July 27, 2015

FILED

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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 June 2015 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

cc: 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
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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 June 30, 2015):

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 June 30, 2015):

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

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

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

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

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

Hawaiian Electric's demand response activations for system events are provided in Attachment 5. Hawai'i Electric Light currently does not have 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.

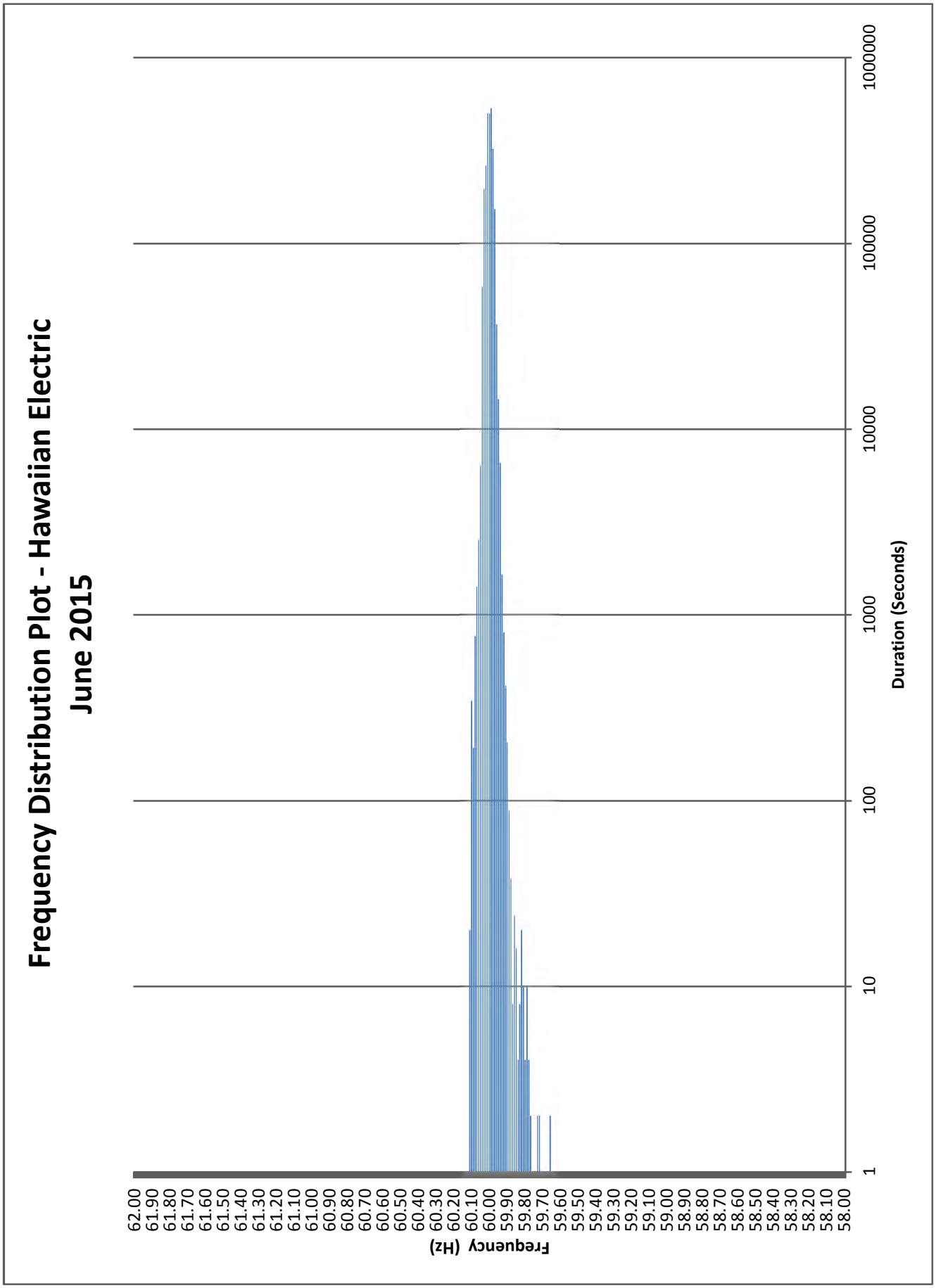
The following provides information with respect to items 3a) through 3b) – (all statements are current as of the month ending June 30, 2015):

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:

Hawai'i Electric Light did not curtail any non-dispatchable renewable resources in the month of June. 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
June 2015
Duration (Seconds)
1000000
100000
10000
1000
100
10
1
Frequency (Hz)
62.00
61.90
61.80
61.70
61.60
61.50
61.40
61.30
61.20
61.10
61.00
60.90
60.80
60.70
60.60
60.50
60.40
60.30
60.20
60.10
60.00
59.90
59.80
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59.30
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58.50
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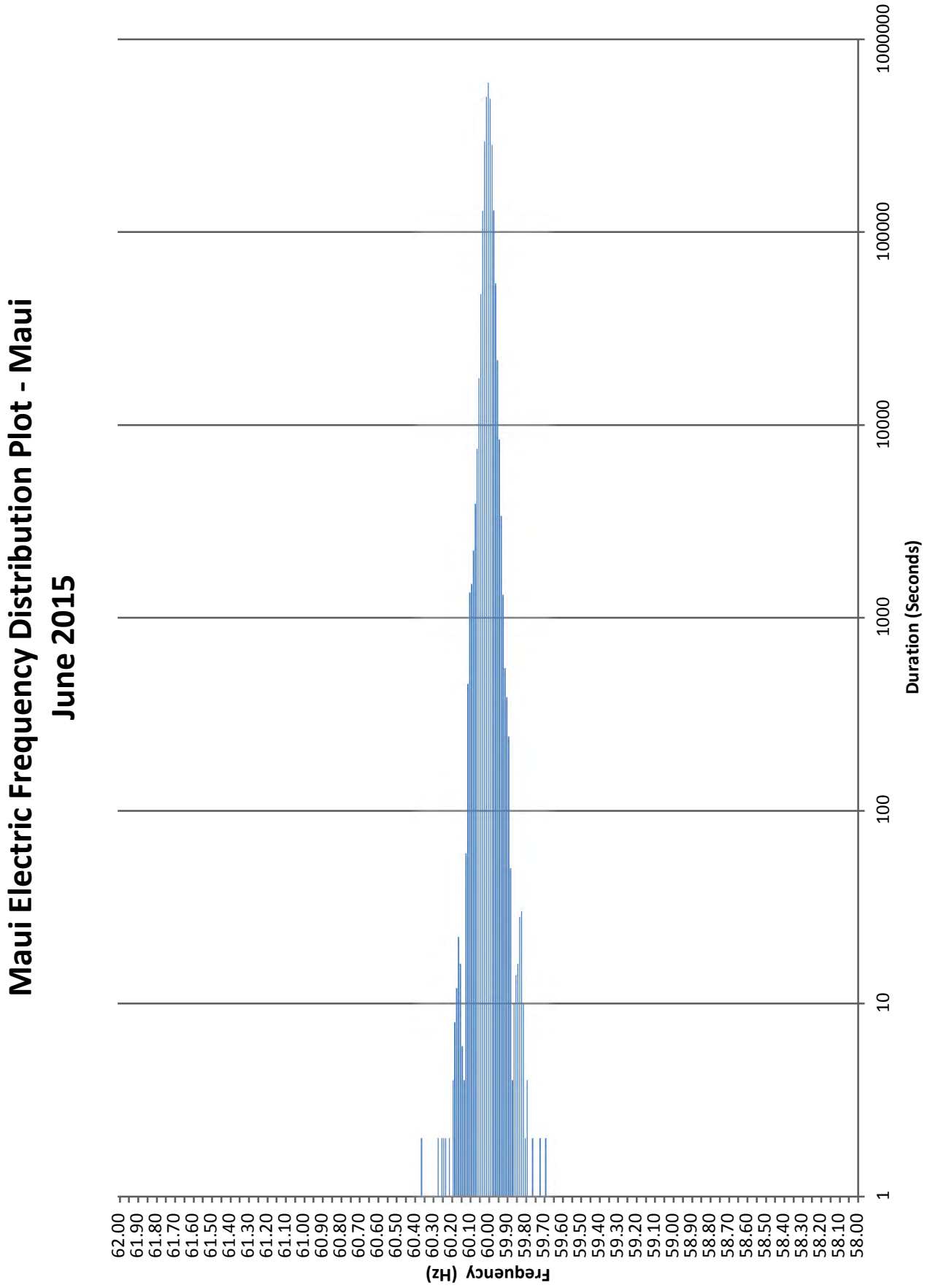
58.30
58.20
58.10
58.00


Maui Electric Frequency Distribution Plot - Maui
June 2015
Duration (Seconds)
1
10
100
1000
10000
100000
1000000
Frequency (Hz)
62.00
61.90
61.80
61.70
61.60
61.50
61.40
61.30
61.20
61.10
61.00
60.90
60.80
60.70
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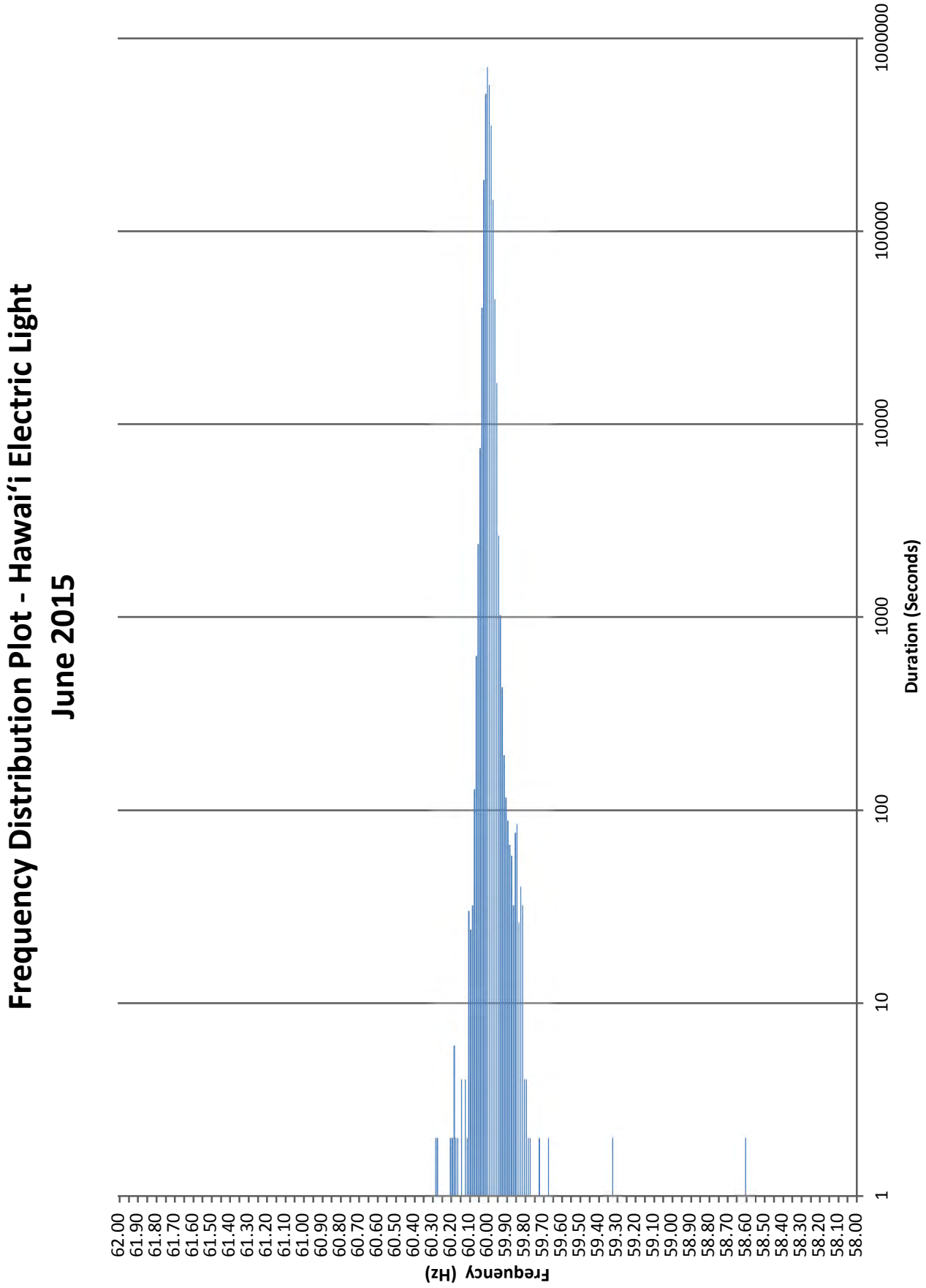
58.30
58.20
58.10
58.00


