



January 27, 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 February 2022

Maui Electric Company, Limited's ("Maui Electric" or "Company") February 2022 Energy Cost Recovery factor for our Maui Division is 20.593 cents per kilowatt-hour ("kWh"), a decrease of 0.197 cents per kWh from last month. A residential customer consuming 500 kWh of electricity will be paying \$192.83, a decrease of \$0.89 compared to rates effective January 1, 2022. The decrease in the typical residential bill is due to the decrease in the Energy Cost Recovery factor (-\$0.99), partially offset by an increase in the Demand-Side Management Adjustment rate (+\$0.05) and increase in the Purchase Power Adjustment (+\$0.05).

The Company's Maui Division fuel composite cost of generation, central station and other decreased 60.690 cents per million BTU to 1,636.53 cents per million BTU. The composite cost of DG energy is 0.00 cents per kWh. The composite cost of purchased energy decreased 0.487 cents per kWh to 19.550 cents per kWh.

Maui Electric has determined that the target sales heat rates for Maui Division's industrial fuel and diesel fuel sources will remain unchanged from the target sales heat rates of 0.015786 million BTU per kilowatt-hour for industrial fuel and 0.009938 million BTU per kilowatt-hour for diesel fuel that were in effect at the end of 2021. Attachment 24 provides a calculation of the applicable target sales heat rates for 2022 for each division. As shown in Attachment 24, the Maui Division actual sales heat rates for industrial and diesel fuel in 2021 were higher than the respective target sales heat rates in 2021, resulting in no adjustments to the respective target heat rates that were in effect at the end of 2021.

The Energy Cost Recovery factor for our Lāna'i Division for February 2022 is 28.361 cents per kWh, an increase of 0.120 cents per kWh from last month. A residential customer consuming 400 kWh of electricity will be paying \$189.67, an increase of \$0.48 compared to rates effective January 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 decreased 0.28 cents per million BTU to 2,430.60 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.

Maui Electric has determined that the target sales heat rate will change from the target sales heat rates of 0.010810 million BTU per kilowatt-hour to 0.010809 million BTU per kilowatt-hour for Lāna‘i Division’s diesel fuel. As shown in Attachment 24, the actual sales heat rate for Lāna‘i Division’s diesel in 2021 was lower than the target sales heat rate for Lāna‘i Division’s diesel fuel in 2021, resulting in an adjustment to the target heat rate for Lāna‘i Division’s diesel fuel that was in effect at the end of 2021 to establish the target heat rate for 2022 for diesel fuel. A revised Lāna‘i Division ECRC tariff reflecting the revised target sales heat rate for 2022 is included as Attachment 25. A blackline of the Lāna‘i Division ECRC tariff is included as Attachment 26. The Company files the Lāna‘i Division ECRC tariff sheets in accordance with the Lāna‘i Division ECRC tariff, which states:

2. The target heat rates for diesel may be reestablished each calendar year, beginning at January 1, 2020. If the prior year’s actual sales heat rate for a fuel type is greater than or equal to the target sales heat rate applicable in that year, the target sales heat rate for that fuel type remains unchanged. If the prior year’s actual sales heat rate for a fuel type is less than the target sales heat rate applicable in that year, the target sales heat rate for that fuel type shall be reduced by one-half of the difference between the prior year’s actual sales heat rate and the target sales heat rate applicable in that year.¹

The Energy Cost Recovery factor for our Moloka‘i Division for February 2022 is 23.569 cents per kWh, an increase of 1.788 cents per kWh from last month. A residential customer consuming 400 kWh of electricity will be paying \$177.66, an increase of \$7.16 compared to rates effective January 1, 2022. The increase in the typical residential bill is due to the increase in the Energy Cost Recovery.

The Company’s Moloka‘i Division fuel composite cost of generation, central station and other increased 139.20 cents per million BTU to 1,949.07 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.

Maui Electric has determined that the target sales heat rates for Moloka‘i Division’s diesel fuel source will remain unchanged from the target sales heat rate of 0.011127 million BTU per kilowatt-hour for diesel fuel that was in effect at the end of 2021. As shown in Attachment 24, the actual sales heat rate for diesel fuel in 2021 was higher than the target sales heat rate in 2021, resulting in no adjustments to the Moloka‘i Division target heat rate for diesel fuel that was in effect at the end of 2021.

¹ See Maui Electric Lāna‘i Division ECRC tariff, Revised Sheet No. 88B.

