



April 28, 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 May 2021

Maui Electric Company, Limited's ("Maui Electric" or "Company") May 2021 Energy Cost Recovery factor for our Maui Division is 17.615 cents per kilowatt-hour ("kWh"), an increase of 1.237 cents per kWh from last month. A residential customer consuming 500 kWh of electricity will be paying \$170.84, an increase of \$7.52 compared to rates effective April 1, 2021. The increase in the typical residential bill is due to the increase in the Energy Cost Recovery factor (+\$6.18), increase in the Purchase Power Adjustment (+\$1.07), termination of the Solar Saver Adjustment (+\$0.22), and increase in the residential DSM Adjustment (+\$0.05).

The Company's Maui Division fuel composite cost of generation, central station and other increased 67.050 cents per million BTU to 1,301.34 cents per million BTU. The composite cost of DG energy is 0.00 cents per kWh. The composite cost of purchased energy increased 0.641 cents per kWh to 20.207 cents per kWh.

The Energy Cost Recovery factor for our Lāna'i Division for May 2021 is 24.354 cents per kWh, an increase of 0.336 cents per kWh from last month. A residential customer consuming 400 kWh of electricity will be paying \$166.87, an increase of \$1.53 compared to rates effective April 1, 2021. The increase in the typical residential bill is due to the increase in the Energy Cost Recovery factor (+\$1.35) and termination of the Solar Saver Adjustment (+\$0.18).

The Company's Lāna'i Division fuel composite cost of generation, central station and other increased 54.89 cents per million BTU to 2,106.82 cents per million BTU. The composite cost of 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 2021 is 18.313 cents per kWh, an increase of 0.490 cents per kWh from last month. A residential customer consuming 400 kWh of electricity will be paying \$149.85, an increase of \$2.14 compared to rates effective April 1, 2021. The increase in the typical residential bill is due to the increase in the Energy Cost Recovery (+\$1.96) and termination of the Solar Saver Adjustment (+\$0.18).

The Company's Moloka'i Division fuel composite cost of generation, central station and other increased 45.77 cents per million BTU to 1,516.79 cents per million BTU. The composite cost

The Honorable Chair and Members  
of the Hawai'i Public Utilities Commission  
April 28, 2021  
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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 May 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>04/01/2021</u>	<u>05/01/2021</u>	
<u>COMPOSITE COSTS</u>			
Generation, Central Station & Other, ¢/mbtu	1,234.29	1,301.34	67.050
DG Energy, ¢/kWh	0.00	0.00	0.000
Purchased Energy, ¢/kWh	19.566	20.207	0.641
<u>Residential Schedule "R"</u>			
Energy Cost Recovery Factor, ¢/kWh	16.378	17.615	1.237
<u>Others - "G,P,F"</u>			
Energy Cost Recovery Factor, ¢/kWh	16.378	17.615	1.237
<u>Residential Customer with</u>			
500 KWH Consumption, \$/Bill	163.32	170.84	7.52
600 KWH Consumption, \$/Bill	195.01	204.05	9.04

Supersedes Sheet Effective:

April 1, 2021

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

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

<u>Line</u>		
1	Effective Date	May 1, 2021
2	Supersedes Factors of	April 1, 2021

**GENERATION COMPONENT**

<u>CENTRAL STATION</u>						<u>DG ENERGY COMPONENT</u>	
FUEL PRICES, ¢/mmbtu							
3	Industrial		1,078.03				
4	Diesel		1,386.25				
5	Other						
BTU MIX, %							
6	Industrial		27.55%	23	COMPOSITE COST OF DG ENERGY, ¢/kWh		0.000
7	Diesel		72.45%	24	% Input to System kWh Mix		0.00%
8	Other		0.00%	25	WEIGHTED COMPOSITE DG ENERGY COST, ¢/kWh (Lines 23 x 24)		-
			100.00%	26	BASE DG ENERGY COMP COST		0.000
9	COMPOSITE COST OF GENERATION, CENTRAL STATION + OTHER ¢/mmbtu (Lines (3 x 6) + (4 x 7) + (5 x 8))		1,301.34	27	Base % Input to System kWh Mix		0.00
10	% Input to System kWh Mix		73.79%	28	WEIGHTED BASE DG ENERGY COST, ¢/kWh (Line 26 x 27)		0.00000
EFFICIENCY FACTOR, mmbtu/kWh							
	(A)	(B)	(C)	(D)			
			Percent of				
			Centrl Stn +				
	Fuel Type	Eff Factor	Other	Weighted	29	Cost Less Base (Line 25 - 28)	0.00000
		mmbtu/kWh		Eff Factor	30	Loss Factor	1.057
11	Industrial	0.015786	19.33	0.003051	31	Revenue Tax Req Multiplier	1.0975
12	Diesel	0.009938	80.67	0.008017	32	DG FACTOR, ¢/kWh (Line 29 x 30 x 31)	0.00000
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)]		0.011068				
15	WEIGHTED COMPOSITE CENTRAL STATION + OTHER GENERATION COST, ¢/kWh (lines (9 x 10 x 14))		10.62814				
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))		10.62814				
21	Revenue Tax Req Multiplier		1.0975				
22	CENTRAL STATION + OTHER GENERATION FACTOR, ¢/kWh (line (20 x 21))		11.66438				
					SUMMARY OF		
					TOTAL GENERATION FACTOR, ¢/kWh		
					33 CNTRL STN + OTHER (line 22)	11.66438	
					34 DG (line 32)	-	
					35 TOTAL GENERATION FACTOR, ¢/kWh (lines 33 + 34)	11.66438	

