



July 27, 2023

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 Recovery Factor for August 2023

Maui Electric Company, Limited's ("Maui Electric" or "Company") August 2023 Energy Cost Recovery factor for our Maui Division is 21.982 cents per kilowatt-hour ("kWh"), a decrease of 1.140 cents per kWh from last month. A residential customer consuming 500 kWh of electricity will be paying \$200.38, a decrease of \$5.30 compared to rates effective July 1, 2023. The decrease in the typical residential bill is due to the decrease in the Energy Cost Recovery factor (-\$5.70) and Purchase Power Adjustment (-\$0.01), partially offset by the increase in the Residential DSM Adjustment (+\$0.36) and the increase in the impact of the RBA Rate Adjustment (+\$0.05).

The Company's Maui Division fuel composite cost of generation, central station and other increased 34.610 cents per million BTU to 1,849.57 cents per million BTU. The composite cost of DG energy is 0.00 cents per kWh. The composite cost of purchased energy decreased 0.231 cents per kWh to 20.474 cents per kWh.

The Energy Cost Recovery factor for our Lāna'i Division for August 2023 is 27.992 cents per kWh, a decrease of 0.456 cents per kWh from last month. A residential customer consuming 400 kWh of electricity will be paying \$188.67, a decrease of \$1.82 compared to rates effective July 1, 2023. The decrease in the typical residential bill is due to the decrease in the Energy Cost Recovery factor.

The Company's Lāna'i Division fuel composite cost of generation, central station and other increased 46.09 cents per million BTU to 2,496.70 cents per million BTU. The composite cost DG energy is 0.00 cents per kWh. The composite cost of purchased energy is 30.00 cents per kWh.

The Energy Cost Recovery factor for our Moloka'i Division for August 2023 is 24.734 cents per kWh, an increase of 0.267 cents per kWh from last month. A residential customer consuming 400 kWh of electricity will be paying \$183.64, an increase of \$1.07 compared to rates effective July 1, 2023. The increase in the typical residential bill is due to the increase in the Energy Cost Recovery 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 increased 65.26 cents per million BTU to 2,064.04 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 August 1, 2023.

Sincerely,

/s/ Dean K. Matsuura  
Dean K. Matsuura  
Director, Regulatory Rate Proceedings  
Hawaiian Electric Company, Inc.

Attachments

cc: Division of Consumer Advocacy

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

**ENERGY COST RECOVERY FACTOR**

	EFFECTIVE DATES		
	<u>7/01/2023</u>	<u>8/01/2023</u>	<u>Change</u>
<u>COMPOSITE COSTS</u>			
Generation, Central Station & Other, ¢/mbtu	1,814.96	1,849.57	34.610
DG Energy, ¢/kWh	0.00	0.00	0.000
Purchased Energy, ¢/kWh	20.705	20.474	(0.231)
<u>Residential Schedule "R"</u>			
Energy Cost Recovery Factor, ¢/kWh	23.122	21.982	(1.140)
<u>Others - "G,J,P,F"</u>			
Energy Cost Recovery Factor, ¢/kWh	23.122	21.982	(1.140)
<u>Residential Customer with</u>			
500 KWH Consumption, \$/Bill	205.68	200.38	(5.30)
600 KWH Consumption, \$/Bill	245.74	239.37	(6.37)

Supersedes Sheet Effective:

7/01/2023

**MAUI ELECTRIC COMPANY, LTD.  
MAUI DIVISION  
ENERGY COST RECOVERY (ECR) FILING**

ENERGY COST RECOVERY (ECR) FILING - August 1, 2023 (page 1 of 2)

Line

1 Effective Date August 1, 2023  
2 Supercedes Factors of July 1, 2023

**GENERATION COMPONENT**

CENTRAL STATION				
FUEL PRICES, ¢/mmbtu				
3	Industrial			1,480.05
4	Diesel			1,950.66
5	Other			
BTU MIX, %				
6	Industrial			21.48%
7	Diesel			78.52%
8	Other			0.00%
				100.00%
9	COMPOSITE COST OF GENERATION, CENTRAL STATION + OTHER ¢/mmbtu (Lines (3 x 6) + (4 x 7) + (5 x 8))			1,849.57
10	% Input to System kWh Mix			69.53%
EFFICIENCY FACTOR, mmbtu/kWh				
	(A)	(B)	(C)	(D)
		Eff Factor	Percent of Centrl Stn + Other	Weighted Eff Factor
11	Industrial	0.015786	14.63	0.002309
12	Diesel	0.009938	85.37	0.008484
13	Other	0.011072	0.00	-
(Lines 11, 12, 13): Col(B) x Col(C) = Col(D)				
14	Weighted Efficiency Factor, mmbtu/kWh [lines 11(D) + 12(D) + 13(D)]			0.010793
15	WEIGHTED COMPOSITE CENTRAL STATION + OTHER GENERATION COST, ¢/kWh (lines (9 x 10 x 14))			13.87986
16	BASE CENTRAL STATION + OTHER GENERATION COST, ¢/mmbtu			0.00
17	Base % Input to Sys kWh Mix			0.00
18	Efficiency Factor, mmbtu/kwh			0.011072
19	WEIGHTED BASE CENTRAL STATION + OTHER GENERATION COST ¢/kWh (lines (16 x 17 x 18))			-
20	COST LESS BASE (line(15 - 19))			13.87986
21	Revenue Tax Req Multiplier			1.0975
22	CENTRAL STATION + OTHER GENERATION FACTOR, ¢/kWh (line (20 x 21))			15.23315

