

MECO  
2000-~~2003~~  
2004

ADEQUACY OF SUPPLY  
(SPECIAL REPORTS - PERMANENT)

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January 30, 2004

**Edward L. Reinhardt**  
President

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  
Maui Electric Company, Limited

In accordance with paragraph 5.3a of General Order No. 7, the following information is respectfully submitted.

Maui's 2003 system peak occurred on December 30, 2003 and was 197,700 kW (net) or 202,000 kW (gross). Lanai's 2003 system peak occurred on December 23, 2003 and was 5,080 kW (gross). Molokai's 2003 system peak occurred on December 29, 2003 and was 6,600 kW (gross). The total system capability of Maui had a reserve margin of approximately 24% over the 2003 system peak. Lanai had a 2003 reserve margin of approximately 105%. Molokai had a 2003 reserve margin of approximately 82%.

Attachment 1 shows the expected reserve margins over the next three years, based on MECO's 2003-2008 Sales and Peak Forecast dated June 26, 2003, and includes DSM impacts from the implementation of Maui Division's load management DSM programs forecasted to start in 2006.

On October 10, 2003, MECO (along with HECO and HELCO) filed a PUC Application for approval of a proposed utility-owned Combined Heat and Power ("CHP") program in Docket No. 03-0366. Implementation of a CHP program is scheduled to begin in 2004, if authorized by the Commission<sup>1</sup>. This program involves the installation of small, distributed generating ("DG")

<sup>1</sup> The utilities requested approval of each of their proposed CHP Programs and related tariff provisions (Schedule CHP, Customer-Sited Utility-Owned Cogeneration Service). Under the CHP Program and Schedule CHP, the utilities propose to offer CHP systems to eligible utility customers on the islands of Oahu, Maui, and Hawaii as a regulated utility service. The utilities also indicated that they would request approval on a contract-by-contract basis for CHP system projects that fall outside the scope of the proposed program. On October 21, 2003, the Commission issued Order No. 20582 in Docket No. 03-0371, which initiated a proceeding to investigate DG in Hawaii. The Commission anticipated that other matters related to the DG generic proceeding may be considered on a "case-by-case basis". In their Reply, filed December 26, 2003, to the Consumer Advocate's Statement of

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units on selected customer sites. The waste heat from the DG units would be used for customers' heating and/or cooling purposes. As indicated in the PUC Application, MECO developed a forecast of utility CHP systems for Maui (dated August 20, 2003). These estimated impacts of the proposed CHP Program on future system capability are indicated in Attachment 1.

CHP systems can also be owned and operated by third-parties (non-utility entities). MECO developed forecasts for third-party CHP systems with and without the utility CHP program (dated August 20, 2003). Both utility and third-party CHP systems have the potential to defer the installation of traditional centralized generation. The rate of installation of CHP systems is estimated to be significantly greater with the utility CHP program<sup>2</sup>.

The following criterion is used to determine the timing of an additional generating unit for the Maui Division:

*New generation will be added to prevent the violation of the rule listed below where "units" mean all units and firm capacity suppliers physically connected to the system, and "available unit" means an operable unit not on scheduled maintenance.*

*The sum of the reserve ratings of all 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.*

*In addition, consideration will be given to maintaining a reserve margin of approximately 20 percent based on Reserve Ratings.*

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Position in the CHP docket, the utilities indicated that, as soon as is practicable after the parties and participants are set in the CHP Program docket, or in the Generic DG Docket, if the two dockets are consolidated, the utilities will file an appropriate motion requesting that the CHP program be allowed to go into effect on an interim basis.

<sup>2</sup> For purposes of this report, utility-owned CHP systems are included in the System Capability numbers (based on the net equivalent capacity of the CHP system, taking into account the electrical capacity supplied to a customer, the reduction of the customer's electrical load through waste heat application for the system, and a reduction in line losses). The load reduction impacts of CHP systems and/or DG owned by third parties are reflected in the System Peak numbers. Since there are expected to be more CHP systems installed with a utility CHP program, the Reserve Margins (System Capability less System Peak divided by System Peak) are greater with the utility CHP program, although the System Peaks appear to be higher because there are estimated to be somewhat fewer third party CHP systems/DG installed with a utility CHP program.



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The following criterion is used to determine the timing of an additional generating unit for the Lanai Division and the Molokai Division:

*New generation will be added to prevent the violation of any one of the rules listed below where "units" mean all units and firm capacity suppliers physically connected to the system, and "available unit" means an operable unit not on scheduled maintenance.*

- 1. The sum of the normal top load ratings of all units must be equal to or greater than the system peak load to be supplied.*
- 2. With no unit on maintenance, the sum of the reserve ratings of all units minus the reserve rating of the largest available unit must be equal to or greater than the system peak to be supplied.*
- 3. With a unit on maintenance:*
  - a) The sum of the reserve ratings of all units minus the reserve rating of the largest available unit must be equal to or greater than the daytime peak load to be supplied.*
  - b) The sum of the reserve ratings of all units must be equal to or greater than the evening peak load to be supplied.*

MECO's generation capacities for Maui, Lanai, and Molokai for the next three years are sufficiently large to meet all reasonably expected demands for service and provide reasonable reserves for emergencies.

Very truly yours,

*Edward J. Reinhardt*

Attachments

cc: Division of Consumer Advocacy



**Table 1**  
**Maui Adequacy of Supply**

With Utility CHP (Includes 3rd Party CHP) <sup>(1)</sup>					
Year	System Capability at Annual Peak Load <sup>(1)</sup> (kW) [A]	Without Future DSM (Includes Acquired DSM) <sup>(III)</sup>		With Future DSM (Includes Acquired DSM) <sup>(IV)</sup>	
		System Peak <sup>(VI)</sup> (kW) [B]	Reserve Margin (%) [(A-B) / B]	System Peak <sup>(VI)</sup> (kW) [C]	Reserve Margin (%) [(A-C) / C]
<i>Recorded</i>					
2003	245,200	197,700 <sup>(VII)</sup>	24%	N/A	N/A
<i>Future</i>					
2004	246,300 <sup>(VIII)</sup>	198,000	24%	196,300	25%
2005	249,000 <sup>(IX)</sup>	206,600	21%	203,600	22%
2006	268,600 <sup>(X)</sup>	211,200	27%	204,100 <sup>(XI)</sup>	32%
<i>Recorded</i>					
2003	250,100	202,000 <sup>(VII)</sup>	24%	N/A	N/A
<i>Future</i>					
2004	251,200	202,300	24%	200,500	25%
2005	254,000	211,100	20%	208,000	22%
2006	273,600	215,800	27%	208,500	31%

