



January 30, 2015

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**PUBLIC UTILITIES
COMMISSION**

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

Dear Commissioners:

Subject: Hawaiian Electric Company, Inc.,
Hawai'i Electric Light Company, Inc.
Maui Electric Company, Limited
2014 Net Energy Metering Status Report

Hawaiian Electric Company, Inc., Hawai'i Electric Light Company, Inc., and Maui Electric Company, Limited respectfully submit their 2014 Net Energy Metering Status Report, which provides the total number of installations and the total rated generating capacity of net metered customer facilities in each of their service territories.

If you have any questions on this matter, please call Marisa Chun at 543-4723.

Sincerely,

Daniel G. Brown
Manager
Regulatory Non-Rate Proceedings

Attachment

cc: Division of Consumer Advocacy

Net Energy Metering Status Report

Hawaiian Electric Company, Inc.
Hawai'i Electric Light Company, Inc.
Maui Electric Company, Limited

December 31, 2014

Status

The following table provides the status of Net Energy Metering ("NEM") in the Hawaiian Electric Company, Inc. ("Hawaiian Electric"), Hawai'i Electric Light Company, Inc. ("Hawai'i Electric Light"), and Maui Electric Company, Limited ("Maui Electric") service territories as of December 31, 2014. In addition, a report on the estimates of the rate and revenue impact of NEM participation is shown in Appendix A.

NEM Status as of 12/31/14

	Information packets sent	No. of Installations ¹	Installed kW ²	NEM System Cap, ³ kW
Hawaiian Electric				
2001	151	1	3.60	5,955
2002	12	1	2.06	6,020
2003	49	8	11.74	6,210
2004	15	3	7.90	6,405
2005	5	0	0	6,150
2006	23	10	74.28	6,330
2007	67	73	400.29	6,080
2008	132	220	2,361	11,860
2009	111	513	2,460	12,130
2010	*	1,327	7,267	11,620
2011	*	3,424	18,518	N/A
2012	*	8,623	52,504	N/A
2013	*	14,010**	83,659**	N/A
2014	*	6,836	46,455	N/A
Total Hawaiian Electric	565	35,049	213,724	N/A

¹ Completed systems (i.e., NEM Agreements completed).

² Installed kW reflects rated generating capacity installed in the year noted. Includes system expansions.

³ In 2011 the (3) companies NEM cap is based on individual circuit capacity and not total system capacity, therefore this metric is no longer applicable (N/A) from 2011 on. Prior system caps as follows: Hawaiian Electric - 0.5% of system peak in 2001-2007, 1.0% of system peak in 2008-2010. Hawai'i Electric Light, Maui Electric - 0.5% of system peak in 2001-2007, 3% of system peak in 2008-2009, and 4% system peak 2010. System Peak is defined as Net System Peak for Hawaiian Electric, Hawai'i Electric Light, and Maui Electric-Maui only and Gross System Peak for Maui Electric-Molokai and Maui Electric-Lanai.

Net Energy Metering Status Report

Hawaiian Electric Company, Inc.
Hawai'i Electric Light Company, Inc.
Maui Electric Company, Limited

December 31, 2014

NEM Status as of 12/31/14 (cont.)

	Information packets sent	No. of Installations ⁵	Installed kW ⁶	NEM System Cap, ⁷ kW
Hawai'i Electric Light				
2001	122	2	10.20	871
2002	25	3	4.73	890
2003	13	6	28.00	934
2004	12	4	8.84	972
2005	17	10	58.27	985
2006	12	34	299.57	1,007
2007	24	35	263.15	1,017
2008	23	116	783.80	5,946
2009	30	265	2,063.58	5,838
2010	*	371	2,287.85	7,624
2011	*	804	4,522.31	N/A
2012	*	1,734	9,943	N/A
2013	*	1,952	12,442	N/A
2014	*	2,080	13,046	N/A
Total Hawai'i Electric Light	278	7,416	45,762	N/A
Maui Electric				
2001	49	2	8.20	993
2002	19	5	8.80	1,006
2003	24	3	13.00	1,047
2004	29	8	21.60	1,091
2005	22	16	92.15	1,068
2006	49	50	233.47	1,091
2007	13	64	359.81	1,081
2008	15	135	947	6,171
2009	0	298	2,336	6,317
2010	*	342	1919	8,397
2011	*	1,039	6,624.22	N/A
2012	*	1,677	10,981	N/A
2013	*	1,566**	11,202**	N/A
2014	*	1,900	12,826	N/A
Total Maui Electric	220	7105	47,572	N/A
TOTAL	*	49,570	307,058	

* NEM information and forms are made available on the web and therefore, not tracked for the respective Companies.

