

March 27, 2019

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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 April 2019

Maui Electric Company, Limited's ("Maui Electric" or "Company") April 2019 Energy Cost Adjustment factor for our Maui Division is -5.441 cents per kilowatt-hour ("kWh"), an increase of 0.398 cents per kWh from last month. A residential customer consuming 500 kWh of electricity will be paying \$163.99, an increase of \$1.55 compared to rates effective March 1, 2019. The increase in the typical residential bill is due to the increase in the Energy Cost Adjustment factor (+\$1.99), partially offset by the decrease in the Purchase Power Adjustment (-\$0.01), and credit for the Solar Saver Adjustment (-\$0.43).

The Company's Maui Division fuel composite cost of generation, central station and other decreased 3.17 cents per million BTU to 1,402.41 cents per million BTU. The composite cost of DG energy is 0.00 cents per kWh. The composite cost of purchased energy decreased 0.047 cents per kWh to 19.831 cents per kWh.

The Energy Cost Adjustment factor for our Lāna'i Division for April 2019 is -6.801 cents per kWh, a decrease of 0.76 cents per kWh from last month. A residential customer consuming 400 kWh of electricity will be paying \$166.07, a decrease of \$3.38 compared to rates effective March 1, 2019. The decrease in the typical residential bill is due to the decrease in the Energy Cost Adjustment factor (-\$3.04) and credit for the Solar Saver Adjustment (-\$0.34).

The Company's Lāna'i Division fuel composite cost of generation, central station and other decreased 65.74 cents per million BTU to 2,032.37 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 2019 is -5.034 cents per kWh, a decrease of 0.162 cents per kWh from last month. A residential customer consuming 400 kWh of electricity will be paying \$158.51, a decrease of \$0.99 compared to rates effective March 1, 2019. The decrease in the typical residential bill is due to

The Honorable Chair and Members of the Hawai'i Public Utilities Commission March 27, 2019 Page 2

the decrease in the Energy Cost Adjustment factor (-\$0.65) and credit for the Solar Saver Adjustment (-\$0.34).

The Company's Moloka'i Division fuel composite cost of generation, central station and other decreased 13.36 cents per million BTU to 1,723.24 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, 2019.

Sincerely,

Sharon M. Suzuki

President

Attachments

cc: Division of Consumer Advocacy

ENERGY COST ADJUSTMENT FACTOR

	EFFECTIVE DATES		
	<u>03-01-19</u>	<u>04-01-19</u>	<u>Change</u>
COMPOSITE COSTS Generation, Central Station & Other, ¢/mbtu DG Energy, ¢/kWh Purchased Energy, ¢/kWh	2,098.11 0.00 30.00	2,032.37 0.00 30.00	(65.74) 0.00 0.00
r dichased Energy, ¢/kwin	30.00	30.00	0.00
Residential Schedule "R"			
Energy Cost Adjustment, ¢/kWh	(6.041)	(6.801)	(0.760)
Others - "G,P,F"			
Energy Cost Adjustment, ¢/kWh	(6.041)	(6.801)	(0.760)
Residential Customer with			
400 KWH Consumption, \$/Bill	169.45	166.07	(3.38)
500 KWH Consumption, \$/Bill	210.86	206.63	(4.23)

Supersedes Sheet Effective:

March 1, 2019

ENERGY COST ADJUSTMENT (ECA) FILING

ENERGY COST ADJUSTMENT (ECA) FILING - April 1, 2019 (page 1 of 2)

Line

	1	Effective Date	April 1, 2019
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2 Supercedes Factors of March 1, 2019

