



October 26, 2021

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 November 2021

Maui Electric Company, Limited's ("Maui Electric" or "Company") November 2021 Energy Cost Recovery factor for our Maui Division is 19.019 cents per kilowatt-hour ("kWh"), an increase of 0.794 cents per kWh from last month. A residential customer consuming 500 kWh of electricity will be paying \$180.07, an increase of \$4.05 compared to rates effective October 1, 2021. The increase in the typical residential bill is due to the increase in the Energy Cost Recovery factor (+\$3.98) and increase in the Purchase Power Adjustment (+\$0.11) partially offset by the decrease in the DSM Adjustment (-\$0.04).

The Company's Maui Division fuel composite cost of generation, central station and other increased 72.280 cents per million BTU to 1,561.11 cents per million BTU. The composite cost of DG energy is 0.00 cents per kWh. The composite cost of purchased energy decreased 0.141 cents per kWh to 18.478 cents per kWh.

The Energy Cost Recovery factor for our Lāna'i Division for November 2021 is 29.191 cents per kWh, an increase of 4.849 cents per kWh from last month. A residential customer consuming 400 kWh of electricity will be paying \$189.14, an increase of \$19.39 compared to rates effective October 1, 2021. 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 435.78 cents per million BTU to 2,532.57 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 November 2021 is 20.133 cents per kWh, a decrease of 0.193 cents per kWh from last month. A residential customer consuming 400 kWh of electricity will be paying \$160.06, a decrease of \$0.77 compared to rates effective October 1, 2021. The decrease in the typical residential bill is due to the decrease in the Energy Cost Recovery factor.

The Company's Moloka'i Division fuel composite cost of generation, central station and other decreased 17.40 cents per million BTU to 1,684.72 cents per million BTU. The composite cost

The Honorable Chair and Members
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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 November 1, 2021.

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>10/01/2021</u>	<u>11/01/2021</u>	
<u>COMPOSITE COSTS</u>			
Generation, Central Station & Other, ¢/mbtu	1,488.83	1,561.11	72.280
DG Energy, ¢/kWh	0.00	0.00	0.000
Purchased Energy, ¢/kWh	18.619	18.478	(0.141)
<u>Residential Schedule "R"</u>			
Energy Cost Recovery Factor, ¢/kWh	18.225	19.019	0.794
<u>Others - "G,P,F"</u>			
Energy Cost Recovery Factor, ¢/kWh	18.225	19.019	0.794
<u>Residential Customer with</u>			
500 KWH Consumption, \$/Bill	176.02	180.07	4.05
600 KWH Consumption, \$/Bill	210.28	215.12	4.84

Supersedes Sheet Effective:

October 1, 2021

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

ENERGY COST RECOVERY (ECR) FILING - November 1, 2021 (page 1 of 2)

