



October 29, 2019

FILED

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

2019 OCT 29 P 3:15

PUBLIC UTILITIES  
COMMISSION

Dear Commissioners:

Subject: Maui Electric Energy Cost Recovery Factor for November 2019

Maui Electric Company, Limited's ("Maui Electric" or "Company") November 2019 Energy Cost Recovery factor for our Maui Division is 17.061 cents per kilowatt-hour ("kWh"), a decrease of 0.037 cents per kWh from last month. A residential customer consuming 500 kWh of electricity will be paying \$168.70, a decrease of \$0.23 compared to rates effective October 1, 2019. The decrease in the typical residential bill is due to the decrease in the Energy Cost Recovery Factor (-\$0.19) and the decrease in the Purchase Power Adjustment (-\$0.04).

The Company's Maui Division fuel composite cost of generation, central station and other increased 10.98 cents per million BTU to 1,398.45 cents per million BTU. The composite cost of DG energy is 0.00 cents per kWh. The composite cost of purchased energy decreased 0.776 cents per kWh to 17.442 cents per kWh.

The Energy Cost Recovery factor for our Lāna'i Division for November 2019 is 26.088 cents per kWh, an increase of 1.131 cents per kWh from last month. A residential customer consuming 400 kWh of electricity will be paying \$175.42, an increase of \$4.52 compared to rates effective October 1, 2019. The increase in the typical residential bill is due to the increase of the Energy Cost Recovery factor (+\$4.52).

The Company's Lāna'i Division fuel composite cost of generation, central station and other increased 88.23 cents per million BTU to 2,097.17 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.

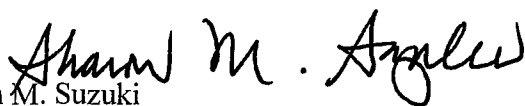
The Energy Cost Recovery factor for our Moloka'i Division for November 2019 is 20.907 cents per kWh, an increase of 1.836 cents per kWh from last month. A residential customer consuming 400 kWh of electricity will be paying \$162.13, an increase of \$10.62 compared to rates effective October 1, 2019. The increase in the typical residential bill is due to the increase of the Energy Cost Recovery Factor (+\$7.35), and the increase in the Purchase Power Adjustment (+\$3.27).

The Honorable Chair and Members  
of the Hawai'i Public Utilities Commission  
October 29, 2019  
Page 2

The Company's Moloka'i Division fuel composite cost of generation, central station and other increased 138.66 cents per million BTU to 1,750.21 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.

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, 2019.

Sincerely,

  
Sharon M. Suzuki  
President

Attachments

cc: Division of Consumer Advocacy

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

**ENERGY COST RECOVERY FACTOR**

	EFFECTIVE DATES		<u>Change</u>
	<u>10-01-19</u>	<u>11-01-19</u>	
<u>COMPOSITE COSTS</u>			
Generation, Central Station & Other, ¢/mbtu	1,611.55	1,750.21	138.66
DG Energy, ¢/kWh	0.00	0.00	0.00
Purchased Energy, ¢/kWh	21.80	21.80	0.00
<u>Residential Schedule "R"</u>			
Energy Cost Recovery, ¢/kWh	19.071	20.907	1.836
<u>Others - "G,P,F"</u>			
Energy Cost Recovery, ¢/kWh	19.071	20.907	1.836
<u>Residential Customer with</u>			
400 KWH Consumption, \$/Bill	151.51	162.13	10.62
500 KWH Consumption, \$/Bill	187.89	201.16	13.27

Supersedes Sheet Effective:

October 1, 2019

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

ENERGY COST RECOVERY (ECR) FILING - November 1, 2019 (page 1 of 2)

