January 27, 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 February 2021

Maui Electric Company, Limited's ("Maui Electric" or "Company") February 2021 Energy Cost Recovery factor for our Maui Division is 14.338 cents per kilowatt-hour ("kWh"), a decrease of 0.629 cents per kWh from last month. A residential customer consuming 500 kWh of electricity will be paying $153.34, a decrease of $2.87 compared to rates effective January 1, 2021. The decrease in the typical residential bill is due to the decrease in the Energy Cost Recovery factor (-$3.15) and decrease in the Purchase Power Adjustment (-$0.01), partially offset by an increase in the Demand-Side Management Adjustment rate (+$0.29).

The Company's Maui Division fuel composite cost of generation, central station and other increased 93.130 cents per million BTU to 1,074.61 cents per million BTU. The composite cost of DG energy is 0.00 cents per kWh. The composite cost of purchased energy increased 0.341 cents per kWh to 20.285 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 2020. Attachment 24 provides a calculation of the applicable target sales heat rates for 2021 for each division. As shown in Attachment 24, the Maui Division actual sales heat rates for industrial and diesel fuel in 2020 were higher than the respective target sales heat rates in 2020, resulting in no adjustments to the respective target heat rates that were in effect at the end of 2020.

The Energy Cost Recovery factor for our Lāna‘i Division for February 2021 is 20.640 cents per kWh, an increase of 1.142 cents per kWh from last month. A residential customer consuming 400 kWh of electricity will be paying $152.01, an increase of $4.57 compared to rates effective January 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 91.27 cents per million BTU to 1,768.88 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 0.010872 million BTU per kilowatt-hour to 0.010810 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 2020 was lower than the target sales heat rate for Lāna‘i Division’s diesel fuel in 2020, resulting in an adjustment to the target heat rate for Lāna‘i Division’s diesel fuel that was in effect at the end of 2020 to establish the target heat rate for 2021 for diesel fuel. A revised Lāna‘i Division ECRC tariff reflecting the revised target sales heat rate for 2021 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 2021 is 16.108 cents per kWh, an increase of 1.992 cents per kWh from last month. A residential customer consuming 400 kWh of electricity will be paying $141.03, an increase of $7.97 compared to rates effective January 1, 2021. 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 171.29 cents per million BTU to 1,327.99 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 2020. As shown in Attachment 24, the actual sales heat rate for diesel fuel in 2020 was higher than the target sales heat rate in 2020, resulting in no adjustments to the Moloka‘i Division target heat rate for diesel fuel that was in effect at the end of 2020.

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

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, 2021.

Sincerely,

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

Attachments

cc: Division of Consumer Advocacy

ATTACHMENT 1

MAUI ELECTRIC COMPANY, LTD.
MAUI DIVISION

ENERGY COST RECOVERY FACTOR

	EFFECTIVE DATES 01/01/2021	02/01/2021	Change
COMPOSITE COSTS			
Generation, Central Station & Other, ¢/mbtu	981.48	1,074.61	93.130
DG Energy, ¢/kWh	0.00	0.00	0.000
Purchased Energy, ¢/kWh	19.944	20.285	0.341
Residential Schedule "R"			
Energy Cost Recovery Factor, ¢/kWh	14.967	14.338	(0.629)
Others - "G,P,F"			
Energy Cost Recovery Factor, ¢/kWh	14.967	14.338	(0.629)
Residential Customer with			
500 KWH Consumption, $/Bill	156.21	153.34	(2.87)
600 KWH Consumption, $/Bill	186.48	183.04	(3.44)

Supersedes Sheet Effective: January 1, 2021

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

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

Line		
1	Effective Date	February 1, 2021
2	Supercedes Factors of	January 1, 2021

GENERATION COMPONENT

CENTRAL STATION

FUEL PRICES, ¢/mmbtu

3	Industrial	876.02
4	Diesel	1,143.01
5	Other	

BTU MIX, %

6	Industrial	25.62%
7	Diesel	74.38%
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))	1,074.61
10	% Input to System kWh Mix	80.01%