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

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

Line	1 Effective Date	May 1, 2021
	2 Supercedes Factors of	April 1, 2021

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	26.200
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	16.50%
50	- Off Peak	14.18%
51	Kaheawa Wind II	22.35%
52	Sempre Wind - On Peak	37.26%
53	Unused - On Peak	0.00%
54	- Off Peak	0.00%
55	South Maui RR	2.24%
56	Ku'ia Solar	2.35%
57	Unused	0.00%
58	Unused	0.00%
59	CBRE PV	0.00%
60		
61	FIT	5.12%
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	20.207
62	COMPOSITE COST OF PURCHASED ENERGY, $\phi$ /kWh	20.207
	(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	26.21%
64	WEIGHTED COMPOSITE PURCHASED ENERGY COST, $\phi$ /kWh (lines (62 x 63))	5.29625
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))	5.29625
69	Loss Factor	1.057
70	Revenue Tax Req Multiplier	1.0975
71	PURCHASED ENERGY FACTOR, $\phi$ /kWh (lines (68 x 69 x 70))	6.14395

Line	Calculation of Monthly Fossil Fuel Cost Risk Sharing Component	
	<b>Baseline IFO</b>	
72	IFO \$, baseline month	\$1,504,934
73	IFO mmbtu, baseline	177,546
74	Baseline IFO, $\phi$ /mmbtu	847.63
	<b>Baseline Diesel</b>	
75	Diesel \$, baseline month	\$4,759,944
76	Diesel mmbtu, baseline	465,907
77	Baseline Diesel, $\phi$ /mmbtu	1021.65
	<b>Month IFO</b>	
78	IFO mmbtu, budget	173,236
79	IFO Cost, $\phi$ /mmbtu	1,078.03
80	IFO ECRC Fossil Cost	\$1,867,537
81	IFO Base ECRC Recovery Target	\$1,468,399
82	IFO differential	\$399,137
	<b>Month Diesel</b>	
83	Diesel mmbtu, budget	455,565
84	Diesel Cost, $\phi$ /mmbtu	1,386.25
85	Diesel ECRC Fossil Cost	\$6,315,276
86	Diesel Base ECRC Recovery Target	\$4,654,288
87	Diesel differential	\$1,660,988
88	Total Fossil	\$2,060,125
89	2% of above	\$41,203
90	Total Monthly Fossil Fuel Cost Risk Sharing, Prior Months in Year	\$60,690
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	\$41,203
96	Total Monthly Fossil Fuel Cost Risk Sharing, Including This Month	\$101,893
97	Fossil Cost Risk Sharing before taxes	\$41,203
98	Revenue Tax Adjustment	1,097,514
99	Fossil Cost Risk Sharing w/revenue tax	\$45,220
100	Forecasted Month MWh Sales	75,351
101	Fossil Fuel Cost Risk Sharing Component, $\phi$ /kWh	-0.0600

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	1,097,514
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	17.80833
110	ECR Reconciliation Adjustment	(0.195)
111	Non-Adjustable Component	0.0612
112	Fossil Fuel Cost Risk Sharing Component	-0.0600
113	ECR FACTOR, $\phi$ /kWh (lines (109 + 110 + 111 + 112))	17.615

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

**Fuel Oil Inventory Prices for May 2021**

<u>TYPE OF OIL BURNED</u>	<u>PRICES \$/BBL</u>	<u>CONVERSION FACTORS</u>		<u>PRICES ¢/MBTU</u>
INDUSTRIAL	67.9162	6.30	MBTU/BBL	1,078.03
DIESEL/ULSD	81.1347	5.85	MBTU/BBL	1,386.25

