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2014 APR 25 P 3:52

PUBLIC UTILITIES
COMMISSION



April 25, 2014

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 March 2014 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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The Commission's Order No. 30371 (Docket No 2011-0206 – Relating To Various Matters in RSWG Process), filed May 4, 2012, ordered the following information for each island grid:

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

The following provides information with respect to items 1a) through 1b) – (all statements are current as of the month ending March 31, 2014):

1a) Frequency duration plot based on the highest resolution SCADA data available for the month detailing how many seconds each power system operated at frequencies above 60 hertz and at frequencies below 60 Hz:

The frequency duration plots for Hawaiian Electric, Maui Electric (Maui Division) and Hawai'i Electric Light based on two-second data are provided in Attachment 1, and the enclosed Excel files. Refer to the electronic files for the individual data points because the information is voluminous and does not translate well to a hard copy.

1b) Tabulation of the number, magnitude and duration of frequency excursions (high and low) outside normal frequency control range (59.95 to 60.05 Hz):

Tabulation of the number, magnitude and duration of frequency excursions outside of the frequency range of 59.95 Hz to 60.05 Hz for Hawaiian Electric, Maui Electric (Maui Division) and Hawai'i Electric Light are provided in Attachment 2, and the enclosed Excel files. Refer to the electronic files for the individual data points because the information is voluminous and does not translate well to a hard copy.

- (2) Significant system events during month:
 - a) Tabulation of contingency reserve activations including date and time, MW magnitude, duration, and triggering event.
 - b) Tabulation of under frequency load shed activations including date and time, triggering frequency, MW magnitude, duration, and triggering event.
 - c) Tabulation of demand response activations for system events, including date and time, MW magnitude, duration, and triggering event, (excluding demand response utilization for unit commitment deferral or system operations economics.)

The following provides information with respect to items 2a) through 2c) – (all statements are current as of the month ending March 31, 2014):

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

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

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

Hawaiian Electric, Maui Electric Light, and Hawai'i Electric Light did not have any under frequency load shed events for the month of March. Therefore, Attachment 4 is not being provided for this reporting period.

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 did not have any demand response activations for system events for the month of March. 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. Therefore, Attachment 5 is not being provided for this reporting period.

- (3) Curtailment of non-dispatchable renewable resources:
- (a) Tabulation of each curtailment event for each resource including the starting date and time, duration, megawatt hours curtailed, peak MW curtailed, and reason for curtailment.
 - (b) Total MWh of non-dispatchable renewable resources curtailed for the month.

The following provides information with respect to items 3a) through 3b) – (all statements are current as of the month ending March 31, 2014):

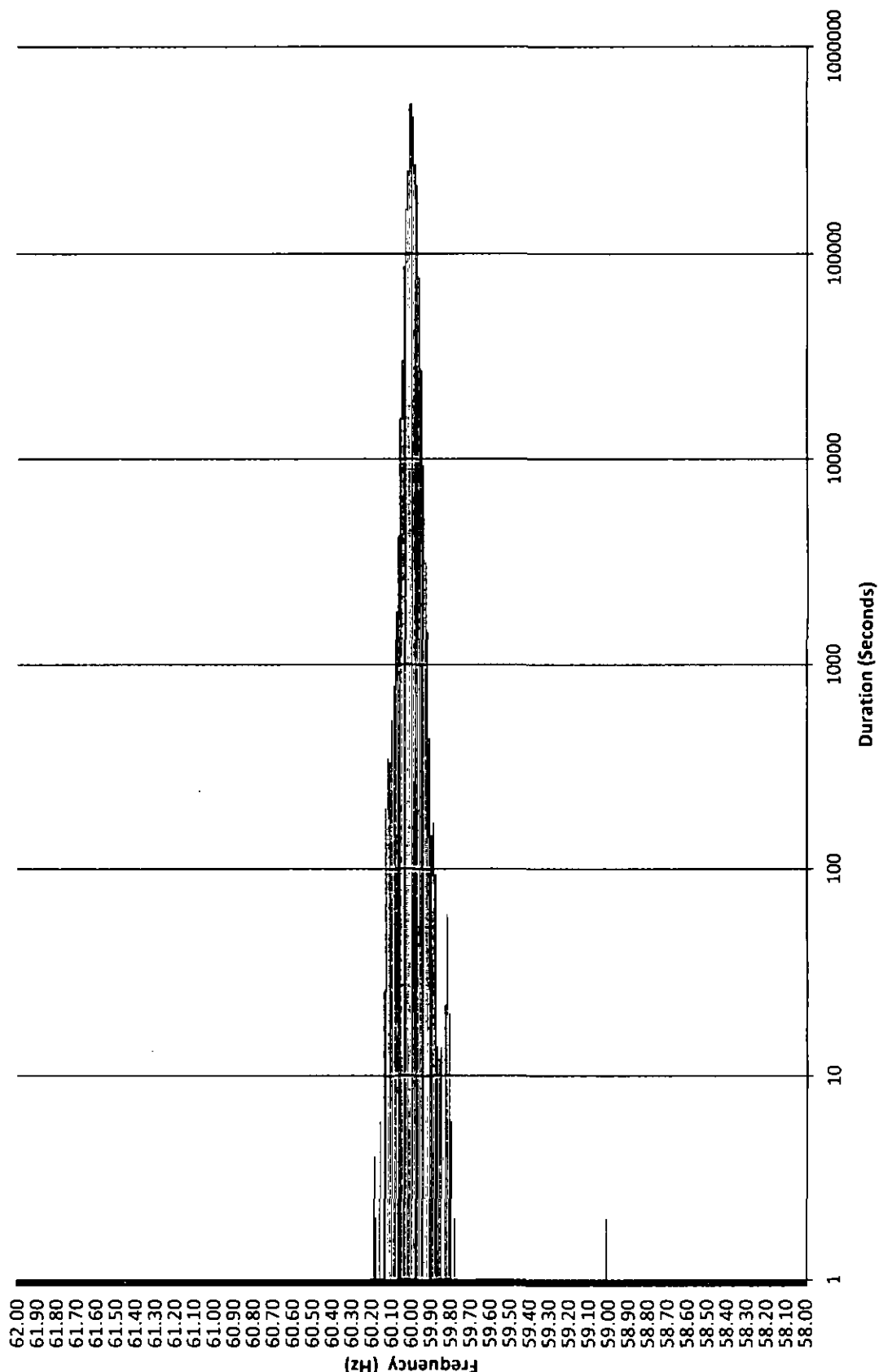
3a) Tabulation of each curtailment event for each resource including the starting date and time, duration, megawatt hours curtailed, peak MW curtailed, and reason for curtailment:

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

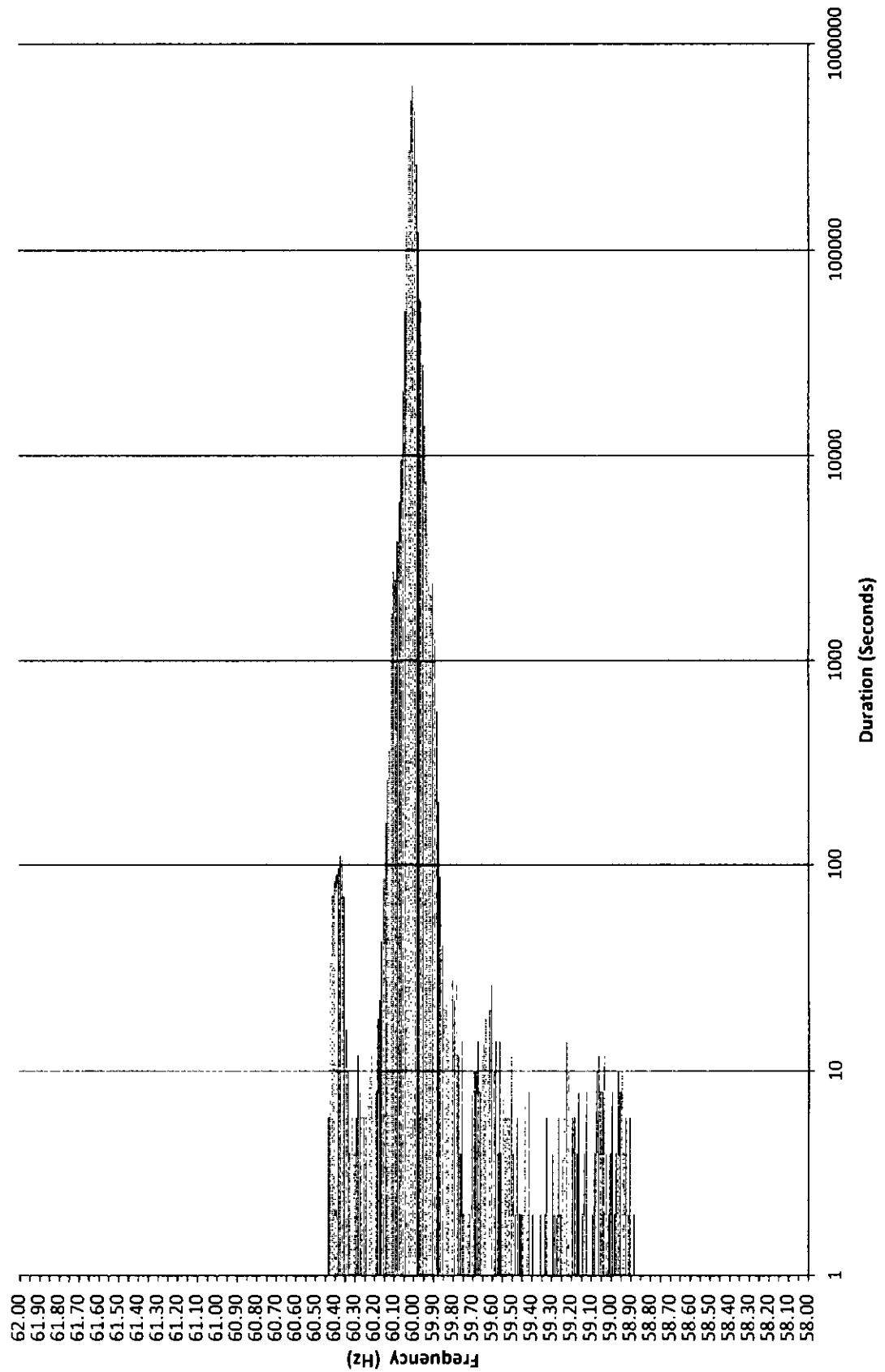
3b) Total MWh of non-dispatchable renewable resources curtailed for the month:

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. Hawai'i Electric Light is not providing an estimate of curtailed MWh, as this information is not provided to Hawai'i Electric Light from the IPP. The Hawaiian Electric Companies do not make any representations as to the accuracy of the curtailed MWh. The estimated MWh of non-dispatchable resources curtailed for the month are provided in Attachment 6, corresponding to each curtailment event.

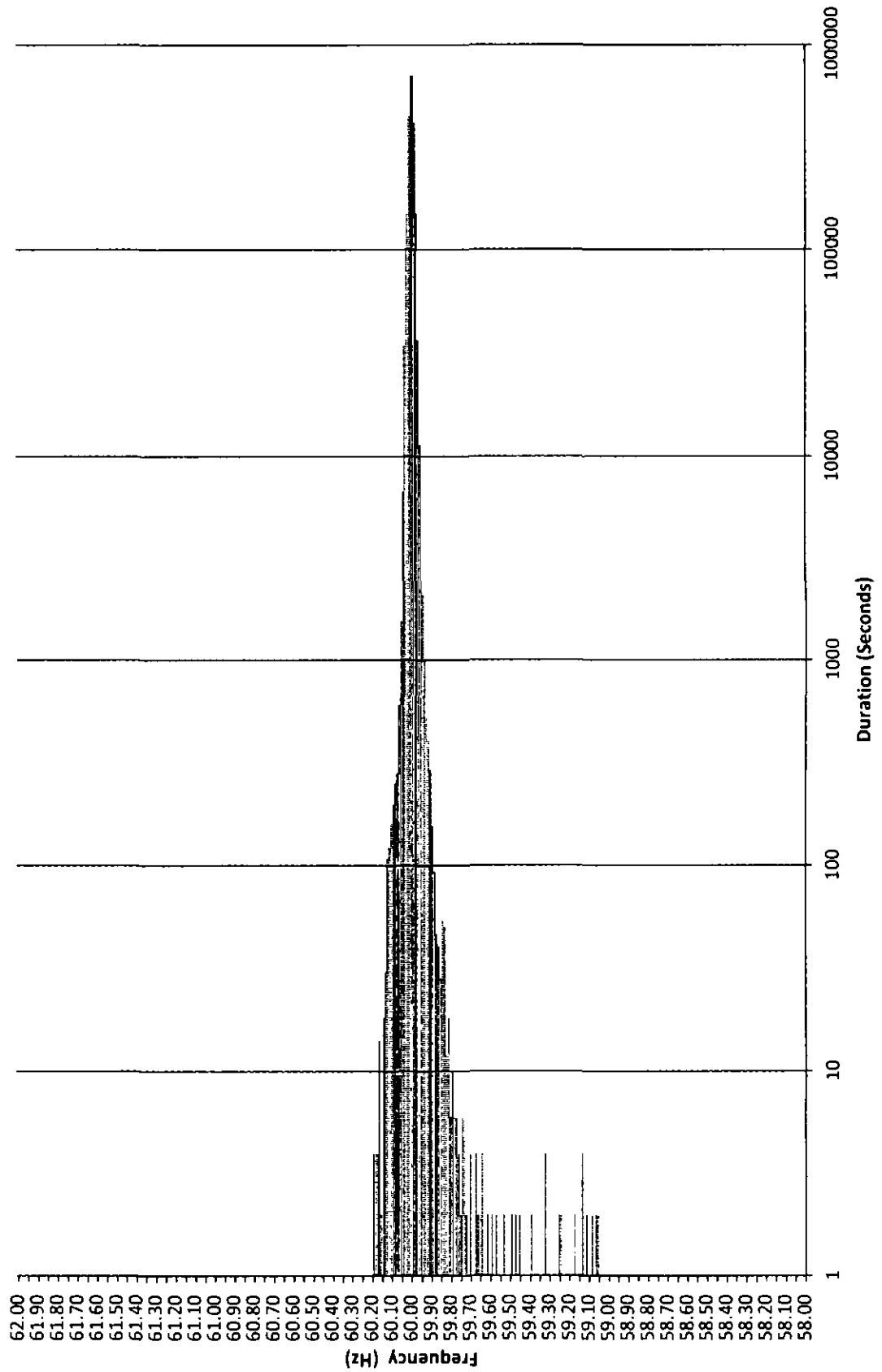
**Frequency Distribution Plot - Hawaiian Electric
March 2014**



Maui Electric Frequency Distribution Plot - Maui March 2014



Frequency Distribution Plot - Hawai'i Electric Light March 2014



Hawaiian Electric Frequency Excursion Statistics March 2014		
Data Rounded to the nearest	<59.95 Hz	>60.05 Hz
Number of Excursions	1929	2233
Maximum Duration (sec)	610	756
Maximum Deviation (Hz)	59.007	60.19
Total Duration of Excursions (sec)	24982	34840

Maui Electric Frequency Excursion Statistics March 2014		
	<59.95 Hz	>60.05 Hz
Number of Excursions	4291	2649
Maximum Duration (sec)	556	1132
Maximum Deviation (Hz)	58.8828	60.4307
Total Duration of Excursions (sec)	44326	35302

Hawai'i Electric Light Frequency Excursion Statistics March 2014		
	<59.95 Hz	>60.05 Hz
Number of Excursions	1359	258
Maximum Duration (sec)	486	670
Maximum Deviation (Hz)	59.051	60.194
Total Duration of Excursions (sec)	10370	2400

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Hawaiian Electric Curtailment Report March 2014