DG ENERGY COMPONENT			
23	COMPOSITE COST OF DG ENERGY, ¢/kWh		0.000
24	% Input to System kWh Mix		0.00%
25	WEIGHTED COMPOSITE DG ENERGY COST, ¢/kWh (Lines 23 x 24)		-
26	BASE DG ENERGY COMP COST		0.000
27	Base % Input to System kWh Mix		0.00
28	WEIGHTED BASE DG ENERGY COST, ¢/kWh (Line 26 x 27)		0.00000
29	Cost Less Base (Line 25 - 28)		0.00000
30	Loss Factor		1.057
31	Revenue Tax Req Multiplier		1.0975
32	DG FACTOR, ¢/kWh (Line 29 x 30 x 31)		0.00000
SUMMARY OF TOTAL GENERATION FACTOR, ¢/kWh			
33	CNTRL STN + OTHER (line 22)		15.23315
34	DG (line 32)		-
35	TOTAL GENERATION FACTOR, ¢/kWh (lines 33 + 34)		15.23315

**MAUI ELECTRIC COMPANY, LTD.**  
**MAUI DIVISION**  
**ENERGY COST RECOVERY (ECR) FILING**

ENERGY COST RECOVERY (ECR) FILING - August 1, 2023 (page 2 of 2)

Line

1 Effective Date August 1, 2023  
2 Supercedes Factors of July 1, 2023

<u>Line</u> <b>PURCHASED ENERGY COMPONENT</b>		
PURCHASED ENERGY PRICE - FOSSIL ¢/kWh		
PURCHASED ENERGY PRICE - RENEWABLE, ¢/kWh		
36	Kaheawa Wind I - On Peak	14.000
37	- Off Peak	13.126
38	Kaheawa Wind II	26.462
39	Sempra Wind	23.559
40	Unused - On Peak	0.000
41	- Off Peak	0.000
42	South Maui RR	11.060
43	Ku'ia Solar	11.060
44	Unused	0.000
45	Unused	0.000
46	CBRE PV	16.500
47		
48	FIT	21.934
PURCHASED ENERGY KWH MIX- FOSSIL, %		
48A	Subtotal Fossil %	0%
PURCHASED ENERGY KWH MIX - RENEWABLE, %		
49	Kaheawa Wind I - On Peak	18.36%
50	- Off Peak	16.77%
51	Kaheawa Wind II	31.35%
52	Sempra Wind	26.47%
53	Unused - On Peak	0.00%
54	- Off Peak	0.00%
55	South Maui RR	1.69%
56	Ku'ia Solar	1.77%
57	Unused	0.00%
58	Unused	0.00%
59	CBRE PV	0.00%
60		
61	FIT	3.59%
61A	Subtotal Renewable %	100.00%
61B	Total Purchased Energy %	100.00%
61C	Composite Cost of Purchased Energy, Fossil	N/A
61D	Composite Cost of Purchased Energy, Renewable	20.474
62	COMPOSITE COST OF PURCHASED ENERGY, ¢/kWh	20.474
(Lines (36 x 49) + (37 x 50) + (38 x 51) + (39 x 52) + (40 x 53) + (41 x 54) + (42 x 55) + (43 x 56) + (44 x 57) + (45 x 58) + (46 x 59) + (48 x 61))		
63	% Input to System kWh Mix	30.47%
64	WEIGHTED COMPOSITE PURCHASED ENERGY COST, ¢/kWh (lines (62 x 63))	6.23843
65	BASE PURCHASED ENERGY COMPOSITE COST, ¢/kWh	0.000
66	Base % Input to Sys kWh Mix	0.00
67	WEIGHTED BASE PURCHASED ENERGY COST, ¢/kWh (lines (65 x 66))	0.00000
68	COST LESS BASE (lines (64 - 67))	6.23843
69	Loss Factor	1.057
70	Revenue Tax Req Multiplier	1.0975
71	PURCHASED ENERGY FACTOR, ¢/kWh (lines (68 x 69 x 70))	7.23694