Line

1 Effective Date November 1, 2019  
2 Supercedes Factors October 1, 2019

**GENERATION COMPONENT**

<b>CENTRAL STATION</b>						<b>DG ENERGY COMPONENT</b>	
FUEL PRICES, ¢/mmbtu							
3	Industrial		0.00				
4	Diesel		1,750.21				
5	Other		0.00				
BTU MIX, %							
6	Industrial		0.00	23	COMPOSITE COST OF DG		
7	Diesel		100.00		ENERGY, ¢/kWh	0.000	
8	Other		0.00	24	% Input to System kWh Mix	0.00	
			<u>100.00</u>				
9	COMPOSITE COST OF GENERATION, CENTRAL STATION + OTHER ¢/mmbtu (Lines (3 x 6) + (4 x 7) + (5 x 8))		1,750.21	25	WEIGHTED COMPOSITE DG ENERGY COST, ¢/kWh (Lines 23 x 24)	0.00000	
10	% Input to System kWh Mix		99.99	26	BASE DG ENERGY COMP COST	0.000	
EFFICIENCY FACTOR, mmbtu/kWh							
	(A)	(B)	(C)	(D)	27	Base % Input to System kWh Mix	0.00
			Percent of		28	WEIGHTED BASE DG ENERGY COST, ¢/kWh (Line 26 x 27)	0.00000
		Eff Factor	Centrl Stn +	Weighted	29	Cost Less Base (Line 25 - 28)	0.00000
	Fuel Type	mmbtu/kwh	Other	Eff Factor	30	Loss Factor	1.098
11	Industrial	0.000000	0.00	0.000000	31	Revenue Tax Req Multiplier	1.0975
12	Diesel	0.011127	100.00	0.011127	32	DG FACTOR, ¢/kWh (Line 29 x 30 x 31)	0.00000
13	Other	0.011127	0.00	0.000000			
	(Lines 11, 12, 13): Col(B) x Col(C) = Col(D)						
14	Weighted Efficiency Factor, mmbtu/kWh [lines 11(D) + 12(D) + 13(D)]		0.011127				
15	WEIGHTED COMPOSITE CENTRAL STATION + OTHER GENERATION COST, ¢/kWh (lines (9 x 10 x 14))		19.47202				
16	BASE CENTRAL STATION + OTHER GENERATION COST, ¢/mmbtu		0.00				
17	Base % Input to Sys kWh Mix		0.00				
18	Efficiency Factor, mmbtu/kwh		0.011127				
19	WEIGHTED BASE CENTRAL STATION + OTHER GENERATION COST ¢/kWh (lines (16 x 17 x 18))		0.00000				
20	COST LESS BASE (line(15 - 19))		19.47202				
21	Revenue Tax Req Multiplier		1.0975				
22	CENTRAL STATION + OTHER GENERATION FACTOR, ¢/kWh (line (20 x 21))		21.37054				
					SUMMARY OF		
					TOTAL GENERATION FACTOR, ¢/kWh		
					33	CNTRL STN + OTHER (line 22)	21.37054
					34	DG (line 32)	0.00000
					35	TOTAL GENERATION FACTOR, ¢/kWh (lines 33 + 34)	21.37054

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

ENERGY COST RECOVERY (ECR) FILING - November 1, 2019 (page 2 of 2)

Line

1 Effective Date November 1, 2019  
2 Supercedes Factors October 1, 2019

Line	<b>PURCHASED ENERGY COMPONENT</b>	
	PURCHASED ENERGY PRICE, ¢/kWh - Fossil	
	PURCHASED ENERGY PRICE, ¢/kWh - Renewable	
36	FIT	21.800
37		0.000
38	Sch Q	0.000
	PURCHASED ENERGY KWH MIX, % - Fossil	
	PURCHASED ENERGY KWH MIX, % - Renewable	
39	FIT	100.00
40		0.00
41	Sch Q	0.000
41A	Fossil Purch. Energy %	0.000
41B	Renewable Purch. Energy %	100.000
41C	Comp. Cost, Fossil Purch. Energy, ¢/kWh	N/A
41D	Comp. Cost, Renewable Purch. Energy, ¢/kWh	21.800
42	COMPOSITE COST OF PURCHASED ENERGY, ¢/kWh (Lines (36 x 39) + (37 x 40) + (38 x 41))	21.800
43	% Input to System kWh Mix	0.01
44	WEIGHTED COMPOSITE PURCHASED ENERGY COST, ¢/kWh (lines (42 x 43))	0.00287
45	BASE PURCHASED ENERGY COMPOSITE COST, ¢/kWh	0.000
46	Base % Input to Sys kWh Mix	0.00
47	WEIGHTED BASE PURCHASED ENERGY COST, ¢/kWh (lines (45 x 46))	0.00000
48	COST LESS BASE (lines (44 - 47))	0.00287
49	Loss Factor	1.098
50	Revenue Tax Req Multiplier	1.0975
51	PURCHASED ENERGY FACTOR, ¢/kWh (lines (48 x 49 x 50))	0.00346

