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PUBLIC UTILITIES
COMMISSION

November 28, 2017

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 December 2017

Maui Electric Company, Limited's ("Maui Electric" or "Company") December 2017 Energy Cost Adjustment factor for our Maui Division is -7.839 cents per kilowatt-hour ("kWh"), a decrease of 2.534 cents per kWh from last month. A residential customer consuming 500 kWh of electricity will be paying \$145.51, a decrease of \$12.67 compared to rates effective November 1, 2017. The decrease in the typical residential bill is due to the decrease in the Energy Cost Adjustment factor.

The Company's Maui Division fuel composite cost of generation, central station and other decreased 122.27 cents per million BTU to 1,301.55 cents per million BTU. The composite cost of DG energy is 0.00 cents per kWh. The composite cost of purchased energy decreased 4.550 cents per kWh to 12.921 cents per kWh.

The Energy Cost Adjustment factor for our Lāna'i Division for December 2017 is -9.353 cents per kWh, a decrease of 1.089 cents per kWh from last month. A residential customer consuming 400 kWh of electricity will be paying \$149.55, a decrease of \$4.35 compared to rates effective November 1, 2017. The decrease in the typical residential bill is due to the decrease in the Energy Cost Adjustment factor.

The Company's Lāna'i Division fuel composite cost of generation, central station and other decreased 98.61 cents per million BTU to 1,864.77 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.

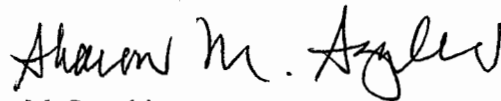
The Energy Cost Adjustment factor for our Moloka'i Division for December 2017 is -5.591 cents per kWh, a decrease of 0.679 cents per kWh from last month. A residential customer consuming 400 kWh of electricity will be paying \$150.36, a decrease of \$2.71 compared to rates effective November 1, 2017. The decrease in the typical residential bill is due to the decrease in the Energy Cost Adjustment factor.

The Honorable Chair and Members
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The Company's Moloka'i Division fuel composite cost of generation, central station and other decreased 55.36 cents per million BTU to 1,690.58 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 December 1, 2017.

Sincerely,



Sharon M. Suzuki
President

Attachments

cc: Division of Consumer Advocacy

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

ENERGY COST ADJUSTMENT FACTOR

	EFFECTIVE DATES		<u>Change</u>
	<u>11-01-17</u>	<u>12-01-17</u>	
<u>COMPOSITE COSTS</u>			
Generation, Central Station & Other, ¢/mbtu	1,963.38	1,864.77	(98.61)
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	(8.264)	(9.353)	(1.089)
<u>Others - "G,P,F"</u>			
Energy Cost Adjustment, ¢/kWh	(8.264)	(9.353)	(1.089)
<u>Residential Customer with</u>			
400 KWH Consumption, \$/Bill	153.90	149.55	(4.35)
500 KWH Consumption, \$/Bill	191.51	186.06	(5.45)

Supersedes Sheet Effective:

November 1, 2017

MAUI ELECTRIC COMPANY, LTD.
LANAI DIVISION

ENERGY COST ADJUSTMENT (ECA) FILING

ENERGY COST ADJUSTMENT (ECA) FILING - December 1, 2017 (page 1 of 2)

