

FILED

2017 SEP 29 P 4: 16

September 29, 2017

PUBLIC UTHATIES 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 October 2017 (REVISED 9/29/2017)

Maui Electric Company, Limited ("Maui Electric" or "Company") hereby resubmits its October 2017 Energy Cost Adjustment filing to correct the calculations of the typical residential bills for September 2017 and October 2017. There are no changes to the energy cost adjustment factors for September 2017 and October 2017 as filed on August 29, 2017 and September 27, 2017, respectively.

The Company's Energy Cost Adjustment factor for our Maui Division for October 2017 is -7.391 cents per kilowatt-hour ("kWh"), an increase of 1.887 cents per kWh from last month. A residential customer consuming 500 kWh of electricity will be paying \$147.64, an increase of \$9.45 compared to rates effective September 1, 2017. The increase in the typical residential bill is due to the increase in the Energy Cost Adjustment factor (+\$9.44) and the increase in the Purchased Power Adjustment Clause rate (+\$0.01).

The Company's Maui Division fuel composite cost of generation, central station and other increased 158.10 cents per million BTU to 1,215.14 cents per million BTU. The composite cost of DG energy is 0.00 cents per kWh. The composite cost of purchased energy decreased 0.097 cents per kWh to 18.050 cents per kWh.

The Energy Cost Adjustment factor for our Lāna'i Division for October 2017 is -10.059 cents per kWh, an increase of 0.330 cents per kWh from last month. A residential customer consuming 400 kWh of electricity will be paying \$146.72, an increase of \$1.32 compared to rates effective September 1, 2017. The increase in the typical residential bill is due to the increase in the Energy Cost Adjustment factor.

The Company's Lāna'i Division fuel composite cost of generation, central station and other increased 30.87 cents per million BTU to 1,744.93 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 Honorable Chair and Members of the Hawai'i Public Utilities Commission September 29, 2017 Page 2

The Energy Cost Adjustment factor for our Moloka'i Division for October 2017 is -9.093 cents per kWh, an increase of 1.599 cents per kWh from last month. A residential customer consuming 400 kWh of electricity will be paying \$136.35, an increase of \$6.40 compared to rates effective September 1, 2017. The increase in the typical residential bill is due to the increase in the Energy Cost Adjustment factor.

The Company's Moloka'i Division fuel composite cost of generation, central station and other increased 130.79 cents per million BTU to 1,398.62 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 October 1, 2017.

For the Commission's convenience, Maui Electric is refiling all of the attachments included in the September 27, 2017 filing. The revised attachments are notated with "Revised 9/29/2017" in the headers; the other attachments are unchanged.

Sincerely, Aharm M. Agalii

Sharon M. Suzuki

President

Attachments

cc: Division of Consumer Advocacy

ENERGY COST ADJUSTMENT FACTOR

	EFFECTIVE DATES		
	<u>09-01-17</u>	<u>10-01-17</u>	<u>Change</u>
COMPOSITE COSTS Generation, Central Station & Other, ¢/mbtu DG Energy, ¢/kWh Purchased Energy, ¢/kWh	1,714.06 0.00 27.00	1,744.93 0.00 27.00	30.87 0.00 0.00
Residential Schedule "R"			
Energy Cost Adjustment, ¢/kWh	(10.389)	(10.059)	0.330
Others - "G,P,F"			
Energy Cost Adjustment, ¢/kWh	(10.389)	(10.059)	0.330
Residential Customer with			
400 KWH Consumption, \$/Bill	145.40 ¹	146.72 1	1.32
500 KWH Consumption, \$/Bill	180.88 ¹	182.53 ¹	1.65

¹ Reflects correction to the typical residential bill calculation.