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

**Month End Fuel Oil Estimate**

<b><u>Kahului</u></b>	<u>Barrels</u>	<u>MBTU</u>	<u>(\$)</u>
4/21/2021	57,728.01	363,686.46	3,892,970.00
Estimated Use	7,343.30	46,262.77	471,032.98
Estimated Received	0.00	0.00	0.00
Estimated Additional	0.00	0.00	0.00
Estimated End	<u>50,384.71</u>	<u>317,423.69</u>	<u>3,421,937.02</u>

**Next month's expense (\$/bbl) = \$ 67.9162**

<b><u>Maalaea</u></b>	<u>Barrels</u>	<u>MBTU</u>	<u>(\$)</u>
4/21/2021	107,989.64	632,043.24	8,601,896.76
Estimated Use	27,079.22	158,489.60	2,038,593.72
Estimated Received	0.00	0.00	0.00
Estimated Additional	1,071.02	6,276.18	88,236.20
Estimated End	<u>81,981.44</u>	<u>479,829.82</u>	<u>6,651,539.24</u>

**Next month's expense (\$/bbl) = \$ 81.1347**

**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**  
**May 2021**

1. Amount to be Refunded	(\$401,000)
2. Monthly amount (1 / 3 X Line 1)	(\$133,667)
3. Revenue Tax Divisor	0.91115
4. Total (Line 2 / Line 3)	(\$146,701)
5. Estimated Sales (May 2021)	75,351 mwh
6. Adjustmnet (Line 4 ÷ Line 5)	(0.195) ¢/kwh

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

<u>Line</u>	<u>W/O Deadband 1st Quarter YTD Total</u>	<u>collection by company*</u>	<u>Basis for Recon With Deadband 1st Quarter YTD Total</u>	<u>collection by company*</u>
<b>ACTUAL COSTS:</b>				
1	Generation		\$19,701.9	\$19,701.9
2	Distributed Generation		\$2.2	\$2.2
3	Purch Power		<u>\$11,696.2</u>	<u>\$11,696.2</u>
4	<b>TOTAL</b>		\$31,400.3	\$31,400.3
<b>FUEL FILING COST</b>				
5	Generation		\$19,190.5	\$19,367.5
6	Distributed Generation		\$0.0	\$0.0
7	Purch Power		<u>\$11,696.2</u>	<u>\$11,696.2</u>
8	<b>TOTAL</b>		\$30,886.7	\$31,063.7
<b>BASE FUEL COST</b>				
9	Generation		\$0.0	\$0.0
10	Distributed Generation		\$0.0	\$0.0
11	Purch Power		<u>\$0.0</u>	<u>\$0.0</u>
12	<b>TOTAL</b>		\$0.0	\$0.0
13	FUEL-BASE COST (Line 8-12)		\$30,886.7	\$31,063.7
14	ACTUAL FOA LESS TAX		\$30,888.8	\$30,888.8
15	FOA reconciliation adj for prior year		-\$664.2	-\$664.2
15A	Less: Non-Adjustable Component Revenues less tax		<u>\$123.7</u>	<u>\$123.7</u>
16	ADJUSTED FOA LESS TAX		\$31,429.3	\$31,429.3
17	FOA-(FUEL-BASE) (Line 16-13)		\$542.6 Over	\$365.6 Over
<b>ADJUSTMENTS</b>				
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)		\$542.6 Over	\$365.6 Over
21A	YTD Fossil Fuel Cost Risk Sharing Adjustment		<u>\$35.4</u>	<u>\$35.4</u>
21B	Quarterly FOA Recon w/Fossil Risk Adj (Line 21 + Line 21A)		<u>\$578.1</u>	<u>\$401.0</u>
22	2020 FOA Reconciliation Recognized in FOA Rates			<u>\$0.0</u>
23	FOA Reconciliation to be Refunded May 2021 to July 2021 (Line 22- 21B)			<u><u>-\$401.0</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 March 31, 2021

	<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	30,760
Industrial Fuel Oil Consumption (Recorded), MMBTU	b	500,879
Industrial Fuel Oil Efficiency Factor (Recorded), BTU/kWh	c = (b/a)*1000	16,283
Lower limit of Industrial Fuel Oil Deadband, BTU/kWh	e = f-d	15,686
Higher limit of Industrial Fuel Oil Deadband, BTU/kWh	g = f+d	15,886
Industrial Fuel Oil Efficiency Factor for cost-recovery, BTU/kWh	h = c, e, or g	<b>15,886</b>
<b><u>Diesel</u></b>		
Diesel Efficiency Factor, BTU/kWh	f	9,938
Diesel Deadband Definition, - BTU/kWh	d	<b>100</b>
Diesel Portion of Recorded Sales, MWh	a	132,862
Diesel Consumption (Recorded), MMBTU	b	1,352,795
Diesel Efficiency Factor (Recorded), BTU/kWh	c = (b/a)*1000	10,182
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>10,038</b>