Line
1 Effective Date November 1, 2021
2 Supercedes Factors of October 1, 2021

GENERATION COMPONENT

CENTRAL STATION						DG ENERGY COMPONENT	
FUEL PRICES, ϕ /mmbtu							
3	Industrial			1,290.10			
4	Diesel			1,650.24			
5	Other						
BTU MIX, %							
6	Industrial			24.75%	23	COMPOSITE COST OF DG	
7	Diesel			75.25%		ENERGY, ϕ /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 ϕ /mmbtu (Lines (3 x 6) + (4 x 7) + (5 x 8))			1,561.11	25	WEIGHTED COMPOSITE DG ENERGY COST, ϕ /kWh (Lines 23 x 24)	-
10	% Input to System kWh Mix			75.62%	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, ϕ /kWh (Line 26 x 27)	0.00000
			Percent of		29	Cost Less Base (Line 25 - 28)	0.00000
			Centrl Stn +		30	Loss Factor	1.057
	Fuel Type	Eff Factor	Other	Weighted	31	Revenue Tax Req Multiplier	1.0975
		mmbtu/kWh		Eff Factor	32	DG FACTOR, ϕ /kWh (Line 29 x 30 x 31)	0.00000
11	Industrial	0.015786	16.99	0.002682			
12	Diesel	0.009938	83.01	0.008249			
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)]			0.010931			
15	WEIGHTED COMPOSITE CENTRAL STATION + OTHER GENERATION COST, ϕ /kWh (lines (9 x 10 x 14))			12.90417			
16	BASE CENTRAL STATION + OTHER GENERATION COST, ϕ /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 ϕ /kWh (lines (16 x 17 x 18))			-			
20	COST LESS BASE (line(15 - 19))			12.90417			
21	Revenue Tax Req Multiplier			1.0975			
22	CENTRAL STATION + OTHER GENERATION FACTOR, ϕ /kWh (line (20 x 21))			14.16233			
						SUMMARY OF	
						TOTAL GENERATION FACTOR, ϕ /kWh	
33	CNTRL STN + OTHER (line 22)			14.16233			
34	DG (line 32)			-			
35	TOTAL GENERATION FACTOR, ϕ /kWh (lines 33 + 34)			14.16233			

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

ENERGY COST RECOVERY (ECR) FILING - November 1, 2021 (page 2 of 2)

Line	1 Effective Date	November 1, 2021
	2 Supercedes Factors of	October 1, 2021

Line	PURCHASED ENERGY COMPONENT	
	PURCHASED ENERGY PRICE - FOSSIL ϕ /kWh	
	PURCHASED ENERGY PRICE - RENEWABLE, ϕ /kWh	
36	Kaheawa Wind I - On Peak	14.000
37	- Off Peak	13.126
38	Kaheawa Wind II	20.224
39	Sempre Wind	22.868
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	22.490
	PURCHASED ENERGY KWH MIX- FOSSIL, %	
48A	Subtotal Fossil %	0%
	PURCHASED ENERGY KWH MIX - RENEWABLE, %	
49	Kaheawa Wind I - On Peak	20.73%
50	- Off Peak	14.65%
51	Kaheawa Wind II	25.21%
52	Sempre Wind - On Peak	32.00%
53	Unused - On Peak	0.00%
54	- Off Peak	0.00%
55	South Maui RR	1.85%
56	Ku'ia Solar	1.86%
57	Unused	0.00%
58	Unused	0.00%
59	CBRE PV	0.10%
60		
61	FIT	3.60%
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	18.478
62	COMPOSITE COST OF PURCHASED ENERGY, ϕ /kWh	18.478
	(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	24.38%
64	WEIGHTED COMPOSITE PURCHASED ENERGY COST, ϕ /kWh (lines (62 x 63))	4.50494
65	BASE PURCHASED ENERGY COMPOSITE COST, ϕ /kWh	0.000
66	Base % Input to Sys kWh Mix	0.00
67	WEIGHTED BASE PURCHASED ENERGY COST, ϕ /kWh (lines (65 x 66))	0.00000
68	COST LESS BASE (lines (64 - 67))	4.50494
69	Loss Factor	1.057
70	Revenue Tax Req Multiplier	1.0975
71	PURCHASED ENERGY FACTOR, ϕ /kWh (lines (68 x 69 x 70))	5.22599

