



November 28, 2022

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 December 2022

Maui Electric Company, Limited's ("Maui Electric" or "Company") December 2022 Energy Cost Recovery factor for our Maui Division is 24.119 cents per kilowatt-hour ("kWh"), a decrease of 0.369 cents per kWh from last month. A residential customer consuming 500 kWh of electricity will be paying \$208.25, a decrease of \$1.83 compared to rates effective November 1, 2022. The decrease in the typical residential bill is due to the decrease in the Energy Cost Recovery factor (-\$1.84), partially offset by an increase in the Purchase Power Adjustment (+\$0.01).

The Company's Maui Division fuel composite cost of generation, central station and other increased 147.310 cents per million BTU to 2,354.99 cents per million BTU. The composite cost of DG energy is 0.00 cents per kWh. The composite cost of purchased energy decreased 6.181 cents per kWh to 12.434 cents per kWh.

The Energy Cost Recovery factor for our Lāna'i Division for December 2022 is 38.346 cents per kWh, an increase of 0.386 cents per kWh from last month. A residential customer consuming 400 kWh of electricity will be paying \$228.13, an increase of \$1.54 compared to rates effective November 1, 2022. The increase in the typical residential bill is due to the increase in the Energy Cost Recovery factor.

The Company's Lāna'i Division fuel composite cost of generation, central station and other increased 31.88 cents per million BTU to 3,301.75 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 December 2022 is 33.316 cents per kWh, an increase of 1.363 cents per kWh from last month. A residential customer consuming 400 kWh of electricity will be paying \$215.16, an increase of \$5.45 compared to rates effective November 1, 2022. The increase in the typical residential bill is due to the increase in the Energy Cost Recovery factor.

.

The Honorable Chair and Members  
of the Hawai'i Public Utilities Commission  
November 28, 2022  
Page 2

The Company's Moloka'i Division fuel composite cost of generation, central station and other increased 110.90 cents per million BTU to 2,772.67 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 December 1, 2022.

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.  
LANAI DIVISION**

**ENERGY COST RECOVERY FACTOR**

	EFFECTIVE DATES		<u>Change</u>
	<u>11/01/2022</u>	<u>12/01/2022</u>	
<u>COMPOSITE COSTS</u>			
Generation, Central Station & Other, ¢/mbtu	3,269.87	3,301.75	31.88
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 Recovery, ¢/kWh	37.960	38.346	0.386
<u>Others - "G,J,P,F"</u>			
Energy Cost Recovery, ¢/kWh	37.960	38.346	0.386
<u>Residential Customer with</u>			
400 KWH Consumption, \$/Bill	226.59	228.13	1.54
500 KWH Consumption, \$/Bill	281.62	283.55	1.93

Supersedes Sheet Effective: 11/01/2022

MAUI ELECTRIC COMPANY, LTD.  
LANAI DIVISION

ENERGY COST RECOVERY (ECR) FILING

ENERGY COST RECOVERY (ECR) FILING - December 1, 2022 (page 1 of 2)