Frequency Distribution Plot - Hawai'i Electric Light
June 2015
Duration (Seconds)
1
10
100
1000
10000
100000
1000000
Frequency (Hz)
62.00
61.90
61.80
61.70
61.60
61.50
61.40
61.30
61.20
61.10
61.00
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58.50
58.40
58.30
58.20
58.10
58.00

Hawaiian Electric Frequency Excursion Statistics June 2015		
Data Rounded to the nearest	<59.95 Hz	>60.05 Hz
Number of Excursions	995	382
Maximum Duration (sec)	650	924
Maximum Deviation (Hz)	59.663	60.108
Total Duration of Excursions (sec)	14754	6862

Maui Electric Frequency Excursion Statistics June 2015		
	<59.95 Hz	>60.05 Hz
Number of Excursions	4785	3499
Maximum Duration (sec)	144	466
Maximum Deviation (Hz)	59.6921	60.3606
Total Duration of Excursions (sec)	22560	23568

Hawai'i Electric Light Frequency Excursion Statistics June 2015		
	<59.95 Hz	>60.05 Hz
Number of Excursions	1881	366
Maximum Duration (sec)	316	52
Maximum Deviation (Hz)	58.602	60.277
Total Duration of Excursions (sec)	12592	1848

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HAWAII ELECTRIC LIGHT COMPANY, INC.
UNDERFREQUENCY LOAD SHEDDING EVENTS
JUNE 2015

			Frequency (Hz)					
			Prior to		Level UFLS	Load Shed	Duration	
Event #	Date	Time	Event	Nadir	Occurred	(MW)	(HH:MM)	Description
1	6/25/2015	10:17 AM	60.00	58.46	58.50	24.66	00:46	Keahole CT-4 tripped offline

HAWAIIAN ELECTRIC COMPANY, INC.
DEMAND RESPONSE EVENTS
JUNE 2015

Event #	Date & Time	Frequency (Hz)			Load Shed (MW)	Duration (HH:MM)	Description
		Prior to Event	Nadir	Trigger			
1	06/02/15 15:24	59.975	59.663	59.70	NA	0:02	K1 tripped offline while generating ~40 MW. RDLC was activated.

Hawaiian Electric Curtailment Report June 2015

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
06/08/15 06:39	0.0	0.20	06/08/15 07:26	0	*	KREP	Replacement work
06/08/15 19:08	0.0	0.00	06/08/15 19:21	0	*	KREP	Replacement work
06/09/15 06:46	0.0	0.20	06/09/15 07:55	0	*	KREP	Replacement work
06/09/15 18:49	0.0	0.00	06/09/15 18:59	0	*	KREP	Replacement work
06/10/15 18:54	0.0	0.00	06/10/15 19:28	0	*	KREP	Replacement work
06/16/15 07:12	0.0	7.00	06/16/15 07:41	0	*	KWF	Replacement work
06/16/15 07:13	0.0	0.50	06/16/15 07:41	0	*	Makai	Replacement work
06/16/15 14:59	0.0	8.40	06/16/15 15:38	0	*	KWF	Replacement work
06/16/15 15:00	0.0	10.00	06/16/15 15:38	0	*	Makai	Replacement work
06/30/15 18:31	0.0	0.20	06/30/15 20:33	0	*	KREP	Replacement work

KLS2 = Kalaeloa Solar 2 PV Farm
KREP = Kalaeloa Renewable Energy Park
KWF = Kahuku Wind Farm
Makai = Kawailoa Makai Wind Farm
Mauka = Kawailoa Mauka Wind Farm
(1) The estimated MWh of energy curtailed during the event is supplied by Kahuku Wind Farm and/or Kawailoa Wind Farm, and HECO does not make any representations as to its accuracy.
* Data has not been provided by IPP.

