



April 28, 2020

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 2020

Maui Electric Company, Limited's ("Maui Electric" or "Company") May 2020 Energy Cost Recovery factor for our Maui Division is 16.260 cents per kilowatt-hour ("kWh"), a decrease of 1.243 cents per kWh from last month. A residential customer consuming 500 kWh of electricity will be paying \$166.06, a decrease of \$6.56 compared to rates effective April 1, 2020. The decrease in the typical residential bill is due to the decrease in the Energy Cost Recovery Factor (-\$6.22) and decrease in the residential DSM Adjustment (-\$0.65), partially offset by the termination of the Solar Saver Adjustment (+\$0.30) and the increase in the Purchase Power Adjustment (+\$0.01).

The Company's Maui Division fuel composite cost of generation, central station and other decreased 179.34 cents per million BTU to 1,122.52 cents per million BTU. The composite cost of DG energy is 0.00 cents per kWh. The composite cost of purchased energy decreased 0.390 cents per kWh to 19.204 cents per kWh.

The Energy Cost Recovery factor for our Lāna'i Division for May 2020 is 18.958 cents per kWh, a decrease of 0.836 cents per kWh from last month. A residential customer consuming 400 kWh of electricity will be paying \$148.04, a decrease of \$3.11 compared to rates effective April 1, 2020. The decrease in the typical residential bill is due to the decrease of the Energy Cost Recovery Factor (-\$3.35), partially offset by the termination of the Solar Saver Adjustment (+\$0.24).

The Company's Lāna'i Division fuel composite cost of generation, central station and other decreased 84.55 cents per million BTU to 1,598.71 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 2020 is 18.231 cents per kWh, a decrease of 1.324 cents per kWh from last month. A residential customer consuming 400 kWh of electricity will be paying \$151.00, a decrease of \$6.34 compared to rates effective April 1, 2020. The decrease in the typical residential bill is due to the decrease of the

The Honorable Chair and Members
of the Hawai'i Public Utilities Commission
April 28, 2020
Page 2

Energy Cost Recovery Factor (-\$5.30), and decrease in the Purchase Power Adjustment (-\$1.28), partially offset by the termination of the Solar Saver Adjustment (+\$0.24).

The Company's Moloka'i Division fuel composite cost of generation, central station and other decreased 70.19 cents per million BTU to 1,487.98 cents per million BTU. The composite cost of DG energy is 0.00 cents per kWh. The composite cost of purchased energy is 22.46 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, 2020.

Sincerely,

/s/ Sharon M. Suzuki
Sharon M. Suzuki
President
Maui County and Hawai'i Island Utilities

Attachments

cc: Division of Consumer Advocacy

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

ENERGY COST RECOVERY FACTOR

	EFFECTIVE DATES		<u>Change</u>
	<u>04/01/2020</u>	<u>05/01/2020</u>	
<u>COMPOSITE COSTS</u>			
Generation, Central Station & Other, ¢/mbtu	1,301.86	1,122.52	(179.34)
DG Energy, ¢/kWh	0.00	0.00	0.000
Purchased Energy, ¢/kWh	19.594	19.204	(0.390)
<u>Residential Schedule "R"</u>			
Energy Cost Recovery Factor, ¢/kWh	17.503	16.260	(1.243)
<u>Others - "G.P.F"</u>			
Energy Cost Recovery Factor, ¢/kWh	17.503	16.260	(1.243)
<u>Residential Customer with</u>			
500 KWH Consumption, \$/Bill	172.62	166.06	(6.56)
600 KWH Consumption, \$/Bill	206.17	198.28	(7.89)

Supersedes Sheet Effective:

April 1, 2020

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

ENERGY COST RECOVERY (ECR) FILING - May 1, 2020 (page 1 of 2)

