



April 26, 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 May 2023

Maui Electric Company, Limited's ("Maui Electric" or "Company") May 2023 Energy Cost Recovery factor for our Maui Division is 24.180 cents per kilowatt-hour ("kWh"), a decrease of 0.356 cents per kWh from last month. A residential customer consuming 500 kWh of electricity will be paying \$210.60, a decrease of \$1.77 compared to rates effective April 1, 2023. The decrease in the typical residential bill is due to the decrease in the Energy Cost Recovery factor (-\$1.78) and Purchase Power Adjustment (-\$0.05) partially offset by the residential DSM Adjustment (+\$0.04) and termination of the Solar Saver Adjustment credit (+\$0.02).

The Company's Maui Division fuel composite cost of generation, central station and other decreased 122.350 cents per million BTU to 1,962.15 cents per million BTU. The composite cost of DG energy is 0.00 cents per kWh. The composite cost of purchased energy increased 0.071 cents per kWh to 20.474 cents per kWh.

The Energy Cost Recovery factor for our Lāna'i Division for May 2023 is 29.925 cents per kWh, a decrease of 3.309 cents per kWh from last month. A residential customer consuming 400 kWh of electricity will be paying \$195.65, a decrease of \$13.22 compared to rates effective April 1, 2023. The decrease in the typical residential bill is due to the decrease in the Energy Cost Recovery factor (-\$13.24) partially offset by the termination of the Solar Saver Adjustment credit (+\$0.02).

The Company's Lāna'i Division fuel composite cost of generation, central station and other decreased 303.97 cents per million BTU to 2,579.38 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 May 2023 is 31.924 cents per kWh, an increase of 2.362 cents per kWh from last month. A residential customer consuming 400 kWh of electricity will be paying \$210.80, an increase of \$9.47 compared to rates effective April 1, 2023. The increase in the typical residential bill is due to the increase in the Energy Cost Recovery (+\$9.45) and the termination of the Solar Saver Adjustment credit (+\$0.02).

The Honorable Chair and Members  
of the Hawai'i Public Utilities Commission  
April 26, 2023  
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The Company's Moloka'i Division fuel composite cost of generation, central station and other increased 210.96 cents per million BTU to 2,622.78 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 May 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>Change</u>
	<u>4/01/2023</u>	<u>5/01/2023</u>	
<u>COMPOSITE COSTS</u>			
Generation, Central Station & Other, ¢/mbtu	2,084.50	1,962.15	(122.350)
DG Energy, ¢/kWh	0.00	0.00	0.000
Purchased Energy, ¢/kWh	20.403	20.474	0.071
<u>Residential Schedule "R"</u>			
Energy Cost Recovery Factor, ¢/kWh	24.536	24.180	(0.356)
<u>Others - "G,J,P,F"</u>			
Energy Cost Recovery Factor, ¢/kWh	24.536	24.180	(0.356)
<u>Residential Customer with</u>			
500 KWH Consumption, \$/Bill	212.37	210.60	(1.77)
600 KWH Consumption, \$/Bill	253.88	251.76	(2.12)

Supersedes Sheet Effective:

4/01/2023

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

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

Line

1 Effective Date May 1, 2023  
2 Supercedes Factors of April 1, 2023

**GENERATION COMPONENT**

<b>CENTRAL STATION</b>				<b>DG ENERGY COMPONENT</b>	
FUEL PRICES, ¢/mmbtu					
3	Industrial		1,502.55		
4	Diesel		2,162.42		
5	Other				
BTU MIX, %					
6	Industrial		30.35%	23 COMPOSITE COST OF DG	
7	Diesel		69.65%	ENERGY, ¢/kWh	0.000
8	Other		0.00%	24 % Input to System kWh Mix	0.00%
			100.00%		
9	COMPOSITE COST OF GENERATION, CENTRAL STATION + OTHER ¢/mmbtu (Lines (3 x 6) + (4 x 7) + (5 x 8))		1,962.15	25 WEIGHTED COMPOSITE DG ENERGY COST, ¢/kWh (Lines 23 x 24)	-
10	% Input to System kWh Mix		66.93%	26 BASE DG ENERGY COMP COST	0.000
EFFICIENCY FACTOR, mmbtu/kWh				27 Base % Input to System kWh Mix	0.00
	(A)	(B)	(C)	(D)	28 WEIGHTED BASE DG ENERGY COST, ¢/kWh (Line 26 x 27)
			Percent of		
			Centrl Stn +		
	<u>Fuel Type</u>	<u>Eff Factor</u>	<u>Other</u>	<u>Eff Factor</u>	
11	Industrial	0.015786	22.02	29 Cost Less Base (Line 25 - 28)	0.00000
12	Diesel	0.009938	77.98	30 Loss Factor	1.057
13	Other	0.011072	0.00	31 Revenue Tax Req Multiplier	1.0975
	(Lines 11, 12, 13): Col(B) x Col(C) = Col(D)			32 DG FACTOR, ¢/kWh (Line 29 x 30 x 31)	0.00000
14	Weighted Efficiency Factor, mmbtu/kWh [(lines 11(D) + 12(D) + 13(D))]		0.011225		
15	WEIGHTED COMPOSITE CENTRAL STATION + OTHER GENERATION COST, ¢/kWh (lines (9 x 10 x 14))		14.74142		
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))		14.74142	SUMMARY OF	
21	Revenue Tax Req Multiplier		1.0975	TOTAL GENERATION FACTOR, ¢/kWh	
22	CENTRAL STATION + OTHER GENERATION FACTOR, ¢/kWh (line (20 x 21))		16.17871	33 CNTRL STN + OTHER (line 22)	16.17871
				34 DG (line 32)	-
				35 TOTAL GENERATION FACTOR, ¢/kWh (lines 33 + 34)	16.17871

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

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

Line	Effective Date	May 1, 2023
2	Supercedes Factors of	April 1, 2023

Line	PURCHASED ENERGY COMPONENT	
	PURCHASED ENERGY PRICE - FOSSIL $\phi$ /kWh	
	PURCHASED ENERGY PRICE - RENEWABLE, $\phi$ /kWh	
36	Kaheawa Wind I - On Peak	14.000
37	- Off Peak	13.126
38	Kaheawa Wind II	26.462
39	Sempre 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	16.92%
50	- Off Peak	16.14%
51	Kaheawa Wind II	25.45%
52	Sempre Wind - On Peak	33.83%
53	Unused - On Peak	0.00%
54	- Off Peak	0.00%
55	South Maui RR	1.86%
56	Ku'ia Solar	1.80%
57	Unused	0.00%
58	Unused	0.00%
59	CBRE PV	0.00%
60		
61	FIT	4.00%
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, $\phi$ /kWh	20.474
	(Lines (36 x 49) + (37 x 51) + (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	33.07%
64	WEIGHTED COMPOSITE PURCHASED ENERGY COST, $\phi$ /kWh (lines (62 x 63))	6.77075
65	BASE PURCHASED ENERGY COMPOSITE COST, $\phi$ /kWh	0.000
66	Base % Input to Sys kWh Mix	0.00
67	WEIGHTED BASE PURCHASED ENERGY COST, $\phi$ /kWh (lines (65 x 66))	0.00000
68	COST LESS BASE (lines (64 - 67))	6.77075
69	Loss Factor	1.057
70	Revenue Tax Req Multiplier	1.0975
71	PURCHASED ENERGY FACTOR, $\phi$ /kWh (lines (68 x 69 x 70))	7.85446

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, $\phi$ /mmbtu	1291.29
	<b>Baseline Diesel</b>	
75	Diesel \$, baseline month	\$15,546,536
76	Diesel mmbtu, baseline	629,682
77	Baseline Diesel, $\phi$ /mmbtu	2468.95
	<b>Month IFO</b>	
78	IFO mmbtu, budget	179,523
79	IFO Cost, $\phi$ /mmbtu	1,502.55
80	IFO ECRC Fossil Cost	\$2,697,429
81	IFO Base ECRC Recovery Target	\$2,318,163
82	IFO differential	\$379,266
	<b>Month Diesel</b>	
83	Diesel mmbtu, budget	411,890
84	Diesel Cost, $\phi$ /mmbtu	2,162.42
85	Diesel ECRC Fossil Cost	\$8,906,799
86	Diesel Base ECRC Recovery Target	\$10,169,366
87	Diesel differential	-\$1,262,567
88	Total Fossil	-\$883,301
89	2% of above	-\$17,666
90	Total Monthly Fossil Fuel Cost Risk Sharing, Prior Months in Year	-\$11,701
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	-\$17,666
96	Total Monthly Fossil Fuel Cost Risk Sharing, Including This Month	-\$29,367
97	Fossil Cost Risk Sharing before taxes	-\$17,666
98	Revenue Tax Adjustment	1.097514
99	Fossil Cost Risk Sharing w/revenue tax	-\$19,389
100	Forecasted Month MWh Sales	76,328
101	Fossil Fuel Cost Risk Sharing Component, $\phi$ /kWh	0.0254