Maui Electric

RSWG Maui Curtailment Report June 2015

Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
6/1/2015 2:04	0:18	KWPII	1.370	10.408	AGC MAVG - calculated
6/1/2015 3:11	0:04	KWPII	0.076	3.321	AGC MAVG - calculated
6/1/2015 3:16	0:02	KWPII	0.043	3.563	AGC MAVG - calculated
6/1/2015 3:19	0:01	KWPII	0.026	4.312	AGC MAVG - calculated
6/1/2015 3:31	0:01	KWPII	0.013	5.290	AGC MAVG - calculated
6/1/2015 3:34	0:01	KWPII	0.012	4.777	AGC MAVG - calculated
6/1/2015 3:37	0:27	KWPII	1.226	4.747	AGC MAVG - calculated
6/1/2015 3:41	0:22	AWE	0.932	19.193	AGC MAVG - calculated
6/1/2015 9:53	0:01	KWPII	0.015	13.675	AGC MAVG - calculated and Good Engineering and Operating Practices
6/1/2015 10:09	0:01	KWPII	0.035	15.033	AGC MAVG - calculated and Good Engineering and Operating Practices
6/1/2015 11:28	0:03	KWPII	0.114	14.599	AGC MAVG - calculated and Good Engineering and Operating Practices
6/1/2015 11:33	0:07	KWPII	0.573	15.884	AGC MAVG - calculated, Good Engineering and Operating Practices, and Testing
6/1/2015 11:42	0:01	KWPII	0.027	15.951	AGC MAVG - calculated and Good Engineering and Operating Practices
6/1/2015 11:47	0:06	KWPII	0.419	15.737	AGC MAVG - calculated and Good Engineering and Operating Practices
6/1/2015 11:55	0:02	KWPII	0.098	13.204	AGC MAVG - calculated and Good Engineering and Operating Practices
6/1/2015 13:26	0:53	KWPII	3.054	19.877	AGC MAVG - calculated
6/1/2015 14:22	0:04	KWPII	0.086	18.877	AGC MAVG - calculated
6/1/2015 14:31	0:10	KWPII	0.467	19.723	AGC MAVG - calculated
6/1/2015 14:43	0:28	KWPII	1.644	20.315	AGC MAVG - calculated
6/1/2015 15:27	0:03	KWPII	0.053	19.855	AGC MAVG - calculated
6/1/2015 15:40	0:01	KWPII	0.002	20.053	AGC MAVG - calculated
6/1/2015 16:16	0:02	KWPII	0.009	18.321	AGC MAVG - calculated
6/1/2015 22:13	0:12	KWPII	0.406	20.516	AGC MAVG - calculated
6/1/2015 22:32	0:02	KWPII	0.013	14.964	AGC MAVG - calculated
6/1/2015 22:36	1:51	KWPII	19.402	20.655	AGC MAVG - calculated
6/2/2015 0:40	0:26	KWPII	2.395	19.595	AGC MAVG - calculated
6/2/2015 1:09	2:21	KWPII	17.082	20.328	AGC MAVG - calculated
6/2/2015 3:31	0:24	KWPII	2.713	19.737	AGC MAVG - calculated
6/2/2015 4:49	0:01	KWPII	0.011	12.180	AGC MAVG - calculated
6/2/2015 6:40	0:03	KWPII	0.061	18.362	AGC MAVG - calculated
6/2/2015 6:46	0:01	KWPII	0.010	19.234	AGC MAVG - calculated
6/2/2015 10:07	0:41	KWPII	7.342	16.407	AGC MAVG - calculated, AGC MAVG - entered, AGC MAVG - entered - Maintaining Regulating Reserves, and AGC MAVG -
6/2/2015 10:43	0:03	AWE	0.017	21.000	AGC MAVG - calculated
6/2/2015 10:51	0:05	KWPII	0.485	15.544	AGC MAVG - calculated
6/2/2015 10:59	0:03	KWPII	0.110	15.389	AGC MAVG - calculated
6/2/2015 11:05	0:04	KWPII	0.043	14.218	AGC MAVG - calculated
6/2/2015 11:40	0:01	KWPII	0.026	13.729	AGC MAVG - calculated
6/2/2015 12:08	0:03	KWPII	0.106	15.625	AGC MAVG - calculated and Testing
6/2/2015 12:13	2:31	KWPII	13.323	20.185	AGC MAVG - calculated and Testing
6/2/2015 14:45	0:02	KWPII	0.015	19.777	AGC MAVG - calculated
6/2/2015 14:50	0:03	KWPII	0.016	20.359	AGC MAVG - calculated
6/2/2015 14:55	0:03	KWPII	0.025	19.977	AGC MAVG - calculated
6/2/2015 15:38	0:01	KWPII	0.001	20.097	AGC MAVG - calculated
6/2/2015 15:40	0:01	KWPII	0.023	19.725	AGC MAVG - calculated
6/2/2015 18:35	0:02	KWPII	0.038	19.679	AGC MAVG - calculated
6/2/2015 22:47	0:18	KWPII	0.865	19.540	AGC MAVG - calculated
6/2/2015 23:48	0:02	KWPII	0.038	17.512	AGC MAVG - calculated
6/2/2015 23:51	1:42	KWPII	19.547	20.422	AGC MAVG - calculated
6/3/2015 1:00	0:05	AWE	0.215	19.147	AGC MAVG - calculated
6/3/2015 1:22	0:05	AWE	0.295	17.277	AGC MAVG - calculated
6/3/2015 1:35	1:05	KWPII	15.960	20.047	AGC MAVG - calculated
6/3/2015 1:58	0:03	AWE	0.046	11.033	AGC MAVG - calculated
6/3/2015 2:22	0:06	AWE	0.204	13.017	AGC MAVG - calculated
6/3/2015 2:32	0:01	AWE	0.040	15.610	AGC MAVG - calculated
6/3/2015 2:43	0:19	KWPII	1.815	15.091	AGC MAVG - calculated
6/3/2015 3:04	0:01	KWPII	0.012	8.456	AGC MAVG - calculated
6/3/2015 4:17	0:03	KWPII	0.121	8.706	AGC MAVG - calculated
6/3/2015 4:24	0:22	KWPII	1.495	15.312	AGC MAVG - calculated
6/3/2015 4:47	0:07	KWPII	0.136	14.745	AGC MAVG - calculated
6/3/2015 4:55	0:01	KWPII	0.013	14.046	AGC MAVG - calculated
6/3/2015 4:58	0:03	KWPII	0.083	12.300	AGC MAVG - calculated
6/3/2015 5:05	0:01	KWPII	0.028	13.247	AGC MAVG - calculated
6/3/2015 5:10	0:25	KWPII	1.637	15.754	AGC MAVG - calculated
6/3/2015 5:36	0:06	KWPII	0.185	17.468	AGC MAVG - calculated
6/3/2015 5:43	0:01	KWPII	0.027	17.375	AGC MAVG - calculated
6/3/2015 6:31	0:01	AWE	0.000	0.020	AGC MAVG - calculated
6/3/2015 7:07	0:14	KWPII	0.746	6.497	AGC MAVG - calculated
6/3/2015 7:10	0:06	AWE	0.174	18.530	AGC MAVG - calculated
6/3/2015 7:17	0:01	AWE	0.028	16.970	AGC MAVG - calculated
6/3/2015 7:26	0:56	KWPII	5.722	16.561	AGC MAVG - calculated
6/3/2015 8:23	0:03	KWPII	0.077	11.247	AGC MAVG - calculated
6/3/2015 8:28	0:03	KWPII	0.079	12.061	AGC MAVG - calculated
6/3/2015 8:40	0:03	KWPII	0.060	8.591	AGC MAVG - calculated
6/3/2015 8:46	0:25	KWPII	1.831	16.158	AGC MAVG - calculated
6/3/2015 10:17	0:24	KWPII	0.994	15.532	AGC MAVG - calculated
6/3/2015 10:42	2:10	KWPII	24.869	18.984	AGC MAVG - calculated
6/3/2015 11:48	0:01	AWE	0.001	21.000	AGC MAVG - calculated
6/3/2015 11:51	0:08	AWE	0.071	21.000	AGC MAVG - calculated
6/3/2015 12:04	0:01	AWE	0.001	19.740	AGC MAVG - calculated
6/3/2015 12:09	0:01	AWE	0.005	20.027	AGC MAVG - calculated
6/3/2015 12:27	0:01	AWE	0.009	20.333	AGC MAVG - calculated
6/3/2015 12:29	0:02	AWE	0.039	20.847	AGC MAVG - calculated
6/3/2015 12:33	0:15	AWE	0.353	21.000	AGC MAVG - calculated
6/3/2015 12:55	0:58	KWPII	6.711	15.216	AGC MAVG - calculated
6/3/2015 13:03	0:02	AWE	0.017	20.960	AGC MAVG - calculated
6/3/2015 13:07	0:04	AWE	0.012	21.000	AGC MAVG - calculated
6/3/2015 13:15	0:05	AWE	0.027	21.000	AGC MAVG - calculated
6/3/2015 13:23	0:02	AWE	0.004	21.000	AGC MAVG - calculated
6/3/2015 13:32	0:04	AWE	0.007	21.000	AGC MAVG - calculated
6/3/2015 16:04	0:03	KWPII	0.061	17.802	AGC MAVG - calculated
6/3/2015 16:33	0:01	KWPII	0.016	16.672	AGC MAVG - calculated
6/3/2015 16:37	0:01	KWPII	0.013	18.313	AGC MAVG - calculated
6/3/2015 19:39	0:05	KWPII	0.172	12.657	AGC MAVG - calculated
6/3/2015 19:45	0:42	KWPII	2.066	19.887	AGC MAVG - calculated
6/3/2015 22:21	0:21	AWE	0.678	21.000	AGC MAVG - calculated
6/3/2015 22:25	2:49	KWPII	28.680	18.090	AGC MAVG - calculated
6/3/2015 22:47	2:25	AWE	10.271	21.000	AGC MAVG - calculated
6/4/2015 1:15	0:01	KWPII	0.029	5.694	AGC MAVG - calculated
6/4/2015 1:19	0:13	KWPII	0.718	8.204	AGC MAVG - calculated
6/4/2015 2:31	1:34	KWPII	17.662	17.281	AGC MAVG - calculated
6/4/2015 2:56	1:05	AWE	7.603	21.000	AGC MAVG - calculated
6/4/2015 4:07	0:41	KWPII	6.229	14.545	AGC MAVG - calculated
6/4/2015 4:21	0:01	AWE	0.000	21.000	AGC MAVG - calculated
6/4/2015 4:25	0:04	AWE	0.006	21.000	AGC MAVG - calculated
6/4/2015 4:31	0:01	AWE	0.000	21.000	AGC MAVG - calculated
6/4/2015 4:34	0:01	AWE	0.001	20.730	AGC MAVG - calculated
6/4/2015 6:42	0:01	AWE	0.003	20.457	AGC MAVG - calculated
6/4/2015 9:38	0:04	KWPII	0.147	11.060	AGC MAVG - calculated and Good Engineering and Operating Practices
6/4/2015 23:09	0:02	KWPII	0.034	7.141	AGC MAVG - calculated
6/4/2015 23:16	0:01	KWPII	0.005	5.042	AGC MAVG - calculated
6/4/2015 23:19	0:01	KWPII	0.012	4.766	AGC MAVG - calculated
6/5/2015 2:02	0:06	AWE	0.173	19.103	AGC MAVG - calculated
6/5/2015 2:16	0:16	AWE	0.647	20.447	AGC MAVG - calculated
6/7/2015 0:01	0:08	KWPII	0.234	15.528	AGC MAVG - calculated