Line	Calculation of Monthly Fossil Fuel Cost Risk Sharing Component	
	Baseline IFO	
72	IFO \$, baseline month	\$1,504,934
73	IFO mmbtu, baseline	177,546
74	Baseline IFO, ϕ /mmbtu	847.63
	Baseline Diesel	
75	Diesel \$, baseline month	\$4,759,944
76	Diesel mmbtu, baseline	465,907
77	Baseline Diesel, ϕ /mmbtu	1021.65
	Month IFO	
78	IFO mmbtu, budget	170,201
79	IFO Cost, ϕ /mmbtu	1,290.10
80	IFO ECRC Fossil Cost	\$2,195,760
81	IFO Base ECRC Recovery Target	\$1,442,671
82	IFO differential	\$753,089
	Month Diesel	
83	Diesel mmbtu, budget	517,509
84	Diesel Cost, ϕ /mmbtu	1,650.24
85	Diesel ECRC Fossil Cost	\$8,540,134
86	Diesel Base ECRC Recovery Target	\$5,287,131
87	Diesel differential	\$3,253,003
88	Total Fossil	\$4,006,092
89	2% of above	\$80,122
90	Total Monthly Fossil Fuel Cost Risk Sharing, Prior Months in Year	\$409,299
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	\$80,122
96	Total Monthly Fossil Fuel Cost Risk Sharing, Including This Month	\$489,420
97	Fossil Cost Risk Sharing before taxes	\$80,122
98	Revenue Tax Adjustment	1.097514
99	Fossil Cost Risk Sharing w/revenue tax	\$87,935
100	Forecasted Month MWh Sales	82,534
101	Fossil Fuel Cost Risk Sharing Component, ϕ /kWh	-0.1065

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, ϕ /kWh	0.06125
109	Generation and Purchased Energy Factors	19.38832
110	ECR Reconciliation Adjustment	(0.324)
111	Non-Adjustable Component	0.0612
112	Fossil Fuel Cost Risk Sharing Component	-0.1065
113	ECR FACTOR, ϕ /kWh (lines (109 + 110 + 111 + 112))	19.019

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

Fuel Oil Inventory Prices for November 2021

<u>TYPE OF OIL BURNED</u>	<u>PRICES \$/BBL</u>	<u>CONVERSION FACTORS</u>		<u>PRICES ¢/MBTU</u>
INDUSTRIAL	81.2762	6.30	MBTU/BBL	1,290.10
DIESEL/ULSD	96.6318	5.86	MBTU/BBL	1,650.24

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

Month End Fuel Oil Estimate

<u>Kahului</u>	<u>Barrels</u>	<u>MBTU</u>	<u>(\$)</u>
10/20/2021	57,091.30	359,675.19	4,581,480.78
Estimated Use	10,102.76	63,647.36	762,428.46
Estimated Received	0.00	0.00	0.00
Estimated Additional	0.00	0.00	0.00
Estimated End	<u>46,988.54</u>	<u>296,027.83</u>	<u>3,819,052.32</u>

Next month's expense (\$/bbl) = \$ 81.2762

<u>Maalaea</u>	<u>Barrels</u>	<u>MBTU</u>	<u>(\$)</u>
10/20/2021	120,340.80	704,668.53	11,459,528.59
Estimated Use	29,925.87	175,234.14	2,772,945.79
Estimated Received	31,000.00	181,523.84	3,045,965.88
Estimated Additional	0.00	0.00	0.00
Estimated End	<u>121,414.93</u>	<u>710,958.23</u>	<u>11,732,548.68</u>

Next month's expense (\$/bbl) = \$ 96.6318

**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 2021:

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
November 2021

1. Amount to be Refunded	(\$731,900)
2. Monthly amount (1 / 3 X Line 1)	(\$243,967)
3. Revenue Tax Divisor	0.91115
4. Total (Line 2 / Line 3)	(\$267,757)
5. Estimated Sales (November 2021)	82,534 mwh
6. Adjustmnet (Line 4 ÷ Line 5)	(0.324) ¢/kwh