Line	<b>Calculation of Monthly Fossil Fuel Cost Risk Sharing Component</b>	
	<b>Baseline Diesel (Actual)</b>	
52	Diesel \$, baseline month	\$512,910
53	Diesel mmbtu, baseline	31,010
54	Baseline Diesel, ¢/mmbtu	1,654.01
	<b>Month Diesel</b>	
55	Diesel mmbtu, budget	26,582
56	Diesel Cost, ¢/mmbtu	1,750.21
57	Diesel ECRC Fossil Cost	\$465,247
58	Diesel Base ECRC Recovery Target	\$439,674
59	Diesel differential	\$25,573
60	Total Fossil	\$25,573
61	2% of above	\$511
62	Total Monthly Fossil Fuel Cost Risk Sharing, Prior Months in Year	-\$136
63	Maximum Annual Cap (bi-directional)	\$31,500
64	Number of Days in year from implementation	122
65	Fossil Risk % Proration (based on 365 day year)	33.42%
66	Maximum Annual Cap (bi-directional) prorated	\$10,529
67	Applicable Monthly Fossil Fuel Cost Risk Sharing	\$511
68	Total Monthly Fossil Fuel Cost Risk Sharing, Including This Month	\$375
69	Fossil Cost Risk Sharing before taxes	\$511
70	Revenue Tax Adjustment	1.097514
71	Fossil Cost Risk Sharing w/revenue tax	\$561
72	Forecasted Month MWh Sales	2,389
73	Fossil Fuel Cost Risk Sharing Component, ¢/kWh	(0.0235)

Line **SYSTEM COMPOSITE CALCULATIONS**

74	GENERATION AND PURCHASED ENERGY FACTOR, ¢/kWh (lines (35 + 51))	21.37400
75	Adjustment, ¢/kWh	0.000
76	Fossil Fuel Cost Risk Sharing Component	(0.024)
77	ECR Reconciliation Adjustment	(0.444)
78	ECR FACTOR, ¢/kWh (lines (74 + 75 + 76 + 77))	20.907

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

**MONTH END FUEL OIL ESTIMATE**

	<u>Barrels</u>	<u>MBTU</u>	<u>\$</u>
10/18/2019	4,539.74	26,012.70	447,332.55
Estimated Use	2,230.98	12,783.52	206,012.49
Estimated Received	1,400.00	8,022.00	136,475.85
Estimated Additional	<u>930.34</u>	<u>5,330.82</u>	<u>87,446.24</u>
Estimated End	4,639.10	26,582.00	465,242.15

Next Months Expense = \$ 100.2872 /bbl

**FUEL OIL INVENTORY PRICE USED FOR FILING**

<u>Type of Oil Burned</u>	<u>Price</u>	<u>Conversion Factor</u>	<u>Prices ¢/MBTU</u>
Diesel	\$ 100.2872	5.73 BTU/BBL	1750.21

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

**Contract Prices effective October 1, 2019**

<u>TYPE OF OIL BURNED</u>	<u>\$/BBL</u>	<u>¢/MBTU</u>
<b>ULTRA LOW SULFUR DIESEL</b>		
Tax *	4.9720	86.77
Ocean Transportation	1.7129	29.89
Storage	5.0658	88.41
Wharfage	0.4000	6.98

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

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.**  
**Molokai Division**  
**ECR Reconciliation Adjustment**

**November 2019**

1. Amount to be refunded	(\$29,000)
2. Monthly amount (1/3 x Line 1)	(\$9,667)
3. Revenue Tax Divisor	0.91115
4. Total (Line 2 / Line 3)	(\$10,610)
5. Estimated Sales (November 2019)	2,389 mwh
6. Adjustment (Line 4 ÷ Line 5)	-0.444 ¢/kwh