Line

**Calculation of Monthly Fossil Fuel Cost Risk Sharing Component**

<b>Baseline IFO</b>	
72	IFO \$, baseline month \$2,734,780
73	IFO mmbtu, baseline 211,787
74	Baseline IFO, ¢/mmbtu 1291.29
<b>Baseline Diesel</b>	
75	Diesel \$, baseline month \$15,546,536
76	Diesel mmbtu, baseline 629,682
77	Baseline Diesel, ¢/mmbtu 2468.95
<b>Month IFO</b>	
78	IFO mmbtu, budget 140,814
79	IFO Cost, ¢/mmbtu 1,480.05
80	IFO ECRC Fossil Cost \$2,084,110
81	IFO Base ECRC Recovery Target \$1,818,307
82	IFO differential \$265,804
<b>Month Diesel</b>	
83	Diesel mmbtu, budget 514,772
84	Diesel Cost, ¢/mmbtu 1,950.66
85	Diesel ECRC Fossil Cost \$10,041,444
86	Diesel Base ECRC Recovery Target \$12,709,454
87	Diesel differential -\$2,668,009
88	Total Fossil -\$2,402,206
89	2% of above -\$48,044
90	Total Monthly Fossil Fuel Cost Risk Sharing, Prior Months in Year -\$100,658
91	Maximum Annual Cap (bi-directional) \$570,000
92	Number of Days in year from implementation 365
93	Fossil Risk % Proration (based on 365 day year) 100.00%
94	Maximum Annual Cap (bi-directional) prorated \$570,000
95	Applicable Monthly Fossil Fuel Cost Risk Sharing -\$48,044
96	Total Monthly Fossil Fuel Cost Risk Sharing, Including This Month -\$148,702
97	Fossil Cost Risk Sharing before taxes -\$48,044
98	Revenue Tax Adjustment 1.097514
99	Fossil Cost Risk Sharing w/revenue tax -\$52,729
100	Forecasted Month MWh Sales 86,044
101	Fossil Fuel Cost Risk Sharing Component, ¢/kWh 0.0613

**Derivation of Non-Adjustable Component:**

102	Maalaea Biodiesel (\$000s)	\$511.3
103	Hana (\$000s)	\$19.2
104	Ignition Startup (\$000s)	\$37.6
	Total	\$568.1
Final Settlement, MECO-602, p1 and MECO-603, p1		
105	Revenue Tax Adjustment	1.097514
106	Non-Adj Revenues, \$000	\$623.5
107	2018 TY Sales, MWh	1,017,968
Final Tariffs submitted 4/17/2019, Docket No. 2017-0150, Exhibit 2, Att 1, p361		
108	Non-Adj Revenues, ¢/kWh	0.06125
109	Generation and Purchased Energy Factors	22.47009
110	ECR Reconciliation Adjustment	(0.611)
111	Non-Adjustable Component	0.0612
112	Fossil Fuel Cost Risk Sharing Component	0.0613
113	ECR FACTOR, ¢/kWh	21.982
(lines (109 + 110 + 111 + 112))		

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

**Fuel Oil Inventory Prices for August 2023**

<u>TYPE OF OIL BURNED</u>	<u>PRICES \$/BBL</u>	<u>CONVERSION FACTORS</u>	<u>PRICES ¢/MBTU</u>
INDUSTRIAL	93.2429	6.30 MBTU/BBL	1,480.05
DIESEL/ULSD	114.1842	5.85 MBTU/BBL	1,950.66

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

**Month End Fuel Oil Estimate**

<b><u>Kahului</u></b>	<b><u>Barrels</u></b>	<b><u>MBTU</u></b>	<b><u>(\$)</u></b>
7/20/2023	41,705.87	262,746.98	3,872,700.99
Estimated Use	7,889.40	49,703.20	718,738.57
Estimated Received	14,400.00	90,720.00	1,341,882.37
Estimated Additional	0.00	0.00	0.00
Estimated End	<u>48,216.47</u>	<u>303,763.78</u>	<u>4,495,844.79</u>
<b>Next month's expense (\$/bbl) =</b>		<b>\$ 93.2429</b>	

<b><u>Maalaea</u></b>	<b><u>Barrels</u></b>	<b><u>MBTU</u></b>	<b><u>(\$)</u></b>
7/20/2023	119,003.80	696,602.75	13,622,085.67
Estimated Use	31,132.72	182,239.01	3,566,548.31
Estimated Received	25,000.00	146,340.44	2,832,554.55
Estimated Additional	0.00	0.00	0.00
Estimated End	<u>112,871.09</u>	<u>660,704.18</u>	<u>12,888,091.91</u>
<b>Next month's expense (\$/bbl) =</b>		<b>\$ 114.1842</b>	

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

**PURCHASED POWER PRICE CALCULATIONS**

**KAHEAWA WIND POWER ENERGY RATE:**

Kaheawa Wind - On Peak, ¢/kWh	14.000
- Off Peak, ¢/kWh	13.126

Kaheawa Wind Energy Rate Calculations:

**Percent of Energy Payment Rate:**

Fixed energy payment rate	70%
Flat payment rate	<u>30%</u>
	<u>100%</u>

**Fixed Energy Payment Rate (Table D-1) for 2023:**

On-peak, ¢/kwh	10.571
Off-peak, ¢/kwh	9.323

**Flat Payment Rate Per Docket No. 2011-0192 D&O 30331:**

On-peak, ¢/kwh	22.000
Off-peak, ¢/kwh	22.000

On-Peak Rate =  $10.5710 \text{ ¢/kwh} \times 0.7 + 22.000 \text{ ¢/kwh} \times 0.3 = 14 \text{ ¢/kwh}$

Off-Peak Rate =  $9.323 \text{ ¢/kwh} \times 0.7 + 22.000 \text{ ¢/kwh} \times 0.3 = 13.126 \text{ ¢/kwh}$



**MAUI ELECTRIC COMPANY, LTD.**  
**Maui Division**  
**ECR Reconciliation Adjustment**  
**August 2023**

1. Amount to be Refunded	(\$1,435,900)
2. Monthly amount (1 / 3 X Line 1)	(\$478,633)
3. Revenue Tax Divisor	0.91115
4. Total (Line 2 / Line 3)	(\$525,306)
5. Estimated Sales (August 2023)	86,044 mwh
6. Adjustment (Line 4 ÷ Line 5)	(0.611) ¢/kwh