** The Number of Installations and the Installed kW are annually adjusted to reflect updates such as modifications to system capacity ratings, agreement execution dates, number of installations, additions to existing systems, changes in rate schedules, and subsequent accounting reconciliations. All accounting reconciliations are trued up in the preceding year (2013) totals only to reflect accurate annual and cumulative numbers in the filing year.

APPENDIX A

Per the Commission's request, the attached pages are included to provide illustrative estimates of lost contributions to fixed cost in 2015 and the associated estimated value per kWh, based on estimated annualized kWh production of NEM installations in place as of year-end 2014. The value shown in these illustrations represents the estimated amount from all installations since the inception of the NEM program. For the calculation of lost contribution to fixed costs, the Base Energy Rates and Production Energy Rates for Hawaiian Electric, Hawai'i Electric Light, Maui, Lana'i, and Moloka'i are unchanged from last year's report. For all Companies, the effective Purchased Power Adjustment Clause rates reflect the January 2015 values. The calculation for lost contribution to fixed cost includes the impact of surcharges for the residential and commercial demand-side management programs, for the renewable energy infrastructure programs, and for the recovery of the Revenue Adjustment Mechanism Provision portion of the Revenue Balancing Adjustment rate. Lost contributions to fixed cost related to the Purchased Power Adjustment Clause, to the demand-side management surcharges, to the renewable infrastructure surcharge, and to the Rate Adjustment Mechanism Provision portion of the Revenue Balancing Adjustment rate are reflected in subsequent reconciliations of these surcharges and are eventually borne by customers who incur per kWh charges. Some of the lost contribution amount related to base energy rates may already be reflected in rates through past utility rate cases or through current decoupling rate adjustments. Any remaining lost contributions to fixed cost for base energy rates have no bill impact unless and until the utilities propose and receive Commission approval to adjust rates. At that point, any rate adjustment would apply to all customers, including customers with NEM installations.

Hawaiian Electric Company

Estimated Lost Contribution to Fixed Costs and Surcharges, based on NEM installations as-of December 31, 2014

Rate	A	B	C	D	E	F = sum(B:E)	G	H = F/G	J = A * H / 100
	Total Lost kWh/yr ¹	Base Energy Rate ² , cents/kWh	Eff. PPAC ³ cents/kWh	REIP & DSM ⁴ cents/kWh	RAM ⁵ cents/kWh	Dec. cents/kWh	Production Energy Rate ³ cents/kWh	Lost Contribution to Fixed Cost, cents/kWh	Total Lost Contribution to Fixed Cost, \$/Yr
R	300,452,217	22.4707	3.1849	0.1646	1.0381	26.8583	15.3950	11.4633	\$34,441,739
G	8,275,936	21.3317	2.6469	0.1159	1.0381	25.1326	15.4450	9.6876	\$801,740
J	47,983,091	16.9734	2.6108	0.1159	1.0381	20.7382	15.4560	5.2822	\$2,534,563
P	925,814	14.9013	2.2439	0.1159	1.0381	18.2992	15.3860	2.9132	\$26,971
Total	357,637,058								\$37,805,013

Rate	Total Lost Contribution to Fixed Cost, \$/Yr	Forecast 2015 Sales ⁶ kWh/Yr	Estimated Impact on Rates, \$/kWh
R	\$34,441,739		
G	\$801,740		
J	\$2,534,563		
P	\$26,971		
Total	\$37,805,013	6,861,800,000	0.55

Notes:

- 1 Annualized kWh generated from NEM installations as of 12/31/14; Hawaiian Electric Distributed Technology Applications
- 2 Source: Base Energy Rates from Docket 2010-0080 (HECO 2011 Test Year) sched R; Docket 2010-0080 (HECO 2011 Test Year); Final revised tariffs, Exhibit B, Attachment 1, page 5, filed 07/24/2012. sched G; Docket 2010-0080 (HECO 2011 Test Year); Final revised tariffs, Exhibit B, Attachment 1, page 13, filed 07/24/2012. sched J; Docket 2010-0080 (HECO 2011 Test Year); Final revised tariffs, Exhibit B, Attachment 1, page 24, filed 07/24/2012. sched P; Docket 2010-0080 (HECO 2011 Test Year); Final revised tariffs, Exhibit B, Attachment 1, page 126, filed 07/24/2012. PPAC Rates Effective January 2015
- 3 REIP and DSM rate from effective rate summaries for January 2015, RAM based on Decoupling Calculation workbook, Schedule A (with settlement revised 05/22/14), page 1
- 4 Source: Cost-of-service calculation, from Docket 2010-0080 (HECO 2011 Test Year); Final revised tariffs, exhibit C, page 80, filed 07/24/2012.
- 5 Source: Hawaiian Electric Sales Forecast, August 2014
- 6 Since the lost kWh in Column A represents kWh from all installations since the inception of Net Metering, part of the lost contribution to fixed cost is already reflected in utility rates.

Hawai'i Electric Light

Estimated Lost Contribution to Fixed Costs and Surcharges based on NEM installations as-of December 31, 2014

Rate	Total Lost kWh/yr ¹	Base Energy Rate ² cents/kWh	Eff. PPAC ³ cents/kWh	REIP & DSM ⁴ cents/kWh	RAM ⁴ cents/kWh	Eff. Base Energy Rate Dec. cents/kWh	Production Energy Rate ⁵ cents/kWh	Lost Contribution to Fixed Cost, cents/kWh	Total Lost Contribution to Fixed Cost, \$/Yr
	A	B	C	D	E	F = sum(B:E)	G	H = F - G	J = A * H / 100
R	49,335,128	29.2689	2.4245	0.0000	0.4507	32.1441	19.0780	13.0661	\$6,447,164
G	5,168,696	31.5858	2.1649	0.0000	0.4507	34.2014	19.1980	15.0024	\$775,428
J	13,492,908	24.8033	1.8910	0.0000	0.4507	27.1450	18.1130	8.0320	\$1,083,750
P	644,046	21.8184	1.5323	0.0000	0.4507	23.8014	18.7610	5.0404	\$32,462
Total	68,640,778								\$8,338,804

Rate	Total Lost Contribution to Fixed Cost, \$/Yr	Forecast 2015 Sales ⁶ kWh/yr	Estimated Impact on Rates, \$/kWh
	K = J	L	M = (K / L) * 100
R	\$6,447,164		
G	\$775,428		
J	\$1,083,750		
P	\$32,462		
Total	\$8,338,804	1,051,166,000	0.79

- Notes:
- 1 Annualized kWh generated from NEM installations as of 12/31/14: Hawaiian Electric Distributed Technology Applications
 - 2 Source: Base Energy Rates, from Docket 2009-0164 (HELCO 2010 Test Year)
 - 3 Sched R: Docket 2009-0164 (HELCO 2010 Test Year), Exhibit 2C, Attach 1, page 9, Filed 02/21/2012 for base energy rate; Sched G: Docket 2009-0164 (HELCO 2010 Test Year), Exhibit 2C, Attach 1, page 10, Filed 02/21/2012.
 - 4 Sched J: Docket 2009-0164 (HELCO 2010 Test Year), Exhibit 2C, Attach 1, page 17, Filed 02/21/2012. Sched P: Docket 2009-0164 (HELCO 2010 Test Year), Exhibit 2C, Attach 1, page 143, Filed 02/21/2012.
 - 5 PPAC Rates Effective January 2015
 - 6 REIP and DSM rate from effective rate summaries for January 2015, RAM based on Decoupling Calculation workbook, Schedule A (with settlement revised 05/14/14), page 1
 - 7 Source: Most-recently approved cost-of-service calculation, from Docket 2009-0164 (HELCO 2010 Test Year), Exhibit 2E, page 65, Filed 02/21/2012.
 - 8 Source: Hawai'i Electric Light Sales Forecast, December 2014
 - 9 Since the lost kWh in Column A represents kWh from all installations since the inception of Net Metering, part of the lost contribution to fixed cost is already reflected in utility rates.