EFFICIENCY FACTOR, mmbtu/kWh

	(A) Fuel Type	(B) Eff Factor mmbtu/kwh	(C) Percent of Centrl Stn + Other	(D) Weighted Eff Factor
11	Industrial	0.015786	17.60	0.002778
12	Diesel	0.009938	82.40	0.008189
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)]	0.010967
15	WEIGHTED COMPOSITE CENTRAL STATION + OTHER GENERATION COST, ¢/kWh (lines (9 x 10 x 14))	9.42938
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))	9.42938
21	Revenue Tax Req Multiplier	1.0975
22	CENTRAL STATION + OTHER GENERATION FACTOR, ¢/kWh (line (20 x 21))	10.34874

DG ENERGY COMPONENT

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)	10.34874
34	DG (line 32)	-
35	TOTAL GENERATION FACTOR, ¢/kWh (lines 33 + 34)	10.34874

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

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

Line		
1	Effective Date	February 1, 2021
2	Supercedes Factors of	January 1, 2021

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		26.200
39	Sempra Wind		22.868
40	Unused	- On Peak	0.000
41		- Off Peak	0.000
42	South Maui RR		11.060
43	Kuʻia 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	20.69%
50		- Off Peak	16.19%
51	Kaheawa Wind II		44.39%
52	Sempra Wind	- On Peak	7.83%
53	Unused	- On Peak	0.00%
54		- Off Peak	0.00%
55	South Maui RR		2.92%
56	Kuʻia Solar		2.41%
57	Unused		0.00%
58	Unused		0.00%
59	CBRE PV		0.00%
60			
61	FIT		5.57%
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		20.285
62	COMPOSITE COST OF PURCHASED ENERGY, ¢/kWh (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))		20.285
63	% Input to System kWh Mix		19.99%
64	WEIGHTED COMPOSITE PURCHASED ENERGY COST, ¢/kWh (lines (62 x 63))		4.05497
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))		4.05497
69	Loss Factor		1.057
70	Revenue Tax Req Multiplier		1.0975
71	PURCHASED ENERGY FACTOR, ¢/kWh (lines (68 x 69 x 70))		4.70400

Line	**Calculation of Monthly Fossil Fuel Cost Risk Sharing Component**	
	Baseline IFO	
72	IFO $, baseline month	$1,443,668
73	IFO mmbtu, baseline	167,966
74	Baseline IFO, ¢/mmbtu	859.50
	Baseline Diesel	
75	Diesel $, baseline month	$5,093,757
76	Diesel mmbtu, baseline	498,109
77	Baseline Diesel, c/mmbtu	1022.62
	Month IFO	
78	IFO mmbtu, budget	159,111
79	IFO Cost, ¢/mmbtu	876.02
80	IFO ECRC Fossil Cost	$1,393,848
81	IFO Base ECRC Recovery Target	$1,367,562
82	IFO differential	$26,285
	Month Diesel	
83	Diesel mmbtu, budget	462,005
84	Diesel Cost, ¢/mmbtu	1,143.01
85	Diesel ECRC Fossil Cost	$5,280,764
86	Diesel Base ECRC Recovery Target	$4,724,556
87	Diesel differential	$556,208
88	Total Fossil	$582,493
89	2% of above	$11,650
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	$11,650
96	Total Monthly Fossil Fuel Cost Risk Sharing, Including This Month	$11,650
97	Fossil Cost Risk Sharing before taxes	$11,650
98	Revenue Tax Adjustment	1.097514
99	Fossil Cost Risk Sharing w/revenue tax	$12,786
100	Forecasted Month MWh Sales	70,290
101	Fossil Fuel Cost Risk Sharing Component, ¢/kWh	-0.0182

	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	15.05274
110	ECR Reconciliation Adjustment	(0.758)
111	Non-Adjustable Component	0.0612
112	Fossil Fuel Cost Risk Sharing Component	-0.0182
113	ECR FACTOR, ¢/kWh (lines (109 + 110 + 111 + 112))	14.338

MAUI ELECTRIC COMPANY, LTD.
MAUI DIVISION

Fuel Oil Inventory Prices for February 2021

TYPE OF OIL BURNED	PRICES $/BBL	CONVERSION FACTORS		PRICES ¢/MBTU
INDUSTRIAL	55.1895	6.30	MBTU/BBL	876.02
DIESEL/ULSD	66.9008	5.85	MBTU/BBL	1,143.01

Maui Electric Company, Ltd.
Maui Division

Month End Fuel Oil Estimate

Kahului	Barrels	MBTU	($)
1/20/2021	29,910.41	188,435.58	1,564,632.60
Estimated Use	11,034.81	69,519.29	592,812.60
Estimated Received	18,000.00	113,400.00	1,063,325.05
Estimated Additional	0.00	0.00	0.00
Estimated End	36,875.60	232,316.29	2,035,145.05