**MAUI ELECTRIC COMPANY, LTD.**  
**MAUI DIVISION**  
**2023 FUEL OIL ADJUSTMENT RECONCILIATION SUMMARY**  
**(Thousand \$)**

<u>Line</u>	W/O Deadband 2nd Quarter <u>YTD Total</u>	collection by <u>company*</u>	Basis for Recon With Deadband 2nd Quarter <u>YTD Total</u>	collection by <u>company*</u>
<b>ACTUAL COSTS:</b>				
1 Generation	\$89,669.8		\$89,669.8	
2 Distributed Generation	\$23.5		\$23.5	
3 Purch Power	<u>\$20,208.5</u>		<u>\$20,208.5</u>	
4 TOTAL	\$109,901.8		\$109,901.8	
<b>FUEL FILING COST</b>				
5 Generation	\$89,316.9		\$89,671.0	
6 Distributed Generation	\$0.0		\$0.0	
7 Purch Power	<u>\$20,208.5</u>		<u>\$20,208.5</u>	
8 TOTAL	\$109,525.4		\$109,879.5	
<b>BASE FUEL COST</b>				
9 Generation	\$0.0		\$0.0	
10 Distributed Generation	\$0.0		\$0.0	
11 Purch Power	<u>\$0.0</u>		<u>\$0.0</u>	
12 TOTAL	\$0.0		\$0.0	
13 FUEL-BASE COST (Line 8-12)	\$109,525.4		\$109,879.5	
14 ACTUAL FOA LESS TAX	\$110,873.9		\$110,873.9	
15 FOA reconciliation adj for prior year	-\$733.3		-\$733.3	
15A Less: Non-Adjustable Component Revenues less tax	<u>\$271.9</u>		<u>\$271.9</u>	
16 ADJUSTED FOA LESS TAX	\$111,335.3		\$111,335.3	
17 FOA-(FUEL-BASE) (Line 16-13)	\$1,809.9	Over	\$1,455.8	Over
<b>ADJUSTMENTS</b>				
18 Current year FOA accrual reversal	-\$84.0		-\$84.0	
19 Other prior year FOA	\$0.0		\$0.0	
20 Other	<u>\$0.0</u>		<u>\$0.0</u>	
21 2nd QUARTER FOA RECONCILIATION (Lines 17+18+19+20)	\$1,725.9	Over	\$1,371.8	Over
21A YTD Fossil Fuel Cost Risk Sharing Adjustment	<u>-\$61.9</u>		<u>-\$61.9</u>	
21B Quarterly FOA Recon w/Fossil Risk Adj (Line 21 + Line 21A)	\$1,664.0		\$1,309.9	
22 1st Quarter Reconciliation YTD			<u>-\$126.0</u>	Under
23 FOA Reconciliation to be Refunded August 2023 to October 2023 (Line 22- 21B)			<u><u>-\$1,435.9</u></u>	To Be Refunded

\* Over means an over-collection by the company.  
Under means an under-collection by the company.

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

Determination of Efficiency Factor to use for Cost-Recovery Purposes

Period: January 1, 2023 Through June 30, 2023

	<u>Notes</u>	<u>YTD</u>
<b><u>Industrial Fuel Oil</u></b>		
Industrial Fuel Oil Efficiency Factor, BTU/kWh	f	15,786
Industrial Fuel Oil Deadband Definition, - BTU/kWh	d	<b>100</b>
Industrial Fuel Oil Portion of Recorded Sales, MWh	a	74,589
Industrial Fuel Oil Consumption (Recorded), MMBTU	b	1,185,638
Industrial Fuel Oil Efficiency Factor (Recorded), BTU/kWh	c = (b/a)*1000	15,896
Lower limit of Industrial Fuel Oil Deadband, BTU/kWh	e = f-d	15,686
Higher limit of Industrial Fuel Oil Deadband, BTU/kWh	g = f+d	15,886
Industrial Fuel Oil Efficiency Factor for cost-recovery, BTU/kWh h = c, e, or g		<b>15,886</b>
<b><u>Diesel</u></b>		
Diesel Efficiency Factor, BTU/kWh	f	9,938
Diesel Deadband Definition, - BTU/kWh	d	<b>100</b>
Diesel Portion of Recorded Sales, MWh	a	316,058
Diesel Consumption (Recorded), MMBTU	b	3,151,667
Diesel Efficiency Factor (Recorded), BTU/kWh	c = (b/a)*1000	9,972
Lower limit of Diesel Deadband, BTU/kWh	e = f-d	9,838
Higher limit of Diesel Deadband, BTU/kWh	g = f+d	10,038
Diesel Efficiency Factor for cost-recovery, BTU/kWh h = c, e, or g		<b>9,972</b>

**MAUI ELECTRIC COMPANY, LTD.  
MAUI DIVISION  
GENERATION FUEL FILING COST AND GENERATION BASE FUEL COST, WITHOUT and WITH DEADBAND**