Start Date/Time	Curtailment Set Point	MW output prior to start of curtailment	End Date/Time	MW output after curtailment released	Estimated MWh of curtailed energy during event (1)	IPP	Reason for Curtailment
03/01/14 06:59	0.0	0.00	03/01/14 07:35	0	*	KREP	Pole replacement in CEIP substation
03/09/14 06:30	0.0	0.00	03/09/14 07:25	0	*	KREP	Tap conductors on Waiuu-Steel Mill and CEIP 46 46kV lines to Kaloa substation
03/09/14 18:31	0.0	0.00	03/10/14 07:07	0	*	KREP	Tap conductors on Waiuu-Steel Mill and CEIP 46 46kV lines to Kaloa substation
03/16/14 00:57	0.0	15.00	03/16/14 06:31	2	*	Makai	Curtailed for excess energy
03/16/14 01:30	15.0	31.20	03/16/14 02:03	13	*	Mauka	Curtailed for excess energy
03/16/14 02:03	0.0	13.00	03/16/14 05:39	1	*	Mauka	Curtailed for excess energy
03/16/14 02:54	20.0	28.60	03/16/14 05:04	20	*	KWF	Curtailed for excess energy
03/16/14 05:39	10.0	0.00	03/16/14 05:51	1	*	Mauka	Curtailed for excess energy
03/16/14 05:51	20.0	10.00	03/16/14 06:16	10	*	Mauka	Curtailed for excess energy
03/16/14 06:16	30.0	21.00	03/16/14 06:26	21	*	Mauka	Curtailed for excess energy
03/16/14 06:26	40.0	30.00	03/16/14 06:30	30	*	Mauka	Curtailed for excess energy
03/16/14 06:31	10.0	1.00	03/16/14 06:56	1	*	Makai	Curtailed for excess energy
03/16/14 11:51	0.0	3.00	03/16/14 12:42	0	*	KREP	Curtailed for excess energy
03/16/14 11:56	0.0	5.00	03/16/14 12:39	0	*	KL52	Curtailed for excess energy
03/17/14 05:37	0.0	0.00	03/18/14 06:53	0	*	KREP	Structure upgrades on Kahe-CEIP 1 and Kahe-CEIP 2 138kV lines
03/17/14 05:41	0.0	9.70	03/17/14 06:35	0	*	Makai	Pole replacement on Koolau-Kahuku 46kV line
03/17/14 05:42	0.0	20.70	03/17/14 06:16	0	*	KWF	Pole replacement on Koolau-Kahuku 46kV line
03/17/14 16:51	0.0	20.00	03/17/14 17:10	0	*	Makai	Pole replacement on Koolau-Kahuku 46kV line
03/17/14 16:52	0.0	15.00	03/17/14 17:10	0	*	KWF	Pole replacement on Koolau-Kahuku 46kV line
03/18/14 06:12	0.0	10.00	03/18/14 06:24	0	*	KWF	Pole replacement on Koolau-Kahuku 46kV line
03/18/14 06:12	0.0	0.00	03/18/14 06:24	0	*	Makai	Pole replacement on Koolau-Kahuku 46kV line
03/18/14 15:56	0.0	7.60	03/18/14 16:16	0	*	KWF	Pole replacement on Koolau-Kahuku 46kV line
03/18/14 15:56	0.0	4.10	03/18/14 16:16	0	*	Makai	Pole replacement on Koolau-Kahuku 46kV line
03/22/14 05:28	0.0	0.00	03/22/14 06:28	0	*	KL52	Structure upgrades on Kahe-CEIP 1 and Kahe-CEIP 2 138kV lines
03/22/14 18:33	0.0	0.00	03/22/14 20:34	0	*	KL52	Structure upgrades on Kahe-CEIP 1 and Kahe-CEIP 2 138kV lines

KL52 = Kalaheo Solar 2 PV Farm

KREP = Kalaheo Renewable Energy Park

KWF = Kahuku Wind Farm

Makai = Kawaiolo Makai Wind Farm

Mauka = Kawaiolo Mauka Wind Farm

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

* Data has not been provided by IPP

RSWG Maui Curtailment Report March 2014



Start Date and Time	Duration	IPP	Curtailment	Estimated Curtailment MWh	Peak MW Curtailment	Reasons for Curtailment
3/1/2014 5:30	0:01	AWE		0.005	0.300	AGC MAVG - calculated
3/1/2014 5:30	0:01	KWP		0.005	0.300	AGC MAVG - calculated
3/1/2014 12:48	0:01	AWE		0.007	0.100	AGC MAVG - calculated
3/1/2014 12:48	0:01	KWP		0.007	0.100	AGC MAVG - calculated
3/2/2014 1:11	0:02	KWPII		0.005	2.303	AGC MAVG - calculated
3/2/2014 1:27	0:18	KWPII		0.108	3.720	AGC MAVG - calculated
3/2/2014 8:53	0:18	KWPII		0.854	13.818	AGC MAVG - calculated and Good Engineering and Operating Practices
3/2/2014 10:28	0:02	AWE		0.002	21.000	AGC MAVG - calculated
3/2/2014 10:28	0:02	KWP		0.002	21.000	AGC MAVG - calculated
3/2/2014 10:31	0:04	AWE		0.031	21.000	AGC MAVG - calculated
3/2/2014 10:31	0:04	KWP		0.031	21.000	AGC MAVG - calculated
3/2/2014 1:37	0:48	KWPII		5.477	10.321	AGC MAVG - calculated, AGC MAVG - entered - Maintaining Regulating Reserves, and AGC MAVG - entered - Excess Energy
3/2/2014 1:40	0:41	MH	Data is not available			AGC MAVG - entered - Maintaining Regulating Reserves
3/2/2014 1:48	0:07	AWE		0.023	0.300	AGC MAVG - entered - Excess Energy
3/2/2014 1:48	0:07	KWP		0.023	0.300	AGC MAVG - entered - Excess Energy
3/2/2014 2:33	0:30	KWPII		2.506	11.580	AGC MAVG - entered - Excess Energy
3/2/2014 2:35	0:13	AWE		0.365	3.700	AGC MAVG - entered - Excess Energy
3/2/2014 2:35	0:13	KWP		0.365	3.700	AGC MAVG - entered - Excess Energy
3/2/2014 18:32	0:01	KWPII		0.003	10.497	AGC MAVG - calculated
3/2/2014 18:34	0:02	KWPII		0.043	10.040	AGC MAVG - calculated
3/2/2014 18:46	0:01	KWPII		0.005	8.165	AGC MAVG - calculated
3/2/2014 17:47	0:01	KWP		0.000	22.100	AGC MAVG - calculated
3/4/2014 10:40	0:01	AWE		0.002	0.100	AGC MAVG - calculated
3/4/2014 10:40	0:01	KWP		0.002	0.100	AGC MAVG - calculated
3/4/2014 13:21	0:01	AWE		0.003	0.200	AGC MAVG - calculated
3/4/2014 13:21	0:01	KWP		0.003	0.200	AGC MAVG - calculated
3/4/2014 14:25	0:02	AWE		0.003	0.100	AGC MAVG - calculated
3/4/2014 14:25	0:02	KWP		0.003	0.100	AGC MAVG - calculated
3/4/2014 18:21	0:01	AWE		0.003	0.200	AGC MAVG - calculated
3/4/2014 18:21	0:01	KWP		0.003	0.200	AGC MAVG - calculated
3/4/2014 18:24	0:01	AWE		0.002	0.100	AGC MAVG - calculated
3/4/2014 18:24	0:01	KWP		0.002	0.100	AGC MAVG - calculated
3/4/2014 18:34	0:01	AWE		0.002	0.100	AGC MAVG - calculated
3/4/2014 18:34	0:01	KWP		0.002	0.100	AGC MAVG - calculated
3/5/2014 6:35	0:01	AWE		0.003	0.200	AGC MAVG - calculated
3/5/2014 6:35	0:01	KWP		0.003	0.200	AGC MAVG - calculated
3/5/2014 7:48	0:01	AWE		0.003	0.300	AGC MAVG - calculated
3/5/2014 7:48	0:01	KWP		0.003	0.300	AGC MAVG - calculated
3/5/2014 8:36	0:01	AWE		0.002	0.100	AGC MAVG - calculated
3/5/2014 8:36	0:01	KWP		0.002	0.100	AGC MAVG - calculated
3/5/2014 1:18	0:01	AWE		0.002	0.100	AGC MAVG - calculated
3/5/2014 1:18	0:01	KWP		0.002	0.100	AGC MAVG - calculated
3/5/2014 5:47	0:01	AWE		0.007	0.400	AGC MAVG - entered - Maintaining Regulating Reserves
3/5/2014 5:47	0:01	KWP		0.007	0.400	AGC MAVG - entered - Maintaining Regulating Reserves
3/5/2014 8:25	0:01	AWE		0.003	0.200	AGC MAVG - entered - Maintaining Regulating Reserves
3/5/2014 8:25	0:01	KWP		0.003	0.200	AGC MAVG - entered - Maintaining Regulating Reserves
3/5/2014 9:13	0:01	AWE		0.003	0.200	AGC MAVG - entered - Maintaining Regulating Reserves
3/5/2014 9:13	0:01	KWP		0.003	0.200	AGC MAVG - entered - Maintaining Regulating Reserves
3/5/2014 10:25	0:01	AWE		0.003	0.200	AGC MAVG - entered - Maintaining Regulating Reserves
3/5/2014 10:25	0:01	KWP		0.003	0.200	AGC MAVG - entered - Maintaining Regulating Reserves
3/5/2014 11:14	0:01	AWE		0.002	0.100	AGC MAVG - entered - Maintaining Regulating Reserves
3/5/2014 11:14	0:01	KWP		0.002	0.100	AGC MAVG - entered - Maintaining Regulating Reserves
3/5/2014 14:30	0:04	KWPII		0.173	12.151	AGC MAVG - entered - Maintaining Regulating Reserves and AGC MAVG - calculated
3/5/2014 15:18	0:01	KWPII		0.020	3.319	AGC MAVG - calculated
3/5/2014 16:55	0:01	AWE		0.002	0.100	AGC MAVG - calculated
3/5/2014 16:55	0:01	KWP		0.002	0.100	AGC MAVG - calculated
3/5/2014 16:57	0:01	AWE		0.002	0.100	AGC MAVG - calculated
3/5/2014 16:57	0:01	KWP		0.002	0.100	AGC MAVG - calculated
3/5/2014 23:13	0:02	KWPII		0.025	8.743	AGC MAVG - calculated
3/7/2014 3:23	0:01	KWPII		0.002	9.202	AGC MAVG - calculated
3/7/2014 3:58	0:51	KWPII		4.815	8.343	AGC MAVG - calculated, AGC MAVG - entered - Maintaining Regulating Reserves and AGC MAVG - entered - Excess Energy
3/7/2014 4:01	0:01	AWE		0.008	0.800	AGC MAVG - calculated
3/7/2014 4:01	0:01	KWP		0.008	0.800	AGC MAVG - calculated
3/7/2014 4:04	0:38	MH	Data is not available			AGC MAVG - entered - Maintaining Regulating Reserves and AGC MAVG - entered - Excess Energy
3/7/2014 4:04	0:43	AWE		0.810	1.500	AGC MAVG - entered - Maintaining Regulating Reserves and AGC MAVG - entered - Excess Energy
3/7/2014 4:04	0:43	KWP		0.810	1.500	AGC MAVG - entered - Maintaining Regulating Reserves and AGC MAVG - entered - Excess Energy
3/7/2014 4:51	0:07	KWPII		0.348	4.908	AGC MAVG - entered - Excess Energy
3/7/2014 4:55	0:01	AWE		0.007	3.500	AGC MAVG - entered - Excess Energy
3/7/2014 4:55	0:01	KWP		0.007	3.500	AGC MAVG - entered - Excess Energy
3/7/2014 5:16	0:04	KWPII		0.304	17.858	AGC MAVG - calculated and AGC MAVG - entered - Maintaining Regulating Reserves
3/7/2014 5:20	0:11	KWPII		1.433	18.814	AGC MAVG - entered - Maintaining Regulating Reserves
3/7/2014 7:55	0:03	KWPII		0.084	17.828	AGC MAVG - calculated and Testing
3/7/2014 7:59	0:11	AWE		0.062	21.000	AGC MAVG - calculated and Testing
3/7/2014 7:59	0:11	KWP		0.062	21.000	AGC MAVG - calculated and Testing
3/7/2014 8:21	0:02	AWE		0.007	21.000	AGC MAVG - calculated and Testing
3/7/2014 8:21	0:02	KWP		0.007	21.000	AGC MAVG - calculated and Testing
3/7/2014 21:50	0:01	AWE		0.003	0.200	AGC MAVG - calculated
3/7/2014 21:50	0:01	KWP		0.003	0.200	AGC MAVG - calculated
3/8/2014 3:24	0:01	AWE		0.002	0.100	AGC MAVG - calculated
3/8/2014 7:22	0:01	AWE		0.002	0.100	AGC MAVG - calculated
3/8/2014 11:28	0:01	KWPII		0.000	0.002	AGC MAVG - calculated
3/8/2014 12:57	0:01	AWE		0.002	0.100	AGC MAVG - calculated
3/8/2014 16:08	0:01	KWP		0.001	0.032	AGC MAVG - calculated
3/8/2014 20:51	0:01	AWE		0.002	0.100	AGC MAVG - calculated
3/8/2014 23:11	0:01	KWPII		0.004	20.178	AGC MAVG - calculated
3/8/2014 23:18	0:03	KWPII		0.023	20.141	AGC MAVG - calculated
3/8/2014 23:22	0:03	KWPII		0.028	20.022	AGC MAVG - calculated
3/8/2014 23:26	7:04	KWPII		105.243	20.418	AGC MAVG - calculated, AGC MAVG - entered - Maintaining Regulating Reserves, AGC MAVG - entered - Excess Energy, and AGC MAVG - calculated
3/8/2014 0:58	0:03	AWE		0.024	1.800	AGC MAVG - calculated
3/8/2014 1:08	0:01	AWE		0.003	0.300	AGC MAVG - calculated
3/8/2014 1:22	0:02	AWE		0.005	1.800	AGC MAVG - calculated
3/8/2014 1:28	0:03	AWE		0.015	2.800	AGC MAVG - calculated
3/8/2014 1:30	0:13	AWE		0.280	3.100	AGC MAVG - calculated and AGC MAVG - entered - Maintaining Regulating Reserves
3/8/2014 1:35	0:01	KWP		0.007	19.138	AGC MAVG - calculated
3/8/2014 1:39	0:21	MH	Data is not available			AGC MAVG - entered - Maintaining Regulating Reserves
3/8/2014 1:46	0:05	AWE		0.097	2.900	AGC MAVG - entered - Maintaining Regulating Reserves
3/8/2014 1:52	0:02	AWE		0.017	2.100	AGC MAVG - entered - Maintaining Regulating Reserves
3/8/2014 1:56	0:02	AWE		0.014	3.300	AGC MAVG - entered - Maintaining Regulating Reserves
3/8/2014 2:00	0:01	AWE		0.005	3.600	AGC MAVG - entered - Maintaining Regulating Reserves
3/8/2014 2:02	0:08	AWE		0.264	4.800	AGC MAVG - entered - Maintaining Regulating Reserves
3/8/2014 2:11	2:55	AWE		72.801	15.000	AGC MAVG - entered - Maintaining Regulating Reserves
3/8/2014 2:18	2:08	MH	Data is not available			AGC MAVG - entered - Maintaining Regulating Reserves
3/8/2014 2:55	0:01	KWP		0.010	16.800	AGC MAVG - entered - Maintaining Regulating Reserves
3/8/2014 2:57	0:01	KWP		0.015	16.880	AGC MAVG - entered - Maintaining Regulating Reserves
3/8/2014 2:59	0:19	KWP		0.563	19.568	AGC MAVG - entered - Maintaining Regulating Reserves
3/8/2014 3:19	0:02	KWP		0.050	18.352	AGC MAVG - entered - Maintaining Regulating Reserves
3/8/2014 3:22	0:01	KWP		0.024	17.424	AGC MAVG - entered - Maintaining Regulating Reserves
3/8/2014 3:24	0:08	KWP		0.163	18.432	AGC MAVG - entered - Maintaining Regulating Reserves
3/8/2014 3:31	0:08	KWP		0.127	17.816	AGC MAVG - entered - Maintaining Regulating Reserves
3/8/2014 3:40	0:01	KWP		0.004	16.592	AGC MAVG - entered - Maintaining Regulating Reserves
3/8/2014 3:48	0:01	KWP		0.007	16.448	AGC MAVG - entered - Maintaining Regulating Reserves
3/8/2014 3:55	0:02	KWP		0.008	16.848	AGC MAVG - entered - Maintaining Regulating Reserves