Next month's expense ($/bbl) = $ 55.1895

Maalaea	Barrels	MBTU	($)
1/20/2021	80,602.95	471,772.86	5,083,687.03
Estimated Use	31,247.11	182,890.81	1,870,708.21
Estimated Received	40,000.00	234,121.89	2,764,995.56
Estimated Additional	0.00	0.00	0.00
Estimated End	89,355.84	523,003.94	5,977,974.38

Next month's expense ($/bbl) = $ 66.9008

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	30%
	100%

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 ¢/kwh x 0.7 + 22.000 ¢/kwh x 0.3 = 14 ¢/kwh
Off-Peak Rate = 9.323 ¢/kwh x 0.7 + 22.000 ¢/kwh x 0.3 = 13.126 ¢/kwh

MAUI ELECTRIC COMPANY, LTD.
Maui Division
ECR Reconciliation Adjustment
February 2021

1. Amount to be Refunded	($1,455,500)	
2. Monthly amount (1 / 3 X Line 1)	($485,167)	
3. Revenue Tax Divisor	0.91115	
4. Total (Line 2 / Line 3)	($532,478)	
5. Estimated Sales (February 2021)	70,290	mwh
6. Adjustment (Line 4 ÷ Line 5)	(0.758)	¢/kwh

MAUI ELECTRIC COMPANY, LTD.
MAUI DIVISION
2020 FUEL OIL ADJUSTMENT RECONCILIATION SUMMARY
(Thousand $)

Line		W/O Deadband 4th Quarter YTD Total	collection by company*	Basis for Recon With Deadband 4th Quarter YTD Total	collection by company*
	ACTUAL COSTS:				
1	Generation	$79,013.0		$79,013.0	
2	Distributed Generation	$30.0		$30.0	
3	Purch Power	$48,867.6		$48,867.6	
4	TOTAL	$127,910.6		$127,910.6	
	FUEL FILING COST				
5	Generation	$77,869.4		$78,593.7	
6	Distributed Generation	$0.0		$0.0	
7	Purch Power	$48,867.6		$48,867.6	
8	TOTAL	$126,737.0		$127,461.3	
	BASE FUEL COST				
9	Generation	$0.0		$0.0	
10	Distributed Generation	$0.0		$0.0	
11	Purch Power	$0.0		$0.0	
12	TOTAL	$0.0		$0.0	
13	FUEL-BASE COST (Line 8-12)	$126,737.0		$127,461.3	
14	ACTUAL FOA LESS TAX	$127,544.3		$127,544.3	
15	FOA reconciliation adj for prior year	-$1,924.7		-$1,924.7	
15A	Less: Non-Adjustable Component Revenues less tax	$501.3		$501.3	
16	ADJUSTED FOA LESS TAX	$128,967.7		$128,967.7	
17	FOA-(FUEL-BASE) (Line 16-13)	$2,230.7	Over	$1,506.4	Over
	ADJUSTMENTS				
18	Current year FOA accrual reversal	$1,254.2		$1,254.2	
19	Other prior year FOA	$0.0		$0.0	
20	Other	$0.0		$0.0	
21	QUARTERLY FOA RECONCILIATION (Line 17+18+19+20)	$3,484.9	Over	$2,760.6	Over
21A	Fossil Fuel YTD Cost Risk Sharing Adjustment	-$357.0		-$357.0	
21B	YTD QUARTERLY FOA RECON w/Fossil Risk Adj (Line 21+Line 21A)	$3,127.9		$2,403.6	
22	3rd Quarter Reconciliation YTD			$948.1	Over
23	FOA Reconciliation to be Refunded February 2021 to April 2021 (Line 22- 21B)			-$1,455.5	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 December 31, 2020

	Notes	YTD
Industrial Fuel Oil		
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	124,115
Industrial Fuel Oil Consumption (Recorded), MMBTU	b	2,021,757
Industrial Fuel Oil Efficiency Factor (Recorded), BTU/kWh	c = (b/a)*1000	16,289
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**
Diesel		
Diesel Efficiency Factor, BTU/kWh	f	9,938
Diesel Deadband Definition, - BTU/kWh	d	**100**
Diesel Portion of Recorded Sales, MWh	a	520,708
Diesel Consumption (Recorded), MMBTU	b	5,241,046
Diesel Efficiency Factor (Recorded), BTU/kWh	c = (b/a)*1000	10,065
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
2020

