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December 27, 2016 2016 DEC 27 P 3:47

PUBLIC UTILITIES  
COMMISSION

The Honorable Chair and Members  
of the Hawai'i Public Utilities Commission  
Kekuanao'a Building, First Floor  
465 South King Street  
Honolulu, Hawai'i 96813

Dear Commissioners:

Subject: Maui Electric Energy Cost Adjustment Factor for January 2017

Maui Electric Company, Limited's ("Maui Electric" or "Company") January 2017 energy cost adjustment factor for our Maui Division is -7.659 cents per kilowatt-hour ("kWh"), an increase of 1.410 cents per kWh from last month. A residential customer consuming 500 kWh of electricity will be paying \$146.59, an increase of \$7.18 compared to rates effective December 1, 2016. The increase in the typical residential bill is due to the increase in the energy cost adjustment factor (+\$7.04) and the increase in the Green Infrastructure Fee (+\$0.14).

The Company's Maui Division fuel composite cost of generation, central station and other increased 45.41 cents per million BTU to 1,245.72 cents per million BTU. The composite cost of DG energy is 0.00 cents per kWh. The composite cost of purchased energy increased 5.924 cents per kWh to 19.040 cents per kWh.

The energy cost adjustment factor for our Lāna'i Division for January 2017 is -11.861 cents per kWh, a decrease of 0.701 cents per kWh from last month. A residential customer consuming 400 kWh of electricity will be paying \$139.67, a decrease of \$2.66 compared to rates effective December 1, 2016. The decrease in the typical residential bill is due to the decrease in the energy cost adjustment factor (-\$2.80) and the increase in the Green Infrastructure Fee (+\$0.14).

The Company's Lāna'i Division fuel composite cost of generation, central station and other decreased 79.25 cents per million BTU to 1,595.09 cents per million BTU. The composite cost of DG energy is 0.00 cents per kWh. The composite cost of purchased energy is 27.000 cents per kWh.

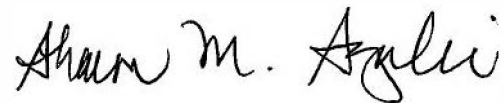
The energy cost adjustment factor for our Moloka'i Division for January 2017 is -8.940 cents per kWh, an increase of 0.304 cents per kWh from last month. A residential customer consuming 400 kWh of electricity will be paying \$137.11, an increase of \$1.36 compared to rates effective December 1, 2016. The increase in the typical residential bill is due to the increase in the energy cost adjustment factor (+\$1.22) and the increase in the Green Infrastructure Fee (+\$0.14).

The Honorable Chair and Members  
of the Hawai'i Public Utilities Commission  
December 27, 2016  
Page 2

The Company's Moloka'i Division fuel composite cost of generation, central station and other increased 23.86 cents per million BTU to 1,378.09 cents per million BTU. The composite cost of DG energy is 0.00 cents per kWh. The composite cost of purchased energy is 21.80 cents per kWh.

The attached sheets set forth the fuel adjustment in cents per kWh for each rate schedule that is applicable for pro rata use beginning January 1, 2017.

Sincerely,

A handwritten signature in black ink that reads "Sharon M. Suzuki". The signature is written in a cursive style.

Sharon M. Suzuki  
President

Attachments

cc: Division of Consumer Advocacy

**MAUI ELECTRIC COMPANY, LTD.  
LANAI DIVISION**

**ENERGY COST ADJUSTMENT FACTOR**

	EFFECTIVE DATES		
	<u>12-01-16</u>	<u>01-01-17</u>	<u>Change</u>
<u>COMPOSITE COSTS</u>			
Generation, Central Station & Other, ¢/mbtu	1,674.34	1,595.09	(79.25)
DG Energy, ¢/kWh	0.00	0.00	0.00
Purchased Energy, ¢/kWh	27.00	27.00	0.00
<u>Residential Schedule "R"</u>			
Energy Cost Adjustment, ¢/kWh	(11.160)	(11.861)	(0.701)
<u>Others - "G,P,F"</u>			
Energy Cost Adjustment, ¢/kWh	(11.160)	(11.861)	(0.701)
<u>Residential Customer with</u>			
400 KWH Consumption, \$/Bill	142.33	139.67	(2.66)
500 KWH Consumption, \$/Bill	177.05	173.68	(3.37)