Line

1 Effective Date December 1, 2022  
2 Supercedes Factors of November 1, 2022

**GENERATION COMPONENT**

<b>CENTRAL STATION</b>				<b>DG ENERGY COMPONENT</b>			
FUEL PRICES, ¢/mmbtu							
3	Industrial		0.00				
4	Diesel - Miki Basin		3,301.75				
5							
6	Other		0.00				
BTU MIX, %							
7	Industrial		0.00%	25	COMPOSITE COST OF DG		
8	Diesel - Miki Basin		100.00%		ENERGY, ¢/kWh	0.000	
9							
10	Other		0.00%	26	% Input to System kWh Mix	0.00%	
			100.00%				
11	COMPOSITE COST OF GENERATION, CENTRAL STATION + OTHER ¢/mmbtu (Lines (3 x 7) + (4 x 8) + (5 x 9) + (6 x 10))		3,301.75	27	WEIGHTED COMPOSITE DG ENERGY COST, ¢/kWh (Lines 25 x 26)	0.00000	
12	% Input to System kWh Mix		97.42%	28	BASE DG ENERGY COMP COST	0.000	
EFFICIENCY FACTOR, mmbtu/kWh				29	Base % Input to System kWh Mix	0.00%	
	(A)	(B)	(C)	(D)	30	WEIGHTED BASE DG ENERGY COST, ¢/kWh (Line 28 x 29)	0.00000
			Percent of				
			Centrl Stn +				
	<u>Fuel Type</u>	<u>Eff Factor</u>	<u>Other</u>	<u>Weighted</u>	31	Cost Less Base (Line 27 - 30)	0.00000
		<u>mmbtu/kwh</u>		<u>Eff Factor</u>	32	Loss Factor	1.0500
13	Industrial	0.000000	0.00	0.000000	33	Revenue Tax Req Multiplier	1.0975
14	Diesel	0.010809	100.00	0.010809	34	DG FACTOR,	
15	Other	0.010809	0.00	0.000000		¢/kWh (Line 31 x 32 x 33)	0.00000
	(Lines 13, 14, 15): Col(B) x Col(C) = Col(D)						
16	Weighted Efficiency Factor, mmbtu/kWh [lines 13(D) + 14(D) + 15(D)]		0.010809				
17	WEIGHTED COMPOSITE CENTRAL STATION + OTHER GEN COST, ¢/kWh (lines (11 x 12 x 16))		34.76785				
18	BASE CENTRAL STATION + OTHER GENERATION COST, ¢/mmbtu		-				
19	Base % Input to Sys kWh Mix		0.00%				
20	Efficiency Factor, mmbtu/kwh		0.010809				
21	WEIGHTED BASE CENTRAL STATION + OTHER GENERATION COST ¢/kWh (lines (18 x 19 x 20))		-				
22	COST LESS BASE (line(17 - 21))		34.76785				
23	Revenue Tax Req Multiplier		1.0975				
24	CENTRAL STATION + OTHER GENERATION FACTOR, ¢/kWh (line (22 x 23))		38.15772				
				SUMMARY OF			
				TOTAL GENERATION FACTOR, ¢/kWh			
				35	CNTRL STN + OTHER (line 24)	38.15772	
				36	DG (line 34)	-	
				37	TOTAL GENERATION FACTOR, ¢/kWh (lines 35 + 36)	38.15772	

MAUI ELECTRIC COMPANY, LTD.  
LANAI DIVISION

ENERGY COST RECOVERY (ECR) FILING

ENERGY COST RECOVERY (ECR) FILING - December 1, 2022 (page 2 of 2)

Line

1 Effective Date December 1, 2022  
2 Supercedes Factors of November 1, 2022

<u>Line</u>	<b>PURCHASED ENERGY COMPONENT</b>	
	PURCHASED ENERGY PRICE, ¢/kWh - FOSSIL	
	PURCHASED ENERGY PRICE, ¢/kWh - RENEWABLE	
38	LANAI SOLAR RESEARCH - On Peak	30.000
39	- Off Peak	30.000
40	Sch Q	0.000
	PURCHASED ENERGY KWH MIX, %, FOSSIL	
	PURCHASED ENERGY KWH MIX, %, RENEWABLE	
41	LANAI SOLAR RESEARCH - On Peak	100.00%
42	- Off Peak	0.00%
43	Sch Q	0.00%
43A	Total Fossil %	0.00%
43B	Total Renewable %	100.00%
43C	Comp. cost of purch. energy, fossil ¢/kWh	N/A
43D	Comp. cost of purch. energy, renewable ¢/kWh	30.00
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	2.58%
46	WEIGHTED COMP. PURCH. ENERGY COST, ¢/kWh (lines (44 x 45))	0.77400
47	BASE PURCHASED ENERGY COMPOSITE COST, ¢/kWh	0.000
48	Base % Input to Sys kWh Mix	0.00
49	WEIGHTED BASE PURCHASED ENERGY COST, ¢/kWh (lines (47 x 48))	0.00000
50	COST LESS BASE(lines (46 - 49))	0.77400
51	Loss Factor	1.050
52	Revenue Tax Req Multiplier	1.0975
53	PURCHASED ENERGY FACTOR, ¢/kWh (lines (50 x 51 x 52))	0.89194