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, $\phi$ /kWh	0.06125
109	Generation and Purchased Energy Factors	24.03317
110	ECR Reconciliation Adjustment	0.060
111	Non-Adjustable Component	0.0612
112	Fossil Fuel Cost Risk Sharing Component	0.0254
113	ECR FACTOR, $\phi$ /kWh (lines (109 + 110 + 111 + 112))	24.180

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

**Fuel Oil Inventory Prices for May 2023**

<u>TYPE OF OIL BURNED</u>	<u>PRICES \$/BBL</u>	<u>CONVERSION FACTORS</u>		<u>PRICES ¢/MBTU</u>
INDUSTRIAL	94.6607	6.30	MBTU/BBL	1,502.55
DIESEL/ULSD	126.5866	5.85	MBTU/BBL	2,162.42

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

**Month End Fuel Oil Estimate**

<b><u>Kahului</u></b>	<u>Barrels</u>	<u>MBTU</u>	<u>(\$)</u>
4/20/2023	52,539.28	330,997.46	4,966,039.67
Estimated Use	10,534.15	66,365.13	983,463.26
Estimated Received	14,400.00	90,720.00	1,356,770.38
Estimated Additional	0.00	0.00	0.00
Estimated End	<u>56,405.13</u>	<u>355,352.33</u>	<u>5,339,346.79</u>
<b>Next month's expense (\$/bbl) =</b>		<b>\$ 94.6607</b>	

<b><u>Maalaea</u></b>	<u>Barrels</u>	<u>MBTU</u>	<u>(\$)</u>
4/20/2023	98,917.25	579,054.88	12,864,187.92
Estimated Use	32,343.04	189,333.99	4,352,743.06
Estimated Received	32,000.00	187,325.83	3,966,724.57
Estimated Additional	0.00	0.00	0.00
Estimated End	<u>98,574.20</u>	<u>577,046.72</u>	<u>12,478,169.43</u>
<b>Next month's expense (\$/bbl) =</b>		<b>\$ 126.5866</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**  
**May 2023**

1. Amount to be Collected	\$126,000
2. Monthly amount (1 / 3 X Line 1)	\$42,000
3. Revenue Tax Divisor	0.91115
4. Total (Line 2 / Line 3)	\$46,096
5. Estimated Sales (May 2023)	76,328 mwh
6. Adjustment (Line 4 ÷ Line 5)	0.060 ¢/kwh

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

<u>Line</u>	W/O Deadband 1st Quarter <u>YTD Total</u>	collection by <u>company*</u>	Basis for Recon With Deadband 1st Quarter <u>YTD Total</u>	collection by <u>company*</u>
ACTUAL COSTS:				
1	Generation	\$47,674.5	\$47,674.5	
2	Distributed Generation	\$14.4	\$14.4	
3	Purch Power	<u>\$8,436.9</u>	<u>\$8,436.9</u>	
4	TOTAL	\$56,125.8	\$56,125.8	
FUEL FILING COST				
5	Generation	\$47,565.1	\$47,657.7	
6	Distributed Generation	\$0.0	\$0.0	
7	Purch Power	<u>\$8,436.9</u>	<u>\$8,436.9</u>	
8	TOTAL	\$56,001.9	\$56,094.5	
BASE FUEL COST				
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)	\$56,001.9	\$56,094.5	
14	ACTUAL FOA LESS TAX	\$55,587.1	\$55,587.1	
15	FOA reconciliation adj for prior year	-\$515.4	-\$515.4	
15A	Less: Non-Adjustable Component Revenues less tax	<u>\$134.2</u>	<u>\$134.2</u>	
16	ADJUSTED FOA LESS TAX	\$55,968.3	\$55,968.3	
17	FOA-(FUEL-BASE) (Line 16-13)	-\$33.7 Under	-\$126.3 Under	
ADJUSTMENTS				
18	Current year FOA accrual reversal	\$0.0	\$0.0	
19	Other prior year FOA	\$0.0	\$0.0	
20	Other	<u>\$0.0</u>	<u>\$0.0</u>	
21	1st QUARTER FOA RECONCILIATION (Lines 17+18+19+20)	-\$33.7 Under	-\$126.3 Under	
21A	YTD Fossil Fuel Cost Risk Sharing Adjustment	<u>\$0.2</u>	<u>\$0.2</u>	
21B	Quarterly FOA Recon w/Fossil Risk Adj (Line 21 + Line 21A)	<u>-\$33.5</u>	<u>-\$126.0</u>	
22	2022 FOA Reconciliation Recognized in FOA Rates		<u>\$0.0</u>	
23	FOA Reconciliation to be Collected May 2023 to July 2023 (Line 22- 21B)		<u><u>\$126.0</u></u> To Be Collected	