RSWG Maul Curtailment Report March 2014

Start Date and Time	Duration	MP Curtailment	Estimated Curtailment MWh	Peak MW Curtailment	Reasons for Curtailment
3/9/2014 5:10	0:51	AWE	3:187	19:700	AGC MAVG - entered - Maintaining Regulating Reserves and AGC MAVG - entered - Excess Energy
3/9/2014 8:05	0:06	AWE	0:168	18:700	AGC MAVG - calculated
3/9/2014 8:13	0:03	AWE	0:071	18:200	AGC MAVG - calculated
3/9/2014 8:20	0:06	AWE	0:062	18:900	AGC MAVG - calculated
3/9/2014 8:27	0:01	AWE	0:001	18:800	AGC MAVG - calculated
3/9/2014 8:39	0:03	KWPII	0:209	17:443	AGC MAVG - calculated
3/9/2014 8:45	2:02	KWPII	15:187	20:108	AGC MAVG - calculated and Testing
3/9/2014 8:50	0:02	KWPII	0:030	18:454	AGC MAVG - calculated and Testing
3/9/2014 8:55	0:03	KWPII	0:023	19:037	AGC MAVG - calculated and Testing
3/9/2014 9:02	0:02	KWPII	0:011	17:842	AGC MAVG - calculated and Testing
3/9/2014 9:18	0:03	KWPII	0:042	19:152	AGC MAVG - calculated and Testing
3/9/2014 9:22	0:24	KWPII	0:911	19:841	AGC MAVG - calculated and Testing
3/9/2014 9:48	0:02	KWPII	0:050	18:208	AGC MAVG - calculated and Testing
3/9/2014 9:51	0:10	KWPII	0:186	18:802	AGC MAVG - calculated and Testing
3/9/2014 10:04	0:05	KWPII	0:062	17:800	AGC MAVG - calculated and Testing
3/9/2014 12:24	0:01	KWPII	0:034	15:884	AGC MAVG - calculated and Testing
3/9/2014 12:26	2:44	KWPII	21:901	20:119	AGC MAVG - calculated and Testing
3/9/2014 14:08	0:01	AWE	0:004	20:800	AGC MAVG - calculated and Testing
3/9/2014 15:14	0:01	KWPII	0:005	17:583	AGC MAVG - calculated and Testing
3/9/2014 15:16	0:01	KWPII	0:018	18:012	AGC MAVG - calculated and Testing
3/9/2014 15:19	0:02	KWPII	0:037	18:198	AGC MAVG - calculated and Testing
3/9/2014 15:48	0:02	KWPII	0:037	18:735	AGC MAVG - calculated and Testing
3/9/2014 15:55	0:04	KWPII	0:115	16:828	AGC MAVG - calculated and Testing
3/9/2014 16:08	0:02	KWPII	0:030	18:313	AGC MAVG - calculated and Testing
3/9/2014 16:09	0:01	KWPII	0:005	18:788	AGC MAVG - calculated and Testing
3/9/2014 16:15	0:08	KWPII	0:292	19:710	AGC MAVG - calculated and Testing
3/9/2014 16:24	0:01	KWPII	0:008	19:441	AGC MAVG - calculated and Testing
3/9/2014 16:27	0:02	KWPII	0:020	19:554	AGC MAVG - calculated and Testing
3/9/2014 21:54	0:01	KWPII	0:002	20:637	AGC MAVG - calculated
3/9/2014 21:57	0:02	KWPII	0:018	20:598	AGC MAVG - calculated
3/9/2014 22:04	2:21	KWPII	25:978	20:642	AGC MAVG - calculated
3/9/2014 23:14	0:01	AWE	0:022	21:000	AGC MAVG - calculated
3/9/2014 23:17	0:08	AWE	0:270	21:000	AGC MAVG - calculated
3/9/2014 23:26	0:11	AWE	0:479	21:000	AGC MAVG - calculated
3/9/2014 23:38	0:02	AWE	0:033	16:900	AGC MAVG - calculated
3/9/2014 23:43	0:02	AWE	0:040	15:100	AGC MAVG - calculated
3/9/2014 23:46	0:02	AWE	0:051	15:600	AGC MAVG - calculated
3/9/2014 23:48	0:02	AWE	0:034	16:900	AGC MAVG - calculated
3/9/2014 23:52	0:19	AWE	0:866	20:200	AGC MAVG - calculated
3/10/2014 0:12	0:05	AWE	0:106	14:400	AGC MAVG - calculated
3/10/2014 0:26	1:04	KWPII	12:143	13:919	AGC MAVG - calculated
3/10/2014 0:29	0:58	AWE	4:882	16:800	AGC MAVG - calculated
3/10/2014 1:32	0:02	KWPII	0:111	6:881	AGC MAVG - calculated
3/10/2014 2:29	0:46	AWE	1:255	19:109	AGC MAVG - calculated
3/10/2014 3:17	0:01	AWE	0:007	16:900	AGC MAVG - calculated
3/10/2014 8:57	0:01	KWPII	0:001	0:044	AGC MAVG - calculated
3/10/2014 7:06	0:01	KWPII	0:001	0:048	AGC MAVG - calculated
3/10/2014 11:54	0:01	KWPII	0:001	0:064	AGC MAVG - calculated and Good Engineering and Operating Practices
3/10/2014 15:19	0:01	KWPII	0:000	0:016	AGC MAVG - calculated and Good Engineering and Operating Practices
3/10/2014 22:41	0:02	KWPII	0:026	13:340	AGC MAVG - calculated
3/10/2014 22:46	0:05	KWPII	0:100	16:808	AGC MAVG - calculated
3/10/2014 22:53	0:18	KWPII	0:483	17:992	AGC MAVG - calculated
3/10/2014 23:37	0:01	KWPII	0:003	17:890	AGC MAVG - calculated
3/10/2014 23:39	0:02	KWPII	0:022	17:823	AGC MAVG - calculated
3/11/2014 0:02	0:10	KWPII	0:058	19:027	AGC MAVG - calculated
3/11/2014 0:13	0:02	KWPII	0:016	18:188	AGC MAVG - calculated
3/11/2014 0:20	0:01	AWE	0:002	0:100	AGC MAVG - calculated
3/11/2014 0:48	2:05	KWPII	19:323	18:132	AGC MAVG - calculated
3/11/2014 1:10	0:13	AWE	0:320	0:700	AGC MAVG - calculated
3/11/2014 2:14	0:05	AWE	0:026	0:500	AGC MAVG - calculated and AGC MAVG - entered - Maintaining Regulating Reserves
3/11/2014 2:15	0:01	KWPII	0:005	17:600	AGC MAVG - calculated
3/11/2014 2:16	2:04	MH	Data is not available	Data is not available	AGC MAVG - entered - Maintaining Regulating Reserves, AGC MAVG - calculated, and AGC MAVG - entered - Maintaining Regulating Reserves
3/11/2014 2:17	0:01	KWPII	0:036	19:040	AGC MAVG - entered - Maintaining Regulating Reserves
3/11/2014 2:21	0:01	KWPII	0:025	18:912	AGC MAVG - entered - Maintaining Regulating Reserves
3/11/2014 2:21	0:08	AWE	0:029	0:300	AGC MAVG - entered - Maintaining Regulating Reserves
3/11/2014 2:24	0:01	KWPII	0:010	17:824	AGC MAVG - entered - Maintaining Regulating Reserves
3/11/2014 2:26	0:05	KWPII	0:064	18:472	AGC MAVG - entered - Maintaining Regulating Reserves and AGC MAVG - calculated
3/11/2014 2:36	0:01	AWE	0:003	0:200	AGC MAVG - calculated
3/11/2014 2:38	0:03	KWPII	0:084	18:944	AGC MAVG - calculated
3/11/2014 2:40	0:08	KWPII	0:159	19:378	AGC MAVG - calculated
3/11/2014 2:52	0:01	AWE	0:002	0:100	AGC MAVG - calculated
3/11/2014 2:52	0:01	AWE	0:007	16:112	AGC MAVG - calculated
3/11/2014 2:55	1:25	KWPII	22:800	18:521	AGC MAVG - entered - Maintaining Regulating Reserves
3/11/2014 2:55	1:25	AWE	0:731	0:800	AGC MAVG - entered - Maintaining Regulating Reserves
3/11/2014 4:21	0:03	KWPII	0:355	15:579	AGC MAVG - entered - Maintaining Regulating Reserves
3/11/2014 4:27	0:21	KWPII	1:327	15:825	AGC MAVG - entered - Maintaining Regulating Reserves and AGC MAVG - calculated
3/11/2014 4:40	0:01	AWE	0:003	0:200	AGC MAVG - calculated
3/11/2014 4:49	0:14	KWPII	0:479	15:453	AGC MAVG - calculated
3/11/2014 5:07	0:01	KWPII	0:014	14:637	AGC MAVG - calculated
3/11/2014 9:01	0:01	KWPII	0:000	0:018	AGC MAVG - calculated and Testing
3/11/2014 11:32	0:01	AWE	0:002	0:100	AGC MAVG - calculated and Testing
3/11/2014 14:51	0:01	KWPII	0:002	0:144	AGC MAVG - calculated and Testing
3/11/2014 22:45	7:02	KWPII	133:418	20:708	AGC MAVG - calculated AGC MAVG - entered - Excess Energy and AGC MAVG - calculated
3/12/2014 0:07	0:03	AWE	0:010	0:300	AGC MAVG - entered - Excess Energy
3/12/2014 0:12	3:31	AWE	3:007	2:400	AGC MAVG - entered - Excess Energy
3/12/2014 0:16	5:19	MH	Data is not available	Data is not available	AGC MAVG - entered - Excess Energy
3/12/2014 0:19	0:01	KWPII	0:001	28:080	AGC MAVG - entered - Excess Energy
3/12/2014 0:21	0:01	KWPII	0:005	28:288	AGC MAVG - entered - Excess Energy
3/12/2014 0:23	4:41	KWPII	38:511	28:480	AGC MAVG - entered - Excess Energy and AGC MAVG - calculated
3/12/2014 3:46	0:01	AWE	0:002	0:100	AGC MAVG - calculated
3/12/2014 4:06	0:01	AWE	0:002	0:100	AGC MAVG - calculated
3/12/2014 4:06	0:10	KWPII	0:179	28:400	AGC MAVG - calculated
3/12/2014 5:16	0:08	KWPII	0:063	28:432	AGC MAVG - calculated
3/12/2014 5:20	0:02	KWPII	0:008	28:320	AGC MAVG - calculated
3/12/2014 5:32	0:01	KWPII	0:001	28:080	AGC MAVG - calculated
3/12/2014 5:49	0:29	KWPII	4:540	20:471	AGC MAVG - calculated
3/12/2014 11:23	0:01	KWPII	0:003	20:486	AGC MAVG - calculated and Testing
3/12/2014 11:25	0:01	KWPII	0:007	20:319	AGC MAVG - calculated and Testing
3/12/2014 11:42	0:17	KWPII	0:624	20:882	AGC MAVG - calculated and Testing
3/12/2014 12:00	0:01	KWPII	0:076	20:879	AGC MAVG - calculated and Testing
3/12/2014 12:02	0:01	KWPII	0:002	20:455	AGC MAVG - calculated and Testing
3/12/2014 12:10	0:02	KWPII	0:011	20:873	AGC MAVG - calculated and Testing
3/12/2014 12:16	0:02	KWPII	0:021	20:885	AGC MAVG - calculated and Testing
3/12/2014 13:17	0:01	KWPII	0:001	20:708	AGC MAVG - calculated and Testing
3/12/2014 13:19	0:01	KWPII	0:001	20:708	AGC MAVG - calculated and Testing
3/12/2014 13:23	0:04	KWPII	0:030	20:708	AGC MAVG - calculated and Testing
3/12/2014 13:30	0:01	KWPII	0:003	20:896	AGC MAVG - calculated and Testing
3/12/2014 13:52	0:04	KWPII	0:067	20:875	AGC MAVG - calculated and Testing
3/12/2014 14:04	0:04	KWPII	0:152	20:893	AGC MAVG - calculated and Testing
3/12/2014 14:10	0:01	KWPII	0:012	20:826	AGC MAVG - calculated and Testing
3/12/2014 14:13	0:02	KWPII	0:017	20:865	AGC MAVG - calculated and Testing
3/12/2014 14:18	0:02	KWPII	0:021	20:877	AGC MAVG - calculated and Testing
3/12/2014 14:23	0:03	KWPII	0:009	20:731	AGC MAVG - calculated and Testing
3/12/2014 14:27	0:02	KWPII	0:016	20:695	AGC MAVG - calculated and Testing