Supersedes Sheet Effective:

December 1, 2016

1 Effective Date January 1, 2017  
 2 Supercedes Factors of December 1, 2016

**GENERATION COMPONENT**

<b><u>CENTRAL STATION</u></b>				
FUEL PRICES, ¢/mmbtu				
3	Industrial			0.00
4	Diesel - Miki Basin			1,595.09
5	Diesel - Manele Bay			0.00
6	Other			0.00
BTU MIX, %				
7	Industrial			0.00%
8	Diesel - Miki Basin			100.00%
9	Diesel - Manele Bay <sup>1</sup>			0.00%
10	Other			0.00%
				100.00%
11	COMPOSITE COST OF GENERATION, CENTRAL STATION + OTHER ¢/mmbtu (Lines (3 x 7) + (4 x 8) + (5 x 9) + (6 x 10))			1,595.09
12	% Input to System kWh Mix			90.82%
EFFICIENCY FACTOR, mmbtu/kWh				
	(A)	(B)	(C)	(D)
			Percent of	
	Fuel Type	Eff Factor mmbtu/kwh	Centrl Stn + Other	Weighted Eff Factor
13	Industrial	0.000000	0.00	0.000000
14	Diesel	0.011151	100.00	0.011151
15	Other	0.011151	0.00	0.000000
	(Lines 13, 14, 15): Col(B) x Col(C) = Col(D)			
16	Weighted Efficiency Factor, mmbtu/kWh [lines 13(D) + 14(D) + 15(D)]			0.011151
17	WEIGHTED COMPOSITE CENTRAL STATION + OTHER GEN COST, ¢/kWh (lines (11 x 12 x 16))			16.15402
18	BASE CENTRAL STATION + OTHER GENERATION COST, ¢/mmbtu			2,647.15
19	Base % Input to Sys kWh Mix			89.65%
20	Efficiency Factor, mmbtu/kwh			0.011151
21	WEIGHTED BASE CENTRAL STATION + OTHER GENERATION COST ¢/kWh (lines (18 x 19 x 20))			26.46322

<b><u>DG ENERGY COMPONENT</u></b>		
25	COMPOSITE COST OF DG ENERGY, ¢/kWh	0.00
26	% Input to System kWh Mix	0.00
27	WEIGHTED COMPOSITE DG ENERGY COST, ¢/kWh (Lines 25 x 26)	0.0000
28	BASE DG ENERGY COMP COST	0.00
29	Base % Input to System kWh Mix	0.00
30	WEIGHTED BASE DG ENERGY COST, ¢/kWh (Line 28 x 29)	0.0000
31	Cost Less Base (Line 27 - 30)	0.0000
32	Loss Factor	1.05
33	Revenue Tax Req Multiplier	1.09
34	DG FACTOR, ¢/kWh (Line 31 x 32 x 33)	0.0000