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

<u>Line</u>	<u>W/O Deadband 3rd Quarter YTD Total</u>	<u>collection by company*</u>	<u>Basis for Recon With Deadband 3rd Quarter YTD Total</u>	<u>collection by company*</u>
ACTUAL COSTS:				
1	Generation	\$73,854.6	\$73,854.6	
2	Distributed Generation	\$6.5	\$6.5	
3	Purch Power	<u>\$42,834.5</u>	<u>\$42,834.5</u>	
4	TOTAL	\$116,695.6	\$116,695.6	
FUEL FILING COST				
5	Generation	\$72,331.9	\$73,004.5	
6	Distributed Generation	\$0.0	\$0.0	
7	Purch Power	<u>\$42,834.5</u>	<u>\$42,834.5</u>	
8	TOTAL	\$115,166.4	\$115,839.0	
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)	\$115,166.4	\$115,839.0	
14	ACTUAL FOA LESS TAX	\$115,877.7	\$115,877.7	
15	FOA reconciliation adj for prior year	-\$1,149.4	-\$1,149.4	
15A	Less: Non-Adjustable Component Revenues less tax	<u>\$405.7</u>	<u>\$405.7</u>	
16	ADJUSTED FOA LESS TAX	\$116,621.4	\$116,621.4	
17	FOA-(FUEL-BASE) (Line 16-13)	\$1,455.0 Over	\$782.4 Over	
ADJUSTMENTS				
18	Current year FOA accrual reversal	\$1,207.7	\$1,207.7	
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)	\$2,662.7 Over	\$1,990.1 Over	
21A	YTD Fossil Fuel Cost Risk Sharing Adjustment	<u>\$352.8</u>	<u>\$352.8</u>	
21B	Quarterly FOA Recon w/Fossil Risk Adj (Line 21 + Line 21A)	\$3,015.5	\$2,342.9	
22	2nd Quarter FOA Reconciliation YTD		<u>\$1,611.0</u> Over	
23	FOA Reconciliation to be Refunded November 2021 to January 2022 (Line 22- 21B)		<u><u>-\$731.9</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, 2021 through September 30, 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	90,503
Industrial Fuel Oil Consumption (Recorded), MMBTU	b	1,470,540
Industrial Fuel Oil Efficiency Factor (Recorded), BTU/kWh	c = (b/a)*1000	16,249
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	425,823
Diesel Consumption (Recorded), MMBTU	b	4,313,442
Diesel Efficiency Factor (Recorded), BTU/kWh	c = (b/a)*1000	10,130
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 - Sep 30</u>	<u>Jan 1 - Sep 30</u>
<u>INDUSTRIAL</u>		
Industrial Portion of Recorded Sales , MWH	90,503	90,503
Industrial Sales Efficiency Factor (mmbtu/kwh)	0.015786	0.015886
Mmbtu adjusted for Sales Efficiency Factor	1,428,679	1,437,730
\$/mmbtu	<u>\$10.3742</u>	<u>\$10.3742</u>
TOTAL Industrial \$000s TO BE RECOVERED	\$14,821.4	\$14,915.3
<u>DIESEL FUEL FILING COST</u>		
Diesel Portion of Recorded Sales, MWH	425,823	425,823
Diesel Sales Efficiency Factor (mmbtu/kwh)	0.009938	0.010038
Mmbtu adjusted for Sales Efficiency Factor	4,231,833	4,274,415
\$/mmbtu	<u>\$13.5900</u>	<u>\$13.5900</u>
TOTAL DIESEL \$000s TO BE RECOVERED	\$57,510.5	\$58,089.2
TOTAL GENERATION FUEL FILING COST, \$000s	\$72,331.9	\$73,004.5
TOTAL GENERATION BASE FUEL COST , \$000s	\$0.0	\$0.0
TOTAL GENERATION FUEL FILING COST, \$000s YTD	\$72,331.9	\$73,004.5
TOTAL GENERATION BASE FUEL COST, \$000s YTD	\$0.0	\$0.0