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Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
6/7/2015 0:10	0:48	KWPII	3.134	20.007	AGC MAVG - calculated
6/7/2015 1:00	0:01	KWPII	0.010	17.652	AGC MAVG - calculated
6/7/2015 1:19	0:02	KWPII	0.039	15.418	AGC MAVG - calculated
6/7/2015 1:24	3:09	KWPII	39.887	19.172	AGC MAVG - calculated
6/7/2015 3:06	0:48	MH	Data is not available	Data is not available	AGC MAVG - calculated and AGC MAVG - entered - Maintaining Regulating Reserves
6/7/2015 3:06	0:19	KWP	0.850	25.809	AGC MAVG - entered - Maintaining Regulating Reserves
6/7/2015 3:07	0:09	AWE	0.074	1.030	AGC MAVG - entered - Maintaining Regulating Reserves
6/7/2015 3:17	0:13	AWE	0.042	0.397	AGC MAVG - entered - Maintaining Regulating Reserves
6/7/2015 3:26	0:03	KWP	0.031	24.211	AGC MAVG - entered - Maintaining Regulating Reserves
6/7/2015 3:30	0:01	KWP	0.014	24.864	AGC MAVG - entered - Maintaining Regulating Reserves
6/7/2015 3:32	0:15	KWP	0.202	25.282	AGC MAVG - entered - Maintaining Regulating Reserves
6/7/2015 4:36	0:05	KWPII	0.491	11.999	AGC MAVG - calculated
6/7/2015 6:24	0:01	KWPII	0.016	11.441	AGC MAVG - calculated
6/7/2015 6:32	1:30	KWPII	10.188	18.698	AGC MAVG - calculated
6/7/2015 6:45	0:05	5A	Data is not available	Data is not available	AGC MAVG - calculated
6/7/2015 6:45	0:05	BS	Data is not available	Data is not available	AGC MAVG - calculated
6/7/2015 8:05	0:02	KWPII	0.061	14.836	AGC MAVG - calculated
6/7/2015 9:09	0:18	KWPII	1.142	13.712	AGC MAVG - calculated
6/7/2015 9:29	0:05	KWPII	0.164	11.635	AGC MAVG - calculated
6/7/2015 9:38	0:36	KWPII	3.081	13.243	AGC MAVG - calculated
6/7/2015 10:22	0:04	KWPII	0.124	12.808	AGC MAVG - calculated
6/7/2015 10:32	0:09	KWPII	0.290	11.622	AGC MAVG - calculated
6/7/2015 10:42	0:11	KWPII	0.247	9.954	AGC MAVG - calculated
6/7/2015 10:54	0:07	KWPII	0.253	8.464	AGC MAVG - calculated
6/7/2015 11:08	0:01	KWPII	0.018	9.460	AGC MAVG - calculated
6/7/2015 11:12	0:03	KWPII	0.105	11.701	AGC MAVG - calculated
6/7/2015 11:16	0:02	KWPII	0.064	10.092	AGC MAVG - calculated
6/7/2015 11:19	0:07	KWPII	0.195	11.828	AGC MAVG - calculated
6/7/2015 11:28	0:01	KWPII	0.011	10.051	AGC MAVG - calculated
6/7/2015 11:31	1:54	KWPII	9.837	14.758	AGC MAVG - calculated
6/7/2015 13:29	0:02	KWPII	0.051	10.603	AGC MAVG - calculated
6/7/2015 13:39	0:03	KWPII	0.074	13.194	AGC MAVG - calculated and Good Engineering and Operating Practices
6/7/2015 16:07	0:03	KWPII	0.062	18.864	AGC MAVG - calculated
6/7/2015 16:13	0:05	KWPII	0.169	20.015	AGC MAVG - calculated
6/7/2015 16:20	0:03	KWPII	0.080	20.430	AGC MAVG - calculated
6/7/2015 17:28	0:01	KWPII	0.009	19.656	AGC MAVG - calculated and Good Engineering and Operating Practices
6/7/2015 17:55	0:31	KWPII	2.724	20.671	AGC MAVG - entered - Maintaining Regulating Reserves and AGC MAVG - calculated
6/7/2015 21:14	0:01	KWPII	0.008	18.263	AGC MAVG - calculated
6/7/2015 21:21	0:01	KWPII	0.017	16.735	AGC MAVG - calculated
6/7/2015 21:23	0:05	KWPII	0.107	16.927	AGC MAVG - calculated
6/7/2015 21:30	0:04	KWPII	0.087	14.747	AGC MAVG - calculated
6/7/2015 21:37	0:01	KWPII	0.003	12.023	AGC MAVG - calculated
6/7/2015 21:53	0:20	KWPII	1.280	15.333	AGC MAVG - calculated
6/7/2015 23:33	3:41	KWPII	51.853	20.388	AGC MAVG - calculated
6/8/2015 0:51	0:01	AWE	0.011	4.637	AGC MAVG - calculated
6/8/2015 0:53	0:15	AWE	0.632	6.747	AGC MAVG - calculated
6/8/2015 1:09	0:57	AWE	1.916	5.377	AGC MAVG - calculated and AGC MAVG - entered - Maintaining Regulating Reserves
6/8/2015 1:16	0:48	MH	Data is not available	Data is not available	AGC MAVG - entered - Maintaining Regulating Reserves
6/8/2015 1:42	0:19	KWP	0.846	26.119	AGC MAVG - entered - Maintaining Regulating Reserves
6/8/2015 2:10	0:02	AWE	0.020	2.990	AGC MAVG - calculated
6/8/2015 2:17	0:04	AWE	0.080	3.920	AGC MAVG - calculated
6/8/2015 2:29	0:01	AWE	0.023	4.930	AGC MAVG - calculated
6/8/2015 2:35	0:01	AWE	0.035	4.747	AGC MAVG - calculated
6/8/2015 2:38	0:01	AWE	0.016	4.647	AGC MAVG - calculated
6/8/2015 2:40	0:19	AWE	0.817	5.750	AGC MAVG - calculated
6/8/2015 3:00	0:01	AWE	0.027	2.730	AGC MAVG - calculated
6/8/2015 3:04	0:09	AWE	0.284	4.563	AGC MAVG - calculated
6/8/2015 3:15	0:21	MH	Data is not available	Data is not available	AGC MAVG - entered - Maintaining Regulating Reserves
6/8/2015 3:16	4:50	KWPII	61.259	20.693	AGC MAVG - entered - Maintaining Regulating Reserves
6/8/2015 3:17	0:21	AWE	0.664	6.403	AGC MAVG - entered - Maintaining Regulating Reserves
6/8/2015 3:20	0:04	KWP	0.043	26.261	AGC MAVG - entered - Maintaining Regulating Reserves
6/8/2015 8:14	2:54	KWPII	41.842	20.296	AGC MAVG - calculated
6/8/2015 9:01	0:01	AWE	0.015	19.120	AGC MAVG - calculated
6/8/2015 9:42	0:01	AWE	0.021	17.913	AGC MAVG - calculated
6/8/2015 9:56	0:01	AWE	0.025	18.290	AGC MAVG - calculated
6/8/2015 10:15	0:06	AWE	0.238	20.563	AGC MAVG - calculated
6/8/2015 10:23	0:02	AWE	0.011	18.167	AGC MAVG - calculated
6/8/2015 10:26	0:01	AWE	0.010	18.147	AGC MAVG - calculated
6/8/2015 10:28	0:06	AWE	0.140	19.337	AGC MAVG - calculated
6/8/2015 10:36	0:03	AWE	0.095	19.200	AGC MAVG - calculated
6/8/2015 11:10	4:28	KWPII	55.832	20.625	AGC MAVG - calculated
6/8/2015 14:41	0:01	AWE	0.000	21.000	AGC MAVG - calculated
6/8/2015 15:41	0:28	KWPII	1.199	19.044	AGC MAVG - calculated
6/8/2015 21:34	0:02	KWPII	0.005	20.708	AGC MAVG - calculated
6/8/2015 21:37	0:01	KWPII	0.003	20.707	AGC MAVG - calculated
6/8/2015 21:47	0:06	KWPII	0.463	20.707	AGC MAVG - entered - Maintaining Regulating Reserves
6/8/2015 22:28	0:05	KWPII	0.078	20.642	AGC MAVG - calculated
6/8/2015 22:54	0:01	KWPII	0.001	20.681	AGC MAVG - calculated
6/8/2015 22:58	5:28	KWPII	99.494	20.708	AGC MAVG - calculated
6/9/2015 0:36	2:31	AWE	5.919	10.293	AGC MAVG - calculated and AGC MAVG - entered - Maintaining Regulating Reserves
6/9/2015 1:40	2:29	MH	Data is not available	Data is not available	AGC MAVG - entered - Maintaining Regulating Reserves
6/9/2015 1:50	2:16	KWP	3.949	29.682	AGC MAVG - entered - Maintaining Regulating Reserves
6/9/2015 3:09	0:01	AWE	0.001	0.050	AGC MAVG - entered - Maintaining Regulating Reserves
6/9/2015 4:27	6:09	KWPII	69.366	20.708	AGC MAVG - calculated
6/9/2015 10:37	0:39	KWPII	12.344	20.671	AGC MAVG - calculated
6/9/2015 10:43	0:01	AWE	0.011	16.623	AGC MAVG - calculated
6/9/2015 10:48	0:15	AWE	0.653	18.953	AGC MAVG - calculated
6/9/2015 11:06	0:02	AWE	0.124	16.320	AGC MAVG - calculated
6/9/2015 11:10	0:02	AWE	0.056	17.047	AGC MAVG - calculated
6/9/2015 11:18	4:40	KWPII	51.685	20.708	AGC MAVG - calculated
6/9/2015 11:21	0:02	AWE	0.017	16.790	AGC MAVG - calculated
6/9/2015 11:29	0:01	AWE	0.023	18.007	AGC MAVG - calculated
6/9/2015 11:32	0:03	AWE	0.056	17.980	AGC MAVG - calculated
6/9/2015 11:41	0:03	AWE	0.099	17.150	AGC MAVG - calculated
6/9/2015 11:49	0:02	AWE	0.039	15.303	AGC MAVG - calculated
6/9/2015 11:53	0:01	AWE	0.027	15.067	AGC MAVG - calculated
6/9/2015 16:47	0:01	KWPII	0.002	20.694	AGC MAVG - calculated
6/9/2015 17:53	0:01	KWPII	0.002	20.529	AGC MAVG - calculated and Operating Conditions on Company's System
6/9/2015 22:30	0:01	KWPII	0.007	20.708	AGC MAVG - calculated
6/9/2015 23:00	0:06	KWPII	0.063	20.708	AGC MAVG - calculated
6/9/2015 23:07	0:01	KWPII	0.001	20.708	AGC MAVG - calculated
6/9/2015 23:28	0:04	KWPII	0.017	20.708	AGC MAVG - calculated
6/9/2015 23:33	3:56	KWPII	59.580	20.708	AGC MAVG - calculated, AGC MAVG - entered - Maintaining Regulating Reserves, and AGC MAVG - calculated
6/10/2015 2:10	0:38	AWE	0.443	2.830	AGC MAVG - entered - Maintaining Regulating Reserves
6/10/2015 2:49	0:04	AWE	0.020	0.583	AGC MAVG - entered - Maintaining Regulating Reserves
6/10/2015 3:07	0:03	AWE	0.006	0.200	AGC MAVG - entered - Maintaining Regulating Reserves
6/10/2015 3:18	0:01	AWE	0.000	0.003	AGC MAVG - calculated
6/10/2015 3:30	1:00	KWPII	19.212	20.688	AGC MAVG - entered - Maintaining Regulating Reserves and AGC MAVG - calculated
6/10/2015 3:33	0:36	AWE	0.625	3.803	AGC MAVG - calculated
6/10/2015 4:13	0:02	AWE	0.058	4.610	AGC MAVG - calculated
6/10/2015 4:18	0:01	AWE	0.018	3.620	AGC MAVG - calculated
6/10/2015 4:31	1:09	KWPII	15.242	20.676	AGC MAVG - calculated
6/10/2015 5:41	1:06	KWPII	8.319	20.670	AGC MAVG - calculated
6/10/2015 6:48	0:47	KWPII	4.411	20.689	AGC MAVG - calculated