<u>Line</u>		
1	Effective Date	May 1, 2020
2	Supercedes Factors of	April 1, 2020

GENERATION COMPONENT

CENTRAL STATION						DG ENERGY COMPONENT	
FUEL PRICES, ¢/mmbtu							
3	Industrial		766.20				
4	Diesel		1,227.64				
5	Other						
BTU MIX, %							
6	Industrial		22.78%	23	COMPOSITE COST OF DG		
7	Diesel		77.22%		ENERGY, ¢/kWh	0.000	
8	Other		0.00%	24	% Input to System kWh Mix	0.00%	
			100.00%				
9	COMPOSITE COST OF GENERATION, CENTRAL STATION + OTHER ¢/mmbtu (Lines (3 x 6) + (4 x 7) + (5 x 8))		1,122.52	25	WEIGHTED COMPOSITE DG ENERGY COST, ¢/kWh (Lines 23 x 24)		-
10	% Input to System kWh Mix		65.29%	26	BASE DG ENERGY COMP COST	0.000	
EFFICIENCY FACTOR, mmbtu/kWh				27	Base % Input to System kWh Mix	0.00	
	(A)	(B)	(C)	(D)	28	WEIGHTED BASE DG ENERGY COST, ¢/kWh (Line 26 x 27)	
			Percent of			0.00000	
			Centrl Stn +		29	Cost Less Base (Line 25 - 28)	0.00000
	<u>Fuel Type</u>	<u>Eff Factor</u>	<u>Other</u>	<u>Weighted</u>	30	Loss Factor	1.057
		<u>mmbtu/kwh</u>		<u>Eff Factor</u>	31	Revenue Tax Req Multiplier	1.0975
11	Industrial	0.015786	15.46	0.002440	32	DG FACTOR, ¢/kWh (Line 29 x 30 x 31)	0.00000
12	Diesel	0.009938	84.54	0.008401			
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)]		0.010841				
15	WEIGHTED COMPOSITE CENTRAL STATION + OTHER GENERATION COST, ¢/kWh (lines (9 x 10 x 14))		7.94530				
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))		7.94530				
21	Revenue Tax Req Multiplier		1.0975				
22	CENTRAL STATION + OTHER GENERATION FACTOR, ¢/kWh (line (20 x 21))		8.71997				
				SUMMARY OF			
				TOTAL GENERATION FACTOR, ¢/kWh			
				33	CNTRL STN + OTHER (line 22)	8.71997	
				34	DG (line 32)	-	
				35	TOTAL GENERATION FACTOR, ¢/kWh (lines 33 + 34)	8.71997	

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

ENERGY COST RECOVERY (ECR) FILING - May 1, 2020 (page 2 of 2)

Line	1 Effective Date	May 1, 2020
	2 Supercedes Factors of	April 1, 2020

Line	PURCHASED ENERGY COMPONENT	
	PURCHASED ENERGY PRICE - FOSSIL ¢/kWh	
	PURCHASED ENERGY PRICE - RENEWABLE, ¢/kWh	
36	Kaheawa Wind I - On Peak	13.891
37	- Off Peak	13.030
38	Kaheawa Wind II	26.069
39	Sempra Wind	22.530
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	23.31%
50	- Off Peak	17.64%
51	Kaheawa Wind II	20.00%
52	Sempra Wind - On Peak	32.59%
53	Unused - On Peak	0.00%
54	- Off Peak	0.00%
55	South Maui RR	1.49%
56	Ku'ia Solar	1.46%
57	Unused	0.00%
58	Unused	0.00%
59	CBRE PV	0.07%
60		
61	FIT	3.44%
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	19.204
62	COMPOSITE COST OF PURCHASED ENERGY, ¢/kWh	19.204
	(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	34.71%
64	WEIGHTED COMPOSITE PURCHASED ENERGY COST, ¢/kWh (lines (62 x 63))	6.66571
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))	6.66571
69	Loss Factor	1.057
70	Revenue Tax Req Multiplier	1.0975
71	PURCHASED ENERGY FACTOR, ¢/kWh (lines (68 x 69 x 70))	7.73261

Line	Calculation of Monthly Fossil Fuel Cost Risk Sharing Component	
	Baseline IFO	
72	IFO \$, baseline month	\$1,709,027
73	IFO mmbtu, baseline	193,384
74	Baseline IFO, ¢/mmbtu	883.75
	Baseline Diesel	
75	Diesel \$, baseline month	\$7,688,936
76	Diesel mmbtu, baseline	503,889
77	Baseline Diesel, ¢/mmbtu	1,525.92
	Month IFO	
78	IFO mmbtu, budget	133,195
79	IFO Cost, ¢/mmbtu	766.20
80	IFO ECRC Fossil Cost	\$1,020,543
81	IFO Base ECRC Recovery Target	\$1,177,113
82	IFO differential	-\$156,570
	Month Diesel	
83	Diesel mmbtu, budget	451,389
84	Diesel Cost, ¢/mmbtu	1,227.64
85	Diesel ECRC Fossil Cost	\$5,541,430
86	Diesel Base ECRC Recovery Target	\$6,887,834
87	Diesel differential	-\$1,346,403
88	Total Fossil	-\$1,502,973
89	2% of above	-\$30,059
90	Total Monthly Fossil Fuel Cost Risk Sharing, Prior Months in Year	\$879
91	Maximum Annual Cap (bi-directional)	\$570,000
92	Number of Days in year from implementation	366
93	Fossil Risk % Proration (based on 366 day year)	100.00%
94	Maximum Annual Cap (bi-directional) prorated	\$570,000
95	Applicable Monthly Fossil Fuel Cost Risk Sharing	-\$30,059
96	Total Monthly Fossil Fuel Cost Risk Sharing, Including This Month	-\$29,181
97	Fossil Cost Risk Sharing before taxes	-\$30,059
98	Revenue Tax Adjustment	1.097514
99	Fossil Cost Risk Sharing w/revenue tax	-\$32,991
100	Forecasted Month MWh Sales	67,024
101	Fossil Fuel Cost Risk Sharing Component, ¢/kWh	0.0492

