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Jay M. Ignacio, P.E.
President

January 27, 2011

PUBLIC UTILITIES
COMMISSION

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The Honorable Chairman and Members of the
Hawaii Public Utilities Commission
465 South King Street
Kekuanaoa Building, 1st Floor
Honolulu, Hawaii 96813

Dear Commissioners:

Subject: Adequacy of Supply
Hawaii Electric Light Company, Inc. ("HELCO")

The following information is respectfully submitted in accordance with paragraph 5.3a of General Order No. 7, which states:

The generation capacity of the utility's plant, supplemented by electric power regularly available from other sources, must be sufficiently large to meet all reasonably expectable demands for service and provide a reasonable reserve for emergencies. A Statement shall be filed annually with the Commission within 30 days after the close of the year indicating the adequacy of such capacity and the method used to determine the required reserve capacity which forms the basis for future requirements in generation, transmission, and distribution plant expansion programs required under Rule 2.3h.1.

HELCO's 2010 total system capability was 285,500 kW net (291,750 kW gross) and included firm capacity power purchases of 30,000 kW from Puna Geothermal Venture ("PGV") and 60,000 kW from Hamakua Energy Partners, L.P. ("HEP"). HELCO's system peak of 190,600 kW (net) or 195,498 kW (gross) occurred on December 27, 2010¹, at approximately 6:33 p.m. The 2010 reserve margin was approximately 49.8% over the system peak.

Load Management/DSM

At the time of the system peak, HELCO had in place 34 load management contracts totaling 8,390 kW under Rider M and Schedule U, which reduced the evening peak by

¹ HELCO's system peak has occurred in the month of December from 1997 to 2007, and again in 2009 and 2010. For the purposes of this report, it is assumed that HELCO's system peak will continue to occur in December.

approximately 7,534 kW. In addition, residential and commercial & industrial demand side management (“DSM”) programs, implemented by HELCO from 1996 through June 2009 and by Hawaii Energy since July 1, 2009, reduced the system peak by an estimated 11,316² net kW (net of free riders).

Reserve Margins

Attachment 1 shows the expected reserve margin over the next three years, based on HELCO’s 2010-2015 Sales and Peak Forecast, dated May 26, 2010, and HELCO’s latest estimate of forecasted DSM impacts. Attachment 2 details the gross and net ratings of HELCO units and Independent Power Producer (“IPP”) units.

The following capacity planning criterion is used to determine the need for additional generation:

The sum of the reserve ratings of all available units, minus the reserve rating of the largest available unit, minus the reserve ratings of any units on maintenance, must be equal to or greater than the system peak load to be supplied.

HELCO’s generation capacity for the Big Island for the next three years is sufficiently large to meet all reasonably expected demands for service and provide reasonable reserves for emergencies.

Acquisition of Additional Firm Generating Capacity

Competitive Bidding is the Required Acquisition Mechanism Attachment

On December 8, 2006, the Framework for Competitive Bidding (“CB Framework”) was adopted by the Commission in Decision and Order No. 23121 (“D&O 23121”) in Docket No. 03-0372, pursuant to HRS §§ 269-7 and 269-15, and Hawaii Administrative Rules § 6-61-71. The Commission’s CB Framework states that “[c]ompetitive bidding, unless the Commission finds it to be unsuitable, is established as the required mechanism for acquiring a future generation resource or a block of generation resources, whether or not such resource has been identified in a utility’s IRP.”

² Energy efficiency program impacts for customers who participated in the programs prior to July 1, 2009 are based on HELCO records. Energy efficiency program impacts for Hawaii Energy’s first program year, which ran July 1, 2009 to June 30, 2010, are also included in this estimate. Source: Hawaii Energy Annual Report for PY2009 (net level savings), Page 23, www.hawaiienergy.com.



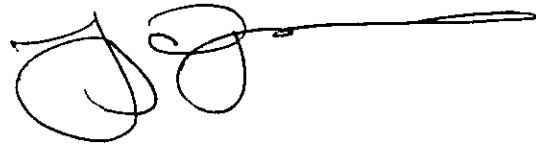
Exemptions to the CB Framework

In D&O 23121, the Commission adopted “exemptions based on size” as proposed by the HECO Utilities. One exemption given in Section II.A.3.f. on page 5 of the CB Framework states in relevant part:

This Framework also does not apply to: (i) generating units with a net output available to the utility of 1% or less of a utility’s total firm capacity, including that of independent power producers, or with a net output of 5 MW or less, whichever is lower

HELCO’s total firm capacity (net reserve MW) as of December 31, 2010 was 287.1 MW,³ and 1% of HELCO’s total firm capacity is 2.87 MW. As a result, for HELCO, the CB Framework would not apply to proposed generating units with a net output available to the utility of 2.87 MW (i.e., the lower of 2.87 MW and 5 MW) or less.