The Honorable Chair and Members
of the Hawai'i Public Utilities Commission
January 27, 2022
Page 3

The attached sheets set forth the fuel adjustment in cents per kWh for each rate schedule that is applicable for pro rata use beginning February 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.
MAUI DIVISION**

ENERGY COST RECOVERY FACTOR

	EFFECTIVE DATES		<u>Change</u>
	<u>01/01/2022</u>	<u>02/01/2022</u>	
<u>COMPOSITE COSTS</u>			
Generation, Central Station & Other, ¢/mbtu	1,697.22	1,636.53	(60.690)
DG Energy, ¢/kWh	0.00	0.00	0.000
Purchased Energy, ¢/kWh	20.037	19.550	(0.487)
<u>Residential Schedule "R"</u>			
Energy Cost Recovery Factor, ¢/kWh	20.790	20.593	(0.197)
<u>Others - "G,J,P,F"</u>			
Energy Cost Recovery Factor, ¢/kWh	20.790	20.593	(0.197)
<u>Residential Customer with</u>			
500 KWH Consumption, \$/Bill	193.72	192.83	(0.89)
600 KWH Consumption, \$/Bill	231.49	230.42	(1.07)

Supersedes Sheet Effective:

January 1, 2022

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

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

Line

1 Effective Date February 1, 2022
2 Supercedes Factors of January 1, 2022

GENERATION COMPONENT

CENTRAL STATION				DG ENERGY COMPONENT	
FUEL PRICES, ¢/mmbtu					
3	Industrial				
				1,285.57	
4	Diesel			1,742.02	
5	Other				
BTU MIX, %					
6	Industrial			23.11%	
7	Diesel			76.89%	
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))			1,636.53	
10	% Input to System kWh Mix			74.83%	
EFFICIENCY FACTOR, mmbtu/kWh					
	(A)	(B)	(C)	(D)	
			Percent of		
			Centrl Stn +		
			Other		
	Fuel Type	Eff Factor	Centrl Stn +	Weighted	
		mmbtu/kwh	Other	Eff Factor	
11	Industrial	0.015786	15.79	0.002493	
12	Diesel	0.009938	84.21	0.008369	
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)]			0.010862	
15	WEIGHTED COMPOSITE CENTRAL STATION + OTHER GENERATION COST, ¢/kWh (lines 9 x 10 x 14))			13.30177	
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))			13.30177	
21	Revenue Tax Req Multiplier			1.0975	
22	CENTRAL STATION + OTHER GENERATION FACTOR, ¢/kWh (line (20 x 21))			14.59869	
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)			14.59869	
34	DG (line 32)			-	
35	TOTAL GENERATION FACTOR, ¢/kWh (lines 33 + 34)			14.59869	

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

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

Line	1	Effective Date	February 1, 2022
	2	Supercedes Factors of	January 1, 2022

Line	PURCHASED ENERGY COMPONENT		
	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		26.331
39	Sempra Wind		23.211
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	21.88%
50		- Off Peak	18.16%
51	Kaheawa Wind II		21.74%
52	Sempra Wind	- On Peak	30.65%
53	Unused	- On Peak	0.00%
54		- Off Peak	0.00%
55	South Maui RR		1.81%
56	Ku'ia Solar		1.83%
57	Unused		0.00%
58	Unused		0.00%
59	CBRE PV		0.00%
60			
61	FIT		3.93%
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		19.550
62	COMPOSITE COST OF PURCHASED ENERGY, ¢/kWh		19.550
	(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		25.17%
64	WEIGHTED COMPOSITE PURCHASED ENERGY COST, ¢/kWh (lines (62 x 63))		4.92074
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))		4.92074
69	Loss Factor		1.057
70	Revenue Tax Req Multiplier		1.0975
71	PURCHASED ENERGY FACTOR, ¢/kWh (lines (68 x 69 x 70))		5.70834