GENERATION COMPONENT

			1	
	CENTRAL STATION			
0	FUEL PRICES, ¢/mmbtu	0.00		
-	Industrial	0.00		
	Diesel - Miki Basin	2,004.01		
	Diesel - Manele Bay	2,429.91		
6	Other	0.00		
_	BTU MIX, %		DG ENERGY COMPONENT	
	Industrial	0.00%	25 COMPOSITE COST OF DG	
	Diesel - Miki Basin	93.34%	ENERGY, ¢/kWh	0.000
	Diesel - Manele Bay	6.66%		
10	Other	0.00%	26 % Input to System kWh Mix	0.00%
		100.00%		
			27 WEIGHTED COMPOSITE DG ENERGY	
11	COMPOSITE COST OF GENERATION,		COST, ¢/kWh (Lines 25 x 26)	0.00000
	CENTRAL STATION + OTHER ¢/mmbtu	2,032.37		
	(Lines (3 x 7) + (4 x 8) + (5 x 9) + (6 x 10))			
12	% Input to System kWh Mix	92.70%	28 BASE DG ENERGY COMP COST	0.000
			29 Base % Input to System kWh Mix	0.00%
	EFFICIENCY FACTOR, mmbtu/kWh		30 WEIGHTED BASE DG ENERGY COST,	
	(A) (B) (C)	(D)	¢/kWh (Line 28 x 29)	0.00000
	Percent of			
	Eff Factor Centrl Stn +	Weighted	31 Cost Less Base (Line 27 - 30)	0.00000
	Fuel Type mmbtu/kwh Other	Eff Factor	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,	
15	Other 0.011151 0.00	0.000000	¢/kWh (Line 31 x 32 x 33)	0.00000
	(Lines 13, 14, 15): Col(B) x Col(C) = Col(E	D)		
16	Weighted Efficiency Factor, mmbtu/kWh	,		
	[lines 13(D) + 14(D) + 15(D)]	0.011151		
17	WEIGHTED COMPOSITE CENTRAL STAT	ION +		
	OTHER GEN COST, ¢/kWh			
	(lines (11 x 12 x 16))	21.00856		
18	BASE CENTRAL STATION + OTHER GENI	ERATION		
	COST, ¢/mmbtu	2,647.15		
19	Base % Input to Sys kWh Mix	89.65%		
	Efficiency Factor, mmbtu/kwh	0.011151		
	WEIGHTED BASE CENTRAL STATION +			
	OTHER GENERATION COST ¢/kWh			
	(lines (18 x 19 x 20))	26.46322		
	(intes (10 x 15 x 20))	20.40322	SUMMARY OF	
22	COST LESS BASE (line(17 - 21))	(5.45466)	TOTAL GENERATION FACTOR, ¢/kWh	
	Revenue Tax Reg Multiplier	(3.43400)		(5.98649)
	CENTRAL STATION + OTHER GENERATIO		36 DG (line 34)	(0.00040)
24		-5.98649	36 DG (line 34) 37 TOTAL GENERATION FACTOR,	-
	FACTOR, ¢/kWh (line (22 x 23))	-0.90049	-	(5.98649)
				(0.90049)

ENERGY COST ADJUSTMENT (ECA) FILING

ENERGY COST ADJUSTMENT (ECA) FILING - April 1, 2019 (page 2 of 2)

Line

1 Effective Date	April 1, 2019
2 Supercedes Factors of	March 1, 2019

Line	PURCHASED ENERGY COMPOR	NENT
38 39	PURCHASED ENERGY PRICE, ¢/kWh LANAI SOLAR RESEARCH - On Peak - Off Peak	30.000 30.000
40	Sch Q	0.000
41 42	PURCHASED ENERGY KWH MIX, % LANAI SOLAR RESEARCH - On Peak - Off Peak	100.00% 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
	% Input to System kWh Mix WEIGHTED COMP. PURCH. ENERGY COST, ¢/kWh (lines (44 x 45))	7.30% 2.19000
	BASE PURCHASED ENERGY COMPOSITE COST, ¢/kWh Base % Input to Sys kWh Mix	27.000 10.35
49	WEIGHTED BASE PURCHASED ENERGY COST, ¢/kWh (lines (47 x 48))	2.79450
52	Loss Factor Revenue Tax Req Multiplier	(0.60450) 1.051 1.0975
53	PURCHASED ENERGY FACTOR, ¢/kWh (lines (50 x 51 x 52))	(0.69727)

Line SYSTEM COMPOSITE CALCULATIONS

54 GENERATION AND PURCHASED ENERGY		
	FACTOR, ¢/kWh	(6.68376)
	(lines (37 + 53))	
55	Adjustment, ¢/kWh	0.000
56	ECA Reconciliation Adjustment	(0.117)
57	ECA FACTOR, ¢/kWh	(6.801)

(lines (54 + 55 + 56))

Maui Electric Company, Ltd. Lanai Division

MONTH END FUEL OIL ESTIMATE

<u> Miki Basin - ULSD</u>	Barrels		MBTU	\$
3/20/2019	3,420.71		19,600.68	404,450.13
Estimated Use	1,465.26		8,395.94	174,169.57
Estimated Received	1,595.24		9,140.73	178,798.49
Estimated Additional	880.20		5,043.53	99,719.67
Estimated End	4,430.89		25,389.00	508,798.72
Next Month's Combined Miki Exp	ense (\$/bbl)	=	\$ 114.8299 /bbl	
Manele CHP	Barrels		MBTU	\$
3/20/2019	154.17		883.39	28,594.42
Estimated Use	44.45		254.70	6,476.91
Estimated Received	357.14		2,046.41	42,885.19
Estimated Additional	-			
Estimated End	466.86		2,675.10	65,002.70
Next Month's Manele Expense (\$	s/bbl)	=	\$ 139.2338 /bbl	