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Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
6/10/2015 7:36	0:02	KWPII	0.016	20.615	AGC MAVG - calculated
6/10/2015 7:46	0:23	KWPII	0.564	20.698	AGC MAVG - calculated
6/10/2015 8:11	0:19	KWPII	0.741	20.594	AGC MAVG - calculated
6/10/2015 8:38	0:01	KWPII	0.001	19.727	AGC MAVG - calculated
6/10/2015 8:42	0:03	KWPII	0.012	19.917	AGC MAVG - calculated
6/10/2015 8:46	3:09	KWPII	31.305	20.567	AGC MAVG - calculated
6/10/2015 11:56	0:01	KWPII	0.062	15.873	AGC MAVG - calculated
6/10/2015 11:58	0:44	KWPII	3.500	19.505	AGC MAVG - calculated
6/10/2015 12:53	0:02	KWPII	0.010	16.588	AGC MAVG - calculated
6/10/2015 12:56	1:04	KWPII	2.829	20.278	AGC MAVG - calculated
6/10/2015 14:03	0:01	KWPII	0.033	19.642	AGC MAVG - calculated
6/10/2015 14:05	0:03	KWPII	0.071	19.738	AGC MAVG - calculated
6/10/2015 14:10	0:04	KWPII	0.107	19.950	AGC MAVG - calculated
6/10/2015 14:55	0:05	KWPII	0.104	20.530	AGC MAVG - calculated and Good Engineering and Operating Practices
6/10/2015 15:08	0:02	KWPII	0.044	18.790	AGC MAVG - calculated and Good Engineering and Operating Practices
6/10/2015 15:16	1:59	KWPII	11.383	20.702	AGC MAVG - calculated
6/10/2015 17:27	0:03	KWPII	0.029	20.678	AGC MAVG - calculated
6/10/2015 23:09	0:04	KWPII	0.022	20.407	AGC MAVG - calculated
6/10/2015 23:14	0:02	KWPII	0.009	20.398	AGC MAVG - calculated
6/10/2015 23:17	0:01	KWPII	0.003	20.368	AGC MAVG - calculated
6/10/2015 23:20	0:01	KWPII	0.002	20.505	AGC MAVG - calculated
6/10/2015 23:33	0:02	KWPII	0.025	20.378	AGC MAVG - calculated
6/10/2015 23:36	0:09	KWPII	0.128	20.199	AGC MAVG - calculated
6/10/2015 23:48	0:02	KWPII	0.005	19.798	AGC MAVG - calculated
6/11/2015 0:04	3:17	KWPII	47.927	20.635	AGC MAVG - calculated and AGC MAVG - entered - Maintaining Regulating Reserves
6/11/2015 2:11	0:01	AWE	0.001	0.040	AGC MAVG - entered - Maintaining Regulating Reserves
6/11/2015 2:15	0:03	AWE	0.003	0.087	AGC MAVG - entered - Maintaining Regulating Reserves
6/11/2015 2:22	0:02	AWE	0.003	0.123	AGC MAVG - entered - Maintaining Regulating Reserves
6/11/2015 2:32	0:22	AWE	0.075	0.587	AGC MAVG - entered - Maintaining Regulating Reserves
6/11/2015 2:42	0:28	MH	Data is not available	Data is not available	AGC MAVG - entered - Maintaining Regulating Reserves
6/11/2015 2:45	0:02	KWP	0.008	28.578	AGC MAVG - entered - Maintaining Regulating Reserves
6/11/2015 2:52	0:04	KWP	0.017	28.307	AGC MAVG - entered - Maintaining Regulating Reserves
6/11/2015 2:57	0:02	AWE	0.002	0.057	AGC MAVG - entered - Maintaining Regulating Reserves
6/11/2015 3:03	0:01	KWP	0.011	28.669	AGC MAVG - entered - Maintaining Regulating Reserves
6/11/2015 3:13	0:02	KWP	0.003	28.377	AGC MAVG - calculated
6/11/2015 3:22	1:12	KWPII	11.904	18.597	AGC MAVG - calculated
6/11/2015 5:30	3:42	KWPII	28.291	19.802	AGC MAVG - calculated
6/11/2015 5:45	0:03	5A	Data is not available	Data is not available	AGC MAVG - calculated and AGC MAVG - entered - Maintaining Regulating Reserves
6/11/2015 5:45	0:03	BS	Data is not available	Data is not available	AGC MAVG - calculated and AGC MAVG - entered - Maintaining Regulating Reserves
6/11/2015 9:14	0:02	KWPII	0.052	12.923	AGC MAVG - calculated
6/11/2015 9:35	0:01	KWPII	0.010	13.354	AGC MAVG - calculated
6/11/2015 9:37	1:30	KWPII	10.252	18.827	AGC MAVG - calculated
6/11/2015 11:08	0:09	KWPII	0.324	16.678	AGC MAVG - calculated
6/11/2015 11:21	0:06	KWPII	0.175	16.053	AGC MAVG - calculated
6/11/2015 11:28	0:11	KWPII	0.305	16.002	AGC MAVG - calculated
6/11/2015 11:44	0:01	KWPII	0.000	13.966	AGC MAVG - calculated
6/11/2015 21:52	0:01	KWPII	0.005	15.271	AGC MAVG - calculated
6/11/2015 22:01	0:08	KWPII	0.342	15.412	AGC MAVG - calculated
6/11/2015 22:27	0:01	KWPII	0.020	14.814	AGC MAVG - calculated
6/11/2015 22:29	0:01	KWPII	0.001	14.790	AGC MAVG - calculated
6/11/2015 22:32	0:01	KWPII	0.011	15.535	AGC MAVG - calculated
6/11/2015 23:54	0:01	KWPII	0.018	14.088	AGC MAVG - calculated
6/11/2015 23:56	0:04	KWPII	0.126	15.300	AGC MAVG - calculated
6/12/2015 0:03	0:02	KWPII	0.049	14.595	AGC MAVG - calculated
6/12/2015 0:07	0:07	KWPII	0.224	15.069	AGC MAVG - calculated
6/12/2015 0:34	0:11	KWPII	0.340	13.749	AGC MAVG - calculated
6/12/2015 0:52	0:10	KWPII	0.293	12.673	AGC MAVG - calculated
6/12/2015 1:06	0:04	KWPII	0.092	11.815	AGC MAVG - calculated
6/12/2015 1:11	1:42	KWPII	17.982	17.824	AGC MAVG - calculated
6/12/2015 2:29	0:02	AWE	0.067	5.780	AGC MAVG - calculated
6/12/2015 2:42	0:01	AWE	0.026	4.673	AGC MAVG - calculated
6/12/2015 2:55	1:30	KWPII	10.692	14.409	AGC MAVG - calculated
6/12/2015 3:33	0:01	AWE	0.024	4.003	AGC MAVG - calculated
6/12/2015 4:26	0:07	KWPII	0.191	13.227	AGC MAVG - calculated
6/12/2015 4:36	0:57	KWPII	3.130	13.888	AGC MAVG - calculated
6/12/2015 5:34	0:01	KWPII	0.007	13.612	AGC MAVG - calculated
6/12/2015 12:52	0:06	KWPII	0.169	12.859	AGC MAVG - calculated
6/12/2015 21:23	0:19	KWPII	0.608	20.134	AGC MAVG - calculated
6/12/2015 21:46	0:06	KWPII	0.074	19.674	AGC MAVG - calculated
6/12/2015 21:54	0:01	KWPII	0.003	19.983	AGC MAVG - calculated
6/12/2015 22:05	0:02	KWPII	0.005	20.338	AGC MAVG - calculated
6/12/2015 22:24	0:45	KWPII	4.619	19.848	AGC MAVG - calculated
6/12/2015 23:12	0:21	KWPII	1.914	16.358	AGC MAVG - calculated
6/13/2015 0:16	0:01	KWPII	0.004	9.274	AGC MAVG - calculated
6/13/2015 2:49	0:03	KWPII	0.087	10.447	AGC MAVG - calculated
6/13/2015 2:56	0:04	KWPII	0.072	11.244	AGC MAVG - calculated
6/13/2015 15:00	0:04	KWPII	0.111	10.518	AGC MAVG - calculated
6/13/2015 15:26	0:01	KWPII	0.013	8.011	AGC MAVG - calculated
6/13/2015 19:44	0:01	KWPII	0.005	15.577	AGC MAVG - calculated and Good Engineering and Operating Practices
6/13/2015 21:48	0:01	KWPII	0.006	17.620	AGC MAVG - calculated
6/13/2015 21:50	0:03	KWPII	0.028	18.213	AGC MAVG - calculated
6/14/2015 4:45	0:04	KWPII	0.110	5.782	AGC MAVG - calculated and Operating Conditions on Company's System
6/14/2015 4:53	0:01	KWPII	0.013	7.416	AGC MAVG - calculated and Operating Conditions on Company's System
6/14/2015 5:27	0:12	KWPII	0.758	9.784	AGC MAVG - calculated and Operating Conditions on Company's System
6/14/2015 6:11	0:07	KWPII	0.159	7.884	AGC MAVG - calculated and Operating Conditions on Company's System
6/14/2015 7:28	0:36	KWPII	2.632	13.696	AGC MAVG - calculated
6/14/2015 8:05	0:31	KWPII	4.024	16.464	AGC MAVG - calculated
6/14/2015 8:37	0:02	KWPII	0.025	14.537	AGC MAVG - calculated
6/14/2015 11:06	0:01	KWPII	0.004	10.139	AGC MAVG - calculated
6/14/2015 11:08	0:11	KWPII	1.234	15.337	AGC MAVG - calculated
6/14/2015 11:20	0:23	KWPII	3.480	15.944	AGC MAVG - calculated
6/14/2015 11:31	0:01	AWE	0.016	20.143	AGC MAVG - calculated
6/15/2015 19:19	0:13	KWPII	0.738	19.104	AGC MAVG - calculated and Good Engineering and Operating Practices
6/15/2015 20:39	0:07	KWPII	0.105	20.582	AGC MAVG - calculated
6/15/2015 21:58	0:02	KWPII	0.008	20.365	AGC MAVG - calculated
6/15/2015 22:03	0:24	KWPII	1.408	20.689	AGC MAVG - calculated
6/15/2015 22:29	0:05	KWPII	0.024	20.704	AGC MAVG - calculated
6/15/2015 22:36	0:29	KWPII	1.579	20.699	AGC MAVG - calculated
6/15/2015 23:07	6:49	KWPII	80.956	20.702	AGC MAVG - calculated
6/16/2015 6:55	0:03	KWPII	0.014	20.669	AGC MAVG - calculated
6/16/2015 7:44	0:13	KWPII	0.301	20.699	AGC MAVG - calculated
6/16/2015 8:37	0:21	KWPII	0.881	20.677	AGC MAVG - calculated
6/16/2015 9:11	0:07	KWPII	0.258	20.696	AGC MAVG - calculated
6/16/2015 9:20	1:36	KWPII	17.678	20.697	AGC MAVG - calculated
6/16/2015 10:57	0:01	KWPII	0.006	18.429	AGC MAVG - calculated
6/16/2015 10:59	0:02	KWPII	0.042	18.988	AGC MAVG - calculated
6/16/2015 11:08	0:07	KWPII	0.224	18.616	AGC MAVG - calculated
6/16/2015 11:19	0:03	KWPII	0.050	17.031	AGC MAVG - calculated
6/16/2015 11:40	0:25	KWPII	2.513	19.622	AGC MAVG - calculated and Good Engineering and Operating Practices
6/16/2015 16:05	0:04	KWPII	0.044	20.246	AGC MAVG - calculated and Good Engineering and Operating Practices
6/16/2015 16:11	0:02	KWPII	0.021	20.096	AGC MAVG - calculated and Good Engineering and Operating Practices
6/16/2015 16:14	0:04	KWPII	0.060	20.565	AGC MAVG - calculated, Good Engineering and Operating Practices, and Testing
6/16/2015 16:19	0:03	KWPII	0.010	20.597	AGC MAVG - calculated, Good Engineering and Operating Practices, and Testing
6/16/2015 16:23	0:53	KWPII	4.297	20.692	AGC MAVG - calculated and Good Engineering and Operating Practices