Line

1 Effective Date December 1, 2017
2 Supercedes Factors of November 1, 2017

GENERATION COMPONENT

<u>CENTRAL STATION</u>						
FUEL PRICES, ¢/mmbtu						
3	Industrial			0.00		
4	Diesel - Miki Basin			1,847.68		
5	Diesel - Manele Bay			1,944.83		
6	Other			0.00		
BTU MIX, %						
7	Industrial			0.00%		
8	Diesel - Miki Basin			82.41%		
9	Diesel - Manele Bay			17.59%		
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))			1,864.77		
12	% Input to System kWh Mix			90.27%		
EFFICIENCY FACTOR, mmbtu/kWh						
	(A)	(B)	(C)	(D)		
			Percent of			
	<u>Fuel Type</u>	<u>Eff Factor mmbtu/kwh</u>	<u>Centrl Stn + Other</u>	<u>Weighted Eff Factor</u>		
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))			18.77079		
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		
22	COST LESS BASE (line(17 - 21))			(7.69243)		
23	Revenue Tax Req Multiplier			1.0975		
24	CENTRAL STATION + OTHER GENERATION FACTOR, ¢/kWh (line (22 x 23))			-8.44244		
					<u>DG ENERGY COMPONENT</u>	
	25	COMPOSITE COST OF DG ENERGY, ¢/kWh		0.000		
	26	% Input to System kWh Mix		0.00%		
	27	WEIGHTED COMPOSITE DG ENERGY COST, ¢/kWh (Lines 25 x 26)		0.00000		
	28	BASE DG ENERGY COMP COST		0.000		
	29	Base % Input to System kWh Mix		0.00%		
	30	WEIGHTED BASE DG ENERGY COST, ¢/kWh (Line 28 x 29)		0.00000		
	31	Cost Less Base (Line 27 - 30)		0.00000		
	32	Loss Factor		1.0510		
	33	Revenue Tax Req Multiplier		1.0975		
	34	DG FACTOR, ¢/kWh (Line 31 x 32 x 33)		0.00000		
					SUMMARY OF	
					TOTAL GENERATION FACTOR, ¢/kWh	
	35	CNTRL STN + OTHER (line 24)		(8.44244)		
	36	DG (line 34)		-		
	37	TOTAL GENERATION FACTOR, ¢/kWh (lines 35 + 36)		(8.44244)		

MAUI ELECTRIC COMPANY, LTD.
LANAI DIVISION

ENERGY COST ADJUSTMENT (ECA) FILING

ENERGY COST ADJUSTMENT (ECA) FILING - December 1, 2017 (page 2 of 2)

Line

1 Effective Date December 1, 2017
2 Supercedes Factors of November 1, 2017

<u>Line</u>	<u>PURCHASED ENERGY COMPONENT</u>	
	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	9.73%
46	WEIGHTED COMP. PURCH. ENERGY COST, ¢/kWh (lines (44 x 45))	2.62710
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))	(0.16740)
51	Loss Factor	1.051
52	Revenue Tax Req Multiplier	1.0975
53	PURCHASED ENERGY FACTOR, ¢/kWh (lines (50 x 51 x 52))	(0.19309)

Line SYSTEM COMPOSITE CALCULATIONS

54 GENERATION AND PURCHASED ENERGY FACTOR, ¢/kWh (8.63553)
(lines (37 + 53))
55 Adjustment, ¢/kWh 0.000
56 ECA Reconciliation Adjustment (0.717)
57 ECA FACTOR, ¢/kWh (9.353)
(lines (54 + 55 + 56))

**Maui Electric Company, Ltd.
Lanai Division**

MONTH END FUEL OIL ESTIMATE

<u>Miki Basin - ULSD</u>	<u>Barrels</u>	<u>MBTU</u>	<u>\$</u>
11/20/2017	1,661.88	9,522.63	181,145.04
Estimated Use	1,439.38	8,247.65	162,697.22
Estimated Received	1,714.29	9,822.88	181,585.83
Estimated Additional	1,323.76	7,585.14	145,168.20
Estimated End	3,260.55	18,683.00	345,201.85

Next Month's Combined Miki Expense (\$/bbl) = \$ 105.8723 /bbl

<u>Manele CHP</u>	<u>Barrels</u>	<u>MBTU</u>	<u>\$</u>
11/20/2017	98.52	564.52	8,537.95
Estimated Use	5.62	32.20	621.72
Estimated Received	321.43	1,841.79	36,534.25
Estimated Additional	281.48	1,612.89	33,089.89
Estimated End	695.81	3,987.00	77,540.37

Next Month's Manele Expense (\$/bbl) = \$ 111.4387 /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	\$ 105.8723	5.73 BTU/BBL	1,847.68
Diesel - Manele Bay	\$ 111.4387	5.73 BTU/BBL	1,944.83

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

Contract Prices effective November 1, 2017

<u>TYPE OF OIL BURNED</u>	<u>\$/BBL</u>	<u>¢/MBTU</u>
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MIKI BASIN - ULTRA LOW SULFUR DIESEL (DYED)

Tax *	1.6002	27.93
Ocean Transportation	0.0000	0.00
Storage	0.0000	0.00
Wharfage	0.0000	0.00

MIKI BASIN - ULTRA LOW SULFUR DIESEL

Tax *	11.8062	206.04
Ocean Transportation	0.0000	0.00
Storage	0.0000	0.00
Wharfage	0.0000	0.00