SUMMARY OF TOTAL GENERATION FACTOR, ¢/kWh

ne

1 Effective Date January 1, 2017  
 2 Supercedes Factors of December 1, 2016

<b><u>PURCHASED ENERGY COMPONENT</u></b>		
	PURCHASED ENERGY PRICE, ¢/kWh	
38	LANAI SOLAR RESEARCH- On Peak	27.000
39	- Off Peak	27.000
40	Sch Q	0.000
	PURCHASED ENERGY KWH MIX, %	
41	LANAI SOLAR RESEARCH- On Peak	100.00%
42	- Off Peak	0.00%
43	Sch Q	0.00%
44	COMPOSITE COST OF PURCHASED ENERGY, ¢/kWh (Lines (38 x 41) + (39 x 42) + (40 x 43))	27.000
45	% Input to System kWh Mix	9.18%
46	WEIGHTED COMP. PURCH. ENERGY COST, ¢/kWh (lines (44 x 45))	2.47860
47	BASE PURCHASED ENERGY COMPOSITE COST, ¢/kWh	27.000
48	Base % Input to Sys kWh Mix	10.35
49	WEIGHTED BASE PURCHASED ENERGY COST, ¢/kWh (lines (47 x 48))	2.79450
50	COST LESS BASE(lines (46 - 49))	(0.31590)
51	Loss Factor	1.051
52	Revenue Tax Req Multiplier	1.0975
53	PURCHASED ENERGY FACTOR, ¢/kWh (lines (50 x 51 x 52))	(0.36438)

Line	<b><u>SYSTEM COMPOSITE CALCULATIONS</u></b>	
54	GENERATION AND PURCHASED ENERGY FACTOR, ¢/kWh (lines (37 + 53))	(11.678)
55	Adjustment, ¢/kWh	0.0
56	ECA Reconciliation Adjustment	(0.1)
57	ECA FACTOR, ¢/kWh (lines (54 + 55 + 56))	(11.8)

## MONTH END FUEL OIL ESTIMATE

<u>Miki Basin - ULSD</u>	<u>Barrels</u>	<u>MBTU</u>	<u>\$</u>
12/20/2016	4,499.52	25,782.25	418,857.39
Estimated Use	1,628.62	9,331.99	156,249.28
Estimated Received	857.14	4,911.41	77,139.43
Estimated Additional	236.18	1,353.33	22,576.93
Estimated End	3,964.22	22,715.00	362,324.47

Next Month's Combined Miki Expense (\$/bbl) = \$ 91.3987 /bbl

## FUEL OIL INVENTORY PRICE USED FOR FILING

<u>Type of Oil Burned</u>	<u>Price</u>	<u>Conversion Factor</u>	<u>Prices ¢/MBTU</u>
Diesel - Miki Basin	\$ 91.3987	5.73 BTU/BBL	1,595.09

**MAUI ELECTRIC COMPANY, LTD.  
LANAI DIVISION**

**Contract Prices effective December 1, 2016**

TYPE OF OIL BURNED                      \$/BBL                      ¢/MBTU

**MIKI BASIN - ULTRA LOW SULFUR DIESEL (DYED)**

Tax *	1.5120	26.39
Ocean Transportation	0.0000	0.00
Storage	0.0000	0.00
Wharfage	0.0000	0.00

**MIKI BASIN - ULTRA LOW SULFUR DIESEL**

Tax *	1.5120	26.39
Ocean Transportation	0.0000	0.00
Storage	0.0000	0.00
Wharfage	0.0000	0.00

\* Tax includes HGET, Hawaii Use Tax, Liquid Fuel Tax, LUST tax and Environmental Response Tax.

Note: Since these components are not accounted for separately in inventory, contract prices for the current month are being provided. Contract prices are considered accurate pending actual delivery of the fuel.

Reference: Decision and Order No. 16134, Docket No. 96-0040.

**MAUI ELECTRIC COMPANY, LTD.**  
**Lanai Division**  
**ECA Reconciliation Adjustment**

**January 2017**

1. Amount to be refunded	(\$11,300)
2. Monthly amount (1 / 3 X Line 1)	(\$3,767)
3. Revenue Tax Divisor	0.91115
4. Total (Line 2 / Line 3)	(\$4,134)
5. Estimated Sales (January 2017)	2,273 mwh
6. Adjustment (Line 4 ÷ Line 5)	-0.182 ¢/kwh