	Without Deadband	With Deadband AS FILED
	Jan 1 - Dec 31	Jan 1 - Dec 31
INDUSTRIAL		
Industrial Portion of Recorded Sales , MWH	124,115	124,115
Industrial Sales Efficiency Factor (mmbtu/kwh)	0.015786	0.015886
Mmbtu adjusted for Sales Efficiency Factor	1,959,283	1,971,694
$/mmbtu	$8.1138	$8.1138
TOTAL Industrial $000s TO BE RECOVERED	$15,897.1	$15,997.8
DIESEL FUEL FILING COST		
Diesel Portion of Recorded Sales, MWH	520,708	520,708
Diesel Sales Efficiency Factor (mmbtu/kwh)	0.009938	0.010038
Mmbtu adjusted for Sales Efficiency Factor	5,174,791	5,226,862
$/mmbtu	$11.9758	$11.9758
TOTAL DIESEL $000s TO BE RECOVERED	$61,972.3	$62,595.9
TOTAL GENERATION FUEL FILING COST, $000s	$77,869.4	$78,593.7
TOTAL GENERATION BASE FUEL COST , $000s	$0.0	$0.0
TOTAL GENERATION FUEL FILING COST, $000s YTD	$77,869.4	$78,593.7
TOTAL GENERATION BASE FUEL COST, $000s YTD	$0.0	$0.0

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

	IFO Fossil Fuel Cost Risk Sharing	Jan-20, Baseline	YTD Subject to Fossil Risk
A	MMBtu	193383.6849	2,021,757
B	$ cost, actuals	$1,709,027	16,390,702
C = B / A (Baseline Column)	Jan 2020 baseline $/mmbtu	8.837492	8.837492
D	IFO Gen kWh		131,120,539
E	Total kWh, Gen, Purch Pwr, DG		947,757,563
F	Sales kWh		898,268,272
G = (D / E) x F	IFO kWh-sales		124,273,785
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)		16,289
I	Recovery Heat Rate (YTD subject to fossil risk, after deadband)		15,886
J = B / A ytd	Actual Cost $/MMbtu		8.1071566
K = C x H x G / 1,000,000	Base Cost Recovery w/Target Heat Rate		$17,337,268
L = I x J x G / 1,000,000	Fuel Filing Cost Recovery		$16,005,257
M = 2% x (L-K)	**IFO Cost Risk Sharing**		-$26,640
	Diesel Fossil Fuel Cost Risk Sharing		
AA	MMBtu	503,889	5,241,046
BB	$ cost, actuals	$7,688,936	$62,622,257
CC = BB / AA (Baseline Column)	Jan 2020 baseline $/mmbtu	15.2592017	15.2592017
DD	Diesel Gen kWh		549,721,900
EE	Total kWh, Gen, Purch Pwr, DG		947,757,563
FF	Sales kWh		898,268,272
GG = (DD / EE) x FF	Diesel kWh-sales		521,016,936
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)		10,065
II	Recovery Heat Rate (YTD subject to fossil risk, after deadband)		10,038
JJ = BB/AA (YTD Column)	Actual Cost $/MMbtu		11.9484276
KK = CC x HH x GG / 1,000,000	Base Cost Recovery w/Target Heat Rate		$79,010,106
LL = II x JJ x GG / 1,000,000	Fuel Filing Cost Recovery		$62,489,894
MM = 2% x (LL-KK)	**Diesel Cost Risk Sharing**		-$330,404
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		-$357,044
	Non-Adjustable Component		
AAA = F	YTD kWh under ECRC		898,268,272
BBB	Non-Adjustable Component, cents/kWh		0.06125
CCC	Non-Adjustable Component Revenues w/tax		$550,189
DDD	Non-Adjustable Component Revenues less tax		$501,305

MAUI ELECTRIC COMPANY, LTD.
MAUI DIVISION
2020 Cumulative Reconciliation Balance

Month	(1) YTD FOA Reconciliation	Qtr	(2) FOA Rec Adjust Variance	(3) FOA Rec Less Variance	(4) Try to Collect	(5) Actual Collect	(6) Month-end Cumulative Balance
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		
February	1,455,500	(4)	4,747	1,450,753	(485,167)		