Without Utility CHP (Includes 3rd Party CHP) <sup>(1)</sup>					
Year	System Capability at Annual Peak Load <sup>(1)</sup> (kW) [A]	Without Future DSM (Includes Acquired DSM) <sup>(III)</sup>		With Future DSM (Includes Acquired DSM) <sup>(IV)</sup>	
		System Peak <sup>(VI)</sup> (kW) [B]	Reserve Margin (%) [(A-B) / B]	System Peak <sup>(VI)</sup> (kW) [C]	Reserve Margin (%) [(A-C) / C]
<i>Recorded</i>					
2003	245,200	197,700 <sup>(VII)</sup>	24%	N/A	N/A
<i>Future</i>					
2004	245,200	197,100	24%	195,400	25%
2005	245,200	204,500	20%	201,500	22%
2006	262,300 <sup>(VIII)</sup>	208,600	26%	201,500 <sup>(IX)</sup>	30%
<i>Recorded</i>					
2003	250,100	202,000 <sup>(VII)</sup>	24%	N/A	N/A
<i>Future</i>					
2004	250,100	201,300	24%	199,600	25%
2005	250,100	208,900	20%	205,800	22%
2006	268,100	213,100	26%	205,800	30%

Notes – Table 1:

- (I) With Utility CHP: System capability includes forecasted utility CHP system level impacts<sup>1</sup>. Forecasted system peaks include third-party CHP impacts (with utility CHP program).
- (II) Without Utility CHP: System capability does not include forecasted utility CHP impacts. Forecasted system peaks include third-party CHP impacts (without utility CHP program)
- (III) System Peaks (Without Future Peak Reduction Benefits of DSM Programs):  
Implementation of full-scale DSM programs began in the second half of 1996 following Commission approval of the programs. The forecasted system peak values for the years 2004-2006 include the actual peak reduction benefits acquired in 1996-2002 and also include the estimated impacts acquired in 2003, as well as peak reduction benefits of Rider M and T customer contracts.
- (IV) System Peaks (With Future Peak Reduction Benefits of DSM Programs):  
The forecasted System Peaks for 2004-2006 include the peak reduction benefits of DSM programs (acquired and future) and peak reduction benefits of Rider M and T customer contracts.
- (V) The net reserve ratings of the units are used in the determination of the Maui system capability. In addition, the Maui Division system capability includes 16,000 kW (which includes 4,000 kW of system protection capacity) from Hawaiian Commercial and Sugar Company ("HC&S"). All unit projected retirement dates are planned for December 31 of the designated year unless otherwise specified. When the system capability at the time of the system peak differs from the year-end system capability, an applicable note will indicate the year-end system capability.
- (VI) The 2004 - 2006 annual forecasted system peaks are based on MECO's 2003-2008 Sales and Peaks Forecast dated June 26, 2003. The Maui annual forecasted system peak is expected to occur in the month of August.
- (VII) The actual 2003 recorded system peak was 202.0 MW (gross) which is equivalent to 197.7 MW (net).
- (VIII) System Capability at the end of 2004 is 248,361 kW (net), which includes additional CHP resources installed after the annual peak and prior to the end of the 2004.

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<sup>1</sup> Utility CHP impacts are from a CHP forecast dated August 20, 2003. These impacts are at system level based on a T&D loss factor of 6.27%. For capacity planning analysis, an availability factor is also included to account for periods when the utility CHP is unavailable due to forced outage and maintenance

- (IX) System Capability at the end of 2005 is 249,321 kW (net), which includes additional CHP resources installed after the annual peak and prior to the end of the 2005.
- (X) Maalaea Unit 18, a nominal 17,100 kW (net) steam turbine generator (Phase III of a nominal 58,700 kW (net) dual train combined-cycle unit), is scheduled to be placed in service in August 2006. System Capability at the end of 2006 is 270,155 kW (net), which includes additional CHP resources installed after the annual peak and prior to the end of the 2006.
- (XI) Includes a reduction in system peak load due to the implementation of planned Capacity Buy Back (CBB) and Residential Direct Load Control (RDLC) Load Management DSM Programs developed in MECO's IRP- 2000 Report. Full-scale Load Management DSM Program benefits are forecasted to start in 2006.
- (XII) The Maui Division Gross Generation data is provided here for comparative purposes.
- (XIII) Maalaea Unit 18, a nominal 17,100 kW (net) steam turbine generator (Phase III of a nominal 58,700 kW (net) dual train combined-cycle unit), is scheduled to be placed in service in August 2006.

**Table 2**  
**Lanai and Molokai Adequacy of Supply**

With Utility CHP (Includes 3rd Party CHP) <sup>(1)</sup>					
Year	System Capability at Annual Peak Load <sup>(v)</sup> (kW) [A]	Without Future DSM (Includes Acquired DSM) <sup>(iii)</sup>		With Future DSM (Includes Acquired DSM) <sup>(iv)</sup>	
		System Peak <sup>(vi)</sup> (kW) [B]	Reserve Margin (%) [A-B] / B]	System Peak <sup>(vi)</sup> (kW) [C]	Reserve Margin (%) [A-C] / C]
<i>Recorded</i>					
2003	10,400	5,080	105%	N/A	N/A
<i>Future</i>					
2004	10,400	5,110	104%	N/A	N/A
2005	10,400	5,150	102%	N/A	N/A
2006	10,400	5,190	100%	N/A	N/A
<i>Recorded</i>					
2003	12,010 <sup>(vii)</sup>	6,600	82%	N/A	N/A
<i>Future</i>					
2004	12,010	6,850	75%	N/A	N/A
2005	12,010	6,900	74%	N/A	N/A
2006	12,010	6,950	73%	N/A	N/A

  

Without Utility CHP (Includes 3rd Party CHP) <sup>(1)</sup>					
Year	System Capability at Annual Peak Load <sup>(v)</sup> (kW) [A]	Without Future DSM (Includes Acquired DSM) <sup>(iii)</sup>		With Future DSM (Includes Acquired DSM) <sup>(iv)</sup>	
		System Peak <sup>(vi)</sup> (kW) [B]	Reserve Margin (%) [A-B] / B]	System Peak <sup>(vi)</sup> (kW) [C]	Reserve Margin (%) [A-C] / C]
<i>Recorded</i>					
2003	10,400	5,080	105%	N/A	N/A
<i>Future</i>					
2004	10,400	5,110	104%	N/A	N/A
2005	10,400	5,150	102%	N/A	N/A
2006	10,400	5,190	100%	N/A	N/A
<i>Recorded</i>					
2003	12,010 <sup>(vii)</sup>	6,600	82%	N/A	N/A
<i>Future</i>					
2004	12,010	6,850	75%	N/A	N/A
2005	12,010	6,900	74%	N/A	N/A
2006	12,010	6,950	73%	N/A	N/A



Notes – Table 2:

- (I) With Utility CHP: Currently, no Utility CHP or third-Party CHP is forecasted for the years 2004-2006 for either Lanai or Molokai.
- (II) Without Utility CHP: Currently, no third-Party CHP is forecasted for the years 2004-2006 for either Lanai or Molokai.
- (III) System Peaks (Without Future Peak Reduction Benefits of DSM Programs):  
Implementation of full-scale DSM programs began in the second half of 1996 following Commission approval of the programs. The forecasted system peak values for the years 2004-2006 include the actual peak reduction benefits acquired in 1996-2002 and also include the estimated impacts acquired in 2003.
- (IV) System Peaks (With Future Peak Reduction Benefits of DSM Programs):  
Currently no future DSM impacts are forecasted for Lanai or Molokai.
- (V) The gross reserve ratings of the units are used in the determination of the Lanai and Molokai system capabilities. All unit projected retirement dates are planned for December 31 of the designated year unless otherwise specified. When the system capability at the time of the system peak differs from the year-end system capability, an applicable note will indicate the year-end system capability.
- (VI) The 2004 - 2006 annual forecasted system peaks are based on MECO's 2003-2008 Sales and Peaks Forecast dated June 26, 2003. The Lanai and Molokai annual forecasted system peaks are expected to occur in the months of November and December, respectively.
- (VII) Palaa Units 1 and 2 (two 1,250 kW Caterpillar units), and Palaa Units 3, 4, 5 and 6 (four 970 kW Cummins units) operate in peaking service. Because of the age and operating history of these units, MECO includes one Caterpillar unit and two Cummins units ( $1,250 + 970 + 970 = 3,190$  kW) towards firm capacity for the Molokai system.

**Maui Unit Ratings**

As of January 30, 2004

Units	Gross (MW)		Net (MW)	
	Reserve	NTL <sup>(I)</sup>	Reserve	NTL <sup>(I)</sup>
M1	2.50	2.50	2.50	2.50
M2	2.50	2.50	2.50	2.50
M3	2.50	2.50	2.50	2.50
X1	2.50	2.50	2.50	2.50
X2	2.50	2.50	2.50	2.50
M4	5.60	5.60	5.51	5.51
M5	5.60	5.60	5.51	5.51
M6	5.60	5.60	5.51	5.51
M7	5.60	5.60	5.51	5.51
M8	5.60	5.60	5.48	5.48
M9	5.60	5.60	5.48	5.48
M10	12.50	12.50	12.34	12.34
M11	12.50	12.50	12.34	12.34
M12	12.50	12.50	12.34	12.34
M13	12.50	12.50	12.34	12.34
M14/15/16	58.00	58.00	56.78	56.78
M17	21.20	21.20	20.80	20.80
M19	21.20	21.20	20.80	20.80
Maalaea GS	196.50	196.50	193.24	193.24
K1	5.90	5.00	5.62	4.71
K2	6.00	5.00	5.77	4.76
K3	12.70	11.50	12.15	10.98
K4	13.00	12.50	12.38	11.88
Kahului GS	37.60	34.00	35.92	32.33
HC&S <sup>(III)</sup>	16.00	12.00	16.00	12.00
Maui System	250.10	242.50	245.16	237.57
Hana 1 <sup>(III)</sup>	1.00	1.00	1.00	1.00
Hana 2 <sup>(III)</sup>	1.00	1.00	1.00	1.00

## Notes:

- (I) NTL = Normal Top Load
- (II) All values for HC&S are net to the system. The reserve ratings include an additional 4.0 MWs of system protection capacity.
- (III) Unit located at Hana Substation No. 41. Unit is operated in standby mode, and therefore, not counted toward system capability. Unit used primarily to provide electrical power to the Hana community during planned maintenance or unplanned power outages of the transmission line that services Hana.

### Lanai Unit Ratings

As of January 30, 2004

Units	Gross (kW)	
	Reserve	NTL <sup>(1)</sup>
LL-1	1,000	1,000
LL-2	1,000	1,000
LL-3	1,000	1,000
LL-4	1,000	1,000
LL-5	1,000	1,000
LL-6	1,000	1,000
LL-7	2,200	2,200
LL-8	2,200	2,200
Miki Basin GS	10,400	10,400

### Molokai Unit Ratings

As of January 30, 2004

Units	Gross (kW)	
	Reserve	NTL <sup>(1)</sup>
P-1 <sup>(IV)</sup>	1,250	1,250
P-2 <sup>(IV)</sup>	1,250	1,250
P-3 <sup>(IV)</sup>	970	970
P-4 <sup>(IV)</sup>	970	970
P-5 <sup>(IV)</sup>	970	970
P-6 <sup>(IV)</sup>	970	970
Solar CT	2,220	2,220
P-7	2,200	2,200
P-8	2,200	2,200
P-9	2,200	2,200
Palaau GS	12,010	12,010

- (IV) Palaau Units 1 and 2 (two 1,250 kW Caterpillar units), and Palaau Units 3, 4, 5 and 6 (four 970 kW Cummins units) operate in peaking service. Because of the age and operating history of these units, MECO includes one Caterpillar unit and two Cummins units ( $1,250 + 970 + 970 = 3,190$  kW) towards firm capacity for the Molokai system.



**Edward L. Reinhardt**  
President

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  
Maui Electric Company, Limited

In accordance with paragraph 5.3a of General Order No. 7, the following information is respectfully submitted.

Maui's 2002 system peak occurred on August 13, 2002 and was 189,800 kW (net) or 193,900 kW (gross). Lanai's 2002 system peak occurred on January 23, 2002 and was 4,880 kW (gross). Molokai's 2002 system peak occurred on November 25, 2002 and was 6,600 kW (gross). The total system capability of Maui had a reserve margin of approximately 29% over the 2002 system peak. Lanai had a 2002 reserve margin of approximately 113%. Molokai had a 2002 reserve margin of approximately 82%.

Attachment 1 shows the expected reserve margins over the next three years, based on MECO's 2002-2007 Sales and Peak Forecast dated July 18, 2002, and includes DSM impacts from the implementation of Maui Division's load management DSM programs forecasted to start in 2005.

The following criterion is used to determine the timing of an additional generating unit for the Maui Division:

*New generation will be added to prevent the violation of the rule listed below where "units" mean all units and firm capacity suppliers physically connected to the system, and "available unit" means an operable unit not on scheduled maintenance.*

*The sum of the reserve ratings of all 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.*

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The Honorable Chairman and Members of the  
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January 31, 2003  
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*In addition, consideration will be given to maintaining a reserve margin of approximately 20 percent based on Reserve Ratings.*

The following criterion is used to determine the timing of an additional generating unit for the Lanai Division and the Molokai Division:

*New generation will be added to prevent the violation of any one of the rules listed below where "units" mean all units and firm capacity suppliers physically connected to the system, and "available unit" means an operable unit not on scheduled maintenance.*

- 1. The sum of the normal top load ratings of all units must be equal to or greater than the system peak load to be supplied.*
- 2. With no unit on maintenance, the sum of the reserve ratings of all units minus the reserve rating of the largest available unit must be equal to or greater than the system peak to be supplied.*
- 3. With a unit on maintenance:*
  - a) The sum of the reserve ratings of all units minus the reserve rating of the largest available unit must be equal to or greater than the daytime peak load to be supplied.*
  - b) The sum of the reserve ratings of all units must be equal to or greater than the evening peak load to be supplied.*

MECO's generation capacities for Maui, Lanai, and Molokai for the next three years are sufficiently large to meet all reasonably expected demands for service and provide reasonable reserves for emergencies.