**MAUI ELECTRIC COMPANY, LTD.  
LANAI DIVISION  
2016 Cumulative Reconciliation Balance**

<u>Month</u>	(1) <u>YTD FOA</u> <u>Reconciliation</u>	<u>Qtr</u>	(2) <u>FOA Rec</u> <u>Adjust</u> <u>Variance</u>	(3) <u>FOA Rec</u> <u>Less</u> <u>Variance</u>	(4) <u>Try to</u> <u>Collect</u>	(5) <u>Actual</u> <u>Collect</u>	(6) <u>Month-end</u> <u>Cumulative</u> <u>Balance</u>
December '15					(2,067)	(2,151)	1,855
January '16					(2,067)	(2,194)	(339)
February	(13,300)	(4)	(208)	(13,092)	4,433	4,591	(8,840)
March					4,433	4,930	(3,910)
April					4,433	5,061	1,151
May	14,900	(1)	528	14,372	(4,967)	(5,627)	9,896
June					(4,967)	(5,492)	4,404
July					(4,967)	(5,749)	(1,345)
August	21,600	(2)	(557)	22,157	(7,200)	(8,334)	12,478
September					(7,200)	(8,147)	4,331
October					(7,200)	(8,674)	(4,343)
November	11,300	(3)	(2,863)	14,163	(3,767)	(4,026)	5,794
December					(3,767)		
January '17					(3,767)		

## NOTES:

- Col(1): Quarterly FOA reconciliation amounts. (Refer to Attachment 13)  
A positive number is an over-collection. A negative number is an under-collection.
- Col(2): FOA reconciliation adjustment variance accumulated during the last three months, starting with the fourth prior month; the difference between the estimated recorded sales used to derive the \$/kwh adjustment and the actual recorded sales.  
(Col(5) - Col(4))
- Col(3): FOA reconciliation generated in the current quarter. The YTD FOA reconciliation difference minus the adjustment variance. Col(1) - Col(2)
- Col(4): Amount that the FOA reconciliation adjustment is trying to collect. (Col(1) \* 1/3)
- Col(5): Actual collected amount. (recorded sales \* \$/kwh adjustment/1.09751)
- Col(6): Cumulative balance of the FOA reconciliation (Previous balance + Col(3) + Col(5))

**Use Rates**

Base Fuel/Energy Charge  
 Non-fuel Fuel Energy Charge  
 First 250 kWh per month  
 Next 500 kWh per month  
 Customer Charge

**Total Base Charges**

**Refund**

Revenue Balancing Rate Adjustment  
 F Surcharge  
 Renewable Energy Infrastructure Cost  
 Recovery Provision  
 SolarSaver Adjustment

Energy Cost Adjustment  
 Green Infrastructure Fee

**Residential Bill at 400 kwh**

	Rate	
	12-01-16	01-01-17
effective date:	08/01/13	08/01/13
¢/kWh	32.2668	32.2668
¢/kWh	9.1240	9.1240
¢/kWh	11.6240	11.6240
\$	8.50	8.50
% on base	0.0000	0.0000
¢/kWh	1.4082	1.4082
¢/kWh	0.5865	0.5865
¢/kWh	0.0099	0.0099
¢/kWh	0.0000	0.0000
¢/kWh	-11.160	-11.861
\$	1.13	1.27

Charge (\$) at 400 Kw		
12-01-16	01-01-17	Diff
129.07	129.07	
22.81	22.81	
17.44	17.44	
8.50	8.50	
177.82	177.82	
0.00	0.00	
5.63	5.63	
2.35	2.35	
0.04	0.04	
0.00	0.00	
-44.64	-47.44	
1.13	1.27	
142.33	139.67	

Increase (Decrease -)  
 % Change

**Use Rates**

Base Fuel/Energy Charge  
 Non-fuel Fuel Energy Charge  
 First 250 kWh per month  
 Next 500 kWh per month  
 Customer Charge

**Total Base Charges**

**Refund**

Revenue Balancing Rate Adjustment  
 F Surcharge  
 Renewable Energy Infrastructure Cost  
 Recovery Provision  
 SolarSaver Adjustment