**MAUI ELECTRIC COMPANY, LTD.  
MOLOKAI DIVISION  
2019 FUEL OIL ADJUSTMENT RECONCILIATION SUMMARY  
(Thousand \$)**

<u>Line</u>	<u>Description</u>	Without Deadband 3rd Quarter <u>YTD Total</u>	collection by <u>company*</u>	Basis for Recon With Deadband 3rd Quarter <u>YTD Total</u>	collection by <u>company*</u>
Actual Costs					
1	Generation	\$4,248.9		\$4,248.9	
2	Distributed Generation	\$0.0		\$0.0	
3	Purch Power	<u>\$0.9</u>		<u>\$0.9</u>	
4	Total	\$4,249.8		\$4,249.8	
Fuel Filing Cost					
5	Generation	\$4,245.4		\$4,254.2	
6	Distributed Generation	\$0.0		\$0.0	
7	Purch Power	<u>\$0.9</u>		<u>\$0.9</u>	
8	Total	\$4,246.3		\$4,255.1	
Base Fuel Cost					
9	Generation	\$4,070.8		\$4,070.8	
10	Distributed Generation	\$0.0		\$0.0	
11	Purch Power	<u>\$0.8</u>		<u>\$0.8</u>	
12	Total	\$4,071.6		\$4,071.6	
13	FUEL - BASE COST (Line 8-12)	\$174.8		\$183.6	
14	ACTUAL FOA REVENUE LESS TAX	\$232.4		\$232.4	
15	FOA reconciliation adj for prior years	<u>\$5.7</u>		<u>\$5.7</u>	
16	ADJUSTED FOA LESS TAX	\$226.7		\$226.7	
17	FOA-(FUEL-BASE) (Line 16-13)	\$51.9		\$43.1	
ADJUSTMENTS					
18	Current year FOA accrual reversal	\$24.5		\$24.5	
19	Other prior year FOA	\$0.0		\$0.0	
20	Other	<u>\$0.0</u>		<u>\$0.0</u>	
21	3rd QUARTER FOA RECONCILIATION (Lines 17+18+19+20)	\$76.4	Over	\$67.6	Over
21A	Fossil Fuel Cost Risk Sharing Adjustment	<u>\$0.0</u>		<u>\$0.0</u>	
21B	Quarterly FOA Reconciliation with Fossil Risk Adjustment (21+21A)	<u>\$76.5</u>		<u>\$67.7</u>	
22	2nd QUARTERLY FOA Reconciliation Recognized in FOA Rates			<u>\$38.7</u>	Over
23	FOA Reconciliation to be Refunded November 2019 to January 2020 (Line 22- 21B)			<u>-\$29.0</u>	To Be Refunded

\* Over means an over-collection by the company.  
Under means an under-collection by the company.

**MAUI ELECTRIC COMPANY, LTD.  
MOLOKAI DIVISION  
DEADBAND CALCULATION**

Determination of Efficiency Factor to use for Cost-Recovery Purposes  
Period: January 1, 2019 through Sept 30, 2019

	<u>Notes</u>	<u>YTD</u>
<b><u>Palaau Diesel</u></b>		
.	f	11,127
Palaau Diesel Deadband Definition, +/- BTU/kWh	d	<b>50</b>
Palaau Diesel Portion of Recorded Sales, MWh	a	21,952
Palaau Diesel Consumption (Recorded), MMBTU	b	244,762
Palaau Diesel Efficiency Factor (Recorded), BTU/kWh	c = (b/a)*1000	11,150
Lower limit of Palaau Diesel Deadband, BTU/kWh	e = f-d	11,077
Higher limit of Palaau Diesel Deadband, BTU/kWh	g = f+d	11,177
Palaau Diesel Efficiency Factor for cost-recovery, BTU/kWh	h = c, e, or g	<b>11,150</b>