Very truly yours,



Jay Ignacio
President

Attachments

- c: Division of Consumer Advocacy (with Attachments)

³ The Puna steam unit returned from overhaul on December 28, 2010. Before the overhaul, Puna’s net reserve rating was 14.1 MW, as shown in Attachment 2, page 1. The work performed resulted in an improved performance with no increase to emissions. After the overhaul, Puna’s net reserve rating increased to 15.7 MW. At the time of the system peak on December 27, 2010, the net system capability was 285.5 MW. The net system capability increased to 287.1 MW at the end of 2010.



Table 1
Adequacy of Supply

Year	System Capability at Annual Peak Load (net kW) [A]	Notes	With Future DSM (Includes Acquired DSM) ⁽ⁱ⁾	
			System Peak (net kW) [C] ⁽ⁱⁱⁱ⁾	Reserve Margin (%) ^(viii) $[(A-C)/C]$
<i>Recorded</i> ⁽ⁱⁱ⁾				
2010	285,500	(iv)	190,600	49.8%
<i>Future</i>				
2011	287,100	(v)	197,400	45.4%
2012	287,100	(vi)	199,800	43.7%
2013	287,100	(vii)	203,400	41.2%

Notes:

(I) System Peaks (With Future Peak Reduction Benefits of DSM Programs):

- Implementation of full-scale DSM programs began in the first quarter of 1996 following Commission approval of the programs. On February 13, 2007, the Commission issued Decision and Order No. 23258 in the Energy Efficiency proceeding (Docket No. 05-0069). The Commission ordered that the energy efficiency programs transition to a non-utility administrator by January 2009. Effective July 1, 2009, the administration of the company's energy efficiency DSM programs was transferred to the Hawaii Energy Efficiency Programs (HEEP) Administrator.
- The forecasted system peak values for the years 2011-2013 include the actual peak reduction benefits acquired in 1996-June 2009 implemented by HELCO and the estimated peak reduction benefits acquired through 2010 implemented by Hawaii Energy, as well as the benefits of the DSM programs (acquired and future), Rider M, and Schedule U contracts.

(II) System Peaks (Recorded):

- The recorded system peaks for 2010 includes the actual peak reduction benefits of the acquired DSM programs and the Rider M and Schedule U contracts.

- (III) The 2011-2013 annual forecasted system peaks are based on:
- HELCO's 2010-2015 Sales and Peak Forecast, dated May 26, 2010. The HELCO annual forecasted system peak is expected to occur in the month of December.
- (IV) System Capability for 2010 includes:
- HELCO units at a total of 195,500 kW net (201,800 kW gross).
 - Firm power purchase contracts with a combined net total of 90,000 kW from PGV (30,000 kW) and HEP (60,000 kW).
- (V) System Capability for 2011 includes:
- HELCO units at a total of 197,100 kW net (203,300 kW gross).
 - Firm power purchase contracts with a combined net total of 90,000 kW from PGV (30,000 kW) and HEP (60,000 kW).
- (VI) System Capability for 2012 includes:
- HELCO units at a total of 197,100 kW net (203,300 kW gross).
 - Firm power purchase contracts with a combined net total of 90,000 kW from PGV (30,000 kW) and HEP (60,000 kW).
- (VII) System Capability for 2013 includes:
- HELCO units at a total of 197,100 kW net (203,300 kW gross).
 - Firm power purchase contracts with a combined net total of 90,000 kW from PGV (30,000 kW) and HEP (60,000 kW).
- (VIII) Reserve Margin
- The reserve margins shown for 2011-2013 assume that HEP and PGV are at full ratings.
 - On July 26, 2007, HELCO entered into a Power Purchase Agreement ("PPA") with Tradewinds Forest Products, LLC ("Tradewinds") in which HELCO would purchase from Tradewinds approximately 13,220 MWh per year on a scheduled basis. The PPA was incomplete because an Interconnection Requirements Study

("IRS"), which would have provided information on HELCO-owned interconnection facilities, was not completed. The IRS has since been completed, and the PPA would need to be amended with that information. On July 9, 2010, Tradewinds gave notice that their project was on hold indefinitely. Due to the uncertainty of the project's future, Tradewinds is not included in the 2011-2013 firm power purchase capacity and reserve margin calculations.

