



SHARON M. SUZUKI
President
March 27, 2018

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PUBLIC UTILITIES
COMMISSION

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

Dear Commissioners:

Subject: Maui Electric Energy Cost Adjustment Factor for April 2018

Maui Electric Company, Limited's ("Maui Electric" or "Company") April 2018 Energy Cost Adjustment factor for our Maui Division is -4.914 cents per kilowatt-hour ("kWh"), a decrease of 0.512 cents per kWh from last month. A residential customer consuming 500 kWh of electricity will be paying \$159.68, a decrease of \$3.20 compared to rates effective March 1, 2018. The decrease in the typical residential bill is due to the decrease in the Energy Cost Adjustment factor (-\$2.56) and credit for the SolarSaver adjustment (-\$0.64).

The Company's Maui Division fuel composite cost of generation, central station and other decreased 189.02 cents per million BTU to 1,298.05 cents per million BTU. The composite cost of DG energy is 0.00 cents per kWh. The composite cost of purchased energy decreased 0.510 cents per kWh to 19.115 cents per kWh.

The Energy Cost Adjustment factor for our Lāna'i Division for April 2018 is -9.141 cents per kWh, a decrease of 1.273 cents per kWh from last month. A residential customer consuming 400 kWh of electricity will be paying \$150.05, a decrease of \$5.60 compared to rates effective March 1, 2018. The decrease in the typical residential bill is due to the decrease in the Energy Cost Adjustment factor (-\$5.09) and credit for the SolarSaver adjustment (-\$0.51).

The Company's Lāna'i Division fuel composite cost of generation, central station and other decreased 110.42 cents per million BTU to 1,875.08 cents per million BTU. The composite cost of DG energy is 0.00 cents per kWh. The composite cost of purchased energy is 30.00 cents per kWh.

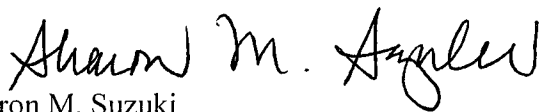
The Energy Cost Adjustment factor for our Moloka'i Division for April 2018 is -5.975 cents per kWh, a decrease of 1.038 cents per kWh from last month. A residential customer consuming 400 kWh of electricity will be paying \$148.47, a decrease of \$4.66 compared to rates effective March 1, 2018. The decrease in the typical residential bill is due to the decrease in the Energy Cost Adjustment factor (-\$4.15) and credit for the SolarSaver adjustment (-\$0.51).

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 83.99 cents per million BTU to 1,672.20 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 April 1, 2018.

Sincerely,



Sharon M. Suzuki
President

Attachments

cc: Division of Consumer Advocacy

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

ENERGY COST ADJUSTMENT FACTOR

	EFFECTIVE DATES		
	<u>03-01-18</u>	<u>04-01-18</u>	<u>Change</u>
<u>COMPOSITE COSTS</u>			
Generation, Central Station & Other, ¢/mbtu	1,985.50	1,875.08	(110.42)
DG Energy, ¢/kWh	0.00	0.00	0.00
Purchased Energy, ¢/kWh	30.00	30.00	0.00
<u>Residential Schedule "R"</u>			
Energy Cost Adjustment, ¢/kWh	(7.868)	(9.141)	(1.273)
<u>Others - "G,P,F"</u>			
Energy Cost Adjustment, ¢/kWh	(7.868)	(9.141)	(1.273)
<u>Residential Customer with</u>			
400 KWH Consumption, \$/Bill	155.65	150.05	(5.60)
500 KWH Consumption, \$/Bill	193.65	186.64	(7.01)

Supersedes Sheet Effective:

March 1, 2018

MAUI ELECTRIC COMPANY, LTD.
LANAI DIVISION

ENERGY COST ADJUSTMENT (ECA) FILING

ENERGY COST ADJUSTMENT (ECA) FILING - April 1, 2018 (page 1 of 2)