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

	2019	
	Without Deadband	With Deadband AS FILED
	<u>Jan 1 - Sept 30</u>	<u>Jan 1 - Sept 30</u>
<b><u>DIESEL FUEL FILING COST</u></b>		
Diesel Portion of Recorded Sales, MWH	21,952	21,952
Diesel Sales Efficiency Factor (mmbtu/kwh)	0.011127	0.011150
Mmbtu adjusted for Sales Efficiency Factor	244,260	244,765
\$/mmbtu	<u>\$17.3806</u>	<u>\$17.3806</u>
TOTAL DIESEL \$000s TO BE RECOVERED	\$4,245.4	\$4,254.2
TOTAL GENERATION FUEL FILING COST, \$000s	\$4,245.4	\$4,254.2
TOTAL GENERATION BASE FUEL COST , \$000s	\$4,070.8	\$4,070.8
TOTAL GENERATION FUEL FILING COST, \$000s YTD	\$4,245.4	\$4,254.2
TOTAL GENERATION BASE FUEL COST, \$000s YTD	\$4,070.8	\$4,070.8

**Fossil Fuel Cost Risk Sharing Mechanism, September 2019, Molokai**

Sep-19, Baseline      YTD Subject to Fossil Risk

		<b>Diesel Fossil Fuel Cost Risk Sharing</b>	
AA	MMBtu	31,010	31,010
BB	\$ cost, actuals	\$512,910	\$512,910
CC = BB / AA (Baseline Column)	Sep 2019 baseline \$/mmbtu	16.5400867	16.5400867
DD	Diesel Gen kWh		2,935,925
EE	Total kWh, Gen, Purch Pwr, DG		2,936,403
FF	Sales kWh		2,731,302
GG = (DD / EE) x FF	Diesel kWh-sales		2,730,857
HH	Target Heat Rate		11,127
II1	Upper limit w/deadband		11,177
II2	Lower limit w/deadband		11,077
II3 = AA/GG x 1,000,000	Calculated Heat Rate (YTD subject to fossil risk, before deadband)		11,355
II	Recovery Heat Rate (YTD subject to fossil risk, after deadband)		11,177
JJ = BB/AA (YTD Column)	Actual Cost \$/MMbtu		16.5400867
KK = CC x HH x GG / 1,000,000	Base Cost Recovery w/Target Heat Rate		\$502,591
LL = II x JJ x GG / 1,000,000	Fuel Filing Cost Recovery		\$504,850
<b>MM = 2% x (LL-KK)</b>	<b>Diesel Cost Risk Sharing</b>		\$45
NN	Annual Cap (non-prorated)		\$31,500
OO	# Days		122
PP	Annual Cap (pro-rated)		\$10,529
QQ = MM, up to cap	Total Fossil Fuel Cost Risk Sharing Adjustment, subject to ±\$10529 cap		\$45

**MAUI ELECTRIC COMPANY, LTD.  
MOLOKAI DIVISION  
2019 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					(3,033)	(3,133)	2,348
January '19					(3,033)	(3,259)	(911)
February	(8,800)	(4)	(682)	(8,118)	2,933	2,637	(6,392)
March					2,933	2,879	(3,513)
April					2,933	2,976	(537)
May	(4,000)	(1)	(576)	(3,424)	1,333	1,340	(2,621)
June					1,333	1,450	(1,171)
July					1,333	1,381	210
August	42,700	(2)	167	42,533	(14,233)	(15,411)	27,332
September					(14,233)	(15,604)	11,728
October					(14,233)		
November	29,000	(3)	(2,501)	31,501	(9,667)		

## NOTES:

- Col(1): Quarterly FOA reconciliation amounts. (Refer to Attachment 20)  
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.  
Molokai Division  
Calculations of the Average Residential Customer Bill**

	Rate		Charge (\$) at 400 Kwh		
	10-01-19	11-01-19	10-01-19	11-01-19	Difference
<b>Base Rates</b>	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 250 kWhr per month	¢/kWh	14.0459	14.0459	35.11	35.11
Next 500 kWhr per month	¢/kWh	16.6959	16.6959	25.04	25.04
Customer Charge	\$	11.50	11.50	11.50	11.50
<b>Total Base Charges</b>				71.65	71.65
<b>IRP Refund</b>	% on base	0.000	0.000	0.00	0.00
<b>Revenue Balancing Rate Adjustment</b>	¢/kWh	0.8716	0.8716	3.49	3.49
<b>PBF Surcharge</b>	¢/kWh	0.4775	0.4775	1.91	1.91
<b>Renewable Energy Infrastructure Cost Recovery Provision</b>	¢/kWh	0.0000	0.0000	0.00	0.00
<b>SolarSaver Adjustment</b>	¢/kWh	0.0000	0.0000	0.00	0.00
<b>Refund of 2018 Interim</b>	% on base	0.00	0.00	0.00	0.00
<b>Purchased Power Adjustment</b>	¢/kWh	-0.7475	0.0692	-2.99	0.28
<b>Energy Cost Recovery</b>	¢/kWh	19.071	20.907	76.28	83.63
<b>Green Infrastructure Fee</b>	\$	1.17	1.17	1.17	1.17
<b>Avg Residential Bill at 400 kwh</b>				151.51	162.13

