	Oversupply
5/7/2016 17:53	0:01	LSR	Data is not available	Data is not available	Oversupply
5/7/2016 17:56	0:05	LSR	Data is not available	Data is not available	Oversupply
5/7/2016 18:06	0:01	LSR	Data is not available	Data is not available	Oversupply
5/7/2016 18:08	0:01	LSR	Data is not available	Data is not available	Oversupply
5/7/2016 18:14	0:02	LSR	Data is not available	Data is not available	Oversupply
5/8/2016 8:37	8:33	LSR	Data is not available	Data is not available	Oversupply
5/8/2016 17:26	0:01	LSR	Data is not available	Data is not available	Oversupply
5/8/2016 17:30	0:32	LSR	Data is not available	Data is not available	Oversupply
5/8/2016 18:05	0:10	LSR	Data is not available	Data is not available	Oversupply
5/9/2016 6:39	0:02	LSR	Data is not available	Data is not available	Oversupply
5/9/2016 6:48	0:02	LSR	Data is not available	Data is not available	Oversupply
5/9/2016 6:54	0:01	LSR	Data is not available	Data is not available	Oversupply
5/9/2016 6:56	0:02	LSR	Data is not available	Data is not available	Oversupply
5/9/2016 7:00	0:06	LSR	Data is not available	Data is not available	Oversupply
5/9/2016 7:07	0:03	LSR	Data is not available	Data is not available	Oversupply
5/9/2016 7:14	0:01	LSR	Data is not available	Data is not available	Oversupply
5/9/2016 7:17	0:03	LSR	Data is not available	Data is not available	Oversupply
5/9/2016 7:23	0:01	LSR	Data is not available	Data is not available	Oversupply
5/9/2016 7:28	0:04	LSR	Data is not available	Data is not available	Oversupply
5/9/2016 7:37	0:01	LSR	Data is not available	Data is not available	Oversupply
5/9/2016 7:41	0:14	LSR	Data is not available	Data is not available	Oversupply
5/9/2016 7:56	0:18	LSR	Data is not available	Data is not available	Oversupply
5/9/2016 8:15	0:15	LSR	Data is not available	Data is not available	Oversupply
5/9/2016 8:31	0:15	LSR	Data is not available	Data is not available	Oversupply
5/9/2016 8:47	0:11	LSR	Data is not available	Data is not available	Oversupply
5/9/2016 8:59	7:53	LSR	Data is not available	Data is not available	Oversupply
5/9/2016 16:53	0:08	LSR	Data is not available	Data is not available	Oversupply
5/9/2016 17:02	0:12	LSR	Data is not available	Data is not available	Oversupply
5/9/2016 17:15	0:07	LSR	Data is not available	Data is not available	Oversupply
5/9/2016 17:24	0:01	LSR	Data is not available	Data is not available	Oversupply
5/9/2016 17:32	0:02	LSR	Data is not available	Data is not available	Oversupply
5/9/2016 17:38	0:01	LSR	Data is not available	Data is not available	Oversupply
5/9/2016 17:41	0:04	LSR	Data is not available	Data is not available	Oversupply
5/9/2016 17:48	0:03	LSR	Data is not available	Data is not available	Oversupply
5/9/2016 17:54	0:10	LSR	Data is not available	Data is not available	Oversupply
5/9/2016 18:05	0:02	LSR	Data is not available	Data is not available	Oversupply
5/9/2016 18:11	0:02	LSR	Data is not available	Data is not available	Oversupply
5/10/2016 6:43	0:22	LSR	Data is not available	Data is not available	Oversupply
5/10/2016 7:06	0:01	LSR	Data is not available	Data is not available	Oversupply
5/10/2016 7:13	0:02	LSR	Data is not available	Data is not available	Oversupply
5/10/2016 7:21	9:12	LSR	Data is not available	Data is not available	Oversupply