FUEL OIL INVENTORY PRICE USED FOR FILING

Type of Oil Burned	Price	Conversion Factor	Prices ¢/MBTU
Diesel - Miki Basin	\$ 114.8299	5.73 BTU/BBL	2,004.01
Diesel - Manele Bay	\$ 139.2338	5.73 BTU/BBL	2,429.91

Contract Prices effective March 1, 2019

TYPE OF OIL BURNED	\$/BBL	¢/MBTU
<u>MIKI BASIN - ULTRA LOW</u>	<u>' SULFUR DIESE</u>	<u>:L (DYED)</u>
Tax *	1.5120	26.39
Ocean Transportation	0.0000	0.00
Storage	0.0000	0.00
Wharfage	0.0000	0.00
<u> MIKI BASIN - ULTRA LOW SULFUR DIESEL</u>		

Tax *	16.4600	287.26
Ocean Transportation	0.0000	0.00
Storage	0.0000	0.00
Wharfage	0.0000	0.00

MANELE BAY - ULTRA LOW SULFUR DIESEL

Tax *	16.4600	287.26
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

April 2019

1. Amount to be refunded	(\$8,600)
2. Monthly amount (1 / 3 X Line 1)	(\$2,867)
3. Revenue Tax Divisor	0.91115
4. Total (Line 2 / Line 3)	(\$3,147)
5. Estimated Sales (April 2019)	2,687 mwh
6. Adjustment (Line 4 ÷ Line 5)	-0.117 ¢/kwh

MAUI ELECTRIC COMPANY, LTD. LANAI DIVISION 2019 Cumulative Reconciliation Balance

	(1) YTD FOA	(2) FOA Rec Adjust	(3) FOA Rec Less	(4) Try to	(5) Actual	(6) Month-end Cumulative
<u>Month</u>	Reconciliation Qtr	Variance	<u>Variance</u>	<u>Collect</u>	<u>Collect</u>	Balance
December '18 January '19 February March April	8,600 (4)	(386)	8,986	(11,867) (11,867) (2,867) (2,867) (2,867)	(11,797) (11,150) (1,424)	11,475 325 7,887
NOTES:						
Col(1):	Quarterly FOA rec A positive number		```		,	er-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):	ol(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		
		03-01-19	04-01-19	03-01-19	04-01-19	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	0.3183	0.3183	1.27	1.27	0.00
PBF Surcharge	¢/kWh	0.4658	0.4658	1.86	1.86	0.00
Renewable Energy Infrastructure Cost						
Recovery Provision	¢/kWh	0.0000	0.0000	0.00	0.00	0.00
SolarSaver Adjustment	¢/kWh	0.0000	-0.0855	0.00	-0.34	-0.34
Interim Rate Increase (Test Year 2018)	% on Base	6.36	6.36	11.31	11.31	0.00
Energy Cost Adjustment	¢/kWh	-6.041	-6.801	-24.16	-27.20	-3.04
Green Infrastructure Fee	\$	1.35	1.35	1.35	1.35	0.00

Avg Residential Bill at 400 kwh

Increase (Decrease -) % Change

169.45

-3.38 -1.99%

0.00

0.00

0.00

0.00

0.00

0.00

0.00

0.00

0.00 -0.43

0.00

-3.80 0.00

166.07

04-01-19 Difference

	Rate		Charge (\$) at 50		00 Kwh	
		03-01-19	04-01-19	03-01-19	04-01-19	Differen
Base Rates	effective date:	08/01/13	08/01/13			
Base Fuel/Energy Charge	¢/kWh	32.2668	32.2668	161.33	161.33	C
Non-fuel Fuel Energy Charge						
First 250 kWhr per month	¢/kWh	9.1240	9.1240	22.81	22.81	C
Next 500 kWhr per month	¢/kWh	11.6240	11.6240	29.06	29.06	C
Customer Charge	\$	8.50	8.50	8.50	8.50	C
Total Base Charges				221.70	221.70	C
IRP Refund	% on base	0.0000	0.0000	0.00	0.00	0
Revenue Balancing Rate Adjustment	¢/kWh	0.3183	0.3183	1.59	1.59	0
PBF Surcharge	¢/kWh	0.4658	0.4658	2.33	2.33	C
Renewable Energy Infrastructure Cost						
Recovery Provision	¢/kWh	0.0000	0.0000	0.00	0.00	0
SolarSaver Adjustment	¢/kWh	0.0000	-0.0855	0.00	-0.43	-0
Interim Rate Increase (Test Year 2018)	% on Base	6.36	6.36	14.10	14.10	C
Energy Cost Adjustment	¢/kWh	-6.041	-6.801	-30.21	-34.01	-3
Green Infrastructure Fee	\$	1.35	1.35	1.35	1.35	C