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Start Date and Time	Duration	Event	Estimated Curtailment MWh	Peak MW Curtailment	Reasons for Curtailment
3/12/2014 14:32	0:01	KWPH	0:01	20 811	AGC MAVG - calculated and Testing
3/12/2014 14:30	0:01	KWPH	0:01	20 812	AGC MAVG - calculated and Testing
3/12/2014 14:40	0:01	KWPH	0:009	20 860	AGC MAVG - calculated and Testing
3/12/2014 14:43	0:03	KWPH	0:083	20 803	AGC MAVG - calculated and Testing
3/12/2014 14:47	0:01	KWPH	0:023	20 548	AGC MAVG - calculated and Testing
3/12/2014 14:55	0:01	KWPH	0:004	20 701	AGC MAVG - calculated and Testing
3/12/2014 14:57	0:08	KWPH	0:243	20 708	AGC MAVG - calculated and Testing
3/12/2014 15:04	0:06	KWPH	0:213	20 708	AGC MAVG - calculated and Testing
3/12/2014 15:23	0:01	KWPH	0:007	20 858	AGC MAVG - calculated and Testing
3/12/2014 16:01	0:02	KWPH	0:027	20 708	AGC MAVG - calculated and Testing
3/12/2014 16:20	0:01	KWPH	0:001	20 708	AGC MAVG - calculated and Testing
3/12/2014 16:35	0:02	KWPH	0:004	20 708	AGC MAVG - calculated and Testing
3/12/2014 16:58	0:01	KWPH	0:000	20 708	AGC MAVG - calculated and Testing
3/12/2014 17:12	0:01	KWPH	0:000	20 708	AGC MAVG - calculated and Testing
3/12/2014 17:20	0:17	KWPH	0:624	20 708	AGC MAVG - calculated and Testing
3/12/2014 17:40	0:08	KWPH	0:430	20 708	AGC MAVG - calculated and Testing
3/12/2014 22:09	0:02	KWPH	0:005	20 708	AGC MAVG - calculated
3/12/2014 22:12	0:09	KWPH	0:203	20 705	AGC MAVG - calculated
3/12/2014 22:22	0:01	KWPH	0:002	20 860	AGC MAVG - calculated
3/12/2014 22:30	0:01	KWPH	0:003	20 707	AGC MAVG - calculated
3/12/2014 22:33	1:28	KWPH	17 457	20 708	AGC MAVG - calculated and AGC MAVG - entered - Excess Energy
3/12/2014 23:52	0:09	AWE	0:191	4 000	AGC MAVG - calculated and AGC MAVG - entered - Excess Energy
3/12/2014 0:02	4:30	AWE	18 577	13 700	AGC MAVG - entered - Excess Energy and AGC MAVG - calculated
3/12/2014 0:02	5:04	KWPH	104 850	20 708	AGC MAVG - entered - Excess Energy and AGC MAVG - calculated
3/12/2014 0:12	5:10	MH	Data is not available	Data is not available	AGC MAVG - entered - Excess Energy and AGC MAVG - calculated
3/12/2014 0:18	4:48	KWPH	38 596	28 496	AGC MAVG - entered - Excess Energy and AGC MAVG - calculated
3/12/2014 4:33	9:04	AWE	0:007	0 100	AGC MAVG - calculated
3/12/2014 4:38	3:28	AWE	1:058	5 300	AGC MAVG - calculated
3/12/2014 5:07	0:12	KWPH	0:243	28 448	AGC MAVG - calculated
3/12/2014 5:07	0:16	AWE	0:252	2 000	AGC MAVG - calculated
3/12/2014 5:07	0:55	KWPH	18 785	20 708	AGC MAVG - calculated
3/12/2014 5:30	0:07	AWE	0:103	3 700	AGC MAVG - calculated
3/12/2014 5:47	0:10	AWE	0:087	5 100	AGC MAVG - calculated
3/12/2014 6:04	0:33	KWPH	102 792	20 708	AGC MAVG - calculated, Good Engineering and Operating Practices, and Testing
3/12/2014 6:36	0:34	SA	Data is not available	Data is not available	AGC MAVG - calculated, Operating Conditions on Company's System, Good Engineering and Operating Practices, and Testing
3/12/2014 7:50	0:02	AWE	0:036	21 000	AGC MAVG - calculated and Good Engineering and Operating Practices
3/12/2014 10:11	0:02	AWE	0:007	21 000	AGC MAVG - calculated and Testing
3/12/2014 10:17	0:01	AWE	0:005	21 000	AGC MAVG - calculated and Testing
3/12/2014 10:34	0:06	AWE	0:058	21 000	AGC MAVG - calculated and Testing
3/12/2014 10:41	0:09	AWE	0:148	21 000	AGC MAVG - calculated and Testing
3/12/2014 10:51	1:19	AWE	3 780	21 000	AGC MAVG - calculated and Testing
3/12/2014 12:11	0:04	AWE	0:193	21 000	AGC MAVG - calculated and Testing
3/12/2014 12:19	0:02	AWE	0:021	20 100	AGC MAVG - calculated and Testing
3/12/2014 12:19	0:03	AWE	0:115	20 800	AGC MAVG - calculated and Testing
3/12/2014 12:23	0:01	AWE	0:005	19 900	AGC MAVG - calculated and Testing
3/12/2014 12:31	0:01	AWE	0:004	19 000	AGC MAVG - calculated and Testing
3/12/2014 12:39	0:38	KWPH	6 192	20 352	AGC MAVG - calculated and Testing
3/12/2014 13:16	0:03	KWPH	0:402	20 091	AGC MAVG - calculated and Testing
3/12/2014 13:26	0:03	KWPH	0:181	18 820	AGC MAVG - calculated and Testing
3/12/2014 13:30	0:01	KWPH	0:007	18 956	AGC MAVG - calculated and Testing
3/12/2014 13:37	0:06	KWPH	0:211	20 278	AGC MAVG - calculated and Testing
3/12/2014 13:47	0:01	KWPH	0:006	20 269	AGC MAVG - calculated and Testing
3/12/2014 13:50	0:01	KWPH	0:007	20 428	AGC MAVG - calculated and Testing
3/12/2014 13:54	0:01	KWPH	0:006	20 395	AGC MAVG - calculated and Testing
3/12/2014 14:03	0:03	KWPH	0:053	19 849	AGC MAVG - calculated and Testing
3/12/2014 18:13	0:01	KWPH	0:004	20 005	AGC MAVG - calculated and Testing
3/12/2014 20:23	0:01	KWPH	0:011	19 758	AGC MAVG - calculated and Testing
3/12/2014 22:12	0:01	KWPH	0:002	20 881	AGC MAVG - calculated
3/12/2014 22:14	0:24	KWPH	1 741	20 694	AGC MAVG - calculated
3/12/2014 22:43	0:01	KWPH	0:018	17 804	AGC MAVG - calculated
3/12/2014 22:45	0:02	KWPH	0:041	18 310	AGC MAVG - calculated
3/12/2014 22:48	0:02	KWPH	0:058	18 784	AGC MAVG - calculated
3/12/2014 22:51	0:19	KWPH	1 337	19 351	AGC MAVG - calculated
3/12/2014 23:11	8:07	KWPH	83 834	20 548	AGC MAVG - calculated and AGC MAVG - entered - Excess Energy
3/12/2014 23:30	2:11	AWE	20 486	20 400	AGC MAVG - entered - Excess Energy
3/14/2014 0:51	0:48	MH	Data is not available	Data is not available	AGC MAVG - entered - Excess Energy
3/14/2014 1:02	0:04	KWPH	0:078	25 296	AGC MAVG - entered - Excess Energy
3/14/2014 1:07	0:04	KWPH	0:060	26 664	AGC MAVG - entered - Excess Energy
3/14/2014 1:15	0:01	KWPH	0:025	24 512	AGC MAVG - entered - Excess Energy
3/14/2014 1:43	0:24	AWE	0:240	6 500	AGC MAVG - entered - Excess Energy
3/14/2014 2:08	0:49	AWE	7 425	7 800	AGC MAVG - entered - Excess Energy
3/14/2014 2:58	0:04	AWE	0:025	3 800	AGC MAVG - entered - Excess Energy
3/14/2014 3:15	0:25	AWE	0:703	7 800	AGC MAVG - entered - Excess Energy
3/14/2014 3:16	0:16	MH	Data is not available	Data is not available	AGC MAVG - entered - Excess Energy
3/14/2014 3:36	0:58	AWE	1 801	3 500	AGC MAVG - entered - Excess Energy
3/14/2014 4:01	0:52	MH	Data is not available	Data is not available	AGC MAVG - entered - Excess Energy
3/14/2014 4:06	0:07	KWPH	0:189	24 704	AGC MAVG - entered - Excess Energy
3/14/2014 5:20	0:03	KWPH	0:120	7 506	AGC MAVG - entered - Excess Energy and AGC MAVG - calculated
3/14/2014 8:55	0:01	KWPH	0:013	15 008	AGC MAVG - calculated
3/14/2014 8:57	0:02	KWPH	0:022	15 530	AGC MAVG - calculated
3/14/2014 10:30	0:02	KWPH	0:071	11 332	AGC MAVG - calculated and Testing
3/14/2014 10:30	0:02	AWE	0:037	17 900	AGC MAVG - calculated and Testing
3/14/2014 13:58	0:01	KWPH	0:000	0 016	AGC MAVG - calculated
3/14/2014 14:47	0:02	KWPH	0 110	17 241	AGC MAVG - calculated
3/14/2014 16:01	0:06	KWPH	0 100	20 041	AGC MAVG - calculated
3/14/2014 16:24	0:01	KWPH	0 014	18 328	AGC MAVG - calculated
3/14/2014 21:54	0:01	KWPH	0 014	20 458	AGC MAVG - calculated
3/14/2014 22:02	0:01	KWPH	0 001	20 385	AGC MAVG - calculated
3/14/2014 22:05	0:03	KWPH	0 044	20 360	AGC MAVG - calculated
3/14/2014 23:51	0:02	KWPH	0 024	19 848	AGC MAVG - calculated
3/14/2014 23:59	0:02	KWPH	0 015	17 588	AGC MAVG - calculated
3/15/2014 0:07	0:01	KWPH	0 028	16 973	AGC MAVG - calculated
3/15/2014 0:10	0:01	KWPH	0 033	17 073	AGC MAVG - calculated
3/15/2014 0:15	0:01	AWE	0 029	0 100	AGC MAVG - calculated
3/15/2014 0:18	0:06	KWPH	0 068	18 743	AGC MAVG - calculated
3/15/2014 0:26	0:01	KWPH	0 011	17 264	AGC MAVG - calculated
3/15/2014 0:28	7:12	KWPH	28 012	20 378	AGC MAVG - calculated
3/15/2014 2:23	0:01	AWE	0 006	1 800	AGC MAVG - calculated
3/15/2014 2:25	0:01	AWE	0 015	1 800	AGC MAVG - calculated
3/15/2014 2:27	0:07	AWE	0 077	3 300	AGC MAVG - calculated
3/15/2014 2:41	0:01	AWE	0 017	2 300	AGC MAVG - calculated
3/15/2014 2:42	0:30	KWPH	8 653	20 247	AGC MAVG - calculated, AGC MAVG - entered - Excess Energy, and AGC MAVG - calculated
3/15/2014 2:43	0:01	AWE	0 019	2 400	AGC MAVG - calculated
3/15/2014 2:45	0:18	AWE	0 365	2 100	AGC MAVG - entered - Excess Energy and AGC MAVG - calculated
3/15/2014 2:47	0:21	MH	Data is not available	Data is not available	AGC MAVG - entered - Excess Energy and AGC MAVG - calculated
3/15/2014 2:47	0:16	KWPH	0 828	26 464	AGC MAVG - entered - Excess Energy and AGC MAVG - calculated
3/15/2014 3:05	0:01	AWE	0 012	0 700	AGC MAVG - calculated
3/15/2014 3:06	0:01	KWPH	0 001	20 176	AGC MAVG - calculated
3/15/2014 3:11	2:03	KWPH	33 637	20 493	AGC MAVG - calculated
3/15/2014 3:38	0:28	AWE	0 425	2 800	AGC MAVG - calculated and AGC MAVG - entered - Excess Energy
3/15/2014 3:38	0:03	KWPH	0 013	20 882	AGC MAVG - entered - Excess Energy
3/15/2014 3:36	0:04	MH	Data is not available	Data is not available	AGC MAVG - entered - Excess Energy and AGC MAVG - calculated
3/15/2014 7:48	1:11	KWPH	0 568	25 888	AGC MAVG - calculated
3/15/2014 8:00	0:01	KWPH	0 001	20 752	AGC MAVG - calculated

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Start Date and Time	Duration	IPP Curtailment	Estimated Curtailment MWh	Peak MW Curtailment	Reasons for Curtailment
3/15/2014 4:03	0:09	AWE	0:091	1 300	AGC MAVG - calculated
3/15/2014 4:04	0:08	KWP	0:208	26 480	AGC MAVG - calculated
3/15/2014 4:13	0:02	AWE	0:005	0 200	AGC MAVG - calculated
3/15/2014 4:13	0:03	KWP	0:089	23 888	AGC MAVG - calculated
3/15/2014 4:17	0:01	AWE	0:002	0 100	AGC MAVG - calculated
3/15/2014 4:17	0:01	KWP	0:078	23 562	AGC MAVG - calculated
3/15/2014 4:19	0:24	AWE	0:210	0 800	AGC MAVG - calculated
3/15/2014 4:19	0:24	KWP	1 267	28 304	AGC MAVG - calculated
3/15/2014 4:44	0:01	AWE	0:006	0 800	AGC MAVG - calculated
3/15/2014 4:48	0:01	AWE	0:010	1 100	AGC MAVG - calculated
3/15/2014 4:50	0:01	AWE	0:009	1 500	AGC MAVG - calculated
3/15/2014 4:52	0:01	AWE	0:013	1 500	AGC MAVG - calculated
3/15/2014 5:05	0:01	KWP	0:010	20 400	AGC MAVG - calculated
3/15/2014 5:05	0:02	AWE	0:018	1 500	AGC MAVG - calculated
3/15/2014 5:09	0:01	AWE	0:015	1 800	AGC MAVG - calculated
3/15/2014 5:11	0:01	AWE	0:016	1 800	AGC MAVG - calculated
3/15/2014 5:18	1:27	KWPII	16 832	20 064	AGC MAVG - calculated
3/15/2014 6:47	0:02	KWPII	0:003	19 085	AGC MAVG - calculated
3/15/2014 6:50	0:18	KWPII	0:759	20 161	AGC MAVG - calculated
3/15/2014 7:09	0:03	KWPII	0:085	20 388	AGC MAVG - calculated
3/15/2014 11:37	0:10	KWPII	0:300	20 708	AGC MAVG - calculated
3/15/2014 11:48	0:33	KWPII	7 062	20 708	AGC MAVG - calculated and Operating Conditions on Company's System
3/15/2014 12:42	0:01	AWE	0:017	1 100	AGC MAVG - calculated and Operating Conditions on Company's System
3/15/2014 12:45	0:22	AWE	0:389	2 800	AGC MAVG - calculated and Operating Conditions on Company's System
3/15/2014 12:47	0:01	KWP	0:006	26 064	AGC MAVG - calculated and Operating Conditions on Company's System
3/15/2014 12:49	0:02	KWP	0:018	26 098	AGC MAVG - calculated and Operating Conditions on Company's System
3/15/2014 12:56	0:03	KWP	0:038	26 864	AGC MAVG - calculated and Operating Conditions on Company's System
3/15/2014 13:01	0:01	KWP	0:003	26 784	AGC MAVG - calculated and Operating Conditions on Company's System
3/15/2014 13:06	0:01	KWP	0:003	26 640	AGC MAVG - calculated and Operating Conditions on Company's System
3/15/2014 13:09	0:01	AWE	0:004	3 800	AGC MAVG - calculated and Operating Conditions on Company's System
3/15/2014 18:21	0:01	AWE	0:002	0 100	AGC MAVG - calculated
3/15/2014 22:13	8:20	KWPII	157 012	20 708	AGC MAVG - calculated AGC MAVG - entered - Excess Energy and AGC MAVG - calculated
3/15/2014 23:34	0:01	AWE	0:001	1 000	AGC MAVG - calculated
3/15/2014 23:37	1:58	AWE	1 077	1 100	AGC MAVG - entered - Excess Energy and AGC MAVG - calculated
3/15/2014 23:38	8:43	MH	Data is not available	AGC MAVG - entered - Excess Energy and AGC MAVG - calculated	
3/15/2014 23:44	0:36	KWP	80 258	30 000	AGC MAVG - entered - Excess Energy and AGC MAVG - calculated
3/18/2014 1:36	0:02	AWE	0:003	0 100	AGC MAVG - calculated
3/18/2014 2:17	1:10	AWE	0:715	1 800	AGC MAVG - calculated
3/18/2014 3:30	0:01	AWE	0:002	0 100	AGC MAVG - calculated
3/18/2014 3:32	0:18	AWE	0:087	0 300	AGC MAVG - calculated
3/18/2014 4:00	0:01	AWE	0:002	0 100	AGC MAVG - calculated
3/18/2014 4:16	0:01	AWE	0:002	0 100	AGC MAVG - calculated
3/18/2014 4:46	0:01	AWE	0:002	0 100	AGC MAVG - calculated
3/18/2014 5:30	0:15	AWE	0:047	0 400	AGC MAVG - calculated
3/18/2014 6:02	0:01	AWE	0:003	0 200	AGC MAVG - calculated
3/18/2014 6:35	1:24	KWPII	13 587	20 708	AGC MAVG - calculated
3/18/2014 6:00	0:03	KWPII	0:041	20 708	AGC MAVG - calculated
3/18/2014 6:04	0:05	KWPII	0:113	20 708	AGC MAVG - calculated
3/18/2014 6:10	0:01	KWPII	0:032	20 708	AGC MAVG - calculated
3/18/2014 6:12	0:01	KWPII	0:024	20 708	AGC MAVG - calculated
3/18/2014 6:15	7:51	KWPII	111 778	20 708	AGC MAVG - calculated Good Engineering and Operating Practices AGC MAVG - entered - Maintaining Regulating Reserves AGC MAVG - calculated AGC MAVG - entered - Excess Energy and AGC MAVG - calculated
3/18/2014 10:38	0:01	AWE	0:006	2 800	AGC MAVG - calculated
3/18/2014 10:41	0:20	AWE	0:147	2 300	AGC MAVG - calculated
3/18/2014 11:17	0:03	AWE	0:006	2 700	AGC MAVG - calculated
3/18/2014 11:22	0:02	AWE	0:019	3 500	AGC MAVG - calculated
3/18/2014 11:35	0:01	AWE	0:018	2 000	AGC MAVG - calculated
3/18/2014 11:46	0:28	AWE	0:483	2 100	AGC MAVG - calculated
3/18/2014 12:13	0:24	AWE	0:443	2 800	AGC MAVG - calculated
3/18/2014 12:38	0:01	AWE	0:002	2 200	AGC MAVG - calculated
3/18/2014 17:43	0:01	AWE	0:004	2 500	AGC MAVG - calculated
3/18/2014 13:02	1:14	AWE	0:953	2 800	AGC MAVG - entered - Maintaining Regulating Reserves and AGC MAVG - calculated
3/18/2014 18:15	0:21	KWPII	0:743	20 708	AGC MAVG - calculated
3/18/2014 17:34	0:22	KWPII	1 347	20 708	AGC MAVG - calculated
3/18/2014 22:16	8:31	KWPII	151 525	20 708	AGC MAVG - calculated Good Engineering and Operating Practices AGC MAVG - entered - Excess Energy and AGC MAVG - calculated
3/18/2014 23:33	0:18	AWE	0:217	1 100	AGC MAVG - entered - Excess Energy and AGC MAVG - calculated
3/18/2014 23:37	5:38	MH	Data is not available	AGC MAVG - entered - Excess Energy and AGC MAVG - calculated	
3/18/2014 23:39	5:41	KWP	62 159	28 498	AGC MAVG - entered - Excess Energy and AGC MAVG - calculated
3/17/2014 0:23	0:19	AWE	0:087	0 500	AGC MAVG - calculated
3/17/2014 0:53	0:47	AWE	0:607	2 000	AGC MAVG - calculated
3/17/2014 1:46	0:02	AWE	0:005	0 200	AGC MAVG - calculated
3/17/2014 1:49	0:01	AWE	0:002	0 100	AGC MAVG - calculated
3/17/2014 1:53	0:22	AWE	0:148	1 100	AGC MAVG - calculated
3/17/2014 4:13	0:41	AWE	0:727	2 200	AGC MAVG - calculated
3/17/2014 4:16	0:12	AWE	0:063	0 800	AGC MAVG - calculated
3/17/2014 4:46	0:34	AWE	0:598	1 800	AGC MAVG - calculated
3/17/2014 5:21	0:01	AWE	0:002	0 300	AGC MAVG - calculated
3/17/2014 5:21	0:01	KWP	0:008	28 032	AGC MAVG - calculated
3/17/2014 5:23	0:01	KWP	0:011	27 858	AGC MAVG - calculated
3/17/2014 5:23	0:02	AWE	0:008	0 300	AGC MAVG - calculated
3/17/2014 5:27	0:06	AWE	0:086	1 100	AGC MAVG - calculated
3/17/2014 5:28	0:01	KWP	0:006	27 584	AGC MAVG - calculated
3/17/2014 5:32	0:01	KWP	0:000	28 032	AGC MAVG - calculated
3/17/2014 6:48	0:21	KWPII	0:709	20 708	AGC MAVG - calculated
3/17/2014 7:10	0:01	KWPII	0:003	20 704	AGC MAVG - calculated
3/17/2014 7:32	0:03	KWPII	0:032	20 700	AGC MAVG - calculated
3/17/2014 7:38	0:02	KWPII	0:019	20 707	AGC MAVG - calculated
3/17/2014 7:42	0:04	KWPII	0:056	20 707	AGC MAVG - calculated
3/17/2014 7:47	0:01	KWPII	0:011	20 704	AGC MAVG - calculated
3/17/2014 7:48	0:04	KWPII	0:084	20 705	AGC MAVG - calculated
3/17/2014 8:05	0:01	KWPII	0:003	20 060	AGC MAVG - calculated
3/17/2014 8:31	0:01	KWPII	0:002	20 931	AGC MAVG - calculated
3/17/2014 8:31	0:01	KWPII	0:001	20 811	AGC MAVG - calculated
3/17/2014 8:06	0:01	KWPII	0:009	20 680	AGC MAVG - calculated
3/17/2014 9:25	0:07	KWPII	0:119	20 703	AGC MAVG - calculated and Testing
3/17/2014 9:33	0:02	KWPII	0:028	20 703	AGC MAVG - calculated and Testing
3/17/2014 9:37	0:30	KWPII	0:859	20 707	AGC MAVG - calculated and Testing
3/17/2014 10:08	0:01	KWPII	0:045	20 708	AGC MAVG - calculated and Testing
3/17/2014 10:10	0:05	KWPII	0:188	20 707	AGC MAVG - calculated and Testing
3/17/2014 10:16	0:08	KWPII	0:258	20 687	AGC MAVG - calculated and Testing
3/17/2014 10:25	0:04	KWPII	0:177	20 708	AGC MAVG - calculated and Testing
3/17/2014 12:41	0:02	AWE	0:012	9 100	AGC MAVG - calculated and Testing
3/17/2014 12:56	0:05	AWE	0:059	11 000	AGC MAVG - calculated and Testing
3/17/2014 13:02	0:01	AWE	0:012	6 000	AGC MAVG - calculated and Testing
3/17/2014 13:12	0:01	AWE	0:012	8 300	AGC MAVG - calculated and Testing
3/17/2014 13:36	0:01	AWE	0:004	21 000	AGC MAVG - calculated and Testing
3/17/2014 15:39	0:02	AWE	0:013	20 300	AGC MAVG - calculated and Testing
3/17/2014 15:43	0:01	AWE	0:028	21 000	AGC MAVG - calculated and Testing
3/17/2014 15:46	0:02	AWE	0:031	19 800	AGC MAVG - calculated and Testing
3/17/2014 15:51	0:01	AWE	0:020	20 000	AGC MAVG - calculated
3/17/2014 16:31	0:01	KWPII	0:010	20 640	AGC MAVG - calculated
3/17/2014 16:38	0:01	KWPII	0:003	20 688	AGC MAVG - calculated
3/17/2014 16:38	0:01	KWPII	0:001	20 653	AGC MAVG - calculated