Line

- 1 Effective Date April 1, 2018
- 2 Supercedes Factors of March 1, 2018

GENERATION COMPONENT

<u>CENTRAL STATION</u>					<u>DG ENERGY COMPONENT</u>		
FUEL PRICES, ¢/mmbtu							
3	Industrial						
				0.00			
4	Diesel - Miki Basin			1,875.08			
5	Diesel - Manele Bay			2,091.20			
6	Other			0.00			
BTU MIX, %							
7	Industrial			0.00%	25	COMPOSITE COST OF DG ENERGY, ¢/kWh	
						0.000	
8	Diesel - Miki Basin			100.00%			
9	Diesel - Manele Bay			0.00%	26	% Input to System kWh Mix	
						0.00%	
10	Other			0.00%			
				100.00%	27	WEIGHTED COMPOSITE DG ENERGY COST, ¢/kWh (Lines 25 x 26)	
						0.00000	
11	COMPOSITE COST OF GENERATION, CENTRAL STATION + OTHER ¢/mmbtu (Lines (3 x 7) + (4 x 8) + (5 x 9) + (6 x 10))			1,875.08	28	BASE DG ENERGY COMP COST	
						0.000	
12	% Input to System kWh Mix			91.92%	29	Base % Input to System kWh Mix	
						0.00%	
EFFICIENCY FACTOR, mmbtu/kWh					30		WEIGHTED BASE DG ENERGY COST, ¢/kWh (Line 28 x 29)
	(A)	(B)	(C)	(D)		0.00000	
	Percent of				31	Cost Less Base (Line 27 - 30)	
						0.00000	
	<u>Fuel Type</u>	<u>Eff Factor mmbtu/kwh</u>	<u>Centrl Stn + Other</u>	<u>Weighted Eff Factor</u>	32	Loss Factor	
						1.0510	
13	Industrial	0.000000	0.00	0.000000	33	Revenue Tax Req Multiplier	
						1.0975	
14	Diesel	0.011151	100.00	0.011151	34	DG FACTOR, ¢/kWh (Line 31 x 32 x 33)	
						0.00000	
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))				19.21957		
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))				(7.24365)		
23	Revenue Tax Req Multiplier				1.0975		
24	CENTRAL STATION + OTHER GENERATION FACTOR, ¢/kWh (line (22 x 23))				-7.94991		
					SUMMARY OF TOTAL GENERATION FACTOR, ¢/kWh		
					35	CNTRL STN + OTHER (line 24)	
						(7.94991)	
					36	DG (line 34)	
						-	
					37	TOTAL GENERATION FACTOR, ¢/kWh (lines 35 + 36)	
						(7.94991)	

MAUI ELECTRIC COMPANY, LTD.
LANAI DIVISION

ENERGY COST ADJUSTMENT (ECA) FILING

ENERGY COST ADJUSTMENT (ECA) FILING - April 1, 2018 (page 2 of 2)

Line

1 Effective Date April 1, 2018
2 Supercedes Factors of March 1, 2018

<u>Line</u>	<u>PURCHASED ENERGY COMPONENT</u>	
	PURCHASED ENERGY PRICE, ¢/kWh	
38	LANAI SOLAR RESEARCH - On Peak	30.000
39	- Off Peak	30.000
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))	30.000
45	% Input to System kWh Mix	8.08%
46	WEIGHTED COMP. PURCH. ENERGY COST, ¢/kWh (lines (44 x 45))	2.42400
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))	(0.37050)
51	Loss Factor	1.051
52	Revenue Tax Req Multiplier	1.0975
53	PURCHASED ENERGY FACTOR, ¢/kWh (lines (50 x 51 x 52))	(0.42736)

Line SYSTEM COMPOSITE CALCULATIONS

54 GENERATION AND PURCHASED ENERGY FACTOR, ¢/kWh (8.37727)
(lines (37 + 53))
55 Adjustment, ¢/kWh 0.000
56 ECA Reconciliation Adjustment (0.764)
57 ECA FACTOR, ¢/kWh (9.141)
(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>
3/21/2018	2,941.21	16,853.13	320,953.99
Estimated Use	932.67	5,344.20	105,273.77
Estimated Received	1,714.29	9,822.88	184,308.46
Estimated Additional	-	-	-
Estimated End	<u>3,722.83</u>	<u>21,331.81</u>	<u>399,988.68</u>