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

		Jan-21, Baseline	YTD Subject to Fossil Risk
A	IFO Fossil Fuel Cost Risk Sharing		
	MMBtu	177546.3006	1,470,540
B	\$ cost, actuals	\$1,504,934	15,249,877
C = B / A (Baseline Column)	Jan 2021 baseline \$/mmbtu	8.476291	8.476291
D	IFO Gen kWh		96,010,696
E	Total kWh, Gen, Purch Pwr, DG		770,844,603
F	Sales kWh		726,894,529
G = (D / E) x F	IFO kWh-sales		90,536,600
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)		16,249
I	Recovery Heat Rate (YTD subject to fossil risk, after deadband)		15,886
J = B / A ytd	Actual Cost \$/MMBtu		10.3702567
K = C x H x G / 1,000,000	Base Cost Recovery w/Target Heat Rate		\$12,114,407
L = I x J x G / 1,000,000	Fuel Filing Cost Recovery		\$14,915,171
M = 2% x (L-K)	IFO Cost Risk Sharing		\$56,015
	Diesel Fossil Fuel Cost Risk Sharing		
AA	MMBtu	465,907	4,313,442
BB	\$ cost, actuals	\$4,759,944	\$58,604,703
CC = BB / AA (Baseline Column)	Jan 2021 baseline \$/mmbtu	10.2165086	10.2165086
DD	Diesel Gen kWh		451,540,300
EE	Total kWh, Gen, Purch Pwr, DG		770,844,603
FF	Sales kWh		726,894,529
GG = (DD / EE) x FF	Diesel kWh-sales		425,795,514
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)		10,130
I1	Recovery Heat Rate (YTD subject to fossil risk, after deadband)		10,038
JJ = BB/AA (YTD Column)	Actual Cost \$/MMBtu		13.5865293
KK = CC x HH x GG / 1,000,000	Base Cost Recovery w/Target Heat Rate		\$43,231,726
LL = I1 x JJ x GG / 1,000,000	Fuel Filing Cost Recovery		\$58,070,666
MM = 2% x (LL-KK)	Diesel Cost Risk Sharing		\$296,779
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		\$352,794
	Non-Adjustable Component		
AAA = F	YTD kWh under ECRC		726,894,529
BBB	Non-Adjustable Component, cents/kWh		0.06125
CCC	Non-Adjustable Component Revenues w/tax		\$445,223
DDD	Non-Adjustable Component Revenues less tax		\$405,665

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 '19					(893,300)	(950,248)	696,893
January '20					(893,300)	(961,281)	(264,388)
February	1,031,400	(4)	(196,411)	1,227,811	(343,800)	(327,089)	636,334
March					(343,800)	(344,340)	291,994
April					(343,800)	(255,361)	36,633
May	554,800	(1)	(51,810)	606,610	(184,933)	(181,950)	461,293
June					(184,933)	(182,971)	278,322
July					(184,933)	(181,695)	96,627
August	1,311,800	(2)	93,384	1,218,416	(437,267)	(375,529)	939,514
September					(437,267)	(397,379)	542,135
October					(437,267)	(419,505)	122,630
November	(918,500)	(3)	104,864	(1,023,364)	306,167	303,207	(597,527)
December					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)		
November	731,900	(3)	(42,473)	774,373	(243,967)		

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		
	10/01/21	11/01/21	10/01/21	11/01/21	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	1.0242	1.0242	5.12	5.12
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	-0.0314	-0.0107	-0.16	-0.05
Energy Cost Recovery	¢/kWh	18.225	19.019	91.12	95.10
DSM Adjustment	¢/kWh	0.0003	-0.0084	0.00	-0.04
Green Infrastructure Fee	\$	1.19	1.19	1.19	1.19
Avg Residential Bill at 500 kwh			176.02	180.07	
			Increase (Decrease -)		4.05
			% Change		2.30%

	Rate		Charge (\$) at 600 Kwh		
	10/01/21	11/01/21	10/01/21	11/01/21	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	1.0242	1.0242	6.15	6.15
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	-0.0314	-0.0107	-0.19	-0.06
Energy Cost Recovery	¢/kWh	18.225	19.019	109.35	114.11
DSM Adjustment	¢/kWh	0.0003	-0.0084	0.00	-0.05
Green Infrastructure Fee	\$	1.19	1.19	1.19	1.19
Avg Residential Bill at 600 kwh			210.28	215.12	
			Increase (Decrease -)		4.84
			% Change		2.30%