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Start Date and Time	Duration	IPP Curtailed	Estimated Curtailed MWh	Peak MW Curtailed	Reasons for Curtailment
3/17/2014 18 41	0 09	KWPII	0 236	20 704	AGC MAVG - calculated
3/17/2014 18 55	0 01	KWPII	0 005	20 703	AGC MAVG - calculated
3/17/2014 17 00	0 02	KWPII	0 001	20 708	AGC MAVG - calculated
3/17/2014 22 06	0 03	KWPII	0 032	20 557	AGC MAVG - calculated and Good Engineering and Operating Practices
3/17/2014 22 10	0 22	KWPII	92 244	20 618	AGC MAVG - calculated and Good Engineering and Operating Practices AGC MAVG - entered - Excess Energy
3/17/2014 23 52	0 02	AWE	0 024	0 800	AGC MAVG - calculated
3/17/2014 23 55	0 03	AWE	0 045	0 700	AGC MAVG - calculated
3/18/2014 0 00	0 01	AWE	0 023	4 100	AGC MAVG - calculated
3/18/2014 0 02	0 04	AWE	0 068	3 800	AGC MAVG - calculated
3/18/2014 0 04	0 01	KWP	0 002	25 424	AGC MAVG - calculated
3/18/2014 0 07	0 50	AWE	0 892	2 500	AGC MAVG - entered - Excess Energy and AGC MAVG - calculated
3/18/2014 0 08	0 02	KWP	0 071	28 517	AGC MAVG - entered - Excess Energy
3/18/2014 0 11	0 01	KWP	0 024	26 096	AGC MAVG - entered - Excess Energy
3/18/2014 0 06	3 58	MH	Data is not available	Data is not available	AGC MAVG - entered - Excess Energy and AGC MAVG - calculated
3/18/2014 0 13	0 01	KWP	0 026	26 128	AGC MAVG - entered - Excess Energy
3/18/2014 0 16	0 01	KWP	0 017	26 256	AGC MAVG - calculated
3/18/2014 0 18	0 02	KWP	0 019	25 958	AGC MAVG - calculated
3/18/2014 0 22	0 01	KWP	0 035	25 477	AGC MAVG - calculated
3/18/2014 0 25	0 01	KWP	0 008	23 216	AGC MAVG - calculated
3/18/2014 0 30	0 03	KWP	0 090	25 376	AGC MAVG - calculated
3/18/2014 0 37	0 03	KWP	0 071	25 760	AGC MAVG - calculated and Testing
3/18/2014 0 43	0 22	KWP	1 106	26 576	AGC MAVG - calculated and Testing
3/18/2014 1 06	0 02	KWP	0 020	19 088	AGC MAVG - calculated
3/18/2014 1 09	2 56	KWP	19 673	26 808	AGC MAVG - calculated
3/18/2014 1 27	1 31	AWE	1 387	1 800	AGC MAVG - calculated
3/18/2014 4 15	0 01	KWP	0 010	17 744	AGC MAVG - calculated
3/18/2014 4 19	0 01	KWP	0 009	16 352	AGC MAVG - calculated
3/18/2014 4 26	0 01	KWP	0 021	19 188	AGC MAVG - calculated
3/18/2014 4 33	0 18	KWPII	4 593	19 355	AGC MAVG - calculated and AGC MAVG - entered
3/18/2014 4 37	0 01	KWP	0 006	20 256	AGC MAVG - calculated
3/18/2014 4 52	1 55	KWPII	20 174	20 600	AGC MAVG - calculated and AGC MAVG - entered
3/18/2014 6 50	0 01	KWPII	0 005	19 917	AGC MAVG - calculated
3/18/2014 7 08	0 01	KWPII	0 001	20 448	AGC MAVG - calculated and Testing
3/18/2014 8 45	0 01	KWPII	0 002	20 531	AGC MAVG - calculated and Testing
3/18/2014 9 33	0 01	KWPII	0 005	19 924	AGC MAVG - calculated and Testing
3/18/2014 9 40	0 03	KWPII	0 083	19 800	AGC MAVG - calculated and Testing
3/18/2014 9 44	0 03	KWPII	0 085	20 003	AGC MAVG - calculated and Testing
3/18/2014 9 49	0 07	KWPII	0 148	19 898	AGC MAVG - calculated and Testing
3/18/2014 10 02	0 08	KWPII	0 296	19 917	AGC MAVG - calculated and Testing
3/18/2014 10 11	1 06	KWPII	12 874	20 285	AGC MAVG - calculated and Testing
3/18/2014 10 51	0 02	AWE	0 071	18 200	AGC MAVG - calculated and Testing
3/18/2014 10 56	0 03	AWE	0 050	15 500	AGC MAVG - calculated and Testing
3/18/2014 11 02	0 03	AWE	0 048	13 800	AGC MAVG - calculated and Testing
3/18/2014 11 08	0 01	AWE	0 019	14 200	AGC MAVG - calculated and Testing
3/18/2014 11 10	0 01	AWE	0 006	15 900	AGC MAVG - calculated and Testing
3/18/2014 11 12	0 01	AWE	0 044	16 500	AGC MAVG - calculated and Testing
3/18/2014 11 18	2 46	KWPII	32 152	20 090	AGC MAVG - calculated and Testing
3/18/2014 11 25	0 01	AWE	0 003	13 800	AGC MAVG - calculated and Testing
3/18/2014 11 27	0 01	AWE	0 050	18 300	AGC MAVG - calculated and Testing
3/18/2014 11 29	0 02	AWE	0 025	17 800	AGC MAVG - calculated and Testing
3/18/2014 11 34	0 01	AWE	0 021	16 200	AGC MAVG - calculated and Testing
3/18/2014 12 06	0 05	AWE	0 102	18 000	AGC MAVG - calculated and Testing
3/18/2014 14 11	0 01	KWPII	0 010	18 813	AGC MAVG - calculated and Testing
3/18/2014 14 14	0 01	KWPII	0 013	18 805	AGC MAVG - calculated and Testing
3/18/2014 14 22	0 01	KWPII	0 010	18 605	AGC MAVG - calculated and Testing
3/18/2014 14 41	0 13	KWPII	0 543	18 733	AGC MAVG - calculated and Testing
3/18/2014 14 59	0 01	KWPII	0 080	18 757	AGC MAVG - calculated and Testing
3/18/2014 15 12	0 01	KWPII	0 007	19 778	AGC MAVG - calculated and Testing
3/18/2014 15 16	0 01	KWPII	0 010	19 387	AGC MAVG - calculated and Testing
3/18/2014 15 42	0 01	KWPII	0 008	20 400	AGC MAVG - calculated and Testing
3/18/2014 18 38	0 01	AWE	0 003	0 200	AGC MAVG - calculated and Testing
3/18/2014 22 53	0 01	KWPII	0 006	19 500	AGC MAVG - calculated
3/18/2014 22 56	0 06	KWPII	60 066	20 228	AGC MAVG - calculated
3/19/2014 0 18	0 01	AWE	0 010	0 600	AGC MAVG - calculated
3/19/2014 0 18	0 01	KWP	0 006	23 248	AGC MAVG - calculated
3/19/2014 0 21	0 08	AWE	0 020	0 300	AGC MAVG - calculated and AGC MAVG - entered - Excess Energy
3/19/2014 0 24	4 20	MH	Data is not available	Data is not available	AGC MAVG - entered - Excess Energy
3/19/2014 0 52	0 04	KWP	0 070	20 576	AGC MAVG - entered - Excess Energy
3/19/2014 0 54	0 01	AWE	0 002	0 100	AGC MAVG - entered - Excess Energy
3/19/2014 0 56	0 10	AWE	0 028	0 300	AGC MAVG - entered - Excess Energy
3/19/2014 0 56	0 01	KWP	0 021	20 256	AGC MAVG - entered - Excess Energy
3/19/2014 1 01	0 06	KWP	0 131	20 016	AGC MAVG - entered - Excess Energy
3/19/2014 1 10	0 01	KWP	0 023	18 368	AGC MAVG - entered - Excess Energy
3/19/2014 1 12	0 05	KWP	0 072	18 112	AGC MAVG - entered - Excess Energy
3/19/2014 1 18	1 08	KWP	5 344	26 224	AGC MAVG - entered - Excess Energy
3/19/2014 2 28	0 03	KWP	0 034	14 336	AGC MAVG - entered - Excess Energy
3/19/2014 2 32	0 46	KWP	2 115	16 784	AGC MAVG - entered - Excess Energy
3/19/2014 3 21	1 16	KWP	5 709	22 517	AGC MAVG - entered - Excess Energy
3/19/2014 3 24	1 05	AWE	0 458	0 700	AGC MAVG - entered - Excess Energy
3/19/2014 4 41	0 01	KWP	0 048	20 448	AGC MAVG - entered - Excess Energy
3/19/2014 5 06	0 59	KWPII	8 780	19 260	AGC MAVG - entered - Excess Energy and AGC MAVG - calculated
3/19/2014 10 40	0 04	KWPII	0 061	16 528	AGC MAVG - calculated and Good Engineering and Operating Practices
3/19/2014 10 59	3 38	KWPII	31 564	17 762	AGC MAVG - calculated Good Engineering and Operating Practices, and Testing
3/19/2014 13 06	0 01	AWE	0 006	20 000	AGC MAVG - calculated Good Engineering and Operating Practices, and Testing
3/19/2014 14 38	0 27	KWPII	0 793	16 532	AGC MAVG - calculated Good Engineering and Operating Practices, and Testing
3/19/2014 15 08	0 03	KWPII	0 060	15 628	AGC MAVG - calculated Good Engineering and Operating Practices, and Testing
3/19/2014 15 27	0 03	KWPII	0 087	16 271	AGC MAVG - calculated Good Engineering and Operating Practices, and Testing
3/19/2014 15 35	0 03	KWPII	0 071	16 583	AGC MAVG - calculated and Testing
3/19/2014 15 39	0 03	KWPII	0 136	17 200	AGC MAVG - calculated and Testing
3/19/2014 15 43	0 27	KWPII	1 240	16 734	AGC MAVG - calculated and Testing
3/19/2014 15 41	0 15	KWPII	0 791	15 732	AGC MAVG - calculated and Testing
3/20/2014 16 28	1 08	KWPII	5 199	17 485	AGC MAVG - calculated and Testing
3/20/2014 10 13	0 01	KWPII	0 011	16 384	AGC MAVG - calculated Good Engineering and Operating Practices, and Testing
3/20/2014 10 25	0 01	KWPII	0 010	10 125	AGC MAVG - calculated Good Engineering and Operating Practices, and Testing
3/20/2014 10 31	0 02	KWPII	0 017	15 211	AGC MAVG - calculated Good Engineering and Operating Practices, and Testing
3/20/2014 10 36	0 02	KWPII	0 010	16 554	AGC MAVG - calculated Good Engineering and Operating Practices, and Testing
3/20/2014 11 36	0 41	KWPII	2 456	15 820	AGC MAVG - calculated Good Engineering and Operating Practices, and Testing
3/20/2014 12 16	0 07	KWPII	0 164	14 418	AGC MAVG - calculated Good Engineering and Operating Practices, and Testing
3/20/2014 12 28	0 01	KWPII	0 049	14 321	AGC MAVG - calculated Good Engineering and Operating Practices, and Testing
3/20/2014 12 31	0 03	KWPII	0 058	14 117	AGC MAVG - calculated Good Engineering and Operating Practices, and Testing
3/20/2014 12 40	0 07	KWPII	0 153	15 062	AGC MAVG - calculated Good Engineering and Operating Practices, and Testing
3/20/2014 12 49	0 01	KWPII	0 013	13 673	AGC MAVG - calculated Good Engineering and Operating Practices, and Testing
3/20/2014 12 51	0 02	KWPII	0 044	14 455	AGC MAVG - calculated Good Engineering and Operating Practices, and Testing
3/20/2014 13 22	0 02	KWPII	0 015	16 448	AGC MAVG - calculated Good Engineering and Operating Practices, and Testing
3/20/2014 13 25	0 08	KWPII	0 125	16 185	AGC MAVG - calculated Good Engineering and Operating Practices, and Testing
3/20/2014 13 34	0 02	KWPII	0 034	15 853	AGC MAVG - calculated Good Engineering and Operating Practices, and Testing
3/20/2014 13 38	0 02	KWPII	0 020	15 778	AGC MAVG - calculated Good Engineering and Operating Practices, and Testing
3/20/2014 14 56	0 01	KWPII	0 009	15 738	AGC MAVG - calculated Good Engineering and Operating Practices, and Testing
3/20/2014 15 07	0 02	KWPII	0 018	12 564	AGC MAVG - calculated Good Engineering and Operating Practices, and Testing
3/20/2014 15 51	0 01	KWPII	0 033	16 587	AGC MAVG - calculated Good Engineering and Operating Practices, and Testing
3/20/2014 15 54	0 01	KWPII	0 008	16 802	AGC MAVG - calculated Good Engineering and Operating Practices, and Testing
3/20/2014 15 56	0 04	KWPII	0 084	16 727	AGC MAVG - calculated Good Engineering and Operating Practices, and Testing
3/20/2014 16 09	0 07	KWPII	0 203	16 681	AGC MAVG - calculated Good Engineering and Operating Practices, and Testing
3/20/2014 16 34	0 02	KWPII	0 018	17 018	AGC MAVG - calculated Good Engineering and Operating Practices, and Testing