Next Month's Combined Miki Expense (\$/bbl) = \$ 107.4421 /bbl

<u>Manele CHP</u>	<u>Barrels</u>	<u>MBTU</u>	<u>\$</u>
3/21/2018	139.90	801.63	18,398.92
Estimated Use	0.50	2.87	59.81
Estimated Received	-	-	-
Estimated Additional	<u>658.16</u>	<u>3,771.24</u>	<u>77,228.58</u>
Estimated End	<u>797.56</u>	<u>4,570.00</u>	<u>95,567.69</u>

Next Month's Manele Expense (\$/bbl) = \$ 119.8255 /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	\$ 107.4421	5.73 BTU/BBL	1,875.08
Diesel - Manele Bay	\$ 119.8255	5.73 BTU/BBL	2,091.20

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

Contract Prices effective March 1, 2018

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

Tax *	1.6020	27.96
Ocean Transportation	0.0000	0.00
Storage	0.0000	0.00
Wharfage	0.0000	0.00

MIKI BASIN - ULTRA LOW SULFUR DIESEL

Tax *	11.8080	206.07
Ocean Transportation	0.0000	0.00
Storage	0.0000	0.00
Wharfage	0.0000	0.00

MANELE BAY - ULTRA LOW SULFUR DIESEL

Tax *	16.3559	285.44
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

April 2018

1. Amount to be refunded	(\$46,500)
2. Monthly amount (1 / 3 X Line 1)	(\$15,500)
3. Revenue Tax Divisor	0.91115
4. Total (Line 2 / Line 3)	(\$17,011)
5. Estimated Sales (April 2018)	2,227 mwh
6. Adjustment (Line 4 ÷ Line 5)	-0.764 ¢/kwh

**MAUI ELECTRIC COMPANY, LTD.
LANAI DIVISION
2018 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 '17					(14,700)	(15,711)	12,481
January '18					(14,700)	(16,163)	(3,682)
February	46,500	(4)	(2,214)	48,714	(15,500)	(16,173)	28,859
March					(15,500)		
April					(15,500)		

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			
	03-01-18	04-01-18	03-01-18	04-01-18	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	-0.1278	0.00	-0.51	-0.51
Energy Cost Adjustment	¢/kWh	-7.868	-9.141	-31.47	-36.56	-5.09
Green Infrastructure Fee	\$	1.34	1.34	1.34	1.34	0.00
Avg Residential Bill at 400 kwh				155.65	150.05	
				Increase (Decrease -)		-5.60
				% Change		-3.60%

	Rate		Charge (\$) at 500 Kwh			
	03-01-18	04-01-18	03-01-18	04-01-18	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	-0.1278	0.00	-0.64	-0.64
Energy Cost Adjustment	¢/kWh	-7.868	-9.141	-39.34	-45.71	-6.37
Green Infrastructure Fee	\$	1.34	1.34	1.34	1.34	0.00
Avg Residential Bill at 500 kwh				193.65	186.64	
				Increase (Decrease -)		-7.01
				% Change		-3.62%

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

<u>EFFECTIVE DATE</u>	FUEL FACTOR CENTS / KWH		RESIDENTIAL BILL (\$)
	<u>RESIDENTIAL & COMMERCIAL</u>	<u>@ 400 KWH @ 500 KWH</u>	
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	155.65	193.65
November 1, 2017	-8.264	153.90	191.51
December 1, 2017	-9.353	149.55	186.06
January 1, 2018	-8.358	153.69	191.20
February 1, 2018	-8.395	153.54	191.01
March 1, 2018	-7.868	155.65	193.65
April 1, 2018	-9.141	150.05	186.64

**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)	
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 - 03/31/18	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
06/01/17	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	1.5654 CENTS/KWH
07/01/17 - 12/31/17	GREEN INFRASTRUCTURE FEE	1.18 DOLLARS/MONTH
07/01/17	RESID. PBF SURCHARGE ADJUSTMENT	0.4244 CENTS/KWH
01/01/18	GREEN INFRASTRUCTURE FEE	1.34 DOLLARS/MONTH
04/01/18	SOLARSAVER ADJUSTMENT	-0.1278 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.