Supersedes Sheet Effective: September 1, 2017

ENERGY COST ADJUSTMENT (ECA) FILING

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

Line
1 Effective Date October 1, 2017 2 Supercedes Factors of September 1, 2017

GENERATION COMPONENT

	CENTRAL STATION		1	
	FUEL PRICES, ¢/mmbtu			
2	Industrial	0.00		
-	Diesel - Miki Basin	1,698.82		
		1,973.77		
	Diesel - Manele Bay	,		
ь	Other	0.00		
	BTU MIX, %		DG ENERGY COMPONENT	
7	Industrial	0.00%	25 COMPOSITE COST OF DG	
8	Diesel - Miki Basin	83.23%	ENERGY, ¢/kWh	0.000
9	Diesel - Manele Bay	16.77%		
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	1,744.93	, , , ,	
	(Lines $(3 \times 7) + (4 \times 8) + (5 \times 9) + (6 \times 10)$)			
12	% Input to System kWh Mix	90.37%	28 BASE DG ENERGY COMP COST	0.000
	, a mpar to Cyclem NTTH Mint	00.0.70	29 Base % Input to System kWh Mix	0.00%
	EFFICIENCY FACTOR, mmbtu/kWh		30 WEIGHTED BASE DG ENERGY COST.	0.0070
	(A) (B) (C)	(D)	¢/kWh (Line 28 x 29)	0.00000
	Percent of	(D)	WALLETT CON 20 X 20)	0.00000
	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	0.000000		1.0975
15	Other 0.011151 100.00	0.000000	34 DG FACTOR,	0.00000
15			¢/kWh (Line 31 x 32 x 33)	0.00000
40	(Lines 13, 14, 15): Col(B) x Col(C) = Col(ט)		
16	Weighted Efficiency Factor, mmbtu/kWh	0.044454		
	[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))	17.58394		
18	BASE CENTRAL STATION + OTHER GEN	FRATION		
10	COST, ¢/mmbtu	2,647.15		
10	Base % Input to Sys kWh Mix	89.65%		
	Efficiency Factor, mmbtu/kwh	0.011151		
	WEIGHTED BASE CENTRAL STATION +	0.011101		
	OTHER GENERATION COST ¢/kWh			
	•	26 46222		
	(lines (18 x 19 x 20))	26.46322	SUMMARY OF	
-00	COST LESS DASE (#(47, 04))	(0.07000)	SUMMARY OF	
	COST LESS BASE (line(17 - 21))	(8.87928)		
	Revenue Tax Req Multiplier	1.0975	,	(9.74501)
24	CENTRAL STATION + OTHER GENERATI	_	36 DG (line 34)	-
	FACTOR, ¢/kWh (line (22 x 23))	-9.74501	37 TOTAL GENERATION FACTOR,	(0 = /== ::
			¢/kWh (lines 35 + 36)	(9.74501)

ENERGY COST ADJUSTMENT (ECA) FILING

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

Line 1 Effective Date October 1, 2017 2 Supercedes Factors of September 1, 2017

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7.000 7.000
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0.00% 0.00%
0.00%
7.000 9.63%
9.03% 60010
7.000 10.35
'9450
9440) 1.051 .0975 22424)
1

SYSTEM COMPOSITE CALCULATIONS <u>Line</u>

54	54 GENERATION AND PURCHASED ENERGY		
	FACTOR, ¢/kWh	(9.96925)	
	(lines (37 + 53))		
55	Adjustment, ¢/kWh	0.000	
56	ECA Reconciliation Adjustment	(0.090)	
57	ECA FACTOR, ¢/kWh	(10.059)	
	(lines (54 + 55 + 56))		

Maui Electric Company, Ltd. Lanai Division

MONTH END FUEL OIL ESTIMATE

Miki Basin - ULSD	Barrels	MBTU	\$
9/20/2017	3,787.98	21,705.07	366,012.48
Estimated Use	1,171.98	6,715.45	111,750.38
Estimated Received	833.33	4,774.98	81,504.51
Estimated Additional			<u> </u>
Estimated End	3,449.33	19,764.60	335,766.61