5/10/2016 16:35	0:12	LSR	Data is not available	Data is not available	Oversupply
5/10/2016 16:50	0:36	LSR	Data is not available	Data is not available	Oversupply
5/10/2016 17:30	0:01	LSR	Data is not available	Data is not available	Oversupply
5/10/2016 17:38	0:07	LSR	Data is not available	Data is not available	Oversupply
5/10/2016 17:46	0:27	LSR	Data is not available	Data is not available	Oversupply
5/11/2016 6:23	0:10	LSR	Data is not available	Data is not available	Oversupply
5/11/2016 6:48	4:56	LSR	Data is not available	Data is not available	Oversupply
5/11/2016 12:25	5:39	LSR	Data is not available	Data is not available	Oversupply
5/11/2016 18:09	0:02	LSR	Data is not available	Data is not available	Oversupply
5/12/2016 6:43	0:04	LSR	Data is not available	Data is not available	Oversupply
5/12/2016 6:55	0:02	LSR	Data is not available	Data is not available	Oversupply
5/12/2016 6:58	0:09	LSR	Data is not available	Data is not available	Oversupply
5/12/2016 7:16	0:01	LSR	Data is not available	Data is not available	Oversupply
5/12/2016 7:19	0:49	LSR	Data is not available	Data is not available	Oversupply
5/12/2016 8:09	0:50	LSR	Data is not available	Data is not available	Oversupply
5/12/2016 9:35	3:04	LSR	Data is not available	Data is not available	Oversupply
5/12/2016 12:42	0:53	LSR	Data is not available	Data is not available	Oversupply
5/12/2016 13:37	3:11	LSR	Data is not available	Data is not available	Oversupply
5/12/2016 17:01	0:20	LSR	Data is not available	Data is not available	Oversupply
5/13/2016 6:10	0:16	LSR	Data is not available	Data is not available	Oversupply
5/13/2016 6:58	1:24	LSR	Data is not available	Data is not available	Oversupply
5/13/2016 8:55	0:01	LSR	Data is not available	Data is not available	Oversupply
5/13/2016 13:01	0:05	LSR	Data is not available	Data is not available	Oversupply
5/14/2016 6:32	0:15	LSR	Data is not available	Data is not available	Oversupply
5/14/2016 6:50	1:01	LSR	Data is not available	Data is not available	Oversupply
5/14/2016 8:43	0:03	LSR	Data is not available	Data is not available	Oversupply
5/14/2016 9:18	0:23	LSR	Data is not available	Data is not available	Oversupply
5/14/2016 9:42	0:06	LSR	Data is not available	Data is not available	Oversupply
5/14/2016 10:01	0:25	LSR	Data is not available	Data is not available	Oversupply
5/14/2016 10:28	0:30	LSR	Data is not available	Data is not available	Oversupply
5/14/2016 11:04	0:01	LSR	Data is not available	Data is not available	Oversupply
5/14/2016 11:09	0:01	LSR	Data is not available	Data is not available	Oversupply
5/14/2016 11:17	0:02	LSR	Data is not available	Data is not available	Oversupply
5/14/2016 11:21	0:26	LSR	Data is not available	Data is not available	Oversupply
5/14/2016 11:49	0:10	LSR	Data is not available	Data is not available	Oversupply
5/14/2016 12:03	0:05	LSR	Data is not available	Data is not available	Oversupply
5/14/2016 12:09	0:12	LSR	Data is not available	Data is not available	Oversupply
5/14/2016 12:24	0:12	LSR	Data is not available	Data is not available	Oversupply
5/14/2016 12:37	0:08	LSR	Data is not available	Data is not available	Oversupply
5/14/2016 13:16	0:10	LSR	Data is not available	Data is not available	Oversupply