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Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
6/16/2015 17:17	0:08	KWPII	0.047	20.201	AGC MAVG - calculated
6/16/2015 17:49	0:02	KWPII	0.005	19.525	AGC MAVG - calculated
6/16/2015 17:54	0:01	KWPII	0.007	19.394	AGC MAVG - calculated
6/16/2015 18:01	0:01	KWPII	0.007	19.591	AGC MAVG - calculated
6/16/2015 18:13	0:05	KWPII	0.050	20.434	AGC MAVG - calculated and Good Engineering and Operating Practices
6/16/2015 21:19	0:01	KWPII	0.001	20.704	AGC MAVG - calculated
6/16/2015 21:37	5:06	KWPII	72.642	20.708	AGC MAVG - calculated
6/17/2015 0:53	1:43	AWE	9.821	21.000	AGC MAVG - calculated
6/17/2015 2:45	2:31	KWPII	40.796	20.635	AGC MAVG - calculated
6/17/2015 2:56	0:09	AWE	0.324	8.813	AGC MAVG - calculated
6/17/2015 3:07	0:03	AWE	0.038	5.280	AGC MAVG - calculated
6/17/2015 3:21	0:04	AWE	0.162	8.617	AGC MAVG - calculated
6/17/2015 3:27	1:06	AWE	7.363	20.647	AGC MAVG - calculated
6/17/2015 4:35	0:32	AWE	1.823	19.993	AGC MAVG - calculated
6/17/2015 5:18	0:43	KWPII	9.207	20.708	AGC MAVG - calculated
6/17/2015 6:02	0:03	KWPII	0.011	20.696	AGC MAVG - calculated
6/17/2015 6:13	2:11	KWPII	14.695	20.701	AGC MAVG - calculated
6/17/2015 9:12	5:07	KWPII	35.479	20.704	AGC MAVG - calculated and Good Engineering and Operating Practices
6/17/2015 14:20	0:40	KWPII	2.946	20.601	AGC MAVG - calculated
6/17/2015 15:01	0:41	KWPII	2.468	20.564	AGC MAVG - calculated
6/17/2015 15:43	0:03	KWPII	0.097	20.545	AGC MAVG - calculated
6/17/2015 15:47	0:25	KWPII	0.543	20.402	AGC MAVG - calculated
6/17/2015 16:13	0:02	KWPII	0.010	19.962	AGC MAVG - calculated
6/17/2015 19:06	0:02	KWPII	0.020	20.689	AGC MAVG - calculated
6/17/2015 21:21	0:02	KWPII	0.004	20.694	AGC MAVG - calculated
6/17/2015 21:25	0:02	KWPII	0.005	20.655	AGC MAVG - calculated
6/17/2015 21:28	8:10	KWPII	92.712	20.696	AGC MAVG - calculated
6/18/2015 0:20	0:05	AWE	0.117	17.210	AGC MAVG - calculated
6/18/2015 0:26	0:01	AWE	0.008	16.150	AGC MAVG - calculated
6/18/2015 0:35	0:25	AWE	2.119	19.407	AGC MAVG - calculated
6/18/2015 1:02	0:11	AWE	0.455	12.347	AGC MAVG - calculated
6/18/2015 1:14	0:32	AWE	2.802	16.307	AGC MAVG - calculated
6/18/2015 1:47	0:03	AWE	0.130	11.693	AGC MAVG - calculated
6/18/2015 1:53	0:01	AWE	0.003	9.743	AGC MAVG - calculated
6/18/2015 1:57	0:07	AWE	0.263	11.893	AGC MAVG - calculated
6/18/2015 2:06	0:01	AWE	0.015	9.993	AGC MAVG - calculated
6/18/2015 2:09	0:01	AWE	0.001	8.577	AGC MAVG - calculated
6/18/2015 2:12	0:03	AWE	0.079	9.310	AGC MAVG - calculated
6/18/2015 2:17	0:13	AWE	0.616	8.700	AGC MAVG - calculated
6/18/2015 3:35	0:01	AWE	0.007	4.057	AGC MAVG - calculated
6/18/2015 5:39	0:03	KWPII	0.045	17.178	AGC MAVG - calculated
6/18/2015 9:08	0:18	KWPII	0.843	18.961	AGC MAVG - calculated
6/18/2015 9:33	0:15	KWPII	0.365	18.888	AGC MAVG - calculated
6/18/2015 9:59	0:01	KWPII	0.002	18.629	AGC MAVG - calculated
6/18/2015 10:03	0:02	KWPII	0.029	18.673	AGC MAVG - calculated
6/18/2015 10:38	0:22	KWPII	1.116	20.072	AGC MAVG - calculated
6/18/2015 11:05	0:07	KWPII	0.195	19.946	AGC MAVG - calculated
6/18/2015 11:15	0:04	KWPII	0.139	19.467	AGC MAVG - calculated
6/18/2015 11:25	0:02	KWPII	0.043	17.771	AGC MAVG - calculated
6/18/2015 11:44	0:03	KWPII	0.118	17.590	AGC MAVG - calculated
6/18/2015 11:48	0:01	KWPII	0.024	18.218	AGC MAVG - calculated
6/18/2015 12:26	0:01	KWPII	0.017	19.215	AGC MAVG - calculated
6/18/2015 12:32	0:05	KWPII	0.066	19.116	AGC MAVG - calculated
6/18/2015 12:46	0:01	KWPII	0.008	18.830	AGC MAVG - calculated
6/18/2015 12:49	0:05	KWPII	0.102	19.401	AGC MAVG - calculated
6/18/2015 13:08	0:02	KWPII	0.011	18.567	AGC MAVG - calculated
6/18/2015 13:11	0:02	KWPII	0.068	19.468	AGC MAVG - calculated
6/18/2015 13:26	0:02	KWPII	0.040	19.758	AGC MAVG - calculated
6/18/2015 13:44	0:02	KWPII	0.009	17.889	AGC MAVG - calculated
6/18/2015 13:47	0:05	KWPII	0.103	18.412	AGC MAVG - calculated
6/18/2015 14:00	0:02	KWPII	0.048	17.877	AGC MAVG - calculated
6/18/2015 22:06	0:15	KWPII	0.553	20.708	AGC MAVG - calculated
6/18/2015 22:44	0:47	KWPII	3.823	20.708	AGC MAVG - calculated
6/18/2015 23:33	5:24	KWPII	60.952	20.708	AGC MAVG - calculated
6/19/2015 4:34	0:08	AWE	0.362	19.027	AGC MAVG - calculated
6/19/2015 4:59	0:21	KWPII	1.628	20.708	AGC MAVG - calculated
6/19/2015 5:21	0:29	KWPII	0.766	20.708	AGC MAVG - calculated
6/19/2015 6:05	1:22	KWPII	9.413	20.708	AGC MAVG - calculated
6/19/2015 7:34	0:08	KWPII	0.195	20.708	AGC MAVG - calculated
6/19/2015 7:49	0:26	KWPII	1.744	20.708	AGC MAVG - calculated
6/19/2015 8:18	0:27	KWPII	2.178	20.703	AGC MAVG - calculated
6/19/2015 8:47	0:38	KWPII	2.334	20.708	AGC MAVG - calculated
6/19/2015 9:38	1:49	KWPII	7.766	20.703	AGC MAVG - calculated
6/19/2015 11:30	0:20	KWPII	1.463	20.663	AGC MAVG - calculated
6/19/2015 12:04	3:04	KWPII	23.919	20.638	AGC MAVG - calculated
6/19/2015 15:34	0:06	KWPII	0.150	20.424	AGC MAVG - calculated
6/19/2015 15:45	0:38	KWPII	2.414	20.675	AGC MAVG - calculated
6/19/2015 16:30	0:13	KWPII	0.385	20.670	AGC MAVG - calculated
6/19/2015 20:04	0:01	KWPII	0.012	20.515	AGC MAVG - calculated
6/19/2015 20:42	0:01	KWPII	0.000	20.703	AGC MAVG - calculated
6/19/2015 20:46	0:01	KWPII	0.002	20.700	AGC MAVG - calculated
6/19/2015 21:19	0:07	KWPII	0.116	20.708	AGC MAVG - calculated
6/19/2015 22:25	0:17	KWPII	0.921	20.708	AGC MAVG - calculated
6/19/2015 23:10	0:02	KWPII	0.001	20.708	AGC MAVG - calculated
6/19/2015 23:15	3:30	KWPII	45.839	20.708	AGC MAVG - calculated
6/20/2015 2:19	0:04	AWE	0.218	10.623	AGC MAVG - calculated
6/20/2015 2:34	0:03	AWE	0.084	6.260	AGC MAVG - calculated
6/20/2015 2:47	3:31	KWPII	40.977	19.211	AGC MAVG - calculated
6/20/2015 6:39	0:23	KWPII	1.428	19.211	AGC MAVG - calculated
6/20/2015 7:19	0:02	KWPII	0.005	19.098	AGC MAVG - calculated
6/20/2015 7:29	0:31	KWPII	1.870	19.165	AGC MAVG - calculated
6/20/2015 8:01	0:03	KWPII	0.062	18.895	AGC MAVG - calculated
6/20/2015 8:05	0:45	KWPII	3.447	19.085	AGC MAVG - calculated
6/20/2015 8:51	0:26	KWPII	2.407	19.204	AGC MAVG - calculated
6/20/2015 9:36	0:06	KWPII	0.126	18.811	AGC MAVG - calculated
6/20/2015 9:45	0:13	KWPII	0.774	18.993	AGC MAVG - calculated
6/20/2015 10:01	1:25	KWPII	8.216	19.200	AGC MAVG - calculated, AGC MAVG - entered - Maintaining Regulating Reserves, and AGC MAVG - calculated
6/20/2015 11:28	0:02	KWPII	0.084	17.633	AGC MAVG - calculated
6/20/2015 11:34	4:16	KWPII	44.662	20.680	AGC MAVG - entered - Maintaining Regulating Reserves and AGC MAVG - calculated
6/20/2015 15:51	0:02	KWPII	0.014	20.592	AGC MAVG - calculated
6/20/2015 15:58	0:01	KWPII	0.000	20.658	AGC MAVG - calculated
6/20/2015 21:58	0:01	KWPII	0.002	20.683	AGC MAVG - calculated
6/20/2015 22:21	0:43	KWPII	1.477	20.694	AGC MAVG - calculated
6/20/2015 23:05	4:09	KWPII	31.499	20.692	AGC MAVG - calculated
6/21/2015 3:23	2:25	KWPII	21.813	20.678	AGC MAVG - calculated
6/21/2015 5:55	0:02	KWPII	0.004	20.185	AGC MAVG - calculated
6/21/2015 6:06	0:01	KWPII	0.002	20.640	AGC MAVG - calculated
6/21/2015 6:35	0:26	KWPII	1.319	20.376	AGC MAVG - calculated
6/21/2015 7:02	0:01	KWPII	0.005	19.839	AGC MAVG - calculated
6/21/2015 7:13	0:01	KWPII	0.004	20.597	AGC MAVG - calculated
6/21/2015 7:41	0:10	KWPII	0.215	20.439	AGC MAVG - calculated
6/21/2015 8:02	0:03	KWPII	0.027	19.958	AGC MAVG - calculated
6/21/2015 9:20	0:02	KWPII	0.075	17.031	AGC MAVG - calculated
6/21/2015 9:39	0:01	KWPII	0.006	18.463	AGC MAVG - calculated