Very truly yours,

*Edward L. Reinhardt*

Attachments

cc: Division of Consumer Advocacy



**Table 1**  
**Adequacy of Supply**

		Without Future DSM (Includes Acquired <sup>1</sup> DSM)		With Future DSM (Includes Acquired <sup>2</sup> DSM)	
Year	System Capability at Annual Peak Load <sup>5</sup> (kW) [A]	System Peak <sup>3</sup> (kW) [B]	Reserve Margin (%) [(A-B) / B]	System Peak <sup>3</sup> (kW) [C]	Reserve Margin (%) [(A-C) / C]
<b>Maui Division (Net Generation)</b>					
<i>Recorded</i> 2002	245,160	189,800 <sup>6</sup>	29%	N/A	N/A
<i>Forecasted</i> 2003	245,160	196,700	25%	194,800	26%
2004	245,160	203,000	21%	200,100	23%
2005	245,160	209,200	17%	202,100 <sup>4</sup>	21%
<b>Maui Division (Gross Generation<sup>7</sup>)</b>					
<i>Recorded</i> 2002	250,100	193,900 <sup>6</sup>	29%	N/A	N/A
<i>Forecasted</i> 2003	250,100	200,800	25%	198,900	26%
2004	250,100	207,300	21%	204,300	22%
2005	250,100	213,600	17%	206,300 <sup>4</sup>	21%
<b>Lanai Division (Gross Generation)</b>					
<i>Recorded</i> 2002	10,400	4,880	113%	N/A	N/A
<i>Forecasted</i> 2003	10,400	5,351	94%	N/A	N/A
2004	10,400	5,415	92%	N/A	N/A
2005	10,400	5,475	90%	N/A	N/A
<b>Molokai Division (Gross Generation)</b>					
<i>Recorded</i> 2002	12,010 <sup>8</sup>	6,600	82%	N/A	N/A
<i>Forecasted</i> 2003	12,010	6,550	83%	N/A	N/A
2004	12,010	6,550	83%	N/A	N/A
2005	12,010	6,600	82%	N/A	N/A

Notes:

- 1) System Peaks (Without Future Peak Reduction Benefits of DSM Programs):  
Implementation of full-scale DSM programs began in the second half of 1996 following Commission approval of the programs. The forecasted system peak values for the years 2003-2005 include the actual peak reduction benefits acquired in 1996-2001 and also include the estimated impacts acquired in 2002.
- 2) System Peaks (With Future Peak Reduction Benefits of DSM Programs) (Maui Only):  
The forecasted System Peaks for 2003-2005 include the peak reduction benefits of DSM programs (acquired and future).
- 3) The 2003 - 2005 annual forecasted system peaks are based on MECO's 2002-2007 Sales and Peaks Forecast dated July 18, 2002. The Maui annual forecasted system peak is expected to occur in the month of October. The Lanai and Molokai annual forecasted system peaks are expected to occur in the months of November and December, respectively.
- 4) Includes a reduction in system peak load due to the implementation of planned Capacity Buy Back (CBB) and Residential Direct Load Control (RDLC) Load Management DSM Programs developed in MECO's IRP- 2000 Report. Full-scale Load Management DSM Program benefits are forecasted to start in 2005.
- 5) The net reserve ratings of the units are used in the determination of the Maui system capability. The gross reserve ratings of the units are used in the determination of the Lanai and Molokai system capabilities. In addition, the Maui Division system capability includes 16,000 kW (which includes 4,000 kW of system protection capacity) from Hawaiian Commercial and Sugar Company ("HC&S"). All unit projected retirement dates are planned for December 31 of the designated year unless otherwise specified. When the system capability at the time of the system peak differs from the year-end system capability, an applicable note will indicate the year-end system capability.
- 6) The actual 2002 recorded system peak was 193.9 MW (gross) which is equivalent to 189.8 MW (net).
- 7) The Maui Division Gross Generation data is provided here for comparative purposes.
- 8) Palaaau Units 1 and 2 (two 1,250 kW Caterpillar units), and Palaaau Units 3, 4, 5 and 6 (four 970 kW Cummins units) operate in peaking service. Because of the age and operating history of these units, MECO includes one Caterpillar unit and two Cummins units ( $1,250 + 970 + 970 = 3,190$  kW) towards firm capacity for the Molokai system.

**Maui Unit Ratings**  
As of January 31, 2003

Units	Gross (MW)		Net (MW)	
	Reserve	NTL <sup>1</sup>	Reserve	NTL <sup>1</sup>
M1	2.50	2.50	2.50	2.50
M2	2.50	2.50	2.50	2.50
M3	2.50	2.50	2.50	2.50
X1	2.50	2.50	2.50	2.50
X2	2.50	2.50	2.50	2.50
M4	5.60	5.60	5.51	5.51
M5	5.60	5.60	5.51	5.51
M6	5.60	5.60	5.51	5.51
M7	5.60	5.60	5.51	5.51
M8	5.60	5.60	5.48	5.48
M9	5.60	5.60	5.48	5.48
M10	12.50	12.50	12.34	12.34
M11	12.50	12.50	12.34	12.34
M12	12.50	12.50	12.34	12.34
M13	12.50	12.50	12.34	12.34
M14/15/16	58.00	58.00	56.78	56.78
M17	21.20	21.20	20.80	20.80
M19	21.20	21.20	20.80	20.80
Maalaea GS	196.50	196.50	193.24	193.24
K1	5.90	5.00	5.62	4.71
K2	6.00	5.00	5.77	4.76
K3	12.70	11.50	12.15	10.98
K4	13.00	12.50	12.38	11.88
Kahului GS	37.60	34.00	35.92	32.33
HC&S <sup>2</sup>	16.00	12.00	16.00	12.00
Maui System	250.10	242.50	245.16	237.57
Hana 1 <sup>3</sup>	1.00	1.00	1.00	1.00
Hana 2 <sup>3</sup>	1.00	1.00	1.00	1.00

Notes:

- 1) NTL = Normal Top Load
- 2) All values for HC&S are net to the system. The reserve ratings include an additional 4.0 MWs of system protection capacity.