5/14/2016 14:14	0:03	LSR	Data is not available	Data is not available	Oversupply
5/14/2016 15:05	0:42	LSR	Data is not available	Data is not available	Oversupply
5/14/2016 15:53	0:07	LSR	Data is not available	Data is not available	Oversupply
5/14/2016 16:02	0:13	LSR	Data is not available	Data is not available	Oversupply
5/14/2016 16:16	1:29	LSR	Data is not available	Data is not available	Oversupply
5/14/2016 17:48	0:29	LSR	Data is not available	Data is not available	Oversupply
5/14/2016 18:19	0:03	LSR	Data is not available	Data is not available	Oversupply
5/15/2016 6:29	0:16	LSR	Data is not available	Data is not available	Oversupply
5/15/2016 6:46	2:09	LSR	Data is not available	Data is not available	Oversupply
5/15/2016 8:58	0:05	LSR	Data is not available	Data is not available	Oversupply
5/15/2016 9:08	0:02	LSR	Data is not available	Data is not available	Oversupply
5/15/2016 9:22	0:02	LSR	Data is not available	Data is not available	Oversupply
5/15/2016 9:37	0:02	LSR	Data is not available	Data is not available	Oversupply



Lanai Curtailment Report

May 2016

Start Date and Time	Duration	IPP Curtailed	Estimated MWh Curtailed	Peak MW Curtailed	Reasons for Curtailment
5/31/2016 13:23	0:03	LSR	Data is not available	Data is not available	Oversupply
5/31/2016 13:29	0:02	LSR	Data is not available	Data is not available	Oversupply
5/31/2016 13:34	0:14	LSR	Data is not available	Data is not available	Oversupply
5/31/2016 13:50	0:18	LSR	Data is not available	Data is not available	Oversupply
5/31/2016 14:20	0:04	LSR	Data is not available	Data is not available	Oversupply
5/31/2016 14:40	0:02	LSR	Data is not available	Data is not available	Oversupply
5/31/2016 14:53	0:02	LSR	Data is not available	Data is not available	Oversupply
5/31/2016 17:38	0:02	LSR	Data is not available	Data is not available	Oversupply
5/31/2016 17:48	0:05	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 May 2016

Start Date/Time	MW output prior to start of curtailment	End Date/Time	MW output after curtailment released ¹	IPP	Reason for Curtailment
05/01/16 23:21	18.7 MW	05/01/16 23:29	17.8 MW	Tawhiri	Oversupply
05/03/16 00:07	15.4 MW	05/03/16 00:24	15.2 MW	Tawhiri	Oversupply
05/04/16 00:44	13.5 MW	05/04/16 01:31	9.0 MW	Tawhiri	Oversupply
05/04/16 10:24	16.7 MW	05/04/16 11:06	14.5 MW	Tawhiri	System constraint
05/05/16 08:28	13.4 MW	05/05/16 08:52	13.9 MW	Tawhiri	System constraint
05/05/16 16:20	11.1 MW	05/05/16 16:33	11.1 MW	Tawhiri	System constraint
05/06/16 10:11	11.3 MW	05/06/16 10:21	8.3 MW	Tawhiri	System constraint
05/14/16 08:58	18.3 MW	05/14/16 09:29	15.9 MW	Tawhiri	System constraint
05/14/16 14:19	14.1 MW	05/14/16 14:49	13.0 MW	Tawhiri	System constraint
05/15/16 11:44	0.6 MW	05/15/16 13:45	0.2 MW	TGUH11	Oversupply
05/15/16 11:55	17.9 MW	05/15/16 13:41	17.9 MW	Tawhiri	Oversupply
05/21/16 06:58	9.7 MW	05/21/16 07:30	9.1 MW	Tawhiri	System constraint
05/21/16 16:39	19.9 MW	05/21/16 17:10	16.5 MW	Tawhiri	System constraint
05/22/16 07:46	0.8 MW	05/22/16 08:46	0.6 MW	TGUH11	Oversupply
05/22/16 07:51	17.9 MW	05/22/16 08:44	15.5 MW	Tawhiri	Oversupply
05/24/16 15:20	6.0 MW	05/24/16 17:30	1.2 MW	HRD	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.