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Start Date and Time	Duration	WPP Curtailment	Estimated Curtailment MWh	Peak MW Curtailment	Reasons for Curtailment
3/20/2014 21:30	0:04	KWPII	0:084	19:340	AGC MAVG - calculated
3/20/2014 23:01	0:02	KWPII	0:079	19:669	AGC MAVG - calculated
3/20/2014 23:41	0:18	KWPII	0:841	19:331	AGC MAVG - calculated
3/21/2014 0:04	3:49	KWPII	40:468	18:672	AGC MAVG - calculated
3/21/2014 2:26	0:05	AWE	0:049	1:000	AGC MAVG - calculated
3/21/2014 2:30	0:07	KWPII	0:068	18:708	AGC MAVG - calculated and AGC MAVG - entered - Excess Energy
3/21/2014 2:31	0:08	AWE	0:178	1:500	AGC MAVG - entered - Excess Energy
3/21/2014 2:37	0:05	KWPII	0:117	71:072	AGC MAVG - entered - Excess Energy
3/21/2014 2:38	0:05	MH	Data is not available	Data is not available	AGC MAVG - entered - Excess Energy
3/21/2014 2:47	0:18	AWE	0:380	3:100	AGC MAVG - entered - Excess Energy
3/21/2014 2:51	0:01	KWPII	0:008	18:544	AGC MAVG - entered - Excess Energy
3/21/2014 2:55	0:01	KWPII	0:025	18:418	AGC MAVG - entered - Excess Energy
3/21/2014 3:04	0:07	AWE	0:143	3:700	AGC MAVG - calculated
3/21/2014 3:08	0:01	KWPII	0:017	18:400	AGC MAVG - calculated
3/21/2014 3:12	0:01	AWE	0:010	1:800	AGC MAVG - calculated
3/21/2014 3:21	0:01	AWE	0:004	2:300	AGC MAVG - calculated
3/21/2014 3:51	0:02	KWPII	0:015	18:612	AGC MAVG - calculated
3/21/2014 3:54	0:11	KWPII	0:324	23:584	AGC MAVG - entered - Excess Energy
3/21/2014 3:54	0:34	AWE	0:157	0:500	AGC MAVG - entered - Excess Energy and AGC MAVG - calculated
3/21/2014 3:54	1:02	KWPII	18:662	18:842	AGC MAVG - entered - Excess Energy and AGC MAVG - calculated
3/21/2014 3:59	4:41	MH	Data is not available	Data is not available	AGC MAVG - entered - Excess Energy
3/21/2014 4:08	0:04	KWPII	0:150	25:232	AGC MAVG - entered - Excess Energy and AGC MAVG - calculated
3/21/2014 4:10	0:18	KWPII	0:800	21:176	AGC MAVG - entered - Excess Energy and AGC MAVG - calculated
3/21/2014 4:30	0:08	KWPII	0:378	28:004	AGC MAVG - calculated
3/21/2014 4:37	0:03	KWPII	0:017	23:808	AGC MAVG - calculated
3/21/2014 4:41	0:08	KWPII	0:319	26:816	AGC MAVG - calculated
3/21/2014 4:57	0:58	KWPII	6:579	19:028	AGC MAVG - calculated
3/21/2014 6:36	0:01	KWPII	0:011	20:553	AGC MAVG - calculated
3/21/2014 6:49	0:01	KWPII	0:009	20:452	AGC MAVG - calculated
3/21/2014 13:45	0:01	KWPII	0:000	20:692	AGC MAVG - calculated and Good Engineering and Operating Practices
3/21/2014 13:51	0:01	KWPII	0:002	20:700	AGC MAVG - calculated and Good Engineering and Operating Practices
3/21/2014 13:57	3:49	KWPII	30:581	20:708	AGC MAVG - calculated, Good Engineering and Operating Practices, and Testing
3/21/2014 17:48	0:01	KWPII	0:002	20:707	AGC MAVG - calculated, Good Engineering and Operating Practices, and Testing
3/21/2014 18:14	0:02	KWPII	0:005	20:858	AGC MAVG - calculated and Good Engineering and Operating Practices
3/21/2014 18:17	0:04	KWPII	0:019	20:823	AGC MAVG - calculated and Good Engineering and Operating Practices
3/21/2014 18:24	0:03	KWPII	0:011	20:542	AGC MAVG - calculated and Good Engineering and Operating Practices
3/21/2014 22:45	0:01	KWPII	0:015	20:360	AGC MAVG - calculated
3/21/2014 22:52	0:01	KWPII	0:010	20:251	AGC MAVG - calculated
3/21/2014 23:08	0:01	KWPII	0:002	20:692	AGC MAVG - calculated
3/21/2014 23:14	6:18	KWPII	100:287	20:707	AGC MAVG - calculated and AGC MAVG - entered - Excess Energy
3/22/2014 1:40	3:30	MH	Data is not available	Data is not available	AGC MAVG - entered - Excess Energy
3/22/2014 2:10	0:01	KWPII	0:002	20:113	AGC MAVG - entered - Excess Energy
3/22/2014 2:12	0:03	KWPII	0:033	21:008	AGC MAVG - entered - Excess Energy
3/22/2014 2:24	0:20	AWE	0:080	0:500	AGC MAVG - entered - Excess Energy
3/22/2014 2:52	0:01	KWPII	0:038	22:277	AGC MAVG - entered - Excess Energy
3/22/2014 2:54	0:01	KWPII	0:004	20:240	AGC MAVG - entered - Excess Energy
3/22/2014 2:58	0:08	KWPII	0:183	25:728	AGC MAVG - entered - Excess Energy
3/22/2014 3:05	0:15	KWPII	0:654	23:804	AGC MAVG - entered - Excess Energy
3/22/2014 3:21	0:12	KWPII	0:398	23:858	AGC MAVG - entered - Excess Energy
3/22/2014 3:29	0:45	AWE	0:502	1:100	AGC MAVG - entered - Excess Energy
3/22/2014 3:49	0:11	KWPII	0:419	22:832	AGC MAVG - entered - Excess Energy
3/22/2014 4:02	0:01	KWPII	0:003	20:480	AGC MAVG - entered - Excess Energy
3/22/2014 4:06	0:02	KWPII	0:020	21:088	AGC MAVG - entered - Excess Energy
3/22/2014 4:38	0:02	KWPII	0:025	23:218	AGC MAVG - entered - Excess Energy
3/22/2014 4:52	0:03	KWPII	0:049	23:458	AGC MAVG - entered - Excess Energy
3/22/2014 4:58	0:01	KWPII	0:008	22:338	AGC MAVG - entered - Excess Energy
3/22/2014 5:20	0:01	AWE	0:002	0:100	AGC MAVG - entered - Excess Energy
3/22/2014 5:34	2:13	KWPII	21:374	20:707	AGC MAVG - entered - Excess Energy and AGC MAVG - calculated
3/22/2014 7:48	0:04	KWPII	0:213	20:857	AGC MAVG - calculated
3/22/2014 7:55	0:06	KWPII	0:312	20:878	AGC MAVG - calculated
3/22/2014 8:05	0:18	KWPII	1:280	20:561	AGC MAVG - calculated
3/22/2014 8:29	0:09	KWPII	0:313	20:601	AGC MAVG - calculated
3/22/2014 8:39	0:03	KWPII	0:098	20:547	AGC MAVG - calculated
3/22/2014 8:58	0:12	KWPII	0:534	20:688	AGC MAVG - calculated
3/22/2014 9:31	0:03	KWPII	0:026	20:698	AGC MAVG - calculated
3/22/2014 10:02	0:01	KWPII	0:002	20:603	AGC MAVG - calculated
3/22/2014 10:07	0:02	KWPII	0:033	20:690	AGC MAVG - calculated
3/22/2014 10:16	0:04	KWPII	0:073	20:692	AGC MAVG - calculated
3/22/2014 10:22	0:02	KWPII	0:028	20:702	AGC MAVG - calculated
3/22/2014 12:09	0:10	KWPII	0:343	20:570	AGC MAVG - calculated
3/22/2014 12:20	3:57	KWPII	33:883	20:698	AGC MAVG - calculated
3/22/2014 18:18	0:13	KWPII	0:874	20:693	AGC MAVG - calculated
3/22/2014 18:32	0:03	KWPII	0:111	20:693	AGC MAVG - calculated
3/22/2014 18:38	0:02	KWPII	0:034	20:688	AGC MAVG - calculated
3/22/2014 18:40	0:12	KWPII	0:320	20:698	AGC MAVG - calculated
3/22/2014 18:53	0:06	KWPII	0:131	20:651	AGC MAVG - calculated
3/22/2014 17:00	0:04	KWPII	0:028	20:644	AGC MAVG - calculated
3/22/2014 17:08	0:01	KWPII	0:001	20:625	AGC MAVG - calculated
3/22/2014 17:08	0:01	KWPII	0:001	20:635	AGC MAVG - calculated
3/22/2014 17:10	0:02	KWPII	0:016	20:591	AGC MAVG - calculated
3/22/2014 17:13	0:01	KWPII	0:008	20:480	AGC MAVG - calculated
3/22/2014 17:57	0:11	KWPII	0:284	20:698	AGC MAVG - calculated and Good Engineering and Operating Practices
3/22/2014 18:12	0:01	KWPII	0:005	20:688	AGC MAVG - calculated and Good Engineering and Operating Practices
3/22/2014 22:43	0:01	KWPII	0:002	20:688	AGC MAVG - calculated
3/22/2014 22:50	0:04	KWPII	0:068	20:685	AGC MAVG - calculated
3/22/2014 22:56	7:13	KWPII	136:000	20:708	AGC MAVG - calculated
3/22/2014 23:29	0:01	AWE	0:002	0:100	AGC MAVG - calculated
3/23/2014 0:10	5:48	MH	Data is not available	Data is not available	AGC MAVG - entered - Excess Energy
3/23/2014 0:24	0:53	AWE	0:515	1:300	AGC MAVG - entered - Excess Energy
3/23/2014 0:28	4:06	KWPII	34:023	28:858	AGC MAVG - entered - Excess Energy
3/23/2014 1:18	0:03	AWE	0:018	0:200	AGC MAVG - entered - Excess Energy
3/23/2014 1:27	0:01	AWE	0:003	0:100	AGC MAVG - entered - Excess Energy
3/23/2014 1:31	0:01	AWE	0:003	0:100	AGC MAVG - entered - Excess Energy
3/23/2014 1:39	0:35	AWE	0:713	1:200	AGC MAVG - entered - Excess Energy
3/23/2014 2:15	0:03	AWE	0:005	0:100	AGC MAVG - entered - Excess Energy
3/23/2014 2:16	0:08	AWE	0:055	0:700	AGC MAVG - entered - Excess Energy
3/23/2014 2:31	0:01	AWE	0:003	0:200	AGC MAVG - entered - Excess Energy
3/23/2014 2:44	0:01	AWE	0:003	0:200	AGC MAVG - entered - Excess Energy
3/23/2014 2:52	0:16	AWE	0:115	0:800	AGC MAVG - entered - Excess Energy
3/23/2014 3:14	0:01	AWE	0:003	0:200	AGC MAVG - entered - Excess Energy
3/23/2014 3:17	0:08	AWE	0:022	0:300	AGC MAVG - entered - Excess Energy
3/23/2014 3:26	0:02	AWE	0:005	0:200	AGC MAVG - entered - Excess Energy
3/23/2014 4:01	1:07	AWE	0:637	2:100	AGC MAVG - entered - Excess Energy
3/23/2014 4:38	0:01	KWPII	0:003	20:178	AGC MAVG - entered - Excess Energy
3/23/2014 4:38	0:05	KWPII	0:145	23:632	AGC MAVG - entered - Excess Energy
3/23/2014 4:44	0:45	KWPII	2:521	29:552	AGC MAVG - entered - Excess Energy
3/23/2014 5:10	0:01	AWE	0:002	0:100	AGC MAVG - entered - Excess Energy
3/23/2014 5:28	0:02	AWE	0:009	0:100	AGC MAVG - entered - Excess Energy
3/23/2014 5:28	0:35	KWPII	3:983	14:300	AGC MAVG - entered - Excess Energy and AGC MAVG - calculated
3/23/2014 5:30	0:02	KWPII	0:043	28:800	AGC MAVG - entered - Excess Energy
3/23/2014 5:33	0:02	KWPII	0:040	28:352	AGC MAVG - entered - Excess Energy
3/23/2014 5:36	0:03	KWPII	0:048	28:708	AGC MAVG - entered - Excess Energy
3/23/2014 5:44	0:02	KWPII	0:019	28:128	AGC MAVG - entered - Excess Energy
3/23/2014 5:51	0:01	KWPII	0:019	28:272	AGC MAVG - entered - Excess Energy
3/23/2014 6:11	1:36	KWPII	13:407	20:708	AGC MAVG - calculated