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

<b>Baseline Diesel</b>		
54	Diesel \$, baseline month	\$708,879
55	Diesel mmbtu, baseline	29,161
56	Baseline Diesel, ¢/mmbtu	2,430.88
<b>Month Diesel</b>		
57	Diesel mmbtu, budget	31,691
58	Diesel Cost, ¢/mmbtu	3,301.75
59	Diesel ECRC Fossil Cost	\$1,046,373
60	Diesel Base ECRC Recovery Target	\$770,383
61	Diesel differential	\$275,990
62	Total Fossil	\$275,990
63	2% of above	\$5,520
64	Total Monthly Fossil Fuel Cost Risk Sharing, Prior Months in Year	\$31,500
65	Maximum Annual Cap (bi-directional)	\$31,500
66	Number of Days in year from implementation	365
67	Fossil Risk % Proration (based on 365 day year)	100.00%
68	Maximum Annual Cap (bi-directional) prorated	\$31,500
69	Applicable Monthly Fossil Fuel Cost Risk Sharing	\$0
70	Total Monthly Fossil Fuel Cost Risk Sharing, Including This Month	\$31,500
71	Fossil Cost Risk Sharing before taxes	\$0
72	Revenue Tax Adjustment	1.097514
73	Fossil Cost Risk Sharing w/revenue tax	\$0
74	Forecasted Month MWh Sales	3,062
75	Fossil Fuel Cost Risk Sharing Component, ¢/kWh	0.0000

Line **SYSTEM COMPOSITE CALCULATIONS**

76	GENERATION AND PURCHASED ENERGY FACTOR, ¢/kWh (lines (37 + 53))	39.04966
77	Adjustment, ¢/kWh	0.000
78	Fossil Fuel Cost Risk Sharing Component	0.000
79	ECR Reconciliation Adjustment	(0.704)
80	ECR FACTOR, ¢/kWh (lines (76 + 77 + 78 + 79))	38.346

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

**MONTH END FUEL OIL ESTIMATE**

<b><u>Miki Basin - ULSD</u></b>	<u>Barrels</u>	<u>MBTU</u>	<u>\$</u>
11/18/2022	4,053.14	23,224.55	776,313.13
Estimated Use	2,109.38	12,086.75	395,220.93
Estimated Received	2,571.43	14,734.29	483,752.58
Estimated Additional	<u>1,015.52</u>	<u>5,818.91</u>	<u>181,511.01</u>
Estimated End	5,530.71	31,691.00	1,046,355.79

Next Month's Combined Miki Expense (\$/bbl) = \$ 189.1901 /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	\$ 189.1901	5.73 BTU/BBL	3,301.75

**MAUI ELECTRIC COMPANY, LTD.**  
**Lanai Division**  
**ECR Reconciliation Adjustment**

**December 2022**

1. Amount to be refunded	(\$58,900)
2. Monthly amount (1 / 3 X Line 1)	(\$19,633)
3. Revenue Tax Divisor	0.91115
4. Total (Line 2 / Line 3)	(\$21,547)
5. Estimated Sales (December 2022)	3,062 mwh
6. Adjustment (Line 4 ÷ Line 5)	-0.704 ¢/kwh

