



FILED

October 29, 2018

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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

PUBLIC UTILITIES  
COMMISSION

Dear Commissioners:

Subject: Maui Electric Energy Cost Adjustment Factor for November 2018

Maui Electric Company, Limited's ("Maui Electric" or "Company") November 2018 Energy Cost Adjustment factor for our Maui Division is -2.358 cents per kilowatt-hour ("kWh"), an increase of 0.924 cents per kWh from last month. A residential customer consuming 500 kWh of electricity will be paying \$179.87, an increase of \$4.97 compared to rates effective October 1, 2018. The increase in the typical residential bill is due to the increase in the Energy Cost Adjustment factor (+\$4.62) and Purchased Power Adjustment (+\$0.35).

The Company's Maui Division fuel composite cost of generation, central station and other increased 151.04 cents per million BTU to 1,734.53 cents per million BTU. The composite cost of DG energy is 0.00 cents per kWh. The composite cost of purchased energy decreased 0.924 cents per kWh to 18.223 cents per kWh.

The Energy Cost Adjustment factor for our Lāna'i Division for November 2018 is -6.037 cents per kWh, an increase of 0.335 cents per kWh from last month. A residential customer consuming 400 kWh of electricity will be paying \$169.32, an increase of \$1.34 compared to rates effective October 1, 2018. The increase in the typical residential bill is due to the Energy Cost Adjustment factor.

The Company's Lāna'i Division fuel composite cost of generation, central station and other increased 42.72 cents per million BTU to 2,150.10 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.

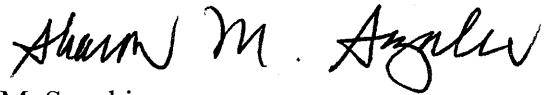
The Energy Cost Adjustment factor for our Moloka'i Division for November 2018 is -3.697 cents per kWh, an increase of 0.357 cents per kWh from last month. A residential customer consuming 400 kWh of electricity will be paying \$164.06, an increase of \$1.43 compared to rates effective October 1, 2018. The increase in the typical residential bill is due to the Energy Cost Adjustment factor.

The Honorable Chair and Members  
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October 29, 2018  
Page 2

The Company's Moloka'i Division fuel composite cost of generation, central station and other increased 21.58 cents per million BTU to 1,855.27 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, 2018.

Sincerely,



Sharon M. Suzuki  
President

Attachments

cc: Division of Consumer Advocacy

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

**ENERGY COST ADJUSTMENT FACTOR**

	EFFECTIVE DATES		<u>Change</u>
	<u>10/01/2018</u>	<u>11/01/2018</u>	
<u>COMPOSITE COSTS</u>			
Generation, Central Station & Other, ¢/mbtu	1,583.49	1,734.53	151.04
DG Energy, ¢/kWh	0.00	0.00	0.000
Purchased Energy, ¢/kWh	19.147	18.223	(0.924)
<u>Residential Schedule "R"</u>			
Energy Cost Adjustment, ¢/kWh	(3.282)	(2.358)	0.924
<u>Others - "G,H,P,F"</u>			
Energy Cost Adjustment, ¢/kWh	(3.282)	(2.358)	0.924
<u>Residential Customer with</u>			
500 KWH Consumption, \$/Bill	174.90	179.87	4.97
600 KWH Consumption, \$/Bill	209.51	215.47	5.96

Supersedes Sheet Effective:

October 1, 2018

MAUI ELECTRIC COMPANY, LTD.  
MAUI DIVISION  
ENERGY COST ADJUSTMENT (ECA) FILING

ENERGY COST ADJUSTMENT (ECA) FILING - November 1, 2018 (page 1 of 2)