	<b>2023</b>	
	<b>Without Deadband</b>	<b>With Deadband AS FILED</b>
	<u>Jan 1 - Jun 30</u>	<u>Jan 1 - Jun 30</u>
<b><u>INDUSTRIAL</u></b>		
Industrial Portion of Recorded Sales , MWH	74,589	74,589
Industrial Sales Efficiency Factor (mmbtu/kwh)	0.015786	0.015886
Mmbtu adjusted for Sales Efficiency Factor	1,177,465	1,184,924
\$/mmbtu	<u>\$14.1522</u>	<u>\$14.1522</u>
TOTAL Industrial \$000s TO BE RECOVERED	\$16,663.7	\$16,769.2
<b><u>DIESEL FUEL FILING COST</u></b>		
Diesel Portion of Recorded Sales, MWH	316,058	316,058
Diesel Sales Efficiency Factor (mmbtu/kwh)	0.009938	0.009972
Mmbtu adjusted for Sales Efficiency Factor	3,140,980	3,151,726
\$/mmbtu	<u>\$23.1307</u>	<u>\$23.1307</u>
TOTAL DIESEL \$000s TO BE RECOVERED	\$72,653.2	\$72,901.8
TOTAL GENERATION FUEL FILING COST, \$000s	\$89,316.9	\$89,671.0
TOTAL GENERATION BASE FUEL COST , \$000s	\$0.0	\$0.0
TOTAL GENERATION FUEL FILING COST, \$000s YTD	\$89,316.9	\$89,671.0
TOTAL GENERATION BASE FUEL COST, \$000s YTD	\$0.0	\$0.0

**Fossil Fuel Cost Risk Sharing Mechanism and Non-Adjustable Component, June 2023, Maui**

	IFO Fossil Fuel Cost Risk Sharing	Jan-23, Baseline	YTD Subject to Fossil Risk
A	MMBtu	211787.1453	1,185,638
B	\$ cost, actuals	\$2,734,780	\$16,784,278
C = B / A (Baseline Column)	Jan 2023 baseline \$/mmbtu	12.912872	12.912872
D	IFO Gen kWh		78,571,030
E	Total kWh, Gen, Purch Pwr, DG		512,805,752
F	Sales kWh		487,155,255
G = (D / E) x F	IFO kWh-sales		74,640,914
H	Target Heat Rate		15,786
I1	Upper limit w/deadband		15,886
I2	Lower limit w/deadband		15,686
I3	Calculated Heat Rate (YTD subject to fossil risk, before deadband)		15,896
I	Recovery Heat Rate (YTD subject to fossil risk, after deadband)		15,886
J = B / A ytd	Actual Cost \$/MMBtu		14.1563294
K = C x H x G / 1,000,000	Base Cost Recovery w/Target Heat Rate		\$15,214,998
L = I x J x G / 1,000,000	Fuel Filing Cost Recovery		\$16,785,805
<b>M = 2% x (L-K)</b>	<b>IFO Cost Risk Sharing</b>		<b>\$31,416</b>
<b>Diesel Fossil Fuel Cost Risk Sharing</b>			
AA	MMBtu	629,682	3,151,667
BB	\$ cost, actuals	\$15,546,536	\$72,885,546
CC = BB / AA (Baseline Column)	Jan 2023 baseline \$/mmbtu	24.6894989	24.6894989
DD	Diesel Gen kWh		332,907,260
EE	Total kWh, Gen, Purch Pwr, DG		512,805,752
FF	Sales kWh		487,155,255
GG = (DD / EE) x FF	Diesel kWh-sales		316,255,269
HH	Target Heat Rate		9,938
II1	Upper limit w/deadband		10,038
II2	Lower limit w/deadband		9,838
II3	Calculated Heat Rate (YTD subject to fossil risk, before deadband)		9,972
II	Recovery Heat Rate (YTD subject to fossil risk, after deadband)		9,972
JJ = BB/AA (YTD Column)	Actual Cost \$/MMBtu		23.1260325
KK = CC x HH x GG / 1,000,000	Base Cost Recovery w/Target Heat Rate		\$77,597,734
LL = II x JJ x GG / 1,000,000	Fuel Filing Cost Recovery		\$72,932,512
<b>MM = 2% x (LL-KK)</b>	<b>Diesel Cost Risk Sharing</b>		<b>-\$93,304</b>
NN	Annual Cap (non-prorated)		\$570,000
OO	# Days		365
PP	Annual Cap (pro-rated)		\$570,000
QQ = M + MM, up to cap	Total Fossil Fuel Cost Risk Sharing Adjustment, subject to ±\$570000 cap		-\$61,888
<b>Non-Adjustable Component</b>			
AAA = F	YTD kWh under ECRC		487,155,255
BBB	Non-Adjustable Component, cents/kWh		0.06125
CCC	Non-Adjustable Component Revenues w/tax		\$298,383
DDD	Non-Adjustable Component Revenues less tax		\$271,871