\* 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 March 31, 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	38,117
Industrial Fuel Oil Consumption (Recorded), MMBTU	b	602,086
Industrial Fuel Oil Efficiency Factor (Recorded), BTU/kWh	c = (b/a)*1000	15,796
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>15,796</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	162,596
Diesel Consumption (Recorded), MMBTU	b	1,619,403
Diesel Efficiency Factor (Recorded), BTU/kWh	c = (b/a)*1000	9,960
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>9,960</b>

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

**2023**

	<b>Without Deadband</b>	<b>With Deadband AS FILED</b>
	<u>Jan 1 - Mar 31</u>	<u>Jan 1 - Mar 31</u>
<b><u>INDUSTRIAL</u></b>		
Industrial Portion of Recorded Sales , MWH	38,117	38,117
Industrial Sales Efficiency Factor (mmbtu/kwh)	0.015786	0.015796
Mmbtu adjusted for Sales Efficiency Factor	601,710	602,091
\$/mmbtu	<u>\$13.3600</u>	<u>\$13.3600</u>
TOTAL Industrial \$000s TO BE RECOVERED	\$8,038.8	\$8,043.9
<b><u>DIESEL FUEL FILING COST</u></b>		
Diesel Portion of Recorded Sales, MWH	162,596	162,596
Diesel Sales Efficiency Factor (mmbtu/kwh)	0.009938	0.009960
Mmbtu adjusted for Sales Efficiency Factor	1,615,881	1,619,459
\$/mmbtu	<u>\$24.4611</u>	<u>\$24.4611</u>
TOTAL DIESEL \$000s TO BE RECOVERED	\$39,526.3	\$39,613.8
TOTAL GENERATION FUEL FILING COST, \$000s	\$47,565.1	\$47,657.7
TOTAL GENERATION BASE FUEL COST , \$000s	\$0.0	\$0.0
TOTAL GENERATION FUEL FILING COST, \$000s YTD	\$47,565.1	\$47,657.7
TOTAL GENERATION BASE FUEL COST, \$000s YTD	\$0.0	\$0.0

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

		Jan-23, Baseline	YTD Subject to Fossil Risk
A	IFO Fossil Fuel Cost Risk Sharing		
	MMBtu	211787.1453	602,086
B	\$ cost, actuals	\$2,734,780	\$8,039,412
C = B / A (Baseline Column)	Jan 2023 baseline \$/mmbtu	12.912872	12.912872
D	IFO Gen kWh		40,368,198
E	Total kWh, Gen, Purch Pwr, DG		254,398,896
F	Sales kWh		240,520,499
G = (D / E) x F	IFO kWh-sales		38,165,964
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)		15,796
I	Recovery Heat Rate (YTD subject to fossil risk, after deadband)		15,796
J = B / A ytd	Actual Cost \$/MMBtu		13.3526075
K = C x H x G / 1,000,000	Base Cost Recovery w/Target Heat Rate		\$7,779,849
L = I x J x G / 1,000,000	Fuel Filing Cost Recovery		\$8,049,881
<b>M = 2% x (L-K)</b>	<b>IFO Cost Risk Sharing</b>		<b>\$5,401</b>
	<b>Diesel Fossil Fuel Cost Risk Sharing</b>		
AA	MMBtu	629,682	1,619,403
BB	\$ cost, actuals	\$15,546,536	\$39,635,073
CC = BB / AA (Baseline Column)	Jan 2023 baseline \$/mmbtu	24.6894989	24.6894989
DD	Diesel Gen kWh		172,202,980
EE	Total kWh, Gen, Purch Pwr, DG		254,398,896
FF	Sales kWh		240,520,499
GG = (DD / EE) x FF	Diesel kWh-sales		162,808,673
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)		9,960
II	Recovery Heat Rate (YTD subject to fossil risk, after deadband)		9,960
JJ = BB/AA (YTD Column)	Actual Cost \$/MMBtu		24.4751203
KK = CC x HH x GG / 1,000,000	Base Cost Recovery w/Target Heat Rate		\$39,947,426
LL = II x JJ x GG / 1,000,000	Fuel Filing Cost Recovery		\$39,688,228
<b>MM = 2% x (LL-KK)</b>	<b>Diesel Cost Risk Sharing</b>		<b>-\$5,184</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		\$217
AAA = F	Non-Adjustable Component		
	YTD kWh under ECRC		240,520,499
BBB	Non-Adjustable Component, cents/kWh		0.06125
CCC	Non-Adjustable Component Revenues w/tax		\$147,319
DDD	Non-Adjustable Component Revenues less tax		\$134,230