Increase (Decrease -)	10.62
% Change	7.01%

	Rate		Charge (\$) at 500 Kwh		
	10-01-19	11-01-19	10-01-19	11-01-19	Difference
<b>Base Rates</b>	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 250 kWhr per month	¢/kWh	14.0459	14.0459	35.11	35.11
Next 500 kWhr per month	¢/kWh	16.6959	16.6959	41.74	41.74
Customer Charge	\$	11.50	11.50	11.50	11.50
<b>Total Base Charges</b>				88.35	88.35
<b>IRP Refund</b>	% on base	0.000	0.000	0.00	0.00
<b>Revenue Balancing Rate Adjustment</b>	¢/kWh	0.8716	0.8716	4.36	4.36
<b>PBF Surcharge</b>	¢/kWh	0.4775	0.4775	2.39	2.39
<b>Renewable Energy Infrastructure Cost Recovery Provision</b>	¢/kWh	0.0000	0.0000	0.00	0.00
<b>SolarSaver Adjustment</b>	¢/kWh	0.0000	0.0000	0.00	0.00
<b>Refund of 2018 Interim</b>	% on base	0.00	0.00	0.00	0.00
<b>Purchased Power Adjustment</b>	¢/kWh	-0.7475	0.0692	-3.74	0.35
<b>Energy Cost Recovery</b>	¢/kWh	19.071	20.907	95.36	104.54
<b>Green Infrastructure Fee</b>	\$	1.17	1.17	1.17	1.17
<b>Avg Residential Bill at 500 kwh</b>				187.89	201.16

Increase (Decrease -)	13.27
% Change	7.06%

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

<u>EFFECTIVE DATE</u>	FUEL FACTOR CENTS / KWH <u>RESIDENTIAL &amp; COMMERCIAL</u>	RESIDENTIAL BILL (\$)	
		<u>@ 400 KWH</u>	<u>@ 500 KWH</u>
January 1, 2017	-8.940	137.11	170.58
February 1, 2017	-8.792	137.70	171.32
March 1, 2017	-8.066	140.61	174.95
April 1, 2017	-8.432	138.59	172.43
May 1, 2017	-8.851	137.47	171.02
June 1, 2017	-8.516	139.44	173.49
July 1, 2017	-8.482	138.83	172.76
August 1, 2017	-9.670	134.08	166.82
September 1, 2017	-10.692	129.95	161.66
October 1, 2017	-9.093	136.35	169.65
November 1, 2017	-4.912	153.07	190.56
December 1, 2017	-5.591	150.36	187.16
January 1, 2018	-6.300	147.68	183.78
February 1, 2018	-6.275	147.78	183.90
March 1, 2018	-4.937	153.13	190.59
April 1, 2018	-5.975	148.47	184.76
May 1, 2018	-5.031	152.76	190.12
June 1, 2018	-3.490	160.24	199.48
July 1, 2018	-1.354	168.81	210.24
August 1, 2018	-4.992	154.26	192.05
September 1, 2018	-3.443	165.08	205.53
October 1, 2018	-4.054	162.63	202.48
November 1, 2018	-3.697	164.06	204.26
December 1, 2018	-1.431	173.13	215.59
January 1, 2019	-3.771	163.91	204.03
February 1, 2019	-7.208	150.16	186.85
March 1, 2019	-4.872	159.50	198.53
April 1, 2019	-5.034	158.51	197.29
May 1, 2019	-3.503	164.98	205.37
June 1, 2019	5.096	166.63	206.77
July 1, 2019	3.171	161.65	200.57
August 1, 2019	2.259	155.00	192.25
September 1, 2019	19.349	152.49	189.11
October 1, 2019	19.071	151.51	187.89
November 1, 2019	20.907	162.13	201.16