**MAUI ELECTRIC COMPANY, LTD.**  
**MAUI DIVISION**  
**2023 Cumulative Reconciliation Balance**

<u>Month</u>	(1) <u>YTD FOA Reconciliation</u>	<u>Qtr</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</u>
December '21					(243,967)	(253,989)	224,074
January '22					(243,967)	(255,810)	(31,736)
February	(428,500)	(4)	(19,896)	(408,604)	142,833	139,468	(300,872)
March					142,833	163,965	(136,907)
April					142,833	157,268	20,361
May	1,081,500	(1)	5,924	1,075,576	(360,500)	(408,035)	687,902
June					(360,500)	(403,811)	284,091
July					(360,500)	(391,575)	(107,484)
August	243,600	(2)	(76,411)	320,011	(81,200)	(88,227)	124,300
September					(81,200)	(91,938)	32,362
October					(81,200)	(90,765)	(58,403)
November	238,800	(3)	(48,840)	287,640	(79,600)	(83,469)	145,768
December					(79,600)	(81,834)	63,934
January '23					(79,600)	(83,279)	(19,345)
February	653,600	(4)	(15,668)	669,268	(217,867)	(221,715)	428,208
March					(217,867)	(225,886)	202,322
April					(217,867)	(234,572)	(32,250)
May	(126,000)	(1)	(15,546)	(110,454)	42,000	44,399	(98,305)
June					42,000	44,093	(54,212)
July					42,000		
August	1,435,900	(2)	(12,213)	1,448,113	(478,633)		

## NOTES:

- Col(1): Quarterly FOA reconciliation amounts. (Refer to Attachment 5)  
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.**  
**Maui Division**  
**Calculations of the Average Residential Customer Bill**

	Rate			Charge (\$) at 500 Kwh		
		7/01/23	8/01/23	7/01/23	8/01/23	Difference
Base Rates	effective date:	09/01/19	09/01/19			
Base Fuel/Energy Charge	¢/kWh	0.0000	0.0000	0.00	0.00	0.00
Non-fuel Energy Charge						
First 350 kWh per month	¢/kWh	12.1240	12.1240	42.43	42.43	0.00
Next 850 kWh per month	¢/kWh	14.3840	14.3840	21.58	21.58	0.00
Customer Charge	\$	11.50	11.50	11.50	11.50	0.00
Total Base Charges				75.51	75.51	0.00
RBA Rate Adjustment	% of bill excluding ECRC	11.88%	11.88%	9.56	9.61	0.05
PBF Surcharge	¢/kWh	0.7195	0.7195	3.60	3.60	0.00
SolarSaver Adjustment	¢/kWh	0.0000	0.0000	0.00	0.00	0.00
Refund of 2018 Interim	% on Base	0.00	0.00	0.00	0.00	0.00
Purchased Power Adjustment	¢/kWh	0.0032	0.0023	0.02	0.01	-0.01
Energy Cost Recovery	¢/kWh	23.122	21.982	115.61	109.91	-5.70
DSM Adjustment	¢/kWh	0.0395	0.1119	0.20	0.56	0.36
Green Infrastructure Fee	\$	1.18	1.18	1.18	1.18	0.00
Avg Residential Bill at 500 kwh				205.68	200.38	
				Increase (Decrease -)		-5.30
				% Change		-2.58%

	Rate		Charge (\$) at 600 Kwh		
	7/01/23	8/01/23	7/01/23	8/01/23	Difference
Base Rates	effective date:	09/01/19	09/01/19		
Base Fuel/Energy Charge	¢/kWh	0.0000	0.0000	0.00	0.00
Non-fuel Energy Charge					
First 350 kWh per month	¢/kWh	12.1240	12.1240	42.43	42.43
Next 850 kWh per month	¢/kWh	14.3840	14.3840	35.96	35.96
Customer Charge	\$	11.50	11.50	11.50	11.50
Total Base Charges			89.89	89.89	0.00
RBA Rate Adjustment	% of bill excluding ECRC	11.88%	11.88%	11.36	11.41
PBF Surcharge	¢/kWh	0.7195	0.7195	4.32	4.32
Renewable Energy Infrastructure Cost					
Recovery Provision	¢/kWh	0.0000	0.0000	0.00	0.00
SolarSaver Adjustment	¢/kWh	0.0000	0.0000	0.00	0.00
Refund of 2018 Interim	% on Base	0.00	0.00	0.00	0.00
Purchased Power Adjustment	¢/kWh	0.0032	0.0023	0.02	0.01
Energy Cost Recovery	¢/kWh	23.122	21.982	138.73	131.89
DSM Adjustment	¢/kWh	0.0395	0.1119	0.24	0.67
Green Infrastructure Fee	\$	1.18	1.18	1.18	1.18
Avg Residential Bill at 600 kwh			245.74	239.37	
			Increase (Decrease -)		-6.37
			% Change		-2.59%

Note: Effective June 1, 2023, the RBA Rate Adjustment is billed based on the total billed amount before the RBA rate adjustment excluding the Energy Cost Recovery.