Avg Residential Bill at 500 kwh

210.86 206.63 Increase (Decrease -) % Change

-4.23 -2.01%

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

	FUEL FACTOR CENTS / KWH		
	RESIDENTIAL &	RESIDENT	IAL BILL (\$)
EFFECTIVE DATE		@ 400 KWH	
		<u> </u>	
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	169.45	210.86
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
May 1, 2018	-7.716	156.26	194.41
June 1, 2018	-6.144	163.86	203.92
July 1, 2018	-5.753	165.46	205.95
August 1, 2018	-7.005	160.45	199.69
September 1, 2018	-6.735	166.53	207.25
October 1, 2018	-6.372	167.98	209.07
November 1, 2018	-6.037	169.32	210.74
December 1, 2018	-5.396	171.89	213.95
January 1, 2019	-6.950	165.81	206.32
February 1, 2019	-8.789	158.45	197.12
March 1, 2019	-6.041	169.45	210.86
April 1, 2019	-6.801	166.07	206.63
, pin 1, 2010	0.001	100.07	200.00

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

EFFECTIVE DATE	DESCRIPTION OF SURCHARGE	DESCRIPTION OF SURCHARGE RATE				
01/01/11 - 12/31/11	RESID. PBF SURCHARGE ADJUSTMENT	0.5944	CENTS/KWH			
06/01/11	IRP RECOVERY REFUND		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	0.0099	CENTS/KWH			
	RECOVERY PROVISION					
04/01/16 - 04/30/16	SOLARSAVER ADJUSTMENT	-0.1835	CENTS/KWH			
05/01/16 - 03/31/17	SOLARSAVER ADJUSTMENT		CENTS/KWH			
06/01/16 - 05/31/17	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT		CENTS/KWH			
07/01/16 - 06/30/17	RESID. PBF SURCHARGE ADJUSTMENT		CENTS/KWH			
07/01/16 - 12/31/16	GREEN INFRASTRUCTURE FEE		DOLLARS/MONTH			
01/01/17 - 06/30/17	GREEN INFRASTRUCTURE FEE		DOLLARS/MONTH			
03/01/17 - 08/16/17	RENEWABLE ENERGY INFRASTRUCTURE COST	0.0098	CENTS/KWH			
04/04/47 04/00/47		0 4070				
04/01/17 - 04/30/17	SOLARSAVER ADJUSTMENT		CENTS/KWH			
05/01/17 - 03/31/18	SOLARSAVER ADJUSTMENT		CENTS/KWH			
06/01/17 - 05/31/18 07/01/17 - 12/31/17	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT GREEN INFRASTRUCTURE FEE		CENTS/KWH			
07/01/17 - 12/31/17	RESID. PBF SURCHARGE ADJUSTMENT		DOLLARS/MONTH CENTS/KWH			
07/01/17 - 00/30/18 08/17/17	RESID. PER SURCHARGE ADJUSTMENT RENEWABLE ENERGY INFRASTRUCTURE COST		CENTS/KWH			
00/17/17	RECOVERY PROVISION	0.0000	CENTS/RWIT			
01/01/18 - 06/30/18	GREEN INFRASTRUCTURE FEE	1.34	DOLLARS/MONTH			
04/01/18 - 04/30/18	SOLARSAVER ADJUSTMENT		CENTS/KWH			
05/01/18 - 03/31/19	SOLARSAVER ADJUSTMENT	0.0000	CENTS/KWH			
06/01/18 - 08/22/18	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	1.8954	CENTS/KWH			
07/01/18	RESID. PBF SURCHARGE ADJUSTMENT	0.4658	CENTS/KWH			
07/01/18 - 12/31/18	GREEN INFRASTRUCTURE FEE	1.21	DOLLARS/MONTH			
08/23/18	INTERIM RATE INCREASE 2018 TEST YEAR	6.36	PERCENT ON BASE			
08/23/18	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	0.3183	CENTS/KWH			
01/01/19	GREEN INFRASTRUCTURE FEE	1.35	DOLLARS/MONTH			
04/01/18	SOLARSAVER ADJUSTMENT	-0.0855	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.