**MAUI ELECTRIC COMPANY, LTD. -- Molokai 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>
08/01/13 - 05/31/19	FINAL RATE INCREASE (1.25%), DOCKET NO. 2011-0092 (2012 TEST YEAR)	
01/01/16 - 06/30/16	GREEN INFRASTRUCTURE FEE	1.30 DOLLARS/MONTH
03/01/16 - 02/28/17	RENEWABLE ENERGY INFRASTRUCTURE COST RECOVERY PROVISION	0.0099 CENTS/KWH
04/01/16 - 04/30/16	SOLARSAVER ADJUSTMENT	-0.1835 CENTS/KWH
05/01/16 - 03/31/17	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
06/01/16 - 05/31/17	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	1.4082 CENTS/KWH
07/01/16 - 06/30/17	RESID. PBF SURCHARGE ADJUSTMENT	0.5865 CENTS/KWH
07/01/16 - 12/31/16	GREEN INFRASTRUCTURE FEE	1.13 DOLLARS/MONTH
01/01/17 - 06/30/17	GREEN INFRASTRUCTURE FEE	1.27 DOLLARS/MONTH
03/01/17 - 08/16/17	RENEWABLE ENERGY INFRASTRUCTURE COST RECOVERY PROVISION	0.0098 CENTS/KWH
04/01/17 - 04/30/17	SOLARSAVER ADJUSTMENT	-0.1378 CENTS/KWH
05/01/17 - 03/31/18	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
6/1/2017 - 05/31/18	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	1.5654 CENTS/KWH
07/01/17 - 12/31/17	GREEN INFRASTRUCTURE FEE	1.18 DOLLARS/MONTH
<b>08/17/17</b>	<b>RENEWABLE ENERGY INFRASTRUCTURE COST RECOVERY PROVISION</b>	<b>0.0000 CENTS/KWH</b>
07/01/17 - 06/30/18	RESID. PBF SURCHARGE ADJUSTMENT	0.4244 CENTS/KWH
01/01/18 - 06/30/18	GREEN INFRASTRUCTURE FEE	1.34 DOLLARS/MONTH
04/01/18 - 04/30/18	SOLARSAVER ADJUSTMENT	1.3400 CENTS/KWH
05/01/18 - 03/31/19	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
06/01/18 - 08/22/18	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	1.8954 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	1.21 DOLLARS/MONTH
08/23/18 - 05/31/19	INTERIM RATE INCREASE 2018 TEST YEAR	6.68 PERCENT ON BASE
08/23/18 - 05/31/19	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	0.3183 CENTS/KWH
01/01/19 / 06/30/19	GREEN INFRASTRUCTURE FEE	1.35 DOLLARS/MONTH
04/01/19 - 04/30/19	SOLARSAVER ADJUSTMENT	-0.0855 CENTS/KWH
<b>05/01/19</b>	<b>SOLARSAVER ADJUSTMENT</b>	<b>0.0000 CENTS/KWH</b>
<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	-2.00 PERCENT ON BASE
<b>06/01/19</b>	<b>REVENUE BALANCING ACCOUNT RATE ADJUSTMENT</b>	<b>0.8716 CENTS/KWH</b>
<b>07/01/19</b>	<b>RESID. PBF SURCHARGE ADJUSTMENT</b>	<b>0.4775 CENTS/KWH</b>
<b>07/01/19</b>	<b>GREEN INFRASTRUCTURE FEE</b>	<b>1.17 DOLLARS/MONTH</b>
08/01/19 - 08/31/19	PURCHASED POWER ADJUSTMENT	-0.7518 CENTS/KWH
09/01/19 - 09/30/19	PURCHASED POWER ADJUSTMENT	-0.7820 CENTS/KWH
10/01/19 - 10/31/19	PURCHASED POWER ADJUSTMENT	-0.7475 CENTS/KWH
<b>11/01/19</b>	<b>PURCHASED POWER ADJUSTMENT</b>	<b>0.0692 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.