- 3) Unit located at Hana Substation No. 41. Unit is operated in standby mode, and therefore, not counted toward system capability. Unit used primarily to provide electrical power to the Hana community during planned maintenance or unplanned power outages of the transmission line that services Hana.

### **Lanai Unit Ratings**

As of January 31, 2003

Units	Gross (kW)	
	Reserve	NTL <sup>1</sup>
LL-1	1,000	1,000
LL-2	1,000	1,000
LL-3	1,000	1,000
LL-4	1,000	1,000
LL-5	1,000	1,000
LL-6	1,000	1,000
LL-7	2,200	2,200
LL-8	2,200	2,200
Miki Basin GS	10,400	10,400

## Molokai Unit Ratings

As of January 31, 2003

Units	Gross (kW)	
	Reserve	NTL <sup>1</sup>
P-1 <sup>4</sup>	1,250	1,250
P-2 <sup>4</sup>	1,250	1,250
P-3 <sup>4</sup>	970	970
P-4 <sup>4</sup>	970	970
P-5 <sup>4</sup>	970	970
P-6 <sup>4</sup>	970	970
Solar CT	2,220	2,220
P-7	2,200	2,200
P-8	2,200	2,200
P-9	2,200	2,200
Palaau GS	12,010	12,010

- 4) Palaau Units 1 and 2 (two 1,250 kW Caterpillar units), and Palaau Units 3, 4, 5 and 6 (four 970 kW Cummins units) operate in peaking service. Because of the age and operating history of these units, MECO includes one Caterpillar unit and two Cummins units ( $1,250 + 970 + 970 = 3,190$  kW) towards firm capacity for the Molokai system.



January 31, 2002

**Edward L. Reinhardt**  
President

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  
Maui Electric Company, Limited

In accordance with paragraph 5.3a of General Order No. 7, the following information is respectfully submitted.

Maui's 2001 system peak occurred on August 27, 2001 and was 187,000 kW (net) or 191,000 kW (gross). Lanai's 2001 system peak occurred on November 26, 2001 and was 5,150 kW (gross). Molokai's 2001 system peak occurred on December 4, 2001 and was 6,450 kW (gross). The total system capability of Maui had a reserve margin of approximately 31% over the 2001 system peak. Lanai had a 2001 reserve margin of approximately 102%. Molokai had a 2001 reserve margin of approximately 87%.

Attachment 1 shows the expected reserve margins over the next three years, based on MECO's 2001-2006 Sales and Peak Forecast dated July 10, 2001, updated in November 2001 with revised sales and peaks, and updated October 2001 DSM impacts.

The following criterion is used to determine the timing of an additional generating unit for the Maui Division:

*New generation will be added to prevent the violation of the rule listed below where "units" mean all units and firm capacity suppliers physically connected to the system, and "available unit" means an operable unit not on scheduled maintenance.*

*The sum of the reserve ratings of all 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.<sup>1</sup>*

<sup>1</sup> In addition, consideration will be given to maintaining a reserve margin of approximately 20 percent based on reserve ratings.

PUBLIC UTILITIES  
COMMISSION

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FILED

The Honorable Chairman and Members of the  
Hawaii Public Utilities Commission  
January 31, 2002  
Page 2

The following criterion is used to determine the timing of an additional generating unit for the Lanai Division and the Molokai Division:

*New generation will be added to prevent the violation of any one of the rules listed below where "units" mean all units and firm capacity suppliers physically connected to the system, and "available unit" means an operable unit not on scheduled maintenance.*

1. *The sum of the normal top load ratings of all units must be equal to or greater than the system peak load to be supplied.*
2. *With no unit on maintenance, the sum of the reserve ratings of all units minus the reserve rating of the largest available unit must be equal to or greater than the system peak to be supplied.*
3. *With a unit on maintenance:*
  - a) *The sum of the reserve ratings of all units minus the reserve rating of the largest available unit must be equal to or greater than the daytime peak load to be supplied.*
  - b) *The sum of the reserve ratings of all units must be equal to or greater than the evening peak load to be supplied.*

MECO's generation capacities for Maui, Lanai, and Molokai for the next three years are sufficiently large to meet all reasonably expected demands for service and provide reasonable reserves for emergencies.

Very truly yours,

*Edward Z. Reinhardt*

Attachment

cc: Division of Consumer Advocacy



Table 1  
Adequacy of Supply

		Without Future DSM (Includes Acquired <sup>1</sup> DSM)		With Future DSM (Includes Acquired <sup>2</sup> DSM)	
Year	System Capability at Annual Peak Load <sup>4</sup> (kW) [A]	System Peak <sup>3</sup> (kW) [B]	Reserve Margin (%) [[A-B] / B]	System Peak <sup>3</sup> (kW) [C]	Reserve Margin (%) [[A-C] / C]
Maui Division (Net Generation)					
Recorded 2001	245,160 <sup>5</sup>	187,000 <sup>6</sup>	31%	N/A	N/A
Forecasted 2002	245,160	188,200	30%	187,400	31%
2003	245,160	194,200	26%	192,400	27%
2004	245,160	200,600	22%	197,700	24%
Maui Division (Gross Generation <sup>7</sup> )					
Recorded 2001	250,100	191,000 <sup>6</sup>	31%	N/A	N/A
Forecasted 2002	250,100	192,300	30%	191,400	31%
2003	250,100	198,400	26%	196,500	27%
2004	250,100	204,900	22%	202,000	24%
Lanai Division (Gross Generation)					
Recorded 2001	10,400	5,150	102%	N/A	N/A
Forecasted 2002	10,400	5,217	99%	N/A	N/A
2003	10,400	5,320	95%	N/A	N/A
2004	10,400	5,373	94%	N/A	N/A
Molokai Division (Gross Generation)					
Recorded 2001	12,050 <sup>8</sup>	6,450	87%	N/A	N/A
Forecasted 2002	12,050	6,650	81%	N/A	N/A
2003	12,050	6,650	81%	N/A	N/A
2004	12,050	6,700	80%	N/A	N/A

Notes:

- 1) System Peaks (Without Future Peak Reduction Benefits of DSM Programs):  
Implementation of full-scale DSM programs began in the second half of 1996 following Commission approval of the programs. The forecasted system peak values for the years 2002-2004 include the actual peak reduction benefits acquired in 1996-2000 and also include the estimated impacts acquired in 2001.
- 2) System Peaks (With Future Peak Reduction Benefits of DSM Programs) (Maui Only):  
The forecasted System Peaks for 2002-2004 include the peak reduction benefits of the DSM programs (acquired and future).
- 3) The 2002 - 2004 annual forecasted system peaks are based on the MECO's 2001-2006 Sales and Peaks Forecast dated July 10, 2001, updated in November 2001 with revised sales and peaks, and updated October 2001 DSM impacts. The Maui annual forecasted system peak is expected to occur in the month of October. The Lanai and Molokai annual forecasted system peaks are expected to occur in the months of November and December, respectively.
- 4) The net reserve ratings of the units are used in the determination of the Maui system capability. The gross reserve ratings of the units are used in the determination of the Lanai and Molokai system capabilities. In addition, the Maui Division system capability includes 16,000 kW (which includes 4,000 kW of system protection capacity) of firm purchased power from Hawaiian Commercial and Sugar Company ("HC&S"). All unit projected retirement dates are planned for December 31 of the designated year unless otherwise specified. When the system capability at the time of the system peak differs from the year-end system capability, an applicable note will indicate the year-end system capability.
- 5) Two Cummins 1,000-kW high-speed diesel engine-generators (previously located at Lanai City Power Plant as Units L7 and L8) were relocated to Maui's Hana Substation No. 41 as designated standby units and placed in service April 19, 2001. These generating units will be used to provide electric power to the Hana community primarily during planned maintenance or unplanned power outages of the transmission line to Hana. Since these units are designated standby units, their capacity values are not included in the Maui annual system capability total.
- 6) The actual 2001 recorded system peak was 191.0 MW (gross) which is equivalent to 187.0 MW (net).
- 7) The Maui Division Gross Generation data is provided here for comparative purposes.

- 8) Palaau Units 1 and 2 (two 1,290 kW Caterpillar units) and Palaau Units 3, 4, and 5 (three 970 kW Cummins units) remain in peaking service. Because of the age and operating history of these units, MECO includes one Caterpillar unit and one Cummins unit ( $1,290 + 970 = 2,260$  kW) towards firm capacity for the Molokai system.



February 13, 2001

**William A. Bonnet**  
President

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  
Maui Electric Company, Limited

In accordance with paragraph 5.3a of General Order No. 7, the following information is respectfully submitted.

Maui's 2000 system peak occurred on October 19, 2000 and was 185,100 kW (gross). Lanai's 2000 system peak occurred on November 27, 2000 and was 4,980 kW (gross). Molokai's 2000 system peak occurred on December 28, 2000 and was 6,500 kW (gross). Maui's 2000 total system capability of 250,100 kW (gross) had a reserve margin of approximately 35% over the 2000 system peak. Lanai had a reserve margin of approximately 109% over the 2000 system peak. Molokai had a reserve margin of approximately 85% over the 2000 system peak.

Attachment 1 shows the expected reserve margins over the next three years, based on the MECO Forecast Planning Committee's 2000-2005 Sales and Peak Forecast dated June 28, 2000.

The following criterion is used to determine the timing of an additional generating unit for the Maui Division:

*New generation will be added to prevent the violation of the rule listed below where "units" mean all units and firm capacity suppliers physically connected to the system, and "available unit" means an operable unit not on scheduled maintenance.*

*The sum of the reserve ratings of all 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.*

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COMMISSION

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The Honorable Chairman and Members of the  
Hawaii Public Utilities Commission  
February 13, 2001  
Page 2

The following criterion is used to determine the timing of an additional generating unit for the Lanai Division and the Molokai Division:

*New generation will be added to prevent the violation of any one of the rules listed below where "units" mean all units and firm capacity suppliers physically connected to the system, and "available unit" means an operable unit not on scheduled maintenance.*

- 1. The sum of the normal top load ratings of all units must be equal to or greater than the system peak load to be supplied.*
- 2. With no unit on maintenance, the sum of the reserve ratings of all units minus the reserve rating of the largest available unit must be equal to or greater than the system peak to be supplied.*
- 3. With a unit on maintenance:*
  - a) The sum of the reserve ratings of all units minus the reserve rating of the largest available unit must be equal to or greater than the daytime peak load to be supplied.*
  - b) The sum of the reserve ratings of all units must be equal to or greater than the evening peak load to be supplied.*

MECO's generation capacities for Maui, Lanai, and Molokai for the next three years are sufficiently large to meet all reasonably expected demands for service and provide reasonable reserves for emergencies.

Very truly yours,



Attachment

cc: Division of Consumer Advocacy



Table 1  
Adequacy of Supply

		Without Future DSM (Includes Acquired <sup>3</sup> DSM)		With Future DSM (Includes Acquired <sup>3</sup> DSM)	
Year	System Capability at Annual Peak Load <sup>1</sup> (kW) [A]	System Peak <sup>2</sup> (kW) [B]	Reserve Margin (%) [[A-B] / B]	System Peak <sup>2</sup> (kW) [C]	Reserve Margin (%) [[A-C] / C]
Maui Division					
Recorded 2000	250,100 <sup>4</sup>	185,100	35%	N/A	N/A
Forecasted 2001	250,100	193,300	29%	191,200	31%
2002	250,100 <sup>5</sup>	199,200	26%	196,100	28%
2003	250,100	205,000	22%	201,000	24%
Lanai Division					
Recorded 2000	10,400 <sup>6</sup>	4,980	109%	N/A	N/A
Forecasted 2001	10,400	5,266	97%	N/A	N/A
2002	10,400	5,344	95%	N/A	N/A
2003	10,400	5,422	92%	N/A	N/A
Molokai Division					
Recorded 2000	12,050 <sup>7</sup>	6,500	85%	N/A	N/A
Forecasted 2001	12,050	7,050	71%	N/A	N/A
2002	12,050	7,088	70%	N/A	N/A
2003	12,050	7,174	68%	N/A	N/A

Notes:

- 1) The gross reserve ratings of the units are used in the determination of the system capability. For Maui Division, system capability includes 16,000 kW (which includes 4,000 kW of system protection capacity) of firm purchased power from Hawaiian Commercial and Sugar Company ("HC&S"). All unit projected retirement dates are planned for December 31 of

the designated year unless otherwise specified. When the system capability at the time of the system peak differs from the year-end system capability, an applicable note will indicate the year-end system capability.

- 2) The 2001 - 2003 annual forecasted system peaks are based on the MECO Forecast Planning Committee's 2000-2005 Sales and Peaks Forecasts dated June 28, 2000. The Maui and Lanai annual forecasted system peaks are expected to occur in the month of November. The Molokai annual forecasted system peak is expected to occur in the month of December.
- 3) System Peaks (Without Future Peak Reduction Benefits of DSM Programs):  
System Peak values for the years 2001-2003 include Acquired DSM through the year 1999 and embedded in the base peak forecast, but exclude the peak reduction benefits acquired in 2000 and to be acquired in the future. System Peak recorded values for the year 2000 include Acquired DSM through the year 2000.  
  