MANELE BAY - ULTRA LOW SULFUR DIESEL

Tax *	16.2880	284.26
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, Environmental Response Tax, Customs Duty Fee, Fed Oil Spill Recovery Fee, Federal Oil Spill Liability Tax, and Federal Excise 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

December 2017

1. Amount to be refunded	(\$44,100)
2. Monthly amount (1 / 3 X Line 1)	(\$14,700)
3. Revenue Tax Divisor	0.91115
4. Total (Line 2 / Line 3)	(\$16,133)
5. Estimated Sales (December 2017)	2,251 mwh
6. Adjustment (Line 4 ÷ Line 5)	-0.717 ¢/kwh

**MAUI ELECTRIC COMPANY, LTD.
LANAI DIVISION
2017 Cumulative Reconciliation Balance**

<u>Month</u>	<u>(1)</u> YTD FOA Reconciliation	<u>Qtr</u>	<u>(2)</u> FOA Rec Adjust Variance	<u>(3)</u> FOA Rec Less Variance	<u>(4)</u> Try to Collect	<u>(5)</u> Actual Collect	<u>(6)</u> Month-end Cumulative Balance
December '16					(3,767)	(4,443)	1,351
January '17					(3,767)	(3,949)	(2,598)
February	17,200	(4)	(2,409)	19,609	(5,733)	(6,375)	10,636
March					(5,733)	(6,727)	3,909
April					(5,733)	(6,537)	(2,628)
May	19,800	(1)	(1,818)	21,618	(6,600)	(7,182)	11,808
June					(6,600)	(7,559)	4,249
July					(6,600)	(7,242)	(2,993)
August	5,800	(2)	(2,345)	8,145	(1,933)	(2,207)	2,945
September					(1,933)	(2,170)	775
October					(1,933)	(2,109)	(1,334)
November	44,100		(1,153)	45,253	(14,700)		
December					(14,700)		

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))

**Maui Electric Company, Ltd.
Lanai Division
Calculations of the Average Residential Customer Bill**

	Rate		Charge (\$) at 400 Kwh			
	11-01-17	12-01-17	11-01-17	12-01-17	Difference	
Base Rates	effective date:	08/01/13	08/01/13			
Base Fuel/Energy Charge	¢/kWh	32.2668	32.2668	129.07	129.07	0.00
Non-fuel Fuel Energy Charge						
First 250 kWhr per month	¢/kWh	9.1240	9.1240	22.81	22.81	0.00
Next 500 kWhr per month	¢/kWh	11.6240	11.6240	17.44	17.44	0.00
Customer Charge	\$	8.50	8.50	8.50	8.50	0.00
Total Base Charges				177.82	177.82	0.00
IRP Refund	% on base	0.0000	0.0000	0.00	0.00	0.00
Revenue Balancing Rate Adjustment	¢/kWh	1.5654	1.5654	6.26	6.26	0.00
PBF Surcharge	¢/kWh	0.4244	0.4244	1.70	1.70	0.00
Renewable Energy Infrastructure Cost						
Recovery Provision	¢/kWh	0.0000	0.0000	0.00	0.00	0.00
SolarSaver Adjustment	¢/kWh	0.0000	0.0000	0.00	0.00	0.00
Energy Cost Adjustment	¢/kWh	-8.264	-9.353	-33.06	-37.41	-4.35
Green Infrastructure Fee	\$	1.18	1.18	1.18	1.18	0.00
Avg Residential Bill at 400 kwh				153.90	149.55	
				Increase (Decrease -)		-4.35
				% Change		-2.83%

	Rate		Charge (\$) at 500 Kwh			
	11-01-17	12-01-17	11-01-17	12-01-17	Difference	
Base Rates	effective date:	08/01/13	08/01/13			
Base Fuel/Energy Charge	¢/kWh	32.2668	32.2668	161.33	161.33	0.00
Non-fuel Fuel Energy Charge						
First 250 kWhr per month	¢/kWh	9.1240	9.1240	22.81	22.81	0.00
Next 500 kWhr per month	¢/kWh	11.6240	11.6240	29.06	29.06	0.00
Customer Charge	\$	8.50	8.50	8.50	8.50	0.00
Total Base Charges				221.70	221.70	0.00
IRP Refund	% on base	0.0000	0.0000	0.00	0.00	0.00
Revenue Balancing Rate Adjustment	¢/kWh	1.5654	1.5654	7.83	7.83	0.00
PBF Surcharge	¢/kWh	0.4244	0.4244	2.12	2.12	0.00
Renewable Energy Infrastructure Cost						
Recovery Provision	¢/kWh	0.0000	0.0000	0.00	0.00	0.00
SolarSaver Adjustment	¢/kWh	0.0000	0.0000	0.00	0.00	0.00
Energy Cost Adjustment	¢/kWh	-8.264	-9.353	-41.32	-46.77	-5.45
Green Infrastructure Fee	\$	1.18	1.18	1.18	1.18	0.00
Avg Residential Bill at 500 kwh				191.51	186.06	
				Increase (Decrease -)		-5.45
				% Change		-2.85%