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Start Date and Time	Duration	WPP Curtailment #	Estimated Curtailment MWh	Peak MW Curtailment	Reasons for Curtailment
3/23/2014 6:30	0:01	AWE	0.003	0.200	AGC MAVG - calculated
3/23/2014 7:50	0:42	KWPII	2.586	20.708	AGC MAVG - calculated
3/23/2014 8:33	0:09	KWPII	0.362	20.888	AGC MAVG - calculated
3/23/2014 8:43	0:03	KWPII	0.117	20.587	AGC MAVG - calculated
3/23/2014 8:48	0:04	KWPII	0.078	20.588	AGC MAVG - calculated
3/23/2014 8:58	0:04	KWPII	0.019	20.707	AGC MAVG - calculated
3/23/2014 9:03	0:09	KWPII	0.487	20.700	AGC MAVG - calculated
3/23/2014 9:13	0:15	KWPII	0.605	20.700	AGC MAVG - calculated and Good Engineering and Operating Practices
3/23/2014 9:29	0:02	KWPII	0.093	20.700	AGC MAVG - calculated and Good Engineering and Operating Practices
3/23/2014 9:32	1:39	KWPII	24.022	20.708	AGC MAVG - calculated and Good Engineering and Operating Practices
3/23/2014 10:49	0:03	AWE	0.020	21.000	AGC MAVG - calculated
3/23/2014 10:53	0:01	AWE	0.010	21.000	AGC MAVG - calculated
3/23/2014 10:55	0:01	AWE	0.009	21.000	AGC MAVG - calculated
3/23/2014 10:58	0:02	AWE	0.023	21.000	AGC MAVG - calculated
3/23/2014 11:03	0:01	AWE	0.009	21.000	AGC MAVG - calculated
3/23/2014 11:13	4:11	KWPII	79.810	20.708	AGC MAVG - calculated
3/23/2014 11:14	0:01	AWE	0.014	21.000	AGC MAVG - calculated
3/23/2014 11:18	0:01	AWE	0.013	21.000	AGC MAVG - calculated
3/23/2014 11:27	0:03	AWE	0.070	21.000	AGC MAVG - calculated
3/23/2014 11:31	0:03	AWE	0.057	21.000	AGC MAVG - calculated
3/23/2014 11:35	0:07	AWE	0.274	21.000	AGC MAVG - calculated
3/23/2014 11:43	0:01	AWE	0.023	21.000	AGC MAVG - calculated
3/23/2014 11:46	0:21	AWE	1.183	21.000	AGC MAVG - calculated
3/23/2014 12:08	0:01	AWE	0.031	20.400	AGC MAVG - calculated
3/23/2014 12:11	0:03	AWE	0.110	21.000	AGC MAVG - calculated
3/23/2014 12:15	0:02	AWE	0.113	19.600	AGC MAVG - calculated
3/23/2014 12:18	0:05	AWE	0.172	19.100	AGC MAVG - calculated
3/23/2014 12:26	0:01	AWE	0.025	17.200	AGC MAVG - calculated
3/23/2014 12:29	0:04	AWE	0.090	20.100	AGC MAVG - calculated
3/23/2014 12:34	0:05	AWE	0.182	21.000	AGC MAVG - calculated
3/23/2014 12:40	0:01	AWE	0.018	21.000	AGC MAVG - calculated
3/23/2014 12:45	0:02	AWE	0.018	21.000	AGC MAVG - calculated
3/23/2014 12:49	0:05	AWE	0.164	21.000	AGC MAVG - calculated
3/23/2014 12:55	0:01	AWE	0.007	21.000	AGC MAVG - calculated
3/23/2014 12:58	0:14	AWE	0.485	21.000	AGC MAVG - calculated
3/23/2014 13:13	0:01	AWE	0.012	20.800	AGC MAVG - calculated
3/23/2014 13:15	0:01	AWE	0.026	21.000	AGC MAVG - calculated
3/23/2014 13:18	0:06	AWE	0.141	21.000	AGC MAVG - calculated
3/23/2014 13:31	0:05	AWE	0.100	21.000	AGC MAVG - calculated
3/23/2014 13:42	0:01	AWE	0.004	21.000	AGC MAVG - calculated
3/23/2014 14:29	0:03	AWE	0.053	21.000	AGC MAVG - calculated
3/23/2014 14:36	0:07	AWE	0.025	21.000	AGC MAVG - calculated
3/23/2014 14:39	0:01	AWE	0.008	20.700	AGC MAVG - calculated
3/23/2014 14:47	0:01	AWE	0.008	19.000	AGC MAVG - calculated
3/23/2014 14:49	0:07	AWE	0.060	21.000	AGC MAVG - calculated
3/23/2014 14:57	0:01	AWE	0.017	21.000	AGC MAVG - calculated
3/23/2014 15:02	0:07	AWE	0.108	21.000	AGC MAVG - calculated
3/23/2014 15:10	0:04	AWE	0.097	21.000	AGC MAVG - calculated
3/23/2014 15:28	0:51	KWPII	6.543	20.708	AGC MAVG - calculated
3/23/2014 16:50	0:03	KWPII	0.082	20.800	AGC MAVG - calculated
3/23/2014 18:59	0:02	KWPII	0.025	20.800	AGC MAVG - calculated
3/23/2014 17:04	0:05	KWPII	0.108	20.708	AGC MAVG - calculated
3/23/2014 17:10	0:09	KWPII	0.441	20.708	AGC MAVG - calculated
3/23/2014 17:20	0:04	KWPII	0.078	20.873	AGC MAVG - calculated
3/23/2014 17:25	0:01	KWPII	0.021	20.800	AGC MAVG - calculated
3/23/2014 17:28	0:10	KWPII	0.377	20.863	AGC MAVG - calculated
3/23/2014 17:39	0:15	KWPII	0.326	20.898	AGC MAVG - calculated
3/23/2014 17:55	0:02	KWPII	0.041	20.887	AGC MAVG - calculated
3/23/2014 17:58	0:01	KWPII	0.001	20.869	AGC MAVG - calculated
3/23/2014 20:13	0:23	KWPII	1.789	20.708	AGC MAVG - calculated
3/23/2014 20:37	0:02	KWPII	0.008	20.708	AGC MAVG - calculated
3/23/2014 22:42	8:46	KWPII	125.919	20.708	AGC MAVG - calculated AGC MAVG - entered - Excess Energy and AGC MAVG - calculated
3/24/2014 0:05	5:06	MH	Data is not available	Data is not available	AGC MAVG - entered - Excess Energy and AGC MAVG - calculated
3/24/2014 0:09	1:03	AWE	1.450	3.800	AGC MAVG - entered - Excess Energy
3/24/2014 0:15	0:03	KWP	0.047	27.874	AGC MAVG - entered - Excess Energy
3/24/2014 0:19	0:02	KWP	0.029	26.978	AGC MAVG - entered - Excess Energy
3/24/2014 0:22	4:43	KWP	31.492	28.368	AGC MAVG - entered - Excess Energy and AGC MAVG - calculated
3/24/2014 1:14	0:01	AWE	0.003	0.200	AGC MAVG - calculated
3/24/2014 1:22	0:03	AWE	0.008	0.200	AGC MAVG - calculated
3/24/2014 1:28	0:03	AWE	0.010	0.300	AGC MAVG - calculated
3/24/2014 1:30	0:10	AWE	0.028	0.300	AGC MAVG - calculated
3/24/2014 2:40	0:01	AWE	0.003	0.200	AGC MAVG - calculated
3/24/2014 3:23	0:01	AWE	0.005	0.400	AGC MAVG - calculated
3/24/2014 3:26	0:01	AWE	0.002	0.100	AGC MAVG - calculated
3/24/2014 3:32	0:33	AWE	0.833	1.900	AGC MAVG - calculated
3/24/2014 4:51	0:33	AWE	0.268	0.700	AGC MAVG - calculated
3/24/2014 5:08	0:01	KWP	0.008	27.200	AGC MAVG - calculated
3/24/2014 5:08	0:02	KWP	0.012	27.840	AGC MAVG - calculated
3/24/2014 5:30	0:59	KWPII	8.370	20.708	AGC MAVG - calculated
3/24/2014 6:34	7:06	KWPII	128.030	20.708	AGC MAVG - calculated and Good Engineering and Operating Practices
3/24/2014 10:47	0:03	AWE	0.031	21.000	AGC MAVG - calculated and Good Engineering and Operating Practices
3/24/2014 10:58	0:01	AWE	0.013	21.000	AGC MAVG - calculated and Good Engineering and Operating Practices
3/24/2014 11:02	0:10	AWE	0.344	21.000	AGC MAVG - calculated and Good Engineering and Operating Practices
3/24/2014 11:13	0:05	AWE	0.955	21.000	AGC MAVG - calculated and Good Engineering and Operating Practices
3/24/2014 11:19	1:56	AWE	8.827	21.000	AGC MAVG - calculated and Good Engineering and Operating Practices
3/24/2014 13:15	1:19	AWE	4.323	21.000	AGC MAVG - calculated Good Engineering and Operating Practices, and Testing
3/24/2014 14:35	0:11	AWE	0.700	21.000	AGC MAVG - calculated and Testing
3/24/2014 14:47	0:02	AWE	0.010	20.200	AGC MAVG - calculated and Testing
3/24/2014 18:41	0:36	KWPII	2.656	20.708	AGC MAVG - calculated and Testing
3/24/2014 17:57	0:01	KWPII	0.008	20.887	AGC MAVG - calculated, Testing, and Good Engineering and Operating Practices
3/24/2014 20:38	0:08	KWPII	0.132	20.708	AGC MAVG - calculated, Testing, and Good Engineering and Operating Practices
3/24/2014 21:19	0:02	KWPII	0.020	20.708	AGC MAVG - calculated and Good Engineering and Operating Practices
3/24/2014 21:41	0:02	KWPII	0.021	20.873	AGC MAVG - calculated
3/24/2014 21:47	0:03	KWPII	0.049	20.708	AGC MAVG - calculated
3/24/2014 22:31	8:01	KWPII	137.977	20.708	AGC MAVG - calculated
3/24/2014 23:28	0:01	AWE	0.008	5.300	AGC MAVG - calculated
3/24/2014 23:32	0:07	AWE	0.178	5.900	AGC MAVG - calculated
3/24/2014 23:41	0:02	AWE	0.013	2.600	AGC MAVG - calculated
3/24/2014 23:45	4:27	AWE	12.532	9.000	AGC MAVG - calculated AGC MAVG - entered - Excess Energy and AGC MAVG - calculated
3/24/2014 23:54	4:12	MH	Data is not available	Data is not available	AGC MAVG - entered - Excess Energy and AGC MAVG - calculated
3/25/2014 0:06	3:58	KWP	36.050	29.936	AGC MAVG - entered - Excess Energy and AGC MAVG - calculated
3/25/2014 4:05	0:01	KWP	0.010	28.980	AGC MAVG - calculated
3/25/2014 4:13	0:01	AWE	0.027	7.400	AGC MAVG - calculated
3/25/2014 4:15	0:09	AWE	0.101	8.200	AGC MAVG - calculated
3/25/2014 4:27	0:01	AWE	0.012	8.200	AGC MAVG - calculated
3/25/2014 4:32	0:01	AWE	0.011	8.600	AGC MAVG - calculated
3/25/2014 4:38	0:01	AWE	0.011	10.000	AGC MAVG - calculated
3/25/2014 4:41	0:14	AWE	0.168	12.500	AGC MAVG - calculated
3/25/2014 4:57	0:01	AWE	0.010	11.000	AGC MAVG - calculated
3/25/2014 4:59	0:05	AWE	0.079	13.100	AGC MAVG - calculated
3/25/2014 5:08	0:05	AWE	0.071	14.400	AGC MAVG - calculated
3/25/2014 5:12	0:01	AWE	0.011	13.000	AGC MAVG - calculated
3/25/2014 5:14	0:03	AWE	0.035	15.800	AGC MAVG - calculated
3/25/2014 5:21	0:01	AWE	0.004	17.100	AGC MAVG - calculated
3/25/2014 5:24	0:01	AWE	0.003	16.400	AGC MAVG - calculated