Line	Calculation of Monthly Fossil Fuel Cost Risk Sharing Component	
	Baseline IFO	
72	IFO \$, baseline month	\$2,269,860
73	IFO mmbtu, baseline	167,966
74	Baseline IFO, ¢/mmbtu	1351.38
	Baseline Diesel	
75	Diesel \$, baseline month	\$9,034,941
76	Diesel mmbtu, baseline	498,109
77	Baseline Diesel, ¢/mmbtu	1813.85
	Month IFO	
78	IFO mmbtu, budget	140,042
79	IFO Cost, ¢/mmbtu	1,285.57
80	IFO ECRC Fossil Cost	\$1,800,336
81	IFO Base ECRC Recovery Target	\$1,892,497
82	IFO differential	-\$92,162
	Month Diesel	
83	Diesel mmbtu, budget	465,919
84	Diesel Cost, ¢/mmbtu	1,742.02
85	Diesel ECRC Fossil Cost	\$8,116,406
86	Diesel Base ECRC Recovery Target	\$8,451,076
87	Diesel differential	-\$334,670
88	Total Fossil	-\$426,831
89	2% of above	-\$8,537
90	Total Monthly Fossil Fuel Cost Risk Sharing, Prior Months in Year	\$0
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	-\$8,537
96	Total Monthly Fossil Fuel Cost Risk Sharing, Including This Month	-\$8,537
97	Fossil Cost Risk Sharing before taxes	-\$8,537
98	Revenue Tax Adjustment	1.097514
99	Fossil Cost Risk Sharing w/revenue tax	-\$9,369
100	Forecasted Month MWh Sales	73,799
101	Fossil Fuel Cost Risk Sharing Component, ¢/kWh	0.0127

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	20.30703
110	ECR Reconciliation Adjustment	0.212
111	Non-Adjustable Component	0.0612
112	Fossil Fuel Cost Risk Sharing Component	0.0127
113	ECR FACTOR, ¢/kWh (lines (109 + 110 + 111 + 112))	20.593

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

Fuel Oil Inventory Prices for February 2022

<u>TYPE OF OIL BURNED</u>	<u>PRICES \$/BBL</u>	<u>CONVERSION FACTORS</u>		<u>PRICES ¢/MBTU</u>
INDUSTRIAL	80.9911	6.30	MBTU/BBL	1,285.57
DIESEL/ULSD	101.9864	5.85	MBTU/BBL	1,742.02

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

Month End Fuel Oil Estimate

<u>Kahului</u>	<u>Barrels</u>	<u>MBTU</u>	<u>(\$)</u>
1/20/2022	41,743.55	262,984.37	3,462,426.95
Estimated Use	17,106.38	107,770.22	1,450,137.02
Estimated Received	24,000.00	151,200.00	1,926,887.83
Estimated Additional	0.00	0.00	0.00
Estimated End	<u>48,637.17</u>	<u>306,414.15</u>	<u>3,939,177.76</u>

Next month's expense (\$/bbl) = \$ 80.9911

<u>Maalaea</u>	<u>Barrels</u>	<u>MBTU</u>	<u>(\$)</u>
1/20/2022	106,846.79	625,532.01	11,061,891.29
Estimated Use	34,391.63	201,344.99	3,653,110.06
Estimated Received	26,400.00	154,558.17	2,673,097.23
Estimated Additional	0.00	0.00	0.00
Estimated End	<u>98,855.16</u>	<u>578,745.19</u>	<u>10,081,878.46</u>

Next month's expense (\$/bbl) = \$ 101.9864

**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 2022:

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
February 2022

1. Amount to be Collected	\$428,500
2. Monthly amount (1 / 3 X Line 1)	\$142,833
3. Revenue Tax Divisor	0.91115
4. Total (Line 2 / Line 3)	\$156,761
5. Estimated Sales (February 2022)	73,799 mwh
6. Adjustment (Line 4 ÷ Line 5)	0.212 ¢/kwh