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	16.45258
110	ECR Reconciliation Adjustment	(0.303)
111	Non-Adjustable Component	0.0612
112	Fossil Fuel Cost Risk Sharing Component	0.0492
113	ECR FACTOR, ¢/kWh (lines (109 + 110 + 111 + 112))	16.260

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

Fuel Oil Inventory Prices for May 2020

<u>TYPE OF OIL BURNED</u>	<u>PRICES \$/BBL</u>	<u>CONVERSION FACTORS</u>		<u>PRICES ¢/MBTU</u>
INDUSTRIAL	48.2709	6.30	MBTU/BBL	766.20
DIESEL/ULSD	71.8621	5.85	MBTU/BBL	1,227.64

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

Month End Fuel Oil Estimate

<u>Kahului</u>	<u>Barrels</u>	<u>MBTU</u>	<u>(\$)</u>
4/17/2020	97,065.81	611,514.60	5,048,362.83
Estimated Use	11,533.67	72,662.13	707,599.89
Estimated Received	68,134.43	429,246.91	3,076,865.16
Estimated Additional	0.00	0.00	0.00
Estimated End	<u>153,666.57</u>	<u>968,099.38</u>	<u>7,417,628.10</u>

Next month's expense (\$/bbl) = \$ 48.2709

<u>Maalaea</u>	<u>Barrels</u>	<u>MBTU</u>	<u>(\$)</u>
4/17/2020	104,641.96	612,541.95	8,148,726.37
Estimated Use	28,346.68	165,932.77	2,312,136.73
Estimated Received	24,280.27	142,129.25	1,390,981.54
Estimated Additional	0.00	0.00	0.00
Estimated End	<u>100,575.55</u>	<u>588,738.43</u>	<u>7,227,571.18</u>

Next month's expense (\$/bbl) = \$ 71.8621

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

Contract Prices effective April 1, 2020

<u>TYPE OF OIL BURNED</u>	<u>\$/BBL</u>	<u>¢/MBTU</u>
INDUSTRIAL		
Tax *	2.8901	45.88
Ocean Transportation	1.5165	24.07
Land Transportation	0.0000	0.00
Storage	0.0000	0.00
Wharfage	0.4000	6.35
DIESEL		
Tax *	3.6669	62.59
Ocean Transportation	1.5165	25.88
Land Transportation	0.9694	16.54
Storage	2.9010	49.51
Wharfage	0.4000	6.83

* Tax includes HGET, Hawaii Use Tax, Liquid Fuel Tax, LUST tax, Environmental Response Tax, Customs Duty Fee, and Fed Oil Spill Recovery Fee

Note: Since these components are not accounted for separately in inventory, contract prices for the current month are being provided. Contract prices are considered accurate pending actual delivery of the fuel.

Reference: Decision and Order No. 16134, Docket No. 96-0040.

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

PURCHASED POWER PRICE CALCULATIONS

KAHEAWA WIND POWER ENERGY RATE:

Kaheawa Wind - On Peak, ¢/kWh	13.891
- Off Peak, ¢/kWh	13.030

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 2020:

On-peak, ¢/kwh	10.415
Off-peak, ¢/kwh	9.186

Flat Payment Rate Per Docket No. 2011-0192 D&O 30331:

On-peak, ¢/kwh	22.000
Off-peak, ¢/kwh	22.000

On-Peak Rate = $10.4150 \text{ ¢/kwh} \times 0.7 + 22.000 \text{ ¢/kwh} \times 0.3 = 13.891 \text{ ¢/kwh}$