**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 & COMMERCIAL</u>		<u>@ 500 KWH</u>	<u>@ 600 KWH</u>
January 1, 2019	-3.405		174.77	209.33
February 1, 2019	-5.987		161.69	193.64
March 1, 2019	-5.839		162.44	194.54
April 1, 2019	-5.441		163.99	196.39
May 1, 2019	-4.041		171.40	205.29
June 1, 2019	3.899		179.76	214.71
July 1, 2019	3.059		178.60	213.35
August 1, 2019	2.938		178.02	212.67
September 1, 2019	18.068		173.77	207.57
October 1, 2019	17.098		168.93	201.76
November 1, 2019	17.061		168.70	201.48
December 1, 2019	16.191		164.37	196.28
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

**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	0.0000 CENTS/KWH
	RECOVERY PROVISION	
01/01/18 - 01/31/18	PURCHASED POWER ADJUSTMENT	-0.0060 CENTS/KWH
01/01/18 - 06/30/18	GREEN INFRASTRUCTURE FEE	1.3400 DOLLARS/MONTH
02/01/18 - 04/30/18	PURCHASED POWER ADJUSTMENT	0.0003 CENTS/KWH
04/01/18 - 04/30/18	SOLARSAVER ADJUSTMENT	-0.1278 CENTS/KWH
05/01/18 - 03/31/19	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
05/01/18 - 06/30/18	PURCHASED POWER ADJUSTMENT	0.0004 CENTS/KWH
06/01/18 - 08/22/18	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	1.8954 CENTS/KWH
07/01/18 - 07/31/18	PURCHASED POWER ADJUSTMENT	0.0003 CENTS/KWH
07/01/18 - 06/30/19	RESID. PBF SURCHARGE ADJUSTMENT	0.4658 CENTS/KWH
07/01/18 - 12/31/18	GREEN INFRASTRUCTURE FEE	1.2100 DOLLARS/MONTH
08/01/18 - 08/31/18	PURCHASED POWER ADJUSTMENT	-0.0618 CENTS/KWH
09/01/18 - 09/30/18	PURCHASED POWER ADJUSTMENT	-0.0635 CENTS/KWH
08/23/18 - 05/31/19	INTERIM RATE INCREASE 2018 TEST YEAR	7.42 PERCENT ON BASE
08/23/18 - 05/31/19	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	0.3183 CENTS/KWH
10/01/18 - 10/31/18	PURCHASED POWER ADJUSTMENT	-0.0602 CENTS/KWH
11/01/18 - 11/30/19	PURCHASED POWER ADJUSTMENT	0.0108 CENTS/KWH
12/01/18 - 12/31/18	PURCHASED POWER ADJUSTMENT	0.0099 CENTS/KWH
01/01/19 - 01/31/19	PURCHASED POWER ADJUSTMENT	0.0094 CENTS/KWH
01/01/19 - 06/30/19	GREEN INFRASTRUCTURE FEE	1.35 DOLLARS/MONTH
02/01/19 - 02/28/19	PURCHASED POWER ADJUSTMENT	-0.0241 CENTS/KWH
03/01/19 - 03/31/19	PURCHASED POWER ADJUSTMENT	-0.0224 CENTS/KWH
04/01/19 - 04/30/19	PURCHASED POWER ADJUSTMENT	-0.0244 CENTS/KWH
04/01/19 - 04/30/19	SOLARSAVER ADJUSTMENT	-0.0855 CENTS/KWH
05/01/19 - 05/31/19	PURCHASED POWER ADJUSTMENT	-0.0274 CENTS/KWH
5/1/2019 - 03/31/20	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
06/01/19 - 06/30/19	PURCHASED POWER ADJUSTMENT	-0.0067 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
06/01/21	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	1.0242 CENTS/KWH
07/01/21	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	PURCHASED POWER ADJUSTMENT	-0.0107 CENTS/KWH
11/01/21	RESID. DSM ADJUSTMENT	-0.0084 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**