In 2009, HELCO negotiated and reached agreements in principle to purchase additional firm, dispatchable energy from Hu Honua Bioenergy, LLC, ("Hu Honua") and PGV. In accordance with the term sheet signed on March 13, 2009, Hu Honua is anticipated to produce and deliver approximately 21.5 MW of firm, dispatchable energy to HELCO. Hu Honua continues to seek permit approvals and is working towards developing a power purchase agreement. Per the Memorandum of Understanding dated July 31, 2009, between HELCO and PGV, PGV is anticipated to produce and deliver an additional 8 MW of firm, dispatchable energy to HELCO. HELCO and PGV are currently working towards finalizing a power purchase agreement. The parties have agreed in principle on all of the PPA provisions to purchase the additional firm capacity, and the documents are awaiting execution by the parties. The dates of commercial operation for Hu Honua and the PGV additional 8 MW of capacity are predicated on execution of final power purchase agreements and Commission approvals of the PPAs. Therefore, the in-service dates for the projects are uncertain at this time and their capacities are not included in the reserve margin calculations.

HELCO Adequacy of Supply
2010 Unit Ratings (Firm Capacity at Actual System Peak in December 2010)

Unit	(Gross MW)		(Net MW)	
	Reserve Rating (MW)	NTL Rating (MW)	Reserve Rating (MW)	NTL Rating (MW)
Shipman 3	7.50	7.50	7.10	7.10
Shipman 4	7.70	7.70	7.30	7.30
Hill 5	14.10	14.10	13.50	13.50
Hill 6	21.40	21.40	20.20	20.20
Puna	15.50	15.50	14.10	14.10
Kanoelehua D11	2.00	2.00	2.00	2.00
Waimea D12	2.75	2.50	2.75	2.50
Waimea D13	2.75	2.50	2.75	2.50
Waimea D14	2.75	2.50	2.75	2.50
Kanoelehua D15	2.75	2.50	2.75	2.50
Kanoelehua D16	2.75	2.50	2.75	2.50
Kanoelehua D17	2.75	2.50	2.75	2.50
Keahole D21	2.75	2.50	2.75	2.50
Keahole D22	2.75	2.50	2.75	2.50
Keahole D23	2.75	2.50	2.75	2.50
Kanoelehua CT-1	11.50	11.50	11.50	11.50
Keahole CT-2	13.80	13.80	13.80	13.80
Puna CT-3	21.00	21.00	21.00	21.00
Keahole CT-4/CT-5/ST-7	58.50	58.50	56.25	56.25
Panaewa D24	1.00	1.00	1.00	1.00
Ouli D25	1.00	1.00	1.00	1.00
Punaluu D26	1.00	1.00	1.00	1.00
Kapua D27	1.00	1.00	1.00	1.00
HELCO Total	201.75	199.50	195.50	193.25
PGV	30.00	30.00	30.00	30.00
HEP	60.00	60.00	60.00	60.00
IPP Total	90.00	90.00	90.00	90.00
System Total	291.75	289.50	285.50	283.25

**HELCO Adequacy of Supply
 2011-2013 Unit Ratings (Firm Capacity at Forecasted System Peak in December
 2011-2013)**

Unit	(Gross MW)		(Net MW)	
	Reserve Rating (MW)	NTL Rating (MW)	Reserve Rating (MW)	NTL Rating (MW)
Shipman 3	7.50	7.50	7.10	7.10
Shipman 4	7.70	7.70	7.30	7.30
Hill 5	14.10	14.10	13.50	13.50
Hill 6	21.40	21.40	20.20	20.20
Puna	17.00 (I)	17.00 (I)	15.70 (I)	15.70 (I)
Kanoelehua D11	2.00	2.00	2.00	2.00
Waimea D12	2.75	2.50	2.75	2.50
Waimea D13	2.75	2.50	2.75	2.50
Waimea D14	2.75	2.50	2.75	2.50
Kanoelehua D15	2.75	2.50	2.75	2.50
Kanoelehua D16	2.75	2.50	2.75	2.50
Kanoelehua D17	2.75	2.50	2.75	2.50
Keahole D21	2.75	2.50	2.75	2.50
Keahole D22	2.75	2.50	2.75	2.50
Keahole D23	2.75	2.50	2.75	2.50
Kanoelehua CT-1	11.50	11.50	11.50	11.50
Keahole CT-2	13.80	13.80	13.80	13.80
Puna CT-3	21.00	21.00	21.00	21.00
Keahole CT-4/CT-5/ST-7	58.50	58.50	56.25	56.25
Panaewa D24	1.00	1.00	1.00	1.00
Ouli D25	1.00	1.00	1.00	1.00
Punaluu D26	1.00	1.00	1.00	1.00
Kapua D27	1.00	1.00	1.00	1.00
HELCO Total	203.25	201.00	197.10	194.85
PGV	30.00	30.00	30.00	30.00
HEP	60.00	60.00	60.00	60.00
IPP Total	90.00	90.00	90.00	90.00
System Total	293.25	291.00	287.10	284.85

Notes:

- (I) Work performed on Puna has resulted in increased output performance; improved performance resulted in no increase to emissions.