**MAUI ELECTRIC COMPANY, LTD.
MAUI DIVISION
2021 FUEL OIL ADJUSTMENT RECONCILIATION SUMMARY
(Thousand \$)**

<u>Line</u>	<u>W/O Deadband 4th Quarter YTD Total</u>	<u>collection by company*</u>	<u>Basis for Recon With Deadband 4th Quarter YTD Total</u>	<u>collection by company*</u>
ACTUAL COSTS:				
1	Generation		\$108,430.2	\$108,430.2
2	Distributed Generation		\$30.1	\$30.1
3	Purch Power		<u>\$52,413.0</u>	<u>\$52,413.0</u>
4	TOTAL		\$160,873.3	\$160,873.3
FUEL FILING COST				
5	Generation		\$106,431.1	\$107,420.6
6	Distributed Generation		\$0.0	\$0.0
7	Purch Power		<u>\$52,413.0</u>	<u>\$52,413.0</u>
8	TOTAL		\$158,844.1	\$159,833.6
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)		\$158,844.1	\$159,833.6
14	ACTUAL FOA LESS TAX		\$158,478.7	\$158,478.7
15	FOA reconciliation adj for prior year		-\$1,149.4	-\$1,149.4
15A	Less: Non-Adjustable Component Revenues less tax		<u>\$549.1</u>	<u>\$549.1</u>
16	ADJUSTED FOA LESS TAX		\$159,079.0	\$159,079.0
17	FOA-(FUEL-BASE) (Line 16-13)	\$234.9 Over		-\$754.6 Under
ADJUSTMENTS				
18	Current year FOA accrual reversal		\$2,099.0	\$2,099.0
19	Other prior year FOA		\$0.0	\$0.0
20	Other		<u>\$0.0</u>	<u>\$0.0</u>
21	QUARTERLY FOA RECONCILIATION (Lines 17+18+19+20)	\$2,333.9 Over		\$1,344.4 Over
21A	YTD Fossil Fuel Cost Risk Sharing Adjustment		<u>\$570.0</u>	<u>\$570.0</u>
21B	Quarterly FOA Recon w/Fossil Risk Adj (Line 21 + Line 21A)		<u>\$2,903.9</u>	<u>\$1,914.4</u>
22	3rd Quarter FOA Reconciliation YTD			<u>\$2,342.9</u> Over
23	FOA Reconciliation to be Refunded February 2022 to April 2022 (Line 22- 21B)			<u><u>\$428.5</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, 2021 through December 31, 2021

	<u>Notes</u>	<u>YTD</u>
<u>Industrial Fuel Oil</u>		
Industrial Fuel Oil Efficiency Factor, BTU/kWh	f	15,786
Industrial Fuel Oil Deadband Definition, - BTU/kWh	d	100
Industrial Fuel Oil Portion of Recorded Sales, MWh	a	125,191
Industrial Fuel Oil Consumption (Recorded), MMBTU	b	2,032,900
Industrial Fuel Oil Efficiency Factor (Recorded), BTU/kWh	c = (b/a)*1000	16,238
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	15,886
<u>Diesel</u>		
Diesel Efficiency Factor, BTU/kWh	f	9,938
Diesel Deadband Definition, - BTU/kWh	d	100
Diesel Portion of Recorded Sales, MWh	a	585,476
Diesel Consumption (Recorded), MMBTU	b	5,916,063
Diesel Efficiency Factor (Recorded), BTU/kWh	c = (b/a)*1000	10,105
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	10,038

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

	2021	
	Without Deadband	With Deadband AS FILED
	<u>Jan 1 - Dec 31</u>	<u>Jan 1 - Dec 31</u>
<u>INDUSTRIAL</u>		
Industrial Portion of Recorded Sales , MWH	125,191	125,191
Industrial Sales Efficiency Factor (mmbtu/kwh)	0.015786	0.015886
Mmbtu adjusted for Sales Efficiency Factor	1,976,265	1,988,784
\$/mmbtu	<u>\$11.0582</u>	<u>\$11.0582</u>
TOTAL Industrial \$000s TO BE RECOVERED	\$21,854.0	\$21,992.5
<u>DIESEL FUEL FILING COST</u>		
Diesel Portion of Recorded Sales, MWH	585,476	585,476
Diesel Sales Efficiency Factor (mmbtu/kwh)	0.009938	0.010038
Mmbtu adjusted for Sales Efficiency Factor	5,818,460	5,877,008
\$/mmbtu	<u>\$14.5360</u>	<u>\$14.5360</u>
TOTAL DIESEL \$000s TO BE RECOVERED	\$84,577.1	\$85,428.1
TOTAL GENERATION FUEL FILING COST, \$000s	\$106,431.1	\$107,420.6
TOTAL GENERATION BASE FUEL COST , \$000s	\$0.0	\$0.0
TOTAL GENERATION FUEL FILING COST, \$000s YTD	\$106,431.1	\$107,420.6
TOTAL GENERATION BASE FUEL COST, \$000s YTD	\$0.0	\$0.0

Fossil Fuel Cost Risk Sharing Mechanism and Non-Adjustable Component, December 2021, Maui