Energy Cost Adjustment

	Rate	
	12-01-16	01-01-17
effective date:	08/01/13	08/01/13
¢/kWh	32.2668	32.2668
¢/kWh	9.1240	9.1240
¢/kWh	11.6240	11.6240
\$	8.50	8.50
% on base	0.0000	0.0000
¢/kWh	1.4082	1.4082
¢/kWh	0.5865	0.5865
¢/kWh	0.0099	0.0099
¢/kWh	0.0000	0.0000
¢/kWh	-11.160	-11.861

Charge (\$) at 500 Kw		
12-01-16	01-01-17	Diff
161.33	161.33	
22.81	22.81	
29.06	29.06	
8.50	8.50	
221.70	221.70	
0.00	0.00	
7.04	7.04	
2.93	2.93	
0.05	0.05	
0.00	0.00	
-55.80	-59.31	

**MAUI ELECTRIC COMPANY, LTD. – Lanai Division  
FUEL OIL ADJUSTMENT FACTOR DATA**

<u>EFFECTIVE DATE</u>	<u>FUEL FACTOR</u>		
	<u>COMMERCIAL</u>	<u>RESIDENTIAL &amp; @ 400 KWH</u>	<u>RESIDENTIAL BILL (\$) @ 500 KWH</u>
January 1, 2014	0.693	187.14	233.37
February 1, 2014	1.420	190.05	237.00
March 1, 2014	1.370	189.85	236.75
April 1, 2014	1.854	190.81	237.94
May 1, 2014	-1.036	180.23	224.72
June 1, 2014	0.013	187.69	234.05
July 1, 2014	0.208	189.21	235.94
August 1, 2014	-0.179	187.66	234.00
September 1, 2014	-0.244	187.40	233.68
October 1, 2014	-3.591	174.02	216.94
November 1, 2014	-1.766	181.32	226.07
December 1, 2014	-3.365	175.18	218.07
January 1, 2015	-4.698	169.85	211.41
February 1, 2015	-7.361	159.20	198.09
March 1, 2015	-8.793	153.47	190.93
April 1, 2015	-6.831	160.22	199.37
May 1, 2015	-9.750	149.64	186.15
June 8, 2015	-8.842	153.16	190.56
July 1, 2015	-7.314	158.27	196.91
August 1, 2015	-8.457	153.70	191.19
September 1, 2015	-10.465	145.71	181.20
October 1, 2015	-12.259	138.53	172.23
November 1, 2015	-12.177	138.86	172.64
December 1, 2015	-11.304	142.35	177.01
January 1, 2016	-12.957	135.62	168.62
February 1, 2016	-14.236	130.51	162.23
March 1, 2016	-15.833	124.12	154.24
April 1, 2016	-15.204	125.90	156.47
May 1, 2016	-13.856	132.03	164.13
June 1, 2016	-12.617	136.22	169.37
July 1, 2016	-11.833	139.64	173.68
August 1, 2016	-12.201	138.17	171.84
September 1, 2016	-12.634	136.43	169.68
October 1, 2016	-12.723	136.08	169.23
November 1, 2016	-12.595	136.59	169.87
December 1, 2016	-11.160	142.33	177.05
January 1, 2017	-11.861	139.67	173.68