Off-Peak Rate = $9.186 \text{ ¢/kwh} \times 0.7 + 22.000 \text{ ¢/kwh} \times 0.3 = 13.03 \text{ ¢/kwh}$

MAUI ELECTRIC COMPANY, LTD.
Maui Division
ECR Reconciliation Adjustment
May 2020

1. Amount to be Refunded	(\$554,800)
2. Monthly amount (1 / 3 X Line 1)	(\$184,933)
3. Revenue Tax Divisor	0.91115
4. Total (Line 2 / Line 3)	(\$202,967)
5. Estimated Sales (May 2020)	67,024 mwh
6. Adjustmnet (Line 4 ÷ Line 5)	(0.303) ¢/kwh

**MAUI ELECTRIC COMPANY, LTD.
MAUI DIVISION
2020 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>
ACTUAL COSTS:				
1	Generation	\$27,087.8	\$27,087.8	
2	Distributed Generation	\$16.3	\$16.3	
3	Purch Power	<u>\$12,360.2</u>	<u>\$12,360.2</u>	
4	TOTAL	\$39,464.3	\$39,464.3	
FUEL FILING COST				
5	Generation	\$27,335.7	\$27,126.6	
6	Distributed Generation	\$0.0	\$0.0	
7	Purch Power	<u>\$12,360.2</u>	<u>\$12,360.2</u>	
8	TOTAL	\$39,695.9	\$39,486.8	
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)	\$39,695.9	\$39,486.8	
14	ACTUAL FOA LESS TAX	\$38,590.3	\$38,590.3	
15	FOA reconciliation adj for prior year	-\$1,580.9	-\$1,580.9	
15A	Less: Non-Adjustable Component Revenues less tax	<u>\$135.3</u>	<u>\$135.3</u>	
16	ADJUSTED FOA LESS TAX	\$40,035.9	\$40,035.9	
17	FOA-(FUEL-BASE) (Line 16-13)	\$340.0 Over	\$549.1 Over	
ADJUSTMENTS				
18	Current year FOA accrual reversal	\$0.0	\$0.0	
19	Other prior year FOA	\$0.0	\$0.0	
20	Other	<u>\$0.0</u>	<u>\$0.0</u>	
21	1st QUARTER FOA RECONCILIATION (Lines 17+18+19+20)	\$340.0 Over	\$549.1 Over	
21A	YTD Fossil Fuel Cost Risk Sharing Adjustment	<u>\$5.7</u>	<u>\$5.7</u>	
21B	Quarterly FOA Recon w/Fossil Risk Adj (Line 21 + Line 21A)	<u>\$345.6</u>	<u>\$554.8</u>	
22	2019 FOA Reconciliation Recognized in FOA Rates		<u>\$0.0</u>	
23	FOA Reconciliation to be Refunded May 2020 to July 2020 (Line 22- 21B)		<u><u>-\$554.8</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, 2020 through March 31, 2020

	<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	33,087
Industrial Fuel Oil Consumption (Recorded), MMBTU	b	524,262
Industrial Fuel Oil Efficiency Factor (Recorded), BTU/kWh	c = (b/a)*1000	15,845
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	15,845
<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	146,591
Diesel Consumption (Recorded), MMBTU	b	1,439,446
Diesel Efficiency Factor (Recorded), BTU/kWh	c = (b/a)*1000	9,819
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	9,838

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

2020

	Without Deadband	With Deadband AS FILED
	<u>Jan 1 - Mar 31</u>	<u>Jan 1 - Mar 31</u>
<u>INDUSTRIAL</u>		
Industrial Portion of Recorded Sales , MWH	33,087	33,087
Industrial Sales Efficiency Factor (mmbtu/kwh)	0.015786	0.015845
Mmbtu adjusted for Sales Efficiency Factor	522,313	524,265
\$/mmbtu	<u>\$9.1473</u>	<u>\$9.1473</u>
TOTAL Industrial \$000s TO BE RECOVERED	\$4,777.7	\$4,795.6
<u>DIESEL FUEL FILING COST</u>		
Diesel Portion of Recorded Sales, MWH	146,591	146,591
Diesel Sales Efficiency Factor (mmbtu/kwh)	0.009938	0.009838
Mmbtu adjusted for Sales Efficiency Factor	1,456,818	1,442,159
\$/mmbtu	<u>\$15.4844</u>	<u>\$15.4844</u>
TOTAL DIESEL \$000s TO BE RECOVERED	\$22,558.0	\$22,331.0
TOTAL GENERATION FUEL FILING COST, \$000s	\$27,335.7	\$27,126.6
TOTAL GENERATION BASE FUEL COST , \$000s	\$0.0	\$0.0
TOTAL GENERATION FUEL FILING COST, \$000s YTD	\$27,335.7	\$27,126.6
TOTAL GENERATION BASE FUEL COST, \$000s YTD	\$0.0	\$0.0