		Jan-21, Baseline	YTD Subject to Fossil Risk
A	MMBtu	177546.3006	2,032,900
B	\$ cost, actuals	\$1,504,934	\$22,477,683
C = B / A (Baseline Column)	Jan 2021 baseline \$/mmbtu	8.476291	8.476291
D	IFO Gen kWh		132,668,121
E	Total kWh, Gen, Purch Pwr, DG		1,042,330,093
F	Sales kWh		983,972,039
G = (D / E) x F	IFO kWh-sales		125,240,288
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)		16,238
I	Recovery Heat Rate (YTD subject to fossil risk, after deadband)		15,886
J = B / A ytd	Actual Cost \$/MMbtu		11.0569555
K = C x H x G / 1,000,000	Base Cost Recovery w/Target Heat Rate		\$16,757,994
L = I x J x G / 1,000,000	Fuel Filing Cost Recovery		\$21,998,556
M = 2% x (L-K)	IFO Cost Risk Sharing		\$104,811
Diesel Fossil Fuel Cost Risk Sharing			
AA	MMBtu	465,907	5,916,063
BB	\$ cost, actuals	\$4,759,944	\$85,952,541
CC = BB / AA (Baseline Column)	Jan 2021 baseline \$/mmbtu	10.2165086	10.2165086
DD	Diesel Gen kWh		620,271,580
EE	Total kWh, Gen, Purch Pwr, DG		1,042,330,093
FF	Sales kWh		983,972,039
GG = (DD / EE) x FF	Diesel kWh-sales		585,543,769
HH	Target Heat Rate		9,938
I11	Upper limit w/deadband		10,038
I12	Lower limit w/deadband		9,838
I13	Calculated Heat Rate (YTD subject to fossil risk, before deadband)		10,105
I1	Recovery Heat Rate (YTD subject to fossil risk, after deadband)		10,038
JJ = BB/AA (YTD Column)	Actual Cost \$/MMbtu		14.5286723
KK = CC x HH x GG / 1,000,000	Base Cost Recovery w/Target Heat Rate		\$59,451,232
LL = I1 x JJ x GG / 1,000,000	Fuel Filing Cost Recovery		\$85,395,008
MM = 2% x (LL-KK)	Diesel Cost Risk Sharing		\$518,876
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		\$570,000
AAA = F	Non-Adjustable Component YTD kWh under ECRC		983,972,039
BBB	Non-Adjustable Component, cents/kWh		0.06125
CCC	Non-Adjustable Component Revenues w/tax		\$602,683
DDD	Non-Adjustable Component Revenues less tax		\$549,135

MAUI ELECTRIC COMPANY, LTD.
MAUI DIVISION
2021 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 '20					306,167	296,112	(301,415)
January '21					306,167	307,102	5,687
February	1,455,500	(4)	4,747	1,450,753	(485,167)	(467,035)	989,405
March					(485,167)	(490,384)	499,021
April					(485,167)	(484,285)	14,736
May	401,000	(1)	13,850	387,150	(133,667)	(145,125)	256,761
June					(133,667)	(146,388)	110,373
July					(133,667)	(143,212)	(32,839)
August	1,210,000	(2)	(23,297)	1,233,297	(403,333)	(422,230)	778,228
September					(403,333)	(417,364)	360,864
October					(403,333)	(407,780)	(46,916)
November	731,900	(3)	(42,473)	774,373	(243,967)	(249,394)	478,063
December					(243,967)	(253,989)	224,074
January '22					(243,967)		
February	(428,500)	(4)	(19,896)	(408,604)	142,833		

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		
	01/01/22	02/01/22	01/01/22	02/01/22	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	21.58	21.58
Customer Charge	\$	11.50	11.50	11.50	11.50
Total Base Charges				75.51	75.51
					0.00
RBA Rate Adjustment	¢/kWh	1.9714	1.9714	9.86	9.86
PBF Surcharge	¢/kWh	0.6478	0.6478	3.24	3.24
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	-0.0100	-0.0009	-0.05	0.00
Energy Cost Recovery	¢/kWh	20.790	20.593	103.95	102.96
DSM Adjustment	¢/kWh	-0.0084	0.0022	-0.04	0.01
Green Infrastructure Fee	\$	1.25	1.25	1.25	1.25
					0.00
Avg Residential Bill at 500 kwh				193.72	192.83
					Increase (Decrease -) -0.89
					% Change -0.46%

	Rate		Charge (\$) at 600 Kwh		
	01/01/22	02/01/22	01/01/22	02/01/22	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	¢/kWh	1.9714	1.9714	11.83	11.83
PBF Surcharge	¢/kWh	0.6478	0.6478	3.89	3.89
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	-0.0100	-0.0009	-0.06	-0.01
Energy Cost Recovery	¢/kWh	20.790	20.593	124.74	123.56
DSM Adjustment	¢/kWh	-0.0084	0.0022	-0.05	0.01
Green Infrastructure Fee	\$	1.25	1.25	1.25	1.25
					0.00
Avg Residential Bill at 600 kwh				231.49	230.42
					Increase (Decrease -) -1.07
					% Change -0.46%