Next Month's Combined Miki Expense (\$/bbl) = \$ 97.3426 /bbl

Manele CHP	Barrels	MBTU	\$
9/20/2017	164.90	944.88	18,269.62
Estimated Use	254.98	1,461.04	27,340.06
Estimated Received	321.43	1,841.79	33,815.82
Estimated Additional	462.19	2,648.37	53,692.52
Estimated End	693.54	3,974.00	78,437.90

Next Month's Manele Expense (\$/bbl) = \$ 113.0973 /bbl

FUEL OIL INVENTORY PRICE USED FOR FILING

Type of Oil Burned	<u>Price</u>	Conversion Factor	Prices ¢/MBTU
Diesel - Miki Basin Diesel - Manele Bay			1,698.82 1,973.77

Contract Prices effective September 1, 2017

TYPE OF OIL BURNED	\$/BBL	¢/MBTU
MIKI BASIN - ULTRA LOV	SULFUR DIESE	L (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 LOV	V SIII EIID DIESE	:1
Tax *	11.8062	<u>:L</u> 206.04
Ocean Transportation	0.0000	0.00
Storage	0.0000	0.00
Wharfage	0.0000	0.00
MANELE BAY - ULTRA LO	OW SULFUR DIE	SEL
Tax *	15.9497	278.35
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

October 2017

1.	Amount to be refunded	(\$5,800)	
2.	Monthly amount (1/3 X Line 1)	(\$1,933)	
3.	Revenue Tax Divisor	0.91115	
4.	Total (Line 2 / Line 3)	(\$2,121)	
5.	Estimated Sales (October 2017)	2,350	mwh
6.	Adjustment (Line 4 ÷ Line 5)	-0.090	¢/kwh

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

<u>Month</u>	(1) YTD FOA Reconciliation Qtr	(2) FOA Rec Adjust <u>Variance</u>	(3) FOA Rec Less <u>Variance</u>	(4) Try to Collect	(5) Actual Collect	(6) Month-end Cumulative <u>Balance</u>
December '16 January '17 February March April	17,200 (4)	(2,409)	19,609	(3,767) (3,767) (5,733) (5,733) (5,733)	(4,443) (3,949) (6,375) (6,727) (6,537)	1,351 (2,598) 10,636 3,909 (2,628)
May June July	19,800 (1)	(1,818)	21,618	(6,600) (6,600) (6,600)	(7,182) (7,559) (7,242)	11,808 4,249 (2,993)
August September October	5,800 (2)	(2,345)	8,145	(1,933) (1,933) (1,933)	(2,207)	2,945
NOTES:						
Col(1):	Quarterly FOA red A positive number		•		•	r-collection.
Col(2):	FOA reconciliation starting with the for sales used to derividual (Col(5) - Col(4))	n adjustment ourth prior m	variance acc onth; the diffe	umulated durir rence betweer	ng the last thing the thing the thick the thic	ree months, ed recorded

FOA reconciliation generated in the current quarter. The YTD FOA reconciliation

Cumulative balance of the FOA reconciliation (Previous balance + Col(3) + Col(5))

Amount that the FOA reconciliation adjustment is trying to collect. (Col(1) * 1/3)

Actual collected amount. (recorded sales * \$/kwh adjustment/1.09751)

difference minus the adjustment variance. Col(1) - Col(2)

Col(3):

Col(4): Col(5):

Col(6):

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

Rase	Rates

Base Fuel/Energy Charge Non-fuel Fuel Energy Charge First 250 kWhr per month Next 500 kWhr per month Customer Charge Total Base Charges

IRP Refund

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

Energy Cost Adjustment Green Infrastructure Fee

Avg Residential Bill at 400 kwh

Rate					
	09/01/17	10/01/17			
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	1.5654	1.5654			
¢/kWh	0.4244	0.4244			
¢/kWh	0.0000^{-1}	0.0000 1			
¢/kWh	0.0000	0.0000			
¢/kWh	-10.3890	-10.0590			
\$	1.1800	1.1800			