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

<u>EFFECTIVE DATE</u>	<u>FUEL FACTOR</u> <u>CENTS / KWH</u>		<u>RESIDENTIAL BILL (\$)</u>	
	<u>RESIDENTIAL &amp;</u> <u>COMMERCIAL</u>		<u>@ 500 KWH</u>	<u>@ 600 KWH</u>
January 1, 2020	16.751		168.57	201.30
February 1, 2020	17.482		172.82	206.40
March 1, 2020	17.800		174.41	208.31
April 1, 2020	17.503		172.62	206.17
May 1, 2020	16.260		166.06	198.28
June 1, 2020	15.145		157.82	188.40
July 1, 2020	14.702		154.77	184.77
August 1, 2020	13.780		149.70	178.68
September 1, 2020	13.659		149.08	177.94
October 1, 2020	13.390		147.74	176.34
November 1, 2020	13.830		150.47	179.61
December 1, 2020	14.923		155.93	186.17
January 1, 2021	14.967		156.21	186.48
February 1, 2021	14.338		153.34	183.04
March 1, 2021	16.168		162.49	194.03
April 1, 2021	16.378		163.32	195.01
May 1, 2021	17.615		170.84	204.05
June 1, 2021	17.873		175.55	209.70
July 1, 2021	19.391		183.27	218.98
August 1, 2021	18.648		178.15	212.83
September 1, 2021	18.578		177.77	212.38
October 1, 2021	18.225		176.02	210.28
November 1, 2021	19.019		180.07	215.12
December 1, 2021	17.109		170.52	203.66
January 1, 2022	20.790		193.72	231.49
February 1, 2022	20.593		192.83	230.42
March 1, 2022	22.118		200.46	239.58
April 1, 2022	24.483		212.12	253.57
May 1, 2022	26.433		223.53	267.26
June 1, 2022	28.248		230.80	276.00
July 1, 2022	27.953		229.02	273.87
August 1, 2022	30.202		239.45	286.38
September 1, 2022	27.993		228.34	273.06
October 1, 2022	28.147		229.16	274.04
November 1, 2022	24.488		210.08	251.14
December 1, 2022	24.119		208.25	248.95
January 1, 2023	25.334		215.82	258.03
February 1, 2023	24.501		212.21	253.70
March 1, 2023	25.455		216.98	259.42
April 1, 2023	24.536		212.37	253.88
May 1, 2023	24.180		210.60	251.76
June 1, 2023	23.396		206.70	246.95
July 1, 2023	23.122		205.68	245.74
August 1, 2023	21.982		200.38	239.37