Maui Electric Company - Maui Division

Estimated Lost Contribution to Fixed Costs and Surcharges based on NEM installations as-of December 31, 2014

Rate	Total Lost kWh/yr ¹	Base Energy Rate ² , cents/kWh	Eff. PPAC ³ , cents/kWh	REIP & DSM ⁴ , cents/kWh	RAM ⁴ , cents/kWh	Eff. Base Energy Rate Dec, cents/kWh	Production Energy Rate ⁵ , cents/kWh	Lost Contribution to Fixed Cost, cents/kWh	Total Lost Contribution to Fixed Cost, \$/Yr
	A	B	C	D	E	F = sum(B-E)	G	H = F - G	J = A * H / 100
R	48,981,107	33.5605	0.1117	0.0000	0.7825	34.4547	24.6820	9.7727	\$4,786,777
G	6,238,021	34.5890	0.1308	0.0048	0.7825	35.5071	24.8630	10.6441	\$663,981
J	12,228,840	30.4163	0.0806	0.0048	0.7825	31.2842	25.0050	6.2792	\$767,873
P	549,865	27.7504	0.0726	0.0048	0.7825	28.6103	24.8200	3.7903	\$20,842
Total	67,997,833								\$6,239,473

Rate	Total Lost Contribution to Fixed Cost, \$/Yr	Forecast 2015 Sales ⁶ , kWh/yr	Estimated Impact on Rates, \$/kWh
	K = J	L	M = (K / L) * 100
R	\$4,786,777		
G	\$663,981		
J	\$767,873		
P	\$20,842		
Total	\$6,239,473	1,033,064,400	0.60

Notes:

- 1 Annualized kWh generated from NEM Installations as of 12/31/14: Hawaiian Electric Distributed Technology Applications
- 2 Source: Base Energy Rates, from Docket 2011-0092 (MECO 2012 Test Year)- Maui Division
Sched R: Docket 2011-0092 (MECO 2012 Test Year), Maui Division, Exhibit 4, Attachment 1, page 8, filed 06/17/2013.
Sched G: Docket 2011-0092 (MECO 2012 Test Year), Maui Division, Exhibit 4, Attachment 1, page 9, filed 06/17/2013.
Sched J: Docket 2011-0092 (MECO 2012 Test Year), Maui Division, Exhibit 4, Attachment 1, page 33, filed 06/17/2013.
Sched P: Docket 2011-0092 (MECO 2012 Test Year), Maui Division, Exhibit 4, Attachment 1, page 40, filed 06/17/2013.
- 3 PPAC Rates Effective January 2015
- 4 REIP and DSM rate from effective rate summaries for January 2015, RAM based on Decoupling Calculation workbook, Schedule A (with settlement revised 05/14/14), page 1
- 5 Docket 2011-0092 (MECO 2012 Test Year), Maui Division, Exhibit 5, page 66, filed 06/17/2013.
- 6 Source: Maui Electric Sales Forecast, December 2014
Since the lost kWh in Column A represents kWh from all installations since the inception of Net Metering, part of the lost contribution to fixed cost is already reflected in utility rates.

Maui Electric Company - Lanai Division

Estimated Lost Contribution to Fixed Costs and Surcharges based on NEM installations as-of December 31, 2014

Rate	Total Lost kWh/yr ¹	Base Energy Rate ² , cents/kWh	Eff. PPAC ³ cents/kWh	REIP & DSM ⁴ cents/kWh	RAM ⁴ cents/kWh	Eff. Base Energy Rate Dec. cents/kWh	Production Energy Rate ⁵ cents/kWh	Lost Contribution to Fixed Cost, cents/kWh	Total Lost Contribution to Fixed Cost, \$/Yr
	A	B	C	D	E	F = sum(B:F)	G	H = F - G	J = A * H / 100
R	293,223	42.7689	0	0	0.0000	0.7825	35.2000	8.3514	\$24,488
G	63,231	44.8726	0	0	0.0000	0.7825	35.4360	10.2191	\$6,462
J	177,215	42.5860	0	0	0.0000	0.7825	35.5590	7.8095	\$13,840
P	-	40.2141	0	0	0.0000	0.7825	34.9320	6.0646	\$0
Total	533,670								\$44,790

Rate	Total Lost Contribution to Fixed Cost, \$/Yr	Forecast 2015 Sales ⁶ kWh/Yr	Estimated Impact on Rates, \$/kWh	M = (K / L) * 100
	K = J	L		
R	\$24,488			
G	\$6,462			
J	\$13,840			
P	\$0			
Total	\$44,790	26,296,200		0.17

Notes:

- 1 Annualized kWh generated from NEM installations as of 12/31/14: Hawaiian Electric Distributed Technology Applications
 - 2 Source: Base Energy Rates, from Docket 2011-0092 (MECO 2012 Test Year)- Lanai Division
Sched R: Docket 2011-0092 (MECO 2012 Test Year), Lanai Division, Exhibit 4, Attachment 1, page 83, filed 06/17/2013.
Sched G: Docket 2011-0092 (MECO 2012 Test Year), Lanai Division, Exhibit 4, Attachment 1, page 84, filed 06/17/2013.
Sched J: Docket 2011-0092 (MECO 2012 Test Year), Lanai Division, Exhibit 4, Attachment 1, page 92, filed 06/17/2013.
Sched P: Docket 2011-0092 (MECO 2012 Test Year), Lanai Division, Exhibit 4, Attachment 1, page 101, filed 06/17/2013.
 - 3 PPAC Rates Effective January 2015
 - 4 REIP and DSM rate from effective rate summaries for January 2015, RAM based on Decoupling Calculation workbook, Schedule A (with settlement revised 05/14/14), page 1
 - 5 Docket 2011-0092 (MECO 2012 Test Year), Lanai Division, Exhibit 5, page 143, filed 06/17/2013.
 - 6 Source: Maui Electric Sales Forecast, December 2014
- Since the lost kWh in Column A represents kWh from all installations since the inception of Net Metering, part of the lost contribution to fixed cost is already reflected in utility rates.

Maui Electric Company - Molokai Division

Estimated Lost Contribution to Fixed Costs and Surcharges based on NEM installations as-of December 31, 2014

Rate	Total Lost kWh/yr ¹	Base Energy Rate ² , cents/kWh	Eff. PPAC ³ , cents/kWh	REIP & DSM ⁴ , cents/kWh	RAM ⁴ , cents/kWh	Eff. Base Energy Rate Dec, cents/kWh	Production Energy Rate ⁵ , cents/kWh	Lost Contribution to Fixed Cost, cents/kWh	Total Lost Contribution to Fixed Cost, \$/Yr
	A	B	C	D	E	F = sum(B-E)	G	H = F - G	J = A * H / 100
R	1,723,698	39.0927	0	0.0000	0.7825	39.8752	28.8010	11.0742	\$190,886
G	372,486	44.8344	0	0.0000	0.7825	45.6169	29.3620	16.2549	\$60,547
J	85,823	36.9705	0	0.0000	0.7825	37.7530	29.2020	8.5510	\$7,339
P	148,920	29.5392	0	0.0000	0.7825	30.3217	28.5660	1.7557	\$2,615
Total	2,330,927								\$261,387

Rate	Total Lost Contribution to Fixed Cost, \$/Yr	Forecast 2015 Sales ⁶ kWh/yr	Estimated Impact on Rates, \$/kWh
	K = J	L	M = (K/L) * 100
R	\$190,886		
G	\$60,547		
J	\$7,339		
P	\$2,615		
Total	\$261,387	27,866,000	0.94

Notes:

- 1 Annualized kWh generated from NEM Installations as of 12/31/14: Hawaiian Electric Distributed Technology Applications
- 2 Source: Base Energy Rates, from Docket 2011-0092 (MECO 2012 Test Year)-Molokai Division
Sched R: Docket 2011-0092 (MECO 2012 Test Year), Molokai Division, Exhibit 4, Attachment 1, page 132, filed 06/17/2013.
Sched G: Docket 2011-0092 (MECO 2012 Test Year), Molokai Division, Exhibit 4, Attachment 1, page 133, filed 06/17/2013.
Sched J: Docket 2011-0092 (MECO 2012 Test Year), Molokai Division, Exhibit 4, Attachment 1, page 140, filed 06/17/2013.
Sched P: Docket 2011-0092 (MECO 2012 Test Year), Molokai Division, Exhibit 4, Attachment 1, page 148, filed 06/17/2013.
- 3 PPAC Rates Effective January 2015
- 4 REIP and DSM rate from effective rate summaries for January 2015, RAM based on Decoupling Calculation workbook, Schedule A (with settlement revised 05/14/14), page 1
- 5 Docket 2011-0092 (MECO 2012 Test Year), Molokai Division, Exhibit 5, page 220, filed 06/17/2013.
- 6 Source: Maui Electric Sales Forecast, December 2014
Since the lost kWh in Column A represents kWh from all installations since the inception of Net Metering, part of the lost contribution to fixed cost is already reflected in utility rates.