Charge (\$) at 400 Kwh			
09-01-17	10-01-17 Difference		
129.07	129.07	0.00	
22.04	22.04	0.00	
22.81	22.81	0.00	
17.44	17.44	0.00	
8.50	8.50	0.00	
177.82	177.82	0.00	
0.00	0.00	0.00	
6.26	6.26	0.00	
1.70	1.70	0.00	
0.00	0.00	0.00	
0.00	0.00	0.00	
-41.56	-40.24	1.32	
1.18	1.18	0.00	
145.40	146.72		

Increase (Decrease -) % Change

1.32 0.91%

Base Rates

Base Fuel/Energy Charge Non-fuel Fuel Energy Charge First 250 kWhr per month Next 500 kWhr per month Customer Charge Total Base Charges

IRP Refund

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

Energy Cost Adjustment Green Infrastructure Fee

Avg Residential Bill at 500 kwh

	Rate	
	09/01/17	10/01/17
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	1.5654	1.5654
¢/kWh	0.4244	0.4244
<i>p</i> /	0	0
¢/kWh	0.0000 ¹	0.0000 1
¢/kWh	0.0000	0.0000
<i>p</i> ,	3.2300	3.5300
¢/kWh	-10.3890	-10.0590
\$	1.1800	1.1800

Charge (\$) at 500 Kwh			
09-01-17	10-01-17	Difference	
161.33	161.33	0.00	
22.81	22.81	0.00	
29.06	29.06	0.00	
8.50	8.50	0.00	
221.70	221.70	0.00	
0.00	0.00	0.00	
7.83	7.83	0.00	
2.12	2.12	0.00	
0.00	0.00	0.00	
0.00	0.00	0.00	
-51.95	-50.30	1.65	
1.18	1.18	0.00	
180.88	182.53		

Increase (Decrease -) % Change

1	.65
0.9	1%

¹ Reflects updated REIP rate.

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

FUEL FACTOR CENTS / KWH

	RESIDENTIAL &	RESIDENTI	ΔΙ RII (\$)
EFFECTIVE DATE	COMMERCIAL		@ 500 KWH
LITEOTIVE DATE	COMMERCIAL	<u> </u>	<u>© 300 KWII</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
December 1, 2010	11.004	142.00	177.01
January 1, 2016	-12.957	125.62	160 60
January 1, 2016 February 1, 2016	-12.957 -14.236	135.62 130.51	168.62 162.23
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 ¹	180.88 ¹
October 1, 2017	-10.059	146.72 ¹	182.53 ¹

¹ Reflects correction to the typical residential bill calculation.

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		PERCENT ON BASE
08/01/13	FINAL RATE INCREASE (1.25%), DOCKET NO. 2011-0092 (2	012 TEST YI	EAR)
04/01/15 - 04/30/15	SOLARSAVER ADJUSTMENT		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	0.0103	CENTS/KWH
	RECOVERY PROVISION		
01/01/16 - 06/30/16	GREEN INFRASTRUCTURE FEE		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		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 03/01/17 - 08/16/17	GREEN INFRASTRUCTURE FEE RENEWABLE ENERGY INFRASTRUCTURE COST		DOLLARS/MONTH CENTS/KWH
03/01/17 - 06/16/17	RECOVERY PROVISION	0.01	CENTS/KWH
04/01/17 - 04/30/17	SOLARSAVER ADJUSTMENT	-0 1378	CENTS/KWH
05/01/17 - 0-7/30/17	SOLARSAVER ADJUSTMENT		CENTS/KWH
06/01/17	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT		CENTS/KWH
07/01/17	GREEN INFRASTRUCTURE FEE		DOLLARS/MONTH
07/01/17	RESID. PBF SURCHARGE ADJUSTMENT		CENTS/KWH
08/17/17	RENEWABLE ENERGY INFRASTRUCTURE COST		CENTS/KWH
	RECOVERY PROVISION		

Surcharges currently in effect are in bold.
 Base charges include customer charge, demand charge, energy charge, power factor adjustment, voltage discount and minimum charge.