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

<u>EFFECTIVE DATE</u>	<u>FUEL FACTOR CENTS / KWH</u>		<u>RESIDENTIAL BILL (\$)</u>	
	<u>RESIDENTIAL & 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

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

EFFECTIVE DATE	DESCRIPTION OF SURCHARGE	RATE
06/01/11	IRP RECOVERY REFUND	0.000 PERCENT ON BASE
08/17/17	RENEWABLE ENERGY INFRASTRUCTURE COST RECOVERY PROVISION	0.0000 CENTS/KWH
06/01/19	FINAL RATE INCREASE (3.74%), DOCKET NO. 2017-0150 (2018 TEST YEAR)	
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 - 07/31/19	PURCHASED POWER ADJUSTMENT	-0.0045 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
08/01/19 - 08/31/19	PURCHASED POWER ADJUSTMENT	0.0023 CENTS/KWH
09/01/19 - 09/30/19	PURCHASED POWER ADJUSTMENT	0.0005 CENTS/KWH
10/01/19 - 10/31/19	PURCHASED POWER ADJUSTMENT	0.0023 CENTS/KWH
11/01/19 - 11/30/19	PURCHASED POWER ADJUSTMENT	-0.0063 CENTS/KWH
12/01/19 - 12/31/19	PURCHASED POWER ADJUSTMENT	-0.0047 CENTS/KWH
01/01/20 - 01/31/20	PURCHASED POWER ADJUSTMENT	-0.0069 CENTS/KWH
01/01/20 - 06/30/20	RESID. PBF SURCHARGE ADJUSTMENT	0.7437 CENTS/KWH
01/01/20 - 06/30/20	GREEN INFRASTRUCTURE FEE	1.25 DOLLARS/MONTH
02/01/20 - 02/29/20	PURCHASED POWER ADJUSTMENT	-0.0126 CENTS/KWH
02/01/20 - 04/30/20	RESID. DSM ADJUSTMENT	0.1268 CENTS/KWH
03/01/20 - 03/31/20	PURCHASED POWER ADJUSTMENT	-0.0127 CENTS/KWH
04/01/20 - 04/30/20	PURCHASED POWER ADJUSTMENT	-0.0138 CENTS/KWH
04/01/20 - 04/30/20	SOLARSAVER ADJUSTMENT	-0.0592 CENTS/KWH
05/01/20 - 03/31/21	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
05/01/20 - 05/31/20	PURCHASED POWER ADJUSTMENT	-0.0128 CENTS/KWH
05/01/20 - 07/31/20	RESID. DSM ADJUSTMENT	-0.0048 CENTS/KWH
06/01/20 - 06/30/20	PURCHASED POWER ADJUSTMENT	-0.0124 CENTS/KWH
06/01/20 - 05/31/21	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	0.3383 CENTS/KWH
07/01/20 - 07/31/20	PURCHASED POWER ADJUSTMENT	-0.0091 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
08/01/20 - 10/31/20	RESID. DSM ADJUSTMENT	-0.1104 CENTS/KWH
08/01/20 - 08/31/20	PURCHASED POWER ADJUSTMENT	0.0033 CENTS/KWH
09/01/20 - 09/30/20	PURCHASED POWER ADJUSTMENT	0.0016 CENTS/KWH
10/01/20 - 10/31/20	PURCHASED POWER ADJUSTMENT	0.0027 CENTS/KWH
11/01/20 - 11/30/20	PURCHASED POWER ADJUSTMENT	-0.0006 CENTS/KWH
11/01/20 - 01/31/21	RESID. DSM ADJUSTMENT	-0.0022 CENTS/KWH
12/01/20 - 12/31/20	PURCHASED POWER ADJUSTMENT	0.0001 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	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	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	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	1.9714 CENTS/KWH
01/01/22	GREEN INFRASTRUCTURE FEE	1.25 DOLLARS/MONTH
01/01/22 - 01/31/22	PURCHASED POWER ADJUSTMENT	-0.0100 CENTS/KWH
02/01/22	PURCHASED POWER ADJUSTMENT	-0.0009 CENTS/KWH
02/01/22	RESID. DSM ADJUSTMENT	0.0022 CENTS/KWH

~ Surcharges currently in effect are in bold.

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

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