**MAUI ELECTRIC COMPANY, LTD.  
LANAI DIVISION  
2022 Cumulative Reconciliation Balance**

<u>Month</u>	(1) <u>YTD FOA Reconciliation</u>	<u>Qtr</u>	(2) <u>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 '20					(28,400)	(28,503)	32,466
January '21					(28,400)	(25,647)	6,819
February	70,000	(4)	4,076	65,924	(23,333)	(20,929)	51,814
March					(23,333)	(21,960)	29,854
April					(23,333)	(21,452)	8,402
May	80,200	(1)	6,530	73,670	(26,733)	(25,485)	56,587
June					(26,733)	(25,141)	31,446
July					(26,733)	(25,403)	6,043
August	69,700	(2)	4,721	64,979	(23,233)	(22,228)	48,794
September					(23,233)	(20,522)	28,272
October					(23,233)	(21,136)	7,136
November	67,100	(3)	5,046	62,054	(22,367)	(20,580)	48,610
December					(22,367)	(20,800)	27,810
January '22					(22,367)	(20,722)	7,088
February	55,600	(4)	5,451	50,149	(18,533)	(16,329)	40,908
March					(18,533)	(18,196)	22,712
April					(18,533)	(17,076)	5,636
May	68,500	(1)	4,186	64,314	(22,833)	(23,687)	46,263
June					(22,833)	(22,948)	23,315
July					(22,833)	(22,368)	947
August	55,300	(2)	488	54,812	(18,433)	(17,864)	37,895
September					(18,433)	(17,494)	20,401
October					(18,433)	(18,331)	2,070
November	58,900	(3)	1,973	56,927	(19,633)		
December					(19,633)		

## 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		
	11/01/22	12/01/22	11/01/22	12/01/22	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 250 kWh per month	¢/kWh	12.3123	12.3123	30.78	30.78
Next 500 kWh per month	¢/kWh	14.8123	14.8123	22.22	22.22
Customer Charge	\$	11.50	11.50	11.50	11.50
<b>Total Base Charges</b>				64.50	64.50
<b>IRP Refund</b>	% on base	0.0000	0.0000	0.00	0.00
<b>Revenue Balancing Rate Adjustment</b>	¢/kWh	1.6175	1.6175	6.47	6.47
<b>PBF Surcharge</b>	¢/kWh	0.6488	0.6488	2.60	2.60
<b>Renewable Energy Infrastructure Cost</b>					
<b>Recovery Provision</b>	¢/kWh	0.0000	0.0000	0.00	0.00
<b>SolarSaver Adjustment</b>	¢/kWh	0.0000	0.0000	0.00	0.00
<b>Energy Cost Recovery</b>	¢/kWh	37.960	38.346	151.84	153.38
<b>Green Infrastructure Fee</b>	\$	1.18	1.18	1.18	1.18
<b>Avg Residential Bill at 400 kwh</b>				226.59	228.13

Increase (Decrease -)	1.54
% Change	0.68%

	Rate		Charge (\$) at 500 Kwh		
	11/01/22	12/01/22	11/01/22	12/01/22	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 250 kWh per month	¢/kWh	12.3123	12.3123	30.78	30.78
Next 500 kWh per month	¢/kWh	14.8123	14.8123	37.03	37.03
Customer Charge	\$	11.50	11.50	11.50	11.50
<b>Total Base Charges</b>				79.31	79.31
<b>IRP Refund</b>	% on base	0.0000	0.0000	0.00	0.00
<b>Revenue Balancing Rate Adjustment</b>	¢/kWh	1.6175	1.6175	8.09	8.09
<b>PBF Surcharge</b>	¢/kWh	0.6488	0.6488	3.24	3.24
<b>Renewable Energy Infrastructure Cost</b>					
<b>Recovery Provision</b>	¢/kWh	0.0000	0.0000	0.00	0.00
<b>SolarSaver Adjustment</b>	¢/kWh	0.0000	0.0000	0.00	0.00
<b>Energy Cost Recovery</b>	¢/kWh	37.960	38.346	189.80	191.73
<b>Green Infrastructure Fee</b>	\$	1.18	1.18	1.18	1.18
<b>Avg Residential Bill at 500 kwh</b>				281.62	283.55