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Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
6/21/2015 9:41	0:05	KWPII	0.146	18.474	AGC MAVG - calculated
6/21/2015 9:50	0:23	KWPII	1.255	18.378	AGC MAVG - calculated
6/21/2015 10:15	0:01	KWPII	0.026	16.314	AGC MAVG - calculated
6/21/2015 23:12	0:01	KWPII	0.000	20.683	AGC MAVG - calculated
6/21/2015 23:14	0:01	KWPII	0.000	20.686	AGC MAVG - calculated
6/21/2015 23:21	2:59	KWPII	37.092	20.696	AGC MAVG - calculated
6/22/2015 1:42	0:01	AWE	0.015	5.503	AGC MAVG - calculated
6/22/2015 1:48	0:17	AWE	0.885	8.887	AGC MAVG - calculated
6/22/2015 2:06	0:02	AWE	0.046	7.503	AGC MAVG - calculated
6/22/2015 2:11	0:01	AWE	0.051	8.723	AGC MAVG - calculated
6/22/2015 2:23	3:17	KWPII	47.358	18.299	AGC MAVG - calculated
6/22/2015 2:41	0:01	AWE	0.038	6.133	AGC MAVG - calculated
6/22/2015 2:44	0:04	AWE	0.123	5.700	AGC MAVG - calculated
6/22/2015 2:51	0:02	AWE	0.024	5.400	AGC MAVG - calculated
6/22/2015 2:54	0:01	AWE	0.007	4.887	AGC MAVG - calculated
6/22/2015 3:08	0:40	AWE	5.830	17.293	AGC MAVG - calculated
6/22/2015 3:51	1:34	AWE	8.341	18.303	AGC MAVG - calculated
6/22/2015 5:26	0:12	AWE	0.366	15.033	AGC MAVG - calculated
6/22/2015 5:41	0:03	KWPII	0.103	2.595	AGC MAVG - calculated
6/22/2015 5:46	0:03	KWPII	0.149	3.505	AGC MAVG - calculated
6/22/2015 6:05	0:09	KWPII	0.560	15.775	AGC MAVG - calculated
6/22/2015 6:17	0:07	KWPII	0.238	18.167	AGC MAVG - calculated
6/22/2015 6:25	0:02	KWPII	0.033	20.321	AGC MAVG - calculated
6/22/2015 6:28	0:07	KWPII	0.239	20.512	AGC MAVG - calculated
6/22/2015 6:37	0:12	KWPII	0.286	20.237	AGC MAVG - calculated
6/22/2015 10:09	0:01	KWPII	0.039	13.171	AGC MAVG - calculated
6/22/2015 14:46	0:06	KWPII	0.212	20.122	AGC MAVG - calculated
6/22/2015 21:48	2:19	KWPII	26.418	20.708	AGC MAVG - calculated
6/22/2015 23:48	0:11	AWE	0.431	15.390	AGC MAVG - calculated
6/23/2015 0:01	0:01	AWE	0.010	8.617	AGC MAVG - calculated
6/23/2015 0:09	0:41	KWPII	11.883	19.211	AGC MAVG - calculated
6/23/2015 0:25	0:02	AWE	0.025	10.700	AGC MAVG - calculated
6/23/2015 0:28	0:02	AWE	0.046	11.270	AGC MAVG - calculated
6/23/2015 0:31	0:03	AWE	0.077	11.753	AGC MAVG - calculated
6/23/2015 0:42	0:01	AWE	0.018	9.100	AGC MAVG - calculated
6/23/2015 0:51	4:06	KWPII	71.223	19.211	AGC MAVG - calculated
6/23/2015 1:12	0:01	AWE	0.004	6.970	AGC MAVG - calculated
6/23/2015 1:15	0:02	AWE	0.042	7.657	AGC MAVG - calculated
6/23/2015 1:53	0:01	AWE	0.010	3.980	AGC MAVG - calculated
6/23/2015 1:58	0:08	AWE	0.263	5.283	AGC MAVG - calculated
6/23/2015 2:09	0:06	AWE	0.089	3.480	AGC MAVG - calculated
6/23/2015 2:16	0:01	AWE	0.017	2.010	AGC MAVG - calculated
6/23/2015 2:44	0:02	AWE	0.053	2.950	AGC MAVG - calculated
6/23/2015 2:51	0:01	AWE	0.020	1.973	AGC MAVG - calculated
6/23/2015 2:59	1:07	AWE	4.156	13.310	AGC MAVG - calculated
6/23/2015 4:21	0:20	AWE	0.771	15.673	AGC MAVG - calculated
6/23/2015 4:59	1:02	KWPII	13.944	18.483	AGC MAVG - calculated
6/23/2015 5:33	0:01	AWE	0.007	20.040	AGC MAVG - calculated
6/23/2015 5:36	0:15	AWE	0.060	21.000	AGC MAVG - calculated
6/23/2015 6:03	0:20	KWPII	2.115	18.692	AGC MAVG - calculated
6/23/2015 6:27	0:01	KWPII	0.004	18.979	AGC MAVG - calculated
6/23/2015 6:33	2:50	KWPII	18.903	19.211	AGC MAVG - calculated and Testing
6/23/2015 9:31	0:01	KWPII	0.012	19.153	AGC MAVG - calculated and Testing
6/23/2015 9:33	0:01	KWPII	0.002	18.950	AGC MAVG - calculated and Testing
6/23/2015 9:43	0:01	KWPII	0.004	19.044	AGC MAVG - calculated and Testing
6/23/2015 9:46	0:01	KWPII	0.001	19.021	AGC MAVG - calculated and Testing
6/23/2015 9:49	0:01	KWPII	0.001	19.044	AGC MAVG - calculated and Testing
6/23/2015 9:51	0:01	KWPII	0.001	19.032	AGC MAVG - calculated and Testing
6/23/2015 9:58	0:01	KWPII	0.020	18.805	AGC MAVG - calculated and Testing
6/23/2015 10:12	2:51	KWPII	32.816	20.373	AGC MAVG - calculated and Testing
6/23/2015 10:35	0:02	AWE	0.001	21.000	AGC MAVG - calculated and Testing
6/23/2015 10:38	0:01	AWE	0.002	21.000	AGC MAVG - calculated and Testing
6/23/2015 10:49	0:03	AWE	0.009	21.000	AGC MAVG - calculated and Testing
6/23/2015 10:53	0:22	AWE	0.144	21.000	AGC MAVG - calculated and Testing
6/23/2015 11:16	0:01	AWE	0.003	21.000	AGC MAVG - calculated and Testing
6/23/2015 11:18	0:01	AWE	0.002	21.000	AGC MAVG - calculated and Testing
6/23/2015 11:28	0:01	AWE	0.001	21.000	AGC MAVG - calculated and Testing
6/23/2015 13:04	0:01	KWPII	0.022	20.325	AGC MAVG - calculated
6/23/2015 14:43	0:01	KWPII	0.009	17.732	AGC MAVG - calculated
6/23/2015 15:03	0:03	KWPII	0.102	20.076	AGC MAVG - calculated
6/23/2015 15:16	0:03	KWPII	0.058	20.072	AGC MAVG - calculated
6/23/2015 15:23	0:02	KWPII	0.012	19.131	AGC MAVG - calculated
6/23/2015 15:28	0:02	KWPII	0.025	19.000	AGC MAVG - calculated
6/23/2015 16:08	0:01	KWPII	0.015	19.445	AGC MAVG - calculated
6/23/2015 16:10	0:11	KWPII	0.163	20.237	AGC MAVG - calculated
6/23/2015 16:23	0:01	KWPII	0.002	20.237	AGC MAVG - calculated
6/23/2015 16:25	0:01	KWPII	0.002	19.974	AGC MAVG - calculated
6/23/2015 22:40	6:21	KWPII	58.364	20.706	AGC MAVG - calculated
6/24/2015 5:02	0:01	KWPII	0.012	15.397	AGC MAVG - calculated
6/24/2015 5:05	0:01	KWPII	0.006	15.631	AGC MAVG - calculated
6/24/2015 9:03	0:02	KWPII	0.088	16.101	AGC MAVG - calculated
6/24/2015 9:09	0:06	KWPII	0.254	15.298	AGC MAVG - calculated
6/24/2015 10:02	0:05	KWPII	0.212	13.180	AGC MAVG - calculated
6/24/2015 10:15	0:03	KWPII	0.049	11.247	AGC MAVG - calculated and Good Engineering and Operating Practices
6/24/2015 10:58	0:08	KWPII	0.592	16.242	AGC MAVG - calculated and Testing
6/24/2015 11:07	0:48	KWPII	8.278	19.072	AGC MAVG - calculated and Testing
6/24/2015 11:56	1:28	KWPII	11.910	20.687	AGC MAVG - calculated
6/24/2015 13:49	0:04	KWPII	0.023	20.688	AGC MAVG - calculated
6/24/2015 13:54	0:02	KWPII	0.027	20.697	AGC MAVG - calculated
6/24/2015 13:59	0:02	KWPII	0.001	20.699	AGC MAVG - calculated
6/24/2015 14:02	0:01	KWPII	0.001	20.673	AGC MAVG - calculated
6/24/2015 14:06	0:08	KWPII	0.073	20.679	AGC MAVG - calculated
6/24/2015 14:21	0:05	KWPII	0.035	20.708	AGC MAVG - calculated
6/24/2015 15:38	0:02	KWPII	0.018	20.708	AGC MAVG - calculated and Good Engineering and Operating Practices
6/24/2015 15:41	0:40	KWPII	2.341	20.708	AGC MAVG - calculated and Good Engineering and Operating Practices
6/24/2015 16:37	0:01	KWPII	0.001	20.698	AGC MAVG - calculated and Good Engineering and Operating Practices
6/24/2015 16:39	0:05	KWPII	0.049	20.707	AGC MAVG - calculated and Good Engineering and Operating Practices
6/24/2015 23:15	0:02	KWPII	0.003	20.700	AGC MAVG - calculated
6/24/2015 23:47	3:05	KWPII	43.692	20.702	AGC MAVG - calculated
6/25/2015 1:14	0:19	AWE	1.288	12.550	AGC MAVG - calculated
6/25/2015 1:43	0:13	AWE	1.187	12.227	AGC MAVG - calculated
6/25/2015 1:57	0:01	AWE	0.020	4.173	AGC MAVG - calculated
6/25/2015 1:59	0:01	AWE	0.017	3.617	AGC MAVG - calculated
6/25/2015 2:11	0:01	AWE	0.017	4.030	AGC MAVG - calculated
6/25/2015 2:14	0:01	AWE	0.003	3.807	AGC MAVG - calculated
6/25/2015 2:16	0:04	AWE	0.070	3.943	AGC MAVG - calculated
6/25/2015 2:21	0:02	AWE	0.100	6.073	AGC MAVG - calculated
6/25/2015 2:26	0:12	AWE	0.856	13.753	AGC MAVG - calculated
6/25/2015 2:54	1:01	KWPII	14.775	19.747	AGC MAVG - calculated
6/25/2015 3:33	0:02	AWE	0.028	5.807	AGC MAVG - calculated
6/25/2015 3:37	0:07	AWE	0.302	6.803	AGC MAVG - calculated
6/25/2015 3:57	1:23	KWPII	20.023	20.596	AGC MAVG - calculated
6/25/2015 4:48	0:01	AWE	0.000	0.003	AGC MAVG - calculated
6/25/2015 5:00	0:14	AWE	0.661	12.343	AGC MAVG - calculated