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

<u>EFFECTIVE DATE</u>	<u>FUEL FACTOR</u> <u>CENTS / KWH</u>		
	<u>RESIDENTIAL & COMMERCIAL</u>	<u>RESIDENTIAL BILL (\$) @ 400 KWH</u>	<u>RESIDENTIAL BILL (\$) @ 500 KWH</u>
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
February 1, 2017	-11.218	142.24	176.90
March 1, 2017	-10.975	143.21	178.11
April 1, 2017	-10.875	143.06	177.92
May 1, 2017	-11.993	139.14	173.02
June 1, 2017	-11.149	143.14	178.03
July 1, 2017	-11.181	142.28	176.97
August 1, 2017	-11.659	140.36	174.58
September 1, 2017	-10.389	145.40	180.88
October 1, 2017	-10.059	153.90	191.51
November 1, 2017	-8.264	153.90	191.51
December 1, 2017	-9.353	149.55	186.06

**MAUI ELECTRIC COMPANY, LTD. -- Lanai Division
RESIDENTIAL SURCHARGE DATA**

EFFECTIVE DATE	DESCRIPTION OF SURCHARGE	RATE
01/01/11 - 12/31/11	RESID. PBF SURCHARGE ADJUSTMENT	0.5944 CENTS/KWH
06/01/11	IRP RECOVERY REFUND	0.000 PERCENT ON BASE
08/01/13	FINAL RATE INCREASE (1.25%), DOCKET NO. 2011-0092 (2012 TEST YEAR)	
04/01/15 - 04/30/15	SOLARSAVER ADJUSTMENT	-0.2744 CENTS/KWH
05/01/15 - 03/31/16	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
06/01/15 - 06/07/15	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	0.0000 CENTS/KWH
06/08/15 - 05/31/16	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	1.5987 CENTS/KWH
07/01/15 - 06/30/16	RESID. PBF SURCHARGE ADJUSTMENT	0.4749 CENTS/KWH
07/01/15 - 12/31/15	GREEN INFRASTRUCTURE FEE	1.42 DOLLARS/MONTH
08/17/15 - 02/29/16	RENEWABLE ENERGY INFRASTRUCTURE COST RECOVERY PROVISION	0.0103 CENTS/KWH
01/01/16 - 06/30/16	GREEN INFRASTRUCTURE FEE	1.3000 DOLLARS/MONTH
03/01/16 - 02/28/17	RENEWABLE ENERGY INFRASTRUCTURE COST RECOVERY PROVISION	0.0099 CENTS/KWH
04/01/16 - 04/30/16	SOLARSAVER ADJUSTMENT	-0.1835 CENTS/KWH
05/01/16 - 03/31/17	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
06/01/16 - 05/31/17	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	1.4082 CENTS/KWH
07/01/16 - 06/30/17	RESID. PBF SURCHARGE ADJUSTMENT	0.5865 CENTS/KWH
07/01/16 - 12/31/16	GREEN INFRASTRUCTURE FEE	1.13 DOLLARS/MONTH
01/01/17 - 06/30/17	GREEN INFRASTRUCTURE FEE	1.27 DOLLARS/MONTH
03/01/17	RENEWABLE ENERGY INFRASTRUCTURE COST RECOVERY PROVISION	0.0098 CENTS/KWH
04/01/17 - 04/30/17	SOLARSAVER ADJUSTMENT	-0.1378 CENTS/KWH
05/01/17	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
06/01/17	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	1.5654 CENTS/KWH
07/01/17	GREEN INFRASTRUCTURE FEE	1.18 DOLLARS/MONTH
07/01/17	RESID. PBF SURCHARGE ADJUSTMENT	0.4244 CENTS/KWH

~ Surcharges currently in effect are in bold.

~ Base charges include customer charge, demand charge, energy charge, power factor adjustment, voltage discount and minimum charge.