System Peaks (With Future Peak Reduction Benefits of DSM Programs) (Maui Only):  
The forecasted system peaks for 2001-2003 include the peak reduction benefits of the DSM programs (acquired and future).
- 4) Maalaea Unit 19, a nominal 21,200 kW (gross) combustion turbine generator (Phase II of a nominal 60,400 kW (gross) dual train combined-cycle unit), was placed in Commercial Operation on September 1, 2000.
- 5) On January 23, 2001, MECO and HC&S agreed to a rescission of MECO's written notice of termination to HC&S dated December 27, 1999.<sup>1</sup> (Under the rescinded notice of termination, termination of the HC&S Amended and Restated Power Purchase Agreement ["PPA"] would have been effective on December 31, 2001.) As a result, the PPA with HC&S will remain in effect from year to year, subject to termination on not less than two years prior written notice. MECO and HC&S agreed to not issue a new notice of termination prior to the end of 2002. Therefore, the PPA will remain in effect through December 31, 2004 (and year-to-year thereafter), subject to termination on or after the end of the day on December 31, 2004 on not less than two years prior written notice by either party.
- 6) Lanai City Power Plant Units L7 and L8, two Cummins 1,000-kW high-speed diesel engine-generators owned by MECO, were removed from standby status at Lanai City Power Plant on May 23, 2000 and transported to a maintenance contracting facility in Hilo, Hawaii for unit refurbishing. These units will be relocated to Maui's Hana Substation No. 41 as

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<sup>1</sup> MECO informed the Commission of the rescission of MECO's written notice of termination by letter dated February 8, 2001. MECO informed the Commission of the written notice of termination of the HC&S PPA by letter dated December 28, 2000.

designated standby units with an expected in-service date in April 2001. An in-service date of November 2000, as reported in the MECO Adequacy of Supply letter dated January 31, 2000, was deferred due to delays in obtaining the County building permits, equipment delivery delays, and additional electrical relay/protection design efforts. These generating units will be used to provide electric power to the Hana community primarily during planned maintenance or unplanned power outages of the transmission line to Hana.

- 7) Palaaau Units 1 and 2, two 1,290 kW Caterpillar units; and Palaaau Units 3, 4, and 5, three 970 kW Cummins units remain in peaking service as reported in the MECO Adequacy of Supply letter dated January 29, 1999. Because of the age and operating history of these units, MECO includes one Caterpillar unit and one Cummins unit ( $1,290 + 970 = 2,260$  kW) towards firm capacity for the Molokai system.



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PUBLIC UTILITIES  
COMMISSION

January 31, 2001

**William A. Bonnet, P.E.**  
President

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  
Maui Electric Company, Limited

In accordance with paragraph 5.3a of General Order No. 7, MECO's Adequacy of Supply Report is due within 30 days after the end of the year. MECO respectfully requests an extension to no later than February 15, 2001 in which to submit its report. The Consumer Advocate does not object to this request.

Very truly yours,

cc: Division of Consumer Advocacy

**REQUEST APPROVED**

COMMISSIONER  
PUBLIC UTILITIES COMMISSION  
STATE OF HAWAII

DATE February 1, 2001





January 31, 2000

William A. Bonnet, P.E.  
President

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  
Maui Electric Company, Limited

In accordance with paragraph 5.3a of General Order No. 7, the following information is respectfully submitted.

Maui's 1999 system peak occurred on August 4, 1999, and was 180,100 kW (gross). Lanai's 1999 system peak occurred on November 24, 1999, and was 5,040 kW (gross). Molokai's 1999 system peak occurred on December 13, 1999, and was 6,950 kW (gross). Maui had a reserve margin of approximately 27% over the 1999 system peak. Lanai had a 1999 reserve margin of approximately 106%. Molokai had a 1999 reserve margin of approximately 73%.

Attachment 1 shows the expected reserve margins over the next three years, based on the MECO Forecast Planning Committee's 1999-2004 Sales and Peak Forecast, dated July 8, 1999.

Maui's 1999 total system capability of 228,900 kW (gross) includes 16,000 kW of firm purchased power from Hawaiian Commercial & Sugar ("HC&S") Company.

The following criterion is used to determine the timing of an additional generating unit for the Maui Division:

*New generation will be added to prevent the violation of the rule listed below where "available units" means all operable units and firm capacity suppliers physically connected to the system which are not on scheduled maintenance.*

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COMMISSION



The Honorable Chairman and Members of the  
Hawaii Public Utilities Commission  
January 31, 2000  
Page 2

*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.*

The following criterion is used to determine the timing of an additional generating unit for the Lanai Division and the Molokai Division:

*New generation will be added to prevent the violation of any one of the rules listed below where "available units" means all operable units and firm capacity suppliers physically connected to the system which are not on scheduled maintenance.*

1. *The sum of the normal top load ratings of all available units must be equal to or greater than the system peak load to be supplied.*
2. *With no unit on maintenance, the sum of the reserve ratings of all available units minus the reserve rating of the largest available unit must be equal to or greater than the system peak to be supplied.*
3. *With a unit on maintenance:*
  - a) *The sum of the reserve ratings of all available units minus the reserve rating of the largest available unit must be equal to or greater than the daytime peak load to be supplied.*
  - b) *The sum of the reserve ratings of all available units must be equal to or greater than the evening peak load to be supplied.*

MECO's generation capacities for Maui, Lanai, and Molokai for the next three years are sufficiently large to meet all reasonably expected demands for service and will provide reasonable reserves for emergencies.

Very truly yours,



Attachments

cc: Division of Consumer Advocacy



Table 1  
Adequacy of Supply

		Without Future DSM (Includes Acquired DSM)		With Future DSM (Includes Acquired DSM)	
Year	System Capability at Annual Peak Load <sup>1</sup> (kW) [A]	System Peak <sup>2</sup> (kW) [B]	Reserve Margin (%) [[A-B] / B]	System Peak <sup>2</sup> (kW) [C]	Reserve Margin (%) [[A-C] / C]
Maui Division					
Recorded 1999	228,900	180,100	27%	N/A	N/A
Forecasted 2000	250,100 <sup>3</sup>	186,000	34%	184,000	36%
2001	250,100	190,400	31%	187,300	34%
2002	234,100 <sup>4</sup>	195,700	20%	191,500	22%
Lanai Division					
Recorded 1999	10,400 <sup>5</sup>	5,040	106%	N/A	N/A
Forecasted 2000	10,400	5,265	98%	N/A	N/A
2001	10,400	5,358	94%	N/A	N/A
2002	10,400	5,453	91%	N/A	N/A
Molokai Division					
Recorded 1999	12,050 <sup>5</sup>	6,950	73%	N/A	N/A
Forecasted 2000	12,050	6,972	73%	N/A	N/A
2001	12,050	7,052	71%	N/A	N/A
2002	12,050	7,122	69%	N/A	N/A

Notes:

- 1) The gross reserve ratings of the units are used in the determination of the system capability. For Maui Division, system capability includes 16,000 kW of firm purchased



power from HC&S. All unit projected retirement dates are planned for December 31 of the designated year unless otherwise specified. When the system capability at the time of the system peak differs from the year-end system capability, an applicable note will indicate the year-end system capability.