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

Month	(1) YTD FOA Reconciliation	Qtr	(2) FOA Rec Adjust Variance	(3) FOA Rec Less Variance	(4) Try to Collect	(5) Actual Collect	(6) Month-end Cumulative Balance
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)		
May	(126,000)	(1)	(15,546)	(110,454)	42,000		

## 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		
	4/01/23	5/01/23	4/01/23	5/01/23	Difference
<b>Base Rates</b>	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	21.58	21.58
Customer Charge	\$	11.50	11.50	11.50	11.50
<b>Total Base Charges</b>				75.51	75.51
<b>RBA Rate Adjustment</b>	¢/kWh	1.9048	1.9048	9.52	9.52
<b>PBF Surcharge</b>	¢/kWh	0.6488	0.6488	3.24	3.24
<b>SolarSaver Adjustment</b>	¢/kWh	-0.0038	0.0000	-0.02	0.00
<b>Refund of 2018 Interim</b>	% on Base	0.00	0.00	0.00	0.00
<b>Purchased Power Adjustment</b>	¢/kWh	0.0090	0.0006	0.05	0.00
<b>Energy Cost Recovery</b>	¢/kWh	24.536	24.180	122.68	120.90
<b>DSM Adjustment</b>	¢/kWh	0.0323	0.0395	0.16	0.20
<b>Green Infrastructure Fee</b>	\$	1.23	1.23	1.23	1.23
<b>Avg Residential Bill at 500 kwh</b>				212.37	210.60
				Increase (Decrease -)	-1.77
				% Change	-0.83%

	Rate		Charge (\$) at 600 Kwh		
	4/01/23	5/01/23	4/01/23	5/01/23	Difference
<b>Base Rates</b>	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
<b>Total Base Charges</b>				89.89	89.89
<b>RBA Rate Adjustment</b>	¢/kWh	1.9048	1.9048	11.43	11.43
<b>PBF Surcharge</b>	¢/kWh	0.6488	0.6488	3.89	3.89
<b>Renewable Energy Infrastructure Cost Recovery Provision</b>	¢/kWh	0.0000	0.0000	0.00	0.00
<b>SolarSaver Adjustment</b>	¢/kWh	-0.0038	0.0000	-0.02	0.00
<b>Refund of 2018 Interim</b>	% on Base	0.00	0.00	0.00	0.00
<b>Purchased Power Adjustment</b>	¢/kWh	0.0090	0.0006	0.05	0.00
<b>Energy Cost Recovery</b>	¢/kWh	24.536	24.180	147.22	145.08
<b>DSM Adjustment</b>	¢/kWh	0.0323	0.0395	0.19	0.24
<b>Green Infrastructure Fee</b>	\$	1.23	1.23	1.23	1.23
<b>Avg Residential Bill at 600 kwh</b>				253.88	251.76
				Increase (Decrease -)	-2.12
				% Change	-0.84%

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

<u>EFFECTIVE DATE</u>	<u>FUEL FACTOR CENTS / KWH</u>		
	<u>RESIDENTIAL &amp; COMMERCIAL</u>	<u>RESIDENTIAL BILL (\$)</u> <u>@ 500 KWH @ 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



**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
<b>07/01/22</b>	<b>RESID. PBF SURCHARGE ADJUSTMENT</b>	<b>0.6488 CENTS/KWH</b>
07/01/22 - 12/31/22	GREEN INFRASTRUCTURE FEE	1.1800 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
<b>01/01/23</b>	<b>REVENUE BALANCING ACCOUNT RATE ADJUSTMENT</b>	<b>1.9048 CENTS/KWH</b>
<b>01/01/23</b>	<b>GREEN INFRASTRUCTURE FEE</b>	<b>1.23 DOLLARS/MONTH</b>
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>
<b>05/01/23</b>	<b>RESID. DSM ADJUSTMENT</b>	<b>0.0395 CENTS/KWH</b>
<b>05/01/23</b>	<b>PURCHASED POWER ADJUSTMENT</b>	<b>0.0006 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**