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Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
6/25/2015 5:22	1:16	KWPII	6.796	20.708	AGC MAVG - calculated
6/25/2015 6:46	1:47	KWPII	15.366	20.701	AGC MAVG - calculated and Good Engineering and Operating Practices
6/25/2015 8:35	0:01	KWPII	0.017	17.528	AGC MAVG - calculated
6/25/2015 8:45	2:30	KWPII	13.594	20.450	AGC MAVG - calculated
6/25/2015 11:18	0:08	KWPII	0.252	18.969	AGC MAVG - calculated
6/25/2015 11:27	0:02	KWPII	0.059	18.979	AGC MAVG - calculated
6/25/2015 11:37	0:08	KWPII	0.198	19.031	AGC MAVG - calculated
6/25/2015 11:59	0:01	KWPII	0.002	18.875	AGC MAVG - calculated
6/25/2015 12:07	0:07	KWPII	0.181	19.472	AGC MAVG - calculated
6/25/2015 12:17	0:22	KWPII	0.660	20.538	AGC MAVG - calculated
6/25/2015 12:41	0:02	KWPII	0.043	18.228	AGC MAVG - calculated
6/25/2015 12:48	0:18	KWPII	0.604	18.985	AGC MAVG - calculated
6/25/2015 13:07	0:03	KWPII	0.067	18.483	AGC MAVG - calculated
6/25/2015 13:16	0:04	KWPII	0.056	20.529	AGC MAVG - calculated
6/25/2015 13:25	0:05	KWPII	0.102	20.596	AGC MAVG - calculated
6/25/2015 13:32	0:04	KWPII	0.034	20.603	AGC MAVG - calculated
6/25/2015 13:37	0:01	KWPII	0.002	20.275	AGC MAVG - calculated
6/25/2015 13:41	0:08	KWPII	0.078	20.608	AGC MAVG - calculated
6/25/2015 13:50	0:04	KWPII	0.056	20.667	AGC MAVG - calculated
6/25/2015 13:55	0:08	KWPII	0.178	20.597	AGC MAVG - calculated
6/25/2015 14:04	0:01	KWPII	0.008	20.174	AGC MAVG - calculated
6/25/2015 14:09	0:02	KWPII	0.008	20.525	AGC MAVG - calculated
6/25/2015 22:45	0:07	KWPII	0.194	18.292	AGC MAVG - calculated
6/25/2015 22:55	0:06	KWPII	0.211	18.660	AGC MAVG - calculated
6/25/2015 23:02	0:01	KWPII	0.018	15.164	AGC MAVG - calculated
6/25/2015 23:04	0:01	KWPII	0.024	14.615	AGC MAVG - calculated
6/25/2015 23:06	0:34	KWPII	2.699	16.275	AGC MAVG - calculated
6/26/2015 0:13	0:01	KWPII	0.020	13.551	AGC MAVG - calculated
6/26/2015 0:17	0:30	KWPII	1.324	17.327	AGC MAVG - calculated
6/26/2015 0:50	0:02	KWPII	0.053	9.120	AGC MAVG - calculated
6/26/2015 0:53	0:02	KWPII	0.035	8.093	AGC MAVG - calculated
6/26/2015 1:00	1:22	KWPII	9.352	18.784	AGC MAVG - calculated
6/26/2015 2:45	0:29	KWPII	2.030	17.856	AGC MAVG - calculated
6/26/2015 3:15	0:02	KWPII	0.014	15.471	AGC MAVG - calculated
6/26/2015 4:11	0:08	KWPII	0.221	18.405	AGC MAVG - calculated
6/26/2015 4:20	0:01	KWPII	0.022	18.102	AGC MAVG - calculated
6/26/2015 4:22	0:02	KWPII	0.015	18.279	AGC MAVG - calculated
6/26/2015 4:32	1:06	KWPII	9.615	19.137	AGC MAVG - calculated
6/26/2015 7:14	0:36	KWPII	3.922	19.207	AGC MAVG - calculated
6/26/2015 7:52	0:01	KWPII	0.016	19.178	AGC MAVG - calculated
6/26/2015 7:54	0:02	KWPII	0.028	19.119	AGC MAVG - calculated
6/26/2015 7:57	0:01	KWPII	0.009	19.095	AGC MAVG - calculated
6/26/2015 7:59	0:01	KWPII	0.008	19.187	AGC MAVG - calculated
6/26/2015 8:19	0:01	KWPII	0.010	18.751	AGC MAVG - calculated
6/26/2015 8:21	2:19	KWPII	14.723	19.200	AGC MAVG - calculated
6/26/2015 10:42	0:58	KWPII	6.292	16.806	AGC MAVG - calculated
6/26/2015 11:43	0:01	KWPII	0.026	14.676	AGC MAVG - calculated
6/26/2015 11:56	0:03	KWPII	0.071	14.257	AGC MAVG - calculated
6/26/2015 12:06	0:02	KWPII	0.044	15.389	AGC MAVG - calculated
6/26/2015 12:15	0:03	KWPII	0.048	14.871	AGC MAVG - calculated
6/26/2015 14:00	0:03	KWPII	0.050	13.639	AGC MAVG - calculated
6/26/2015 20:19	0:01	AWE	0.000	0.007	AGC MAVG - calculated
6/27/2015 17:03	0:01	KWP	0.000	0.006	AGC MAVG - calculated
6/28/2015 6:02	0:01	KWP	0.000	0.001	AGC MAVG - calculated
6/28/2015 6:25	0:01	KWP	0.000	0.001	AGC MAVG - calculated

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"), and Kaheawa Wind Power II ("KWPII") 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, or MH.
- Curtailment signals sent to 5A or BS during nighttime hours are not recorded as curtailment events because no energy generation is possible during that time.

Maui Electric

Lanai Curtailment Report June 2015

Start Date/Time	Stop Date/Time	Duration (h:mm)	IPP Curtailed	Estimated MWH Curtailed	Peak MW Curtailed	Reasons for Curtailment
6/1/2015 5:00	6/1/2015 6:20	1:21	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/1/2015 18:44	6/1/2015 19:59	1:16	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/2/2015 5:00	6/2/2015 6:05	1:06	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/2/2015 18:46	6/2/2015 19:59	1:14	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/3/2015 5:00	6/3/2015 6:06	1:07	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/3/2015 17:59	6/3/2015 18:08	0:10	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/3/2015 18:41	6/3/2015 19:59	1:19	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/4/2015 5:00	6/4/2015 6:05	1:06	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/4/2015 18:43	6/4/2015 18:44	0:02	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/4/2015 18:47	6/4/2015 19:59	1:13	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/5/2015 5:00	6/5/2015 6:05	1:06	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/5/2015 18:15	6/5/2015 18:17	0:03	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/5/2015 18:30	6/5/2015 18:37	0:08	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/5/2015 18:39	6/5/2015 18:42	0:04	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/5/2015 18:46	6/5/2015 19:59	1:14	LSR	Data is not available	Data is not available	Testing
6/6/2015 5:00	6/6/2015 6:05	1:06	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/6/2015 18:37	6/6/2015 19:59	1:23	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/7/2015 5:00	6/7/2015 6:06	1:07	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/7/2015 18:39	6/7/2015 19:59	1:21	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/8/2015 5:00	6/8/2015 6:05	1:06	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/8/2015 18:48	6/8/2015 19:59	1:12	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/9/2015 5:00	6/9/2015 6:06	1:07	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/9/2015 18:49	6/9/2015 19:59	1:11	LSR	Data is not available	Data is not available	Testing
6/10/2015 5:00	6/10/2015 6:06	1:07	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/10/2015 18:44	6/10/2015 18:44	0:01	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/10/2015 18:49	6/10/2015 19:59	1:11	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/11/2015 5:00	6/11/2015 5:41	0:42	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/11/2015 18:50	6/11/2015 19:59	1:10	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/12/2015 5:00	6/12/2015 6:06	1:07	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/12/2015 18:53	6/12/2015 19:59	1:07	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/13/2015 5:00	6/13/2015 6:09	1:10	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/13/2015 18:44	6/13/2015 19:59	1:16	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/14/2015 5:00	6/14/2015 6:09	1:10	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/14/2015 17:39	6/14/2015 17:42	0:04	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/14/2015 18:53	6/14/2015 19:59	1:07	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/15/2015 5:00	6/15/2015 6:07	1:08	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/15/2015 18:51	6/15/2015 19:59	1:09	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/16/2015 5:00	6/16/2015 6:07	1:08	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/16/2015 18:49	6/16/2015 19:59	1:11	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/17/2015 5:00	6/17/2015 6:07	1:08	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/17/2015 6:10	6/17/2015 6:19	0:10	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/17/2015 18:48	6/17/2015 19:59	1:12	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/18/2015 5:00	6/18/2015 5:45	0:46	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/18/2015 6:16	6/18/2015 6:18	0:03	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/18/2015 6:21	6/18/2015 6:22	0:02	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/18/2015 18:52	6/18/2015 19:59	1:08	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/19/2015 5:00	6/19/2015 6:26	1:27	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/19/2015 18:45	6/19/2015 19:59	1:15	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/20/2015 5:00	6/20/2015 6:07	1:08	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/20/2015 18:52	6/20/2015 19:59	1:08	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/21/2015 5:00	6/21/2015 6:08	1:09	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/21/2015 18:41	6/21/2015 18:41	0:01	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/21/2015 18:52	6/21/2015 19:59	1:08	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/22/2015 5:00	6/22/2015 6:08	1:09	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/22/2015 18:54	6/22/2015 19:59	1:06	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/23/2015 5:00	6/23/2015 6:20	1:21	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/23/2015 18:51	6/23/2015 19:59	1:09	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/24/2015 5:00	6/24/2015 6:17	1:18	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/24/2015 6:19	6/24/2015 6:23	0:05	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/24/2015 16:37	6/24/2015 16:49	0:13	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/24/2015 18:34	6/24/2015 19:59	1:26	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/25/2015 5:00	6/25/2015 6:08	1:09	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/25/2015 17:06	6/25/2015 17:16	0:11	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/25/2015 18:07	6/25/2015 18:15	0:09	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/25/2015 18:29	6/25/2015 19:59	1:31	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/26/2015 5:00	6/26/2015 6:15	1:16	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/26/2015 18:53	6/26/2015 19:59	1:07	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/27/2015 5:00	6/27/2015 6:09	1:10	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/27/2015 18:52	6/27/2015 19:59	1:08	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/28/2015 5:00	6/28/2015 6:11	1:12	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/28/2015 18:54	6/28/2015 19:59	1:06	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/29/2015 5:00	6/29/2015 6:11	1:12	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/29/2015 18:09	6/29/2015 19:59	1:51	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
6/30/2015 5:00	6/30/2015 6:11	1:12	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices

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.