- 2) The 2000 - 2002 annual forecasted system peaks are based on the MECO Forecast Planning Committee's 1999-2004 Sales and Peaks Forecasts dated July 8, 1999. The Maui and Molokai annual forecasted system peaks are expected to occur in the month of December. The Lanai annual forecasted system peak is expected to occur in the month of November.
- 3) Maalaea Unit 19, a nominal 21,200 kW (gross) combustion turbine generator (Phase II of a nominal 60,400 kW (gross) dual train combined-cycle unit), is scheduled to be placed in service in September 2000.
- 4) MECO sent written notice of termination to HC&S on December 27, 1999 to terminate its Amended and Restated Power Purchase Agreement. MECO took this measure due to changing business conditions which warrant review of the terms and conditions. The termination will be effective at the end of the day on December 31, 2001. MECO is optimistic that it will be able to negotiate a new, mutually acceptable PPA with HC&S by December 2000. This would provide time to obtain the necessary PUC approval of this new PPA prior to the expiration of the existing agreement. MECO informed the Commission of this action on December 28, 1999<sup>1</sup>. The 2002 year-end system capability of 234,100 kW does not include the HC&S 16,000 kW firm purchased power due to the existing PPA termination on December 31, 2001, and the lack of a new signed PPA as of present.

MECO and HC&S previously executed Letters of Agreement dated December 11, 1997 and October 22, 1998 to extend the current PPA one year each, from December 31, 1999 to December 31, 2000 and December 31, 2000 to December 31, 2001, respectively.

- 5) Lanai City Power Plant Units L7 and L8, two Cummins 1,000-kW high-speed diesel engine-generators owned by MECO, continued to remain in standby status at the Lanai City Power Plant, as reported in the MECO Adequacy of Supply letter dated January 29, 1999. MECO filed an Application with the PUC in Docket No. 99-0369 on November 4, 1999 requesting Commission approval to relocate these two units to Maui's Hana Substation No. 41 as designated standby units with an expected in-service date in

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<sup>1</sup> MECO filed a letter with the PUC, "MECO Written Notice of Termination To Hawaiian Commercial & Sugar Company ("HC&S")", on December 28, 1999 which informed the PUC that MECO had sent written notice of termination to HC&S to terminate its existing Amended and Restated PPA. A copy of MECO's written notice of termination to HC&S is included as an attachment to this letter.

November 2000. These generator units will be used to provide electric power to the Hana community primarily during planned maintenance or unplanned power outages of the transmission line to Hana. Units L7 and L8 are not included in the year-end system capability.

- 6) Palaau Units 1 and 2, two 1,290 kW Caterpillar units; and Palaau Units 3, 4, and 5, three 970 kW Cummins units remain in peaking service as reported in the MECO Adequacy of Supply letter dated January 29, 1999. Because of the age and operating history of these units, MECO includes one Caterpillar unit and one Cummins unit ( $1,290 + 970 = 2,260$  kW) towards firm capacity for the Molokai system.

Maul Electric Company, Ltd. • 210 West Kamehameha Avenue • PO Box 398 • Kahului, Maui, HI 96733-6898 • (808) 871-8461



December 28, 1999

**William A. Bonnet**  
*President*

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

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1999 DEC 28 P 3:44  
PUBLIC UTILITIES  
COMMISSION

Dear Commissioners:

Subject: MECO Written Notice of Termination To  
Hawaiian Commercial & Sugar Company ("HC&S")

This is to inform the Commission that on December 27, 1999, MECO sent a written notice of termination to HC&S to terminate its Amended and Restated Power Purchase Agreement ("PPA").

MECO has taken this measure because, as stated in the attachment, changing business conditions warrant review of the terms and conditions of the PPA. This termination will be effective at the end of the day on December 31, 2001. Attached is a copy of the termination letter. If you have any questions about this filing, please contact Ann Yamamoto at 543-4757.

Sincerely,

Attachment

cc: Division of Consumer Advocacy

Maui Electric Company, Ltd. • 210 West Kamehameha Avenue • PO Box 398 • Kahului, Maui, HI 96733-6898 • (808) 871-8461

CONT 9  
IC/G



William A. Bonnet  
President

December 27, 1999

**CERTIFIED – RETURN RECEIPT**

Mr. G. Stephen Holaday  
Plantation General Manager  
Hawaiian Commercial & Sugar Company  
P. O. Box 266  
Puunene, HI 96784

Dear Mr. Holaday:

Subject: Termination Notice for Amended and Restated Power Purchase Agreement between A&B Hawaii, Inc., through its division, Hawaiian Commercial & Sugar Company ("HC&S"), and Maui Electric Company, Limited ("MECO"), dated November 30, 1989 (the "Amended PPA"), as amended by the First Amendment to Amended and Restated Power Purchase Agreement, dated November 1, 1990 ("Amendment No. 1") (which are together referred to as the "PPA")

I would like to thank you and John Krieg for our recent discussion on the long term generation needs for the island of Maui and the future role that HC&S may play in meeting those needs. MECO and HC&S have had a long term, mutually beneficial relationship. I fully expect that we will be able to continue this relationship as our companies evolve to meet the challenges of the changing business environment on Maui.

Due to these changing business conditions, it is appropriate to review the terms and conditions under which MECO purchases electrical capacity and energy from HC&S. Consequently, pursuant to Article XVII titled TERM OF AGREEMENT of the subject PPA; MECO hereby provides written notice of termination of said PPA. The termination will be effective at the end of the day on December 31, 2001.<sup>1</sup>  
Mr. G. Stephen Holaday

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<sup>1</sup> Pursuant to Article XVII of the Amended PPA, the PPA "shall continue in effect through December 31, 1999, and from year to year thereafter, subject to termination on or after January 1, 2000, on not less than two (2) years' prior written notice by either party." As was provided in letter agreements dated December 11, 1997 and October 22, 1998, no notice of termination was given prior to the end of 1997 or 1998. As a result, the PPA remains in full force and effect through December 31, 2001, and from year to year thereafter, subject to termination on or after January 1, 2002, on not less than two (2) years' written notice by either party. This letter provides such two (2) years' written notice of termination.

December 27, 1999  
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I am optimistic that we will be able to negotiate a new, mutually acceptable Power Purchase Agreement by December 2000. This would provide time to obtain approval from the Public Utilities Commission of the new PPA prior to the expiration of the existing agreement. The Hawaiian Electric Company, Inc. ("HECO") Power Purchase Division will lead the negotiations for MECO. Dan Ching is the Director of this group, and he is available to begin the negotiation process at your earliest convenience. Mr. Ching may be contacted at 808/543-4340.

Again, I remain optimistic about our ability to complete successfully and in a timely manner the negotiations for a new PPA and look forward to continuation of our relationship.

Sincerely,