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		
		01/01/21	02/01/21	01/01/21	02/01/21	Difference
Base Rates	effective date:	09/01/19	09/01/19			
Base Fuel/Energy Charge	¢/kWh	0.0000	0.0000	0.00	0.00	0.00
Non-fuel Energy Charge						
First 350 kWhr per month	¢/kWh	12.1240	12.1240	42.43	42.43	0.00
Next 850 kWhr 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	0.3383	0.3383	1.69	1.69	0.00
PBF Surcharge	¢/kWh	0.5882	0.5882	2.94	2.94	0.00
SolarSaver Adjustment	¢/kWh	0.0000	0.0000	0.00	0.00	0.00
Refund of 2018 Interim	% on Base	0.00	0.00	0.00	0.00	0.00
Purchased Power Adjustment	¢/kWh	-0.0013	-0.0042	-0.01	-0.02	-0.01
Energy Cost Recovery	¢/kWh	14.967	14.338	74.84	71.69	-3.15
DSM Adjustment	¢/kWh	-0.0022	0.0563	-0.01	0.28	0.29
Green Infrastructure Fee	$	1.25	1.25	1.25	1.25	0.00
Avg Residential Bill at 500 kwh				156.21	153.34	
				Increase (Decrease -)		-2.87
				% Change		-1.84%

		Rate		Charge ($) at 600 Kwh		
		01/01/21	02/01/21	01/01/21	02/01/21	Difference
Base Rates	effective date:	09/01/19	09/01/19			
Base Fuel/Energy Charge	¢/kWh	0.0000	0.0000	0.00	0.00	0.00
Non-fuel Energy Charge						
First 350 kWhr per month	¢/kWh	12.1240	12.1240	42.43	42.43	0.00
Next 850 kWhr 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	0.3383	0.3383	2.03	2.03	0.00
PBF Surcharge	¢/kWh	0.5882	0.5882	3.53	3.53	0.00
Renewable Energy Infrastructure Cost Recovery Provision	¢/kWh	0.0000	0.0000	0.00	0.00	0.00
SolarSaver Adjustment	¢/kWh	0.0000	0.0000	0.00	0.00	0.00
Refund of 2018 Interim	% on Base	0.00	0.00	0.00	0.00	0.00
Purchased Power Adjustment	¢/kWh	-0.0013	-0.0042	-0.01	-0.03	-0.02
Energy Cost Recovery	¢/kWh	14.967	14.338	89.80	86.03	-3.77
DSM Adjustment	¢/kWh	-0.0022	0.0563	-0.01	0.34	0.35
Green Infrastructure Fee	$	1.25	1.25	1.25	1.25	0.00
Avg Residential Bill at 600 kwh				186.48	183.04	
				Increase (Decrease -)		-3.44
				% Change		-1.84%