Fossil Fuel Cost Risk Sharing Mechanism and Non-Adjustable Component, March 2020, Maui

		Jan-20, Baseline	YTD Subject to Fossil Risk
A	IFO Fossil Fuel Cost Risk Sharing		
	MMBtu	193383.6849	524,262
B	\$ cost, actuals	\$1,709,027	4,794,543
C = B / A (Baseline Column)	Jan 2020 baseline \$/mmbtu	8.837492	8.837492
D	IFO Gen kWh		34,277,352
E	Total kWh, Gen, Purch Pwr, DG		251,402,889
F	Sales kWh		242,494,898
G = (D / E) x F	IFO kWh-sales		33,062,798
H	Target Heat Rate		15,786
I1	Upper limit w/deadband		15,886
I2	Lower limit w/deadband		15,686
I3	Calculated Heat Rate (YTD subject to fossil risk, before deadband)		15,845
I	Recovery Heat Rate (YTD subject to fossil risk, after deadband)		15,845
J = B / A ytd	Actual Cost \$/MMBtu		9.1453101
K = C x H x G / 1,000,000	Base Cost Recovery w/Target Heat Rate		\$4,612,546
L = I x J x G / 1,000,000	Fuel Filing Cost Recovery		\$4,791,045
M = 2% x (L-K)	IFO Cost Risk Sharing		\$3,570
	Diesel Fossil Fuel Cost Risk Sharing		
AA	MMBtu	503,889	1,439,446
BB	\$ cost, actuals	\$7,688,936	\$22,293,291
CC = BB / AA (Baseline Column)	Jan 2020 baseline \$/mmbtu	15.2592017	15.2592017
DD	Diesel Gen kWh		152,043,140
EE	Total kWh, Gen, Purch Pwr, DG		251,402,889
FF	Sales kWh		242,494,898
GG = (DD / EE) x FF	Diesel kWh-sales		146,655,776
HH	Target Heat Rate		9,938
II1	Upper limit w/deadband		10,038
II2	Lower limit w/deadband		9,838
II3	Calculated Heat Rate (YTD subject to fossil risk, before deadband)		9,819
II	Recovery Heat Rate (YTD subject to fossil risk, after deadband)		9,838
JJ = BB/AA (YTD Column)	Actual Cost \$/MMBtu		15.4874090
KK = CC x HH x GG / 1,000,000	Base Cost Recovery w/Target Heat Rate		\$22,239,754
LL = II x JJ x GG / 1,000,000	Fuel Filing Cost Recovery		\$22,345,226
MM = 2% x (LL-KK)	Diesel Cost Risk Sharing		\$2,109
NN	Annual Cap (non-prorated)		\$570,000
OO	# Days		366
PP	Annual Cap (pro-rated)		\$570,000
QQ = M + MM, up to cap	Total Fossil Fuel Cost Risk Sharing Adjustment, subject to ±\$570000 cap		\$5,679
	Non-Adjustable Component		
AAA = F	YTD kWh under ECRC		242,494,898
BBB	Non-Adjustable Component, cents/kWh		0.06125
CCC	Non-Adjustable Component Revenues w/tax		\$148,528
DDD	Non-Adjustable Component Revenues less tax		\$135,331

**MAUI ELECTRIC COMPANY, LTD.
MAUI DIVISION
2020 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 '18					(327,700)	(323,073)	279,528
January '19					(327,700)	(345,025)	(65,497)
February	1,886,900	(4)	(48,178)	1,935,078	(628,967)	(587,149)	1,282,432
March					(628,967)	(591,146)	691,286
April					(628,967)	(657,008)	34,278
May	1,531,500	(1)	62,314	1,469,186	(510,500)	(538,146)	965,318
June					(510,500)	(580,323)	384,995
July					(510,500)	(585,791)	(200,796)
August	1,306,700	(2)	(125,510)	1,432,210	(435,567)	(484,194)	747,220
September					(435,567)	(495,890)	251,330
October					(435,567)	(480,697)	(229,367)
November	2,679,900	(3)	(184,241)	2,864,141	(893,300)	(987,633)	1,647,141
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)		
May	554,800	(1)	(51,810)	606,610	(184,933)		