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

EFFECTIVE DATE	DESCRIPTION OF SURCHARGE	RATE
<b>06/01/11</b>	<b>IRP RECOVERY REFUND</b>	<b>0.000 PERCENT ON BASE</b>
<b>08/17/17</b>	<b>RENEWABLE ENERGY INFRASTRUCTURE COST RECOVERY PROVISION</b>	<b>0.0000 CENTS/KWH</b>
<b>06/01/19</b>	<b>FINAL RATE INCREASE (3.74%), DOCKET NO. 2017-0150 (2018 TEST YEAR)</b>	
05/01/20 - 03/31/21	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
06/01/20 - 05/31/21	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	0.3383 CENTS/KWH
07/01/20 - 06/30/21	RESID. PBF SURCHARGE ADJUSTMENT	0.5882 CENTS/KWH
11/01/20 - 01/31/21	RESID. DSM ADJUSTMENT	-0.0022 CENTS/KWH
01/01/21 - 01/31/21	PURCHASED POWER ADJUSTMENT	-0.0013 CENTS/KWH
01/01/21 - 06/30/21	GREEN INFRASTRUCTURE FEE	1.25 DOLLARS/MONTH
02/01/21	RESID. DSM ADJUSTMENT	0.0563 CENTS/KWH
02/01/21 - 02/28/21	PURCHASED POWER ADJUSTMENT	-0.0042 CENTS/KWH
03/01/21 - 03/31/21	PURCHASED POWER ADJUSTMENT	-0.0030 CENTS/KWH
04/01/21 - 04/30/21	PURCHASED POWER ADJUSTMENT	-0.0044 CENTS/KWH
04/01/21 - 04/30/21	SOLARSAVER ADJUSTMENT	-0.0445 CENTS/KWH
05/01/21 - 07/31/21	RESID. DSM ADJUSTMENT	0.0658 CENTS/KWH
05/01/21 - 03/31/22	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
05/01/21 - 05/31/21	PURCHASED POWER ADJUSTMENT	0.2109 CENTS/KWH
06/01/21 - 06/30/21	PURCHASED POWER ADJUSTMENT	0.2076 CENTS/KWH
6/1/2021 - 12/31/21	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	1.0242 CENTS/KWH
07/01/21 - 12/31/21	GREEN INFRASTRUCTURE FEE	1.19 DOLLARS/MONTH
07/01/21 - 06/30/22	RESID. PBF SURCHARGE ADJUSTMENT	0.6478 CENTS/KWH
07/01/21 - 07/31/21	PURCHASED POWER ADJUSTMENT	0.1862 CENTS/KWH
08/01/21 - 08/31/21	PURCHASED POWER ADJUSTMENT	-0.0296 CENTS/KWH
08/01/21 - 10/31/21	RESID. DSM ADJUSTMENT	0.0003 CENTS/KWH
09/01/21 - 09/30/21	PURCHASED POWER ADJUSTMENT	-0.0350 CENTS/KWH
10/01/21 - 10/31/21	PURCHASED POWER ADJUSTMENT	-0.0314 CENTS/KWH
11/01/21 - 11/30/21	PURCHASED POWER ADJUSTMENT	-0.0107 CENTS/KWH
11/01/21 - 01/31/22	RESID. DSM ADJUSTMENT	-0.0084 CENTS/KWH
12/01/21 - 12/31/21	PURCHASED POWER ADJUSTMENT	-0.0096 CENTS/KWH
01/01/22 - 05/31/22	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	1.9714 CENTS/KWH
01/01/22 - 06/30/22	GREEN INFRASTRUCTURE FEE	1.25 DOLLARS/MONTH
01/01/22 - 01/31/22	PURCHASED POWER ADJUSTMENT	-0.0100 CENTS/KWH
02/01/22 - 02/28/22	PURCHASED POWER ADJUSTMENT	-0.0009 CENTS/KWH
02/01/22 - 04/30/22	RESID. DSM ADJUSTMENT	0.0022 CENTS/KWH
03/01/22 - 03/31/22	PURCHASED POWER ADJUSTMENT	0.0002 CENTS/KWH
04/01/22 - 04/30/22	SOLARSAVER ADJUSTMENT	-0.0315 CENTS/KWH
04/01/22 - 04/30/22	PURCHASED POWER ADJUSTMENT	-0.0011 CENTS/KWH
05/01/22 - 07/31/22	RESID. DSM ADJUSTMENT	-0.1288 CENTS/KWH
05/01/22 - 03/31/23	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
05/01/22 - 05/31/22	PURCHASED POWER ADJUSTMENT	0.4283 CENTS/KWH
06/01/22 - 06/30/22	PURCHASED POWER ADJUSTMENT	0.4226 CENTS/KWH
06/01/22 - 12/31/22	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	1.6175 CENTS/KWH
07/01/22 - 06/30/23	RESID. PBF SURCHARGE ADJUSTMENT	0.6488 CENTS/KWH
07/01/22 - 12/31/22	GREEN INFRASTRUCTURE FEE	1.18 DOLLARS/MONTH
07/01/22 - 07/31/22	PURCHASED POWER ADJUSTMENT	0.3747 CENTS/KWH
08/01/22 - 08/31/22	PURCHASED POWER ADJUSTMENT	-0.0742 CENTS/KWH
08/01/22 - 10/31/22	RESID. DSM ADJUSTMENT	0.1587 CENTS/KWH
09/01/22 - 09/30/22	PURCHASED POWER ADJUSTMENT	-0.0862 CENTS/KWH
10/01/22 - 10/31/22	PURCHASED POWER ADJUSTMENT	-0.0772 CENTS/KWH
11/01/22 - 01/31/23	RESID. DSM ADJUSTMENT	-0.0584 CENTS/KWH
11/01/22 - 11/30/22	PURCHASED POWER ADJUSTMENT	-0.0177 CENTS/KWH
12/01/22 - 12/31/22	PURCHASED POWER ADJUSTMENT	-0.0155 CENTS/KWH
01/01/23 - 01/31/23	PURCHASED POWER ADJUSTMENT	-0.0120 CENTS/KWH
01/01/23 - 05/31/23	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	1.9048 CENTS/KWH
01/01/23 - 06/30/23	GREEN INFRASTRUCTURE FEE	1.23 DOLLARS/MONTH
02/01/23 - 04/30/23	RESID. DSM ADJUSTMENT	0.0323 CENTS/KWH
02/01/23 - 02/28/23	PURCHASED POWER ADJUSTMENT	0.0092 CENTS/KWH
03/01/23 - 03/31/23	PURCHASED POWER ADJUSTMENT	0.0096 CENTS/KWH
04/01/23 - 04/30/23	PURCHASED POWER ADJUSTMENT	0.0090 CENTS/KWH
04/01/23 - 04/30/23	SOLARSAVER ADJUSTMENT	-0.0038 CENTS/KWH
<b>05/01/23</b>	<b>SOLARSAVER ADJUSTMENT</b>	<b>0.0000 CENTS/KWH</b>
05/01/23 - 07/31/23	RESID. DSM ADJUSTMENT	0.0395 CENTS/KWH
05/01/23 - 05/31/23	PURCHASED POWER ADJUSTMENT	0.0006 CENTS/KWH
06/01/23 - 06/30/23	PURCHASED POWER ADJUSTMENT	0.0012 CENTS/KWH
<b>06/01/23</b>	<b>REVENUE BALANCING ACCOUNT RATE ADJUSTMENT</b>	<b>11.88% PERCENT OF ALL RATE SCHEDULE CHARGES, EXCLUDING ECRC and RBA</b>
<b>07/01/23</b>	<b>RESID. PBF SURCHARGE ADJUSTMENT</b>	<b>0.7195 CENTS/KWH</b>
<b>07/01/23</b>	<b>GREEN INFRASTRUCTURE FEE</b>	<b>1.18 DOLLARS/MONTH</b>
07/01/23 - 07/31/23	PURCHASED POWER ADJUSTMENT	0.0032 CENTS/KWH
<b>08/01/23</b>	<b>RESID. DSM ADJUSTMENT</b>	<b>0.1119 CENTS/KWH</b>
<b>08/01/23</b>	<b>PURCHASED POWER ADJUSTMENT</b>	<b>0.0023 CENTS/KWH</b>

~ Surcharges currently in effect are in bold.

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

**Maui Electric Company, Ltd. - Maui Division  
Residential Bill at 500 kWh/Month Consumption**