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

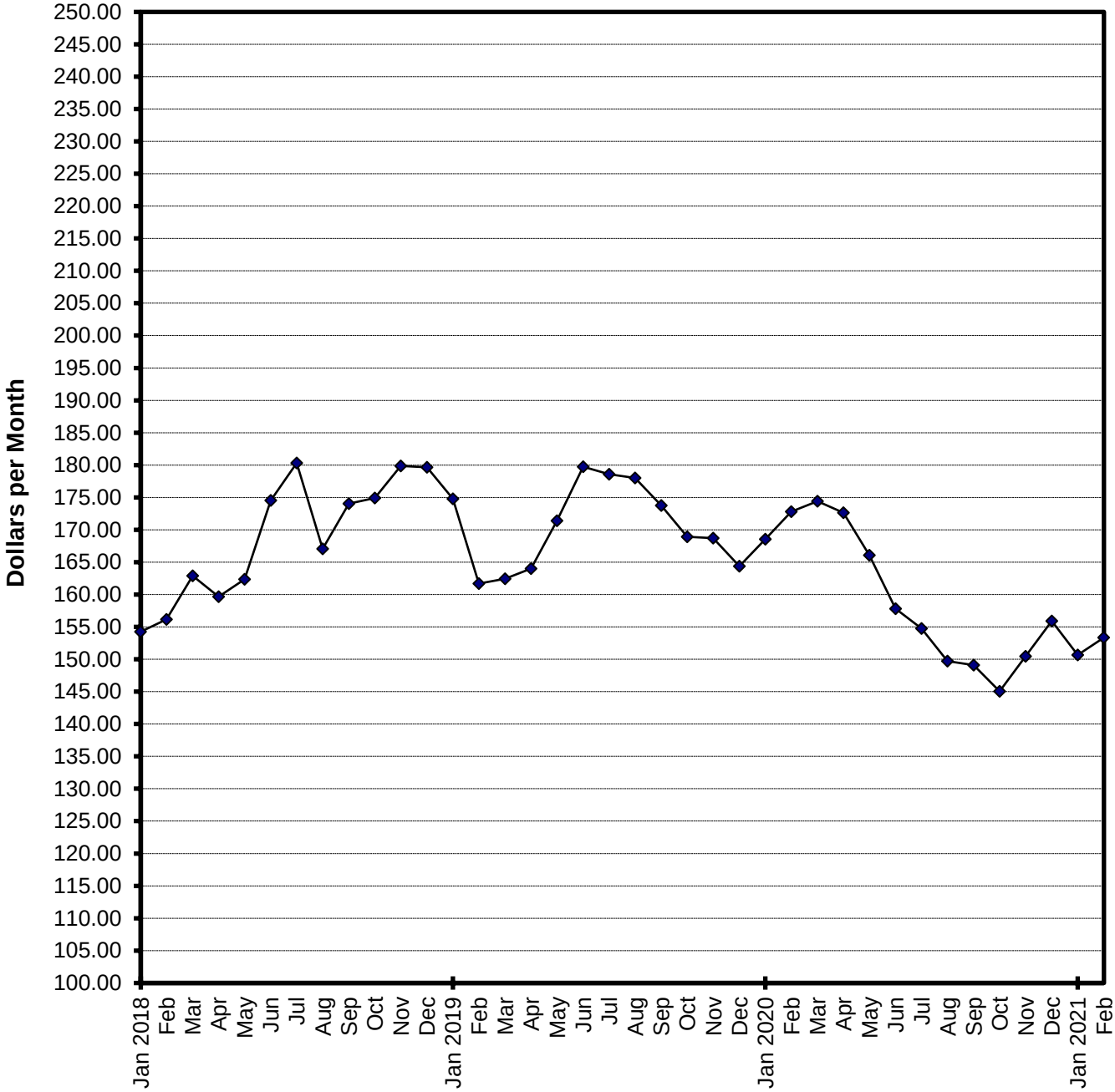
EFFECTIVE DATE	FUEL FACTOR CENTS / KWH RESIDENTIAL & COMMERCIAL	RESIDENTIAL BILL ($) @ 500 KWH	@ 600 KWH
January 1, 2019	-3.405	174.77	209.33
February 1, 2019	-5.987	161.69	193.64
March 1, 2019	-5.839	162.44	194.54
April 1, 2019	-5.441	163.99	196.39
May 1, 2019	-4.041	171.40	205.29
June 1, 2019	3.899	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

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 - 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	**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	**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	**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
11/1/2020 - 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	**GREEN INFRASTRUCTURE FEE**	**1.25**	**DOLLARS/MONTH**
02/01/21	**RESID. DSM ADJUSTMENT**	**0.0563**	**CENTS/KWH**
02/01/21	**PURCHASED POWER ADJUSTMENT**	**-0.0042**	**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



Maui Annual ECRC Adjustment, Based on Recorded Statistics for : 2020

		Industrial A	Diesel B	Notes
1	Target Heat Rate, 2020	0.015786	0.009938	MBTU/kWh Sales
2				
3	Fuel consumed, 2020	2,021,757	5,241,046	MBTU
4	Fuel consumed	0	0	MBTU
5	Fuel consumed during 2020	2,021,757	5,241,046	MBTU
6	Allocated Sales 2020	124,115,200	520,707,525	kWh
7	Allocated Sales	0	0	kWh
8	Allocated Sales during 2020	124,115,200	520,707,525	kWh
9	2020 Sales Heat Rate, Recorded	0.016289	0.010065	MBTU/kWh Sales
10				
11	Difference: 2020 Recorded less Start of Year	0.000503	0.000127	MBTU/kWh Sales
12	Adjustment: One-half the difference, downward only	0.000000	0.000000	MBTU/kWh Sales
13				
14	Target Heat Rate, Start of 2021	0.015786	0.009938	MBTU/kWh Sales