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

2021

	<b>Without Deadband</b>	<b>With Deadband AS FILED</b>
	<u>Jan 1 - Mar 31</u>	<u>Jan 1 - Mar 31</u>

INDUSTRIAL

Industrial Portion of Recorded Sales , MWH	30,760	30,760
Industrial Sales Efficiency Factor (mmbtu/kwh)	0.015786	0.015886
Mmbtu adjusted for Sales Efficiency Factor	485,576	488,652
\$/mmbtu	<u>\$8.8949</u>	<u>\$8.8949</u>
<b>TOTAL Industrial \$000s TO BE RECOVERED</b>	<b>\$4,319.2</b>	<b>\$4,346.5</b>

DIESEL FUEL FILING COST

Diesel Portion of Recorded Sales, MWH	132,862	132,862
Diesel Sales Efficiency Factor (mmbtu/kwh)	0.009938	0.010038
Mmbtu adjusted for Sales Efficiency Factor	1,320,385	1,333,672
\$/mmbtu	<u>\$11.2629</u>	<u>\$11.2629</u>
<b>TOTAL DIESEL \$000s TO BE RECOVERED</b>	<b>\$14,871.4</b>	<b>\$15,021.0</b>

TOTAL GENERATION FUEL FILING COST, \$000s	\$19,190.5	\$19,367.5
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TOTAL GENERATION BASE FUEL COST , \$000s	\$0.0	\$0.0
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TOTAL GENERATION FUEL FILING COST, \$000s YTD	\$19,190.5	\$19,367.5
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TOTAL GENERATION BASE FUEL COST, \$000s YTD	\$0.0	\$0.0
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**Fossil Fuel Cost Risk Sharing Mechanism and Non-Adjustable Component, March 2021, Maui**

		Jan-21, Baseline	YTD Subject to Fossil Risk
A	IFO Fossil Fuel Cost Risk Sharing		
	MMBtu	177546.3006	500,879
B	\$ cost, actuals	\$1,504,934	4,456,958
C = B / A (Baseline Column)	Jan 2021 baseline \$/mmbtu	8.476291	8.476291
D	IFO Gen kWh		32,668,414
E	Total kWh, Gen, Purch Pwr, DG		235,336,366
F	Sales kWh		221,564,276
G = (D / E) x F	IFO kWh-sales		30,756,630
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)		16,283
I	Recovery Heat Rate (YTD subject to fossil risk, after deadband)		15,886
J = B / A ytd	Actual Cost \$/MMBtu		8.8982708
K = C x H x G / 1,000,000	Base Cost Recovery w/Target Heat Rate		\$4,115,444
L = I x J x G / 1,000,000	Fuel Filing Cost Recovery		\$4,347,694
<b>M = 2% x (L-K)</b>	<b>IFO Cost Risk Sharing</b>		<b>\$4,645</b>
	<b>Diesel Fossil Fuel Cost Risk Sharing</b>		
AA	MMBtu	465,907	1,352,795
BB	\$ cost, actuals	\$4,759,944	\$15,244,893
CC = BB / AA (Baseline Column)	Jan 2021 baseline \$/mmbtu	10.2165086	10.2165086
DD	Diesel Gen kWh		141,136,960
EE	Total kWh, Gen, Purch Pwr, DG		235,336,366
FF	Sales kWh		221,564,276
GG = (DD / EE) x FF	Diesel kWh-sales		132,877,502
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)		10,182
I1	Recovery Heat Rate (YTD subject to fossil risk, after deadband)		10,038
JJ = BB/AA (YTD Column)	Actual Cost \$/MMBtu		11.2691788
KK = CC x HH x GG / 1,000,000	Base Cost Recovery w/Target Heat Rate		\$13,491,274
LL = I1 x JJ x GG / 1,000,000	Fuel Filing Cost Recovery		\$15,031,105
<b>MM = 2% x (LL-KK)</b>	<b>Diesel Cost Risk Sharing</b>		<b>\$30,797</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		\$35,442
	Non-Adjustable Component		
AAA = F	YTD kWh under ECRC		221,564,276
BBB	Non-Adjustable Component, cents/kWh		0.06125
CCC	Non-Adjustable Component Revenues w/tax		\$135,708
DDD	Non-Adjustable Component Revenues less tax		\$123,650