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Start Date and Time	Duration	MP	IPP Curtailed	Estimated Curtailed MWh	Peak MW Curtailed	Reasons for Curtailment
3/25/2014 6:30	0:01	KWPII		0.009	20 647	AGC MAVG - calculated
3/25/2014 6:41	0:05	KWPII		0.068	20 658	AGC MAVG - calculated
3/25/2014 6:47	0:07	KWPII		0.100	20 691	AGC MAVG - calculated
3/25/2014 6:48	0:01	KWPII		0.008	20 708	AGC MAVG - calculated and Good Engineering and Operating Practices
3/25/2014 6:48	0:01	KWPII		0.061	20 707	AGC MAVG - calculated and Good Engineering and Operating Practices
3/25/2014 6:50	0:03	KWPII		0.038	20 703	AGC MAVG - calculated and Good Engineering and Operating Practices
3/25/2014 6:57	0:01	KWPII		0.008	20 699	AGC MAVG - calculated and Good Engineering and Operating Practices
3/25/2014 6:59	0:01	KWPII		0.008	20 697	AGC MAVG - calculated and Good Engineering and Operating Practices
3/25/2014 6:59	0:01	KWPII		0.001	20 703	AGC MAVG - calculated
3/25/2014 6:59	0:01	KWPII		0.002	20 703	AGC MAVG - calculated
3/25/2014 6:59	0:05	KWPII		0.033	20 704	AGC MAVG - calculated
3/25/2014 6:41	0:14	KWPII		0.205	20 708	AGC MAVG - calculated
3/25/2014 6:58	0:08	KWPII		0.122	20 706	AGC MAVG - calculated
3/25/2014 10:03	0:08	KWPII		0.170	20 699	AGC MAVG - calculated
3/25/2014 10:12	0:01	KWPII		0.002	20 696	AGC MAVG - calculated
3/25/2014 10:14	0:05	KWPII		0.090	20 693	AGC MAVG - calculated
3/25/2014 10:20	0:01	KWPII		0.002	20 689	AGC MAVG - calculated
3/25/2014 10:36	0:15	KWPII		0.614	20 521	AGC MAVG - calculated
3/25/2014 10:54	0:03	KWPII		0.098	20 142	AGC MAVG - calculated
3/25/2014 10:50	0:01	KWPII		0.004	19 474	AGC MAVG - calculated
3/25/2014 11:03	0:06	KWPII		0.126	20 373	AGC MAVG - calculated
3/25/2014 11:13	0:01	KWPII		0.036	20 527	AGC MAVG - calculated
3/25/2014 11:15	0:01	KWPII		0.010	20 352	AGC MAVG - calculated
3/25/2014 11:24	0:01	KWPII		0.029	20 356	AGC MAVG - calculated
3/25/2014 11:28	0:02	KWPII		0.023	19 750	AGC MAVG - calculated
3/25/2014 11:32	0:01	KWPII		0.004	20 560	AGC MAVG - calculated
3/25/2014 11:36	0:04	KWPII		0.053	20 639	AGC MAVG - calculated
3/25/2014 11:51	0:01	KWPII		0.006	20 410	AGC MAVG - calculated
3/25/2014 11:58	0:01	KWPII		0.002	19 608	AGC MAVG - calculated
3/25/2014 12:02	0:05	KWPII		0.102	20 639	AGC MAVG - calculated
3/25/2014 12:08	0:01	KWPII		0.021	20 425	AGC MAVG - calculated
3/25/2014 12:12	0:02	KWPII		0.043	18 745	AGC MAVG - calculated
3/25/2014 12:20	0:05	KWPII		0.094	19 396	AGC MAVG - calculated
3/25/2014 12:26	0:01	KWPII		0.000	18 547	AGC MAVG - calculated
3/25/2014 13:25	0:01	KWPII		0.002	20 192	AGC MAVG - calculated
3/25/2014 16:07	0:48	KWPII		5.060	20 704	AGC MAVG - entered - Maintaining Required Reserves
3/25/2014 16:54	0:01	KWPII		0.013	20 650	AGC MAVG - calculated
3/25/2014 16:58	0:02	KWPII		0.012	20 604	AGC MAVG - calculated
3/25/2014 17:05	0:02	KWPII		0.010	20 603	AGC MAVG - calculated
3/25/2014 17:09	0:01	KWPII		0.001	20 514	AGC MAVG - calculated
3/25/2014 17:31	0:04	KWPII		0.031	20 707	AGC MAVG - calculated and Good Engineering and Operating Practices
3/25/2014 17:38	0:01	KWPII		0.002	20 708	AGC MAVG - calculated and Good Engineering and Operating Practices
3/25/2014 18:18	0:01	KWPII		0.003	20 607	AGC MAVG - calculated and Good Engineering and Operating Practices
3/25/2014 18:23	0:02	KWPII		0.028	20 471	AGC MAVG - calculated and Good Engineering and Operating Practices
3/25/2014 18:27	0:04	KWPII		0.028	20 329	AGC MAVG - calculated and Good Engineering and Operating Practices
3/25/2014 18:32	0:02	KWPII		0.011	20 228	AGC MAVG - calculated and Good Engineering and Operating Practices
3/25/2014 21:45	0:01	KWPII		0.001	0.048	AGC MAVG - calculated and Good Engineering and Operating Practices
3/25/2014 23:47	0:01	KWPII		0.000	0.016	AGC MAVG - calculated and Good Engineering and Operating Practices
3/26/2014 1:47	0:16	AWP		0.125	21 000	AGC MAVG - calculated
3/26/2014 2:06	0:01	AWP		0.001	21 000	AGC MAVG - calculated
3/26/2014 2:14	0:08	AWP		0.101	21 000	AGC MAVG - calculated
3/26/2014 2:23	0:08	AWP		0.114	21 000	AGC MAVG - calculated
3/26/2014 2:40	0:01	AWP		0.007	18 900	AGC MAVG - calculated
3/26/2014 2:42	0:04	AWP		0.073	20 400	AGC MAVG - calculated
3/26/2014 2:49	0:04	AWP		0.073	20 900	AGC MAVG - calculated
3/26/2014 3:33	0:11	AWP		0.403	21 000	AGC MAVG - calculated
3/26/2014 3:45	0:02	AWP		0.027	17 700	AGC MAVG - calculated
3/26/2014 4:48	0:01	AWP		0.007	20 300	AGC MAVG - calculated
3/26/2014 12:52	0:01	KWPII		0.001	0.040	AGC MAVG - calculated, Good Engineering and Operating Practices, and Testing
3/26/2014 12:54	0:01	KWPII		0.001	0.033	AGC MAVG - calculated, Good Engineering and Operating Practices, and Testing
3/26/2014 21:36	0:01	KWPII		0.002	0.096	AGC MAVG - calculated
3/27/2014 7:58	0:01	KWPII		0.001	0.045	AGC MAVG - calculated and Good Engineering and Operating Practices
3/28/2014 7:21	0:02	AWP		0.016	20 400	AGC MAVG - calculated, Good Engineering and Operating Practices, and Testing
3/28/2014 16:05	0:01	KWPII		0.000	0.014	AGC MAVG - calculated
3/29/2014 2:10	0:03	AWP		0.024	20 800	AGC MAVG - calculated
3/29/2014 2:15	0:09	AWP		0.063	21 000	AGC MAVG - calculated
3/29/2014 2:26	0:01	AWP		0.001	20 200	AGC MAVG - calculated
3/29/2014 2:30	0:01	AWP		0.003	19 700	AGC MAVG - calculated
3/29/2014 15:48	0:01	KWPII		0.001	0.004	AGC MAVG - calculated and Good Engineering and Operating Practices
3/29/2014 22:32	0:06	KWPII		0.250	12 960	AGC MAVG - calculated
3/29/2014 23:52	0:01	KWPII		0.005	5 110	AGC MAVG - calculated
3/29/2014 23:59	0:13	KWPII		0.912	13 620	AGC MAVG - calculated
3/30/2014 0:34	0:43	AWP		3.831	21 000	AGC MAVG - calculated
3/30/2014 0:34	0:47	KWPII		8.746	17 110	AGC MAVG - calculated
3/30/2014 3:17	0:01	KWPII		0.002	0.146	AGC MAVG - calculated
3/30/2014 3:42	0:02	KWPII		0.149	17 461	AGC MAVG - calculated
3/30/2014 3:45	1:59	AWP		10.314	21 000	AGC MAVG - calculated
3/30/2014 14:31	0:01	KWPII		0.004	13 868	AGC MAVG - calculated
3/30/2014 14:33	0:32	KWPII		2.847	16 192	AGC MAVG - calculated
3/30/2014 16:51	0:01	KWPII		0.001	16 125	AGC MAVG - calculated
3/30/2014 18:09	0:01	KWPII		0.000	18 411	AGC MAVG - calculated
3/30/2014 18:24	0:01	KWPII		0.002	16 611	AGC MAVG - calculated
3/30/2014 21:02	0:01	KWPII		0.014	17 693	AGC MAVG - calculated
3/30/2014 21:10	0:01	KWPII		0.018	16 073	AGC MAVG - calculated
3/30/2014 21:12	0:08	KWPII		0.227	16 085	AGC MAVG - calculated
3/30/2014 21:24	0:01	KWPII		0.015	15 883	AGC MAVG - calculated
3/30/2014 21:36	0:02	KWPII		0.025	15 748	AGC MAVG - calculated
3/30/2014 21:39	0:05	KWPII		0.185	17 925	AGC MAVG - calculated
3/30/2014 21:51	0:01	KWPII		0.005	17 587	AGC MAVG - calculated
3/30/2014 21:54	0:01	KWPII		0.017	17 780	AGC MAVG - calculated
3/30/2014 21:56	0:01	KWPII		0.027	17 541	AGC MAVG - calculated
3/30/2014 21:58	0:01	KWPII		0.003	17 178	AGC MAVG - calculated
3/30/2014 22:04	0:02	KWPII		0.011	16 069	AGC MAVG - calculated
3/30/2014 22:07	0:04	KWPII		0.034	14 018	AGC MAVG - calculated
3/30/2014 22:20	7:52	KWPII		103.163	19 125	AGC MAVG - calculated and Good Engineering and Operating Practices
3/30/2014 22:35	0:02	AWP		0.039	21 000	AGC MAVG - calculated and Good Engineering and Operating Practices
3/30/2014 22:38	7:17	AWP		94.484	21 000	AGC MAVG - calculated and Good Engineering and Operating Practices
3/31/2014 0:43	0:01	MH	Data is not available	Data is not available	AGC MAVG - calculated	
3/31/2014 0:44	0:01	KWPII		0.005	26 112	AGC MAVG - calculated
3/31/2014 0:53	0:02	KWPII		0.043	25 472	AGC MAVG - calculated
3/31/2014 0:54	0:02	MH	Data is not available	Data is not available	AGC MAVG - calculated	
3/31/2014 1:31	0:02	KWPII		0.054	23 584	AGC MAVG - calculated
3/31/2014 1:32	0:09	MH	Data is not available	Data is not available	AGC MAVG - calculated	
3/31/2014 1:34	0:04	KWPII		0.127	24 240	AGC MAVG - calculated
3/31/2014 1:47	0:01	KWPII		0.010	21 188	AGC MAVG - calculated
3/31/2014 1:48	0:01	KWPII		0.011	20 864	AGC MAVG - calculated
3/31/2014 1:51	0:01	KWPII		0.007	20 578	AGC MAVG - calculated
3/31/2014 2:08	5:30	MH	Data is not available	Data is not available	AGC MAVG - calculated	
3/31/2014 2:42	0:01	KWPII		0.002	16 083	AGC MAVG - calculated
3/31/2014 2:45	0:02	KWPII		0.038	20 632	AGC MAVG - calculated
3/31/2014 2:48	1:58	KWPII		11.470	26 992	AGC MAVG - calculated
3/31/2014 4:21	0:01	KWPII		0.008	26 081	AGC MAVG - calculated
3/31/2014 4:50	0:01	KWPII		0.001	25 824	AGC MAVG - calculated
3/31/2014 4:53	0:03	KWPII		0.003	26 184	AGC MAVG - calculated
3/31/2014 5:58	2:08	AWP		2.266	20 700	AGC MAVG - calculated

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Start Date and Time	Duration	% IPP Curtailed	Estimated Curtailed MWH	Peak MW Curtailed	Reasons for Curtailment
3/31/2014 6:06	0:01	AWE	0.013	20.800	AGC MAVG - calculated
3/31/2014 6:13	0:50	KWPII	4.384	19.211	AGC MAVG - calculated
3/31/2014 7:04	0:04	KWPII	0.076	19.124	AGC MAVG - calculated
3/31/2014 7:09	0:01	KWPII	0.008	18.998	AGC MAVG - calculated
3/31/2014 7:11	0:01	KWPII	0.007	19.063	AGC MAVG - calculated
3/31/2014 7:18	0:08	KWPII	0.185	18.169	AGC MAVG - calculated
3/31/2014 7:28	0:06	KWPII	0.118	17.062	AGC MAVG - calculated
3/31/2014 7:30	0:01	KWPII	0.001	18.333	AGC MAVG - calculated
3/31/2014 7:42	0:01	KWPII	0.006	17.240	AGC MAVG - calculated
3/31/2014 8:00	0:02	MH	Data is not available	Data is not available	AGC MAVG - calculated
3/31/2014 8:47	0:06	KWPII	0.046	19.003	AGC MAVG - calculated
3/31/2014 9:13	0:06	MH	Data is not available	Data is not available	Testing
3/31/2014 9:35	0:07	MH	Data is not available	Data is not available	Testing
3/31/2014 10:52	0:02	KWPII	0.018	19.211	AGC MAVG - calculated
3/31/2014 10:55	0:58	KWPII	3.386	19.211	AGC MAVG - calculated and Good Engineering and Operating Practices
3/31/2014 11:52	0:12	KWPII	0.387	19.199	AGC MAVG - calculated and Good Engineering and Operating Practices
3/31/2014 12:08	0:01	KWPII	0.000	17.698	AGC MAVG - calculated and Good Engineering and Operating Practices
3/31/2014 12:10	0:01	KWPII	0.001	17.714	AGC MAVG - calculated and Good Engineering and Operating Practices
3/31/2014 12:12	0:01	KWPII	0.003	17.711	AGC MAVG - calculated and Good Engineering and Operating Practices
3/31/2014 12:26	0:01	KWPII	0.009	17.708	AGC MAVG - calculated
3/31/2014 12:26	0:04	KWPII	0.058	17.701	AGC MAVG - calculated
3/31/2014 12:33	0:05	KWPII	0.076	17.709	AGC MAVG - calculated
3/31/2014 14:30	0:10	KWPII	0.126	17.706	AGC MAVG - calculated
3/31/2014 14:41	0:01	KWPII	0.015	17.678	AGC MAVG - calculated
3/31/2014 22:40	0:02	KWPII	0.023	18.129	AGC MAVG - calculated
3/31/2014 23:02	0:58	KWPII	11.796	17.152	AGC MAVG - calculated
3/31/2014 23:36	0:01	AWE	0.017	19.800	AGC MAVG - calculated
3/31/2014 23:38	0:01	AWE	0.005	19.700	AGC MAVG - calculated
3/31/2014 23:46	0:11	AWE	0.438	19.900	AGC MAVG - calculated
3/31/2014 23:52	0:01	AWE	0.014	19.900	AGC MAVG - calculated
3/31/2014 23:54	0:04	AWE	0.041	20.000	AGC MAVG - calculated
3/31/2014 23:58	0:01	AWE	0.023	20.000	AGC MAVG - calculated

Notes

- Curtailment for Kaheswa Wind Power ("KWP"), Mauna Hydroelectric ("MH"), AAAAA Rent-A-Space Maui LTD ("SA"), Bioreal Solar, LLC ("BS"), Auwahi Wind Energy ("AWE") and Kaheswa 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.
- Maui Electric upgraded the SCADA controls to permit the curtailment of the Mauna Hydroelectric ("MH") facility to Net Zero Protocol and uncurtailment of the MH facility without opening and closing the Maui Electric and MH interconnection circuit breaker.
- On November 22, 2013, Maui Electric established Bioreal Solar, LLC ("BS") curtailment control. BS is in the same curtailment security group as AAAAA Rent-A-Space Maui LTD ("SA").
- 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 SA, BS, or MH.
- Curtailment signals sent to SA or BS during nighttime hours are not recorded as curtailment events because no energy generation is possible during that time.



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Start Date/Time	Stop Date/Time	Duration (h mm)	IPP Curtailed	Estimated MWH Curtailed	Peak MW Curtailed	Reasons for Curtailment
3/31/2014 10 27	3/31/2014 10 29	0 03	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
3/31/2014 10 33	3/31/2014 10 41	0 08	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
3/31/2014 10 54	3/31/2014 10 54	0 01	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
3/31/2014 11 10	3/31/2014 11 18	0 07	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
3/31/2014 11 25	3/31/2014 11 25	0 01	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
3/31/2014 12 18	3/31/2014 12 18	0 01	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
3/31/2014 12 32	3/31/2014 12 32	0 01	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
3/31/2014 12 51	3/31/2014 12 52	0 02	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
3/31/2014 13 35	3/31/2014 13 37	0 03	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
3/31/2014 14 15	3/31/2014 14 20	0 06	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
3/31/2014 14 35	3/31/2014 14 44	0 10	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
3/31/2014 14 47	3/31/2014 14 52	0 06	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
3/31/2014 14 58	3/31/2014 15 00	0 05	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
3/31/2014 15 52	3/31/2014 16 12	0 21	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
3/31/2014 16 17	3/31/2014 16 22	0 06	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
3/31/2014 16 28	3/31/2014 16 34	0 07	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
3/31/2014 16 39	3/31/2014 16 41	0 03	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
3/31/2014 16 44	3/31/2014 16 46	0 03	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
3/31/2014 16 49	3/31/2014 16 52	0 04	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices
3/31/2014 17 09	3/31/2014 17 15	0 07	LSR	Data is not available	Data is not available	Good Engineering and Operating Practices

Notes

On June 27, 2012, Mau Electric notified LSR that although LSR has not operated in compliance with the revised ramp rate of 380 kW/minute, Mau Electric would conditionally allow LSR to operate at the allowed capacity of 1.2 MW while the Mau Electric-Lana'i Diesel Operator was in the control room.

LSR possible output data is not available. Therefore, Mau 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.

Hawai'i Electric Light Company Curtailment Report March 2014

Start Date/Time	MW output prior to start of curtailment	End Date/Time	MW output after curtailment released	Reason for Curtailment
03/01/14 18:35	0.5 MW	03/02/14 08:33	0.0 MW	Low wind curtailment at Tawhiri's request.
03/02/14 18:58	1.1 MW	03/02/14 22:21	0.0 MW	Low wind curtailment at Tawhiri's request.
03/03/14 19:54	0.0 MW	03/04/14 06:48	0.0 MW	Low wind curtailment at Tawhiri's request.
03/13/14 08:19	18.6 MW	03/13/14 08:39	12.8 MW	Tawhiri curtailed - switching at 9600 line
03/13/14 13:15	18.3 MW	03/13/14 13:53	11.9 MW	Tawhiri curtailed - switching at 9600 line
03/24/14 00:41	13.7 MW	03/24/14 04:26	7.9 MW	Tawhiri Group B curtailed for excess energy
03/25/14 00:53	19.8 MW	03/25/14 04:53	18.4 MW	Tawhiri Group B curtailed for excess energy.
03/30/14 02:49	16.4 MW	03/30/14 05:02	17.3 MW	Tawhiri Group B curtailed for excess energy
03/30/14 02:58	7.4 MW	03/30/14 03:27	6.8 MW	HRD curtailed for excess energy
03/31/14 02:14	19.7 MW	03/31/14 04:29	19.7 MW	Tawhiri Group B curtailed for excess energy.