Increase (Decrease -)	1.93
% Change	0.69%

**MAUI ELECTRIC COMPANY, LTD. -- Lanai 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; COMMERCIAL</u>	<u>RESIDENTIAL @ 400 KWH</u>	
January 1, 2020	25.369	173.69	215.49
February 1, 2020	24.109	168.65	209.19
March 1, 2020	23.379	165.73	205.54
April 1, 2020	19.794	151.15	187.31
May 1, 2020	18.958	148.04	183.43
June 1, 2020	15.429	131.79	163.12
July 1, 2020	16.335	134.73	166.81
August 1, 2020	17.755	140.41	173.91
September 1, 2020	18.135	141.93	175.81
October 1, 2020	18.076	141.69	175.51
November 1, 2020	17.881	140.91	174.54
December 1, 2020	17.874	140.89	174.50
January 1, 2021	19.498	147.44	182.68
February 1, 2021	20.640	152.01	188.39
March 1, 2021	22.103	157.86	195.71
April 1, 2021	24.018	165.34	205.06
May 1, 2021	24.354	166.87	206.96
June 1, 2021	23.796	167.38	207.60
July 1, 2021	24.680	171.10	212.26
August 1, 2021	25.269	173.46	215.21
September 1, 2021	25.345	173.76	215.59
October 1, 2021	24.342	169.75	210.57
November 1, 2021	29.191	189.14	234.82
December 1, 2021	29.254	189.40	235.13
January 1, 2022	28.241	189.19	234.87
February 1, 2022	28.361	189.67	235.47
March 1, 2022	31.445	202.01	250.89
April 1, 2022	33.341	209.46	260.21
May 1, 2022	37.529	226.35	281.31
June 1, 2022	41.508	240.84	299.43
July 1, 2022	43.106	247.17	307.35
August 1, 2022	43.083	247.08	307.24
September 1, 2022	37.630	225.27	279.97
October 1, 2022	37.815	226.01	280.90
November 1, 2022	37.960	226.59	281.62
December 1, 2022	38.346	228.13	283.55

**MAUI ELECTRIC COMPANY, LTD. -- Lanai 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>	
06/01/19 - 06/30/19	REFUND OF INTERIM RATE INCREASE 2018 TEST YEAR	-2.03 PERCENT ON BASE
06/01/19 - 05/31/20	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	0.8716 CENTS/KWH
07/01/19 - 12/31/19	RESID. PBF SURCHARGE ADJUSTMENT	0.4775 CENTS/KWH
07/01/19 - 12/31/19	GREEN INFRASTRUCTURE FEE	1.17 DOLLARS/MONTH
01/01/20 - 06/30/20	RESID. PBF SURCHARGE ADJUSTMENT	0.7437 CENTS/KWH
01/01/20 - 06/30/20	GREEN INFRASTRUCTURE FEE	1.2500 DOLLARS/MONTH
04/01/20 - 04/30/20	SOLARSAVER ADJUSTMENT	-0.0592 CENTS/KWH
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
07/01/20 - 12/31/20	GREEN INFRASTRUCTURE FEE	1.19 DOLLARS/MONTH
01/01/21 - 06/30/21	GREEN INFRASTRUCTURE FEE	1.25 DOLLARS/MONTH
04/01/21 - 04/30/21	SOLARSAVER ADJUSTMENT	-0.0445 CENTS/KWH
05/01/21 - 03/31/22	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
06/01/21 - 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
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
04/01/22 - 04/30/22	SOLARSAVER ADJUSTMENT	-0.0315 CENTS/KWH
<b>05/01/22</b>	<b>SOLARSAVER ADJUSTMENT</b>	<b>0.0000 CENTS/KWH</b>
<b>06/01/22</b>	<b>REVENUE BALANCING ACCOUNT RATE ADJUSTMENT</b>	<b>1.6175 CENTS/KWH</b>
<b>07/01/22</b>	<b>RESID. PBF SURCHARGE ADJUSTMENT</b>	<b>0.6488 CENTS/KWH</b>
<b>07/01/22</b>	<b>GREEN INFRASTRUCTURE FEE</b>	<b>1.18 DOLLARS/MONTH</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.