**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)		
May	401,000	(1)	13,850	387,150	(133,667)		

## 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		
	04/01/21	05/01/21	04/01/21	05/01/21	Difference
<b>Base Rates</b>	effective date: 09/01/19	09/01/19			
Base Fuel/Energy Charge	¢/kWh	0.0000	0.00	0.00	0.00
Non-fuel Energy Charge					
First 350 kWh per month	¢/kWh	12.1240	42.43	42.43	0.00
Next 850 kWh per month	¢/kWh	14.3840	21.58	21.58	0.00
Customer Charge	\$	11.50	11.50	11.50	0.00
<b>Total Base Charges</b>			75.51	75.51	0.00
<b>RBA Rate Adjustment</b>	¢/kWh	0.3383	1.69	1.69	0.00
<b>PBF Surcharge</b>	¢/kWh	0.5882	2.94	2.94	0.00
<b>SolarSaver Adjustment</b>	¢/kWh	-0.0445	-0.22	0.00	0.22
<b>Refund of 2018 Interim</b>	% on Base	0.00	0.00	0.00	0.00
<b>Purchased Power Adjustment</b>	¢/kWh	-0.0044	-0.02	1.05	1.07
<b>Energy Cost Recovery</b>	¢/kWh	16.378	81.89	88.07	6.18
<b>DSM Adjustment</b>	¢/kWh	0.0563	0.28	0.33	0.05
<b>Green Infrastructure Fee</b>	\$	1.25	1.25	1.25	0.00
<b>Avg Residential Bill at 500 kwh</b>			163.32	170.84	
			Increase (Decrease -)		7.52
			% Change		4.60%

	Rate		Charge (\$) at 600 Kwh		
	04/01/21	05/01/21	04/01/21	05/01/21	Difference
<b>Base Rates</b>	effective date: 09/01/19	09/01/19			
Base Fuel/Energy Charge	¢/kWh	0.0000	0.00	0.00	0.00
Non-fuel Energy Charge					
First 350 kWh per month	¢/kWh	12.1240	42.43	42.43	0.00
Next 850 kWh per month	¢/kWh	14.3840	35.96	35.96	0.00
Customer Charge	\$	11.50	11.50	11.50	0.00
<b>Total Base Charges</b>			89.89	89.89	0.00
<b>RBA Rate Adjustment</b>	¢/kWh	0.3383	2.03	2.03	0.00
<b>PBF Surcharge</b>	¢/kWh	0.5882	3.53	3.53	0.00
<b>Renewable Energy Infrastructure Cost</b>					
<b>Recovery Provision</b>	¢/kWh	0.0000	0.00	0.00	0.00
<b>SolarSaver Adjustment</b>	¢/kWh	-0.0445	-0.27	0.00	0.27
<b>Refund of 2018 Interim</b>	% on Base	0.00	0.00	0.00	0.00
<b>Purchased Power Adjustment</b>	¢/kWh	-0.0044	-0.03	1.27	1.30
<b>Energy Cost Recovery</b>	¢/kWh	16.378	98.27	105.69	7.42
<b>DSM Adjustment</b>	¢/kWh	0.0563	0.34	0.39	0.05
<b>Green Infrastructure Fee</b>	\$	1.25	1.25	1.25	0.00
<b>Avg Residential Bill at 600 kwh</b>			195.01	204.05	
			Increase (Decrease -)		9.04
			% Change		4.64%

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

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



**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>
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
<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 - 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
<b>06/01/20</b>	<b>REVENUE BALANCING ACCOUNT RATE ADJUSTMENT</b>	<b>0.3383 CENTS/KWH</b>
07/01/20 - 07/31/20	PURCHASED POWER ADJUSTMENT	-0.0091 CENTS/KWH
<b>07/01/20</b>	<b>RESID. PBF SURCHARGE ADJUSTMENT</b>	<b>0.5882 CENTS/KWH</b>
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
<b>01/01/21</b>	<b>GREEN INFRASTRUCTURE FEE</b>	<b>1.25 DOLLARS/MONTH</b>
02/01/21 - 04/30/21	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
<b>05/01/21</b>	<b>RESID. DSM ADJUSTMENT</b>	<b>0.0658 CENTS/KWH</b>
<b>05/01/21</b>	<b>SOLARSAVER ADJUSTMENT</b>	<b>0.0000 CENTS/KWH</b>
<b>05/01/21</b>	<b>PURCHASED POWER ADJUSTMENT</b>	<b>0.2109 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**