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		
	04/01/20	05/01/20	04/01/20	05/01/20	Difference
Base Rates	effective date: 09/01/19	09/01/19			
Base Fuel/Energy Charge	¢/kWh 0.0000	0.0000	0.00	0.00	0.00
Non-fuel Energy Charge					
First 350 kWh per month	¢/kWh 12.1240	12.1240	42.43	42.43	0.00
Next 850 kWh per month	¢/kWh 14.3840	14.3840	21.58	21.58	0.00
Customer Charge	\$ 11.50	11.50	11.50	11.50	0.00
Total Base Charges			75.51	75.51	0.00
RBA Rate Adjustment	¢/kWh 0.8716	0.8716	4.36	4.36	0.00
PBF Surcharge	¢/kWh 0.7437	0.7437	3.72	3.72	0.00
SolarSaver Adjustment	¢/kWh -0.0592	0.0000	-0.30	0.00	0.30
Refund of 2018 Interim	% on Base 0.00	0.00	0.00	0.00	0.00
Purchased Power Adjustment	¢/kWh -0.0138	-0.0128	-0.07	-0.06	0.01
Energy Cost Recovery	¢/kWh 17.503	16.260	87.52	81.30	-6.22
DSM Adjustment	¢/kWh 0.1268	-0.0048	0.63	-0.02	-0.65
Green Infrastructure Fee	\$ 1.25	1.25	1.25	1.25	0.00
Avg Residential Bill at 500 kwh			172.62	166.06	
Increase (Decrease -)					-6.56
% Change					-3.80%

	Rate		Charge (\$) at 600 Kwh		
	04/01/20	05/01/20	04/01/20	05/01/20	Difference
Base Rates	effective date: 09/01/19	09/01/19			
Base Fuel/Energy Charge	¢/kWh 0.0000	0.0000	0.00	0.00	0.00
Non-fuel Energy Charge					
First 350 kWh per month	¢/kWh 12.1240	12.1240	42.43	42.43	0.00
Next 850 kWh per month	¢/kWh 14.3840	14.3840	35.96	35.96	0.00
Customer Charge	\$ 11.50	11.50	11.50	11.50	0.00
Total Base Charges			89.89	89.89	0.00
RBA Rate Adjustment	¢/kWh 0.8716	0.8716	5.23	5.23	0.00
PBF Surcharge	¢/kWh 0.7437	0.7437	4.46	4.46	0.00
Renewable Energy Infrastructure Cost					
Recovery Provision	¢/kWh 0.0000	0.0000	0.00	0.00	0.00
SolarSaver Adjustment	¢/kWh -0.0592	0.0000	-0.36	0.00	0.36
Refund of 2018 Interim	% on Base 0.00	0.00	0.00	0.00	0.00
Purchased Power Adjustment	¢/kWh -0.0138	-0.0128	-0.08	-0.08	0.00
Energy Cost Recovery	¢/kWh 17.503	16.260	105.02	97.56	-7.46
DSM Adjustment	¢/kWh 0.1268	-0.0048	0.76	-0.03	-0.79
Green Infrastructure Fee	\$ 1.25	1.25	1.25	1.25	0.00
Avg Residential Bill at 600 kwh			206.17	198.28	
Increase (Decrease -)					-7.89
% Change					-3.83%

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

<u>EFFECTIVE DATE</u>	FUEL FACTOR	RESIDENTIAL BILL (\$)	
	<u>RESIDENTIAL & COMMERCIAL</u>	<u>@ 500 KWH</u>	<u>@ 600 KWH</u>
January 1, 2018	-6.115	154.28	184.75
February 1, 2018	-5.747	156.16	187.00
March 1, 2018	-4.402	162.88	195.07
April 1, 2018	-4.914	159.68	191.23
May 1, 2018	-4.510	162.34	194.42
June 1, 2018	-2.402	174.53	209.05
July 1, 2018	-1.259	180.32	216.01
August 1, 2018	-3.848	167.07	200.11
September 1, 2018	-3.445	174.06	208.51
October 1, 2018	-3.282	174.90	209.51
November 1, 2018	-2.358	179.87	215.47
December 1, 2018	-2.401	179.65	215.21
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

**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
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	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	RESID. PBF SURCHARGE ADJUSTMENT	0.7437 CENTS/KWH
01/01/20	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	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
05/01/20	PURCHASED POWER ADJUSTMENT	-0.0128 CENTS/KWH
05/01/20	RESID. DSM ADJUSTMENT	-0.0048 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**