## RESIDENTIAL SURCHARGE DATA

EFFECTIVE DATE	DESCRIPTION OF SURCHARGE	RATE
1/01/11 - 12/31/11	RESID. PBF SURCHARGE ADJUSTMENT	0.5944 CENTS/KWH
1/12/11 - 05/03/12	FINAL RATE INCREASE (3.65%), DOCKET NO. 2006-0387 (2007 TEST YEAR)	
1/12/11 - 05/03/12	INTERIM RATE INCREASE 2010 TEST YEAR	2.68 PERCENT ON E
2/01/11 - 02/28/11	IRP RECOVERY REFUND	-4.332 PERCENT ON E
3/01/11 - 04/30/11	IRP RECOVERY REFUND	0.000 PERCENT ON E
4/01/11 - 04/30/11	SOLARSAVER ADJUSTMENT	-0.0888 CENTS/KWH
5/01/11 - 03/31/12	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
5/01/11 - 05/31/11	IRP RECOVERY REFUND	-0.356 PERCENT ON E
6/01/11	<b>IRP RECOVERY REFUND</b>	<b>0.000 PERCENT ON E</b>
1/01/12 - 12/31/12	RESID. PBF SURCHARGE ADJUSTMENT	0.6766 CENTS/KWH
4/01/12 - 04/30/12	SOLARSAVER ADJUSTMENT	-0.2392 CENTS/KWH
5/01/12 - 03/31/13	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
4/2012 - 07/31/13	FINAL RATE INCREASE (1.51%), DOCKET NO. 2009-0163 (2010 TEST YEAR)	
1/2012 - 07/31/13	INTERIM RATE INCREASE 2012 TEST YEAR	4.02 PERCENT ON E
1/01/13 - 06/30/13	RESID. PBF SURCHARGE ADJUSTMENT	0.7850 CENTS/KWH
4/01/13 - 04/30/13	SOLARSAVER ADJUSTMENT	-0.2053 CENTS/KWH
5/01/13 - 03/31/14	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
6/01/13 - 05/31/14	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	0.8071 CENTS/KWH
7/01/13 - 06/30/14	RESID. PBF SURCHARGE ADJUSTMENT	0.8312 CENTS/KWH
8/01/13	<b>FINAL RATE INCREASE (1.25%), DOCKET NO. 2011-0092 (2012 TEST YEAR)</b>	
1/01/14 - 04/30/14	SOLARSAVER ADJUSTMENT	-0.2453 CENTS/KWH
5/01/14 - 03/31/15	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
6/01/14 - 05/31/15	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	1.6239 CENTS/KWH
7/01/14 - 11/30/14	RESID. PBF SURCHARGE ADJUSTMENT	1.0157 CENTS/KWH
2/01/14 - 06/30/15	RESID. PBF SURCHARGE ADJUSTMENT	0.7583 CENTS/KWH
2/01/14 - 06/30/15	GREEN INFRASTRUCTURE FEE	1.29 DOLLARS/MON
4/01/15 - 04/30/15	SOLARSAVER ADJUSTMENT	-0.2744 CENTS/KWH
5/01/15 - 03/31/16	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
6/01/15 - 06/07/15	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	0.0000 CENTS/KWH
6/08/15 - 05/31/16	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	1.5987 CENTS/KWH
7/01/15 - 06/30/16	RESID. PBF SURCHARGE ADJUSTMENT	0.4749 CENTS/KWH
7/01/15 - 12/31/15	GREEN INFRASTRUCTURE FEE	1.42 DOLLARS/MON
8/17/15 - 02/29/16	RENEWABLE ENERGY INFRASTRUCTURE COST RECOVERY PROVISION	0.0103 CENTS/KWH
1/01/16 - 06/30/16	GREEN INFRASTRUCTURE FEE	1.3000 DOLLARS/MON
2/01/16	<b>RENEWABLE ENERGY INFRASTRUCTURE COST RECOVERY PROVISION</b>	<b>0.0099 CENTS/KWH</b>
4/01/16 - 04/30/16	SOLARSAVER ADJUSTMENT	-0.1835 CENTS/KWH
5/01/16	<b>SOLARSAVER ADJUSTMENT</b>	<b>0.0000 CENTS/KWH</b>
6/01/16	<b>REVENUE BALANCING ACCOUNT RATE ADJUSTMENT</b>	<b>1.4082 CENTS/KWH</b>
7/01/16	<b>RESID. PBF SURCHARGE ADJUSTMENT</b>	<b>0.5865 CENTS/KWH</b>
7/01/16 - 12/31/16	GREEN INFRASTRUCTURE FEE	1.13 DOLLARS/MON
8/01/17	<b>GREEN INFRASTRUCTURE FEE</b>	<b>1.27 DOLLARS/MON</b>

Surcharges currently in effect are in bold.