Line

1 Effective Date November 1, 2018  
2 Supercedes Factors of October 1, 2018

**GENERATION COMPONENT**

<b><u>CENTRAL STATION</u></b>						<b><u>DG ENERGY COMPONENT</u></b>	
FUEL PRICES, ¢/mmbtu							
3	Industrial			1,209.21			
4	Diesel			1,956.47			
5	Other						
BTU MIX, %							
6	Industrial			29.70%	23 COMPOSITE COST OF DG		
7	Diesel			70.30%	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))			1,734.53	25 WEIGHTED COMPOSITE DG ENERGY COST, ¢/kWh (Lines 23 x 24)	-	
10	% Input to System kWh Mix			68.98%	26 BASE DG ENERGY COMP COST	0.000	
EFFICIENCY FACTOR, mmbtu/kWh					27 Base % Input to System kWh Mix	0.01	
	(A)	(B)	(C)	(D)	28 WEIGHTED BASE DG ENERGY COST, ¢/kWh (Line 26 x 27)	0.00000	
		Eff Factor	Percent of	Weighted	29 Cost Less Base (Line 25 - 28)	0.00000	
	<u>Fuel Type</u>	<u>mmbtu/kwh</u>	Centrl Stn +	<u>Eff Factor</u>	30 Loss Factor	1.063	
11	Industrial	0.015126	Other	0.002972	31 Revenue Tax Req Multiplier	1.0975	
12	Diesel	0.010026	19.65	0.008056	32 DG FACTOR,		
13	Other	0.010951	80.35	-	¢/kWh (Line 29 x 30 x 31)	0.00000	
			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))]			0.011028			
15	WEIGHTED COMPOSITE CENTRAL STATION + OTHER GENERATION COST, ¢/kWh (lines (9 x 10 x 14))			13.19477			
16	BASE CENTRAL STATION + OTHER GENERATION COST, ¢/mmbtu			2,019.39			
17	Base % Input to Sys kWh Mix			78.09			
18	Efficiency Factor, mmbtu/kwh			0.010951			
19	WEIGHTED BASE CENTRAL STATION + OTHER GENERATION COST ¢/kWh (lines (16 x 17 x 18))			17.26909			
20	COST LESS BASE (line(15 - 19))			(4.07432)	SUMMARY OF		
21	Revenue Tax Req Multiplier			1.0975	TOTAL GENERATION FACTOR, ¢/kWh		
22	CENTRAL STATION + OTHER GENERATION FACTOR, ¢/kWh (line (20 x 21))			(4.47157)	33 CNTRL STN + OTHER (line 22)	(4.47157)	
					34 DG (line 32)	-	
					35 TOTAL GENERATION FACTOR, ¢/kWh (lines 33 + 34)	(4.47157)	

MAUI ELECTRIC COMPANY, LTD.  
MAUI DIVISION  
ENERGY COST ADJUSTMENT (ECA) FILING

ENERGY COST ADJUSTMENT (ECA) FILING - November 1, 2018 (page 2 of 2)

<u>Line</u>		
1	Effective Date	November 1, 2018
2	Supercedes Factors of	October 1, 2018

<u>Line</u>	<u>PURCHASED ENERGY COMPONENT</u>		
	PURCHASED ENERGY PRICE, ¢/kWh		
36	Kaheawa Wind I	- On Peak	13.676
37		- Off Peak	12.841
38	Kaheawa Wind II		19.533
39	Sempra Wind		21.869
40	Hydro & Other	- On Peak	18.367
41		- Off Peak	17.417
42	South Maui RR		11.060
43	Ku'ia Solar		11.060
44			
45			
46	FIT		21.458
	PURCHASED ENERGY KWH MIX, %		
47	Kaheawa Wind I	- On Peak	18.08%
48		- Off Peak	13.10%
49	Kaheawa Wind II		25.74%
50	Sempra Wind	- On Peak	36.67%
51	Hydro & Other	- On Peak	0.20%
52		- Off Peak	0.06%
53	South Maui RR		1.65%
54	Ku'ia Solar		1.68%
55			
56			
57	FIT		<u>2.82%</u>
			<u>100.00%</u>
58	COMPOSITE COST OF PURCHASED ENERGY, ¢/kWh		18.223
	(Lines (36 x 47) + (37 x 48) + (38 x 49) + (39 x 50) + (40 x 51) + (41 x 52) + (42 x 53) + (43 x 54) + (46 x 57))		
59	% Input to System kWh Mix		31.02%
60	WEIGHTED COMPOSITE PURCHASED ENERGY COST, ¢/kWh (lines (58 x 59))		5.65277
61	BASE PURCHASED ENERGY COMPOSITE COST, ¢/kWh		15.847
62	Base % Input to Sys kWh Mix		21.90
63	WEIGHTED BASE PURCHASED ENERGY COST, ¢/kWh (lines (61 x 62))		3.47049
64	COST LESS BASE (lines (60 - 63))		2.18228
65	Loss Factor		1.063
66	Revenue Tax Req Multiplier		1.0975
67	PURCHASED ENERGY FACTOR, ¢/kWh (lines (64 x 65 x 66))		2.54594

<u>Line</u>	<u>SYSTEM COMPOSITE CALCULATIONS</u>		
68	GENERATION AND PURCHASED ENERGY FACTOR, ¢/kWh (lines (35 + 67))		(1.92563)
69	ADJUSTMENT, ¢/kWh		
70	ECA Reconciliation Adjustment		(0.432)
71	ECA FACTOR, ¢/kWh (lines (68 + 69 + 70))		(2.358)

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

**Fuel Oil Inventory Prices for November 2018**

<u>TYPE OF OIL BURNED</u>	<u>PRICES \$/BBL</u>	<u>CONVERSION FACTORS</u>	<u>PRICES ¢/MBTU</u>
INDUSTRIAL	76.1805	6.30 MBTU/BBL	1,209.21
DIESEL/ULSD	114.5976	5.86 MBTU/BBL	1,956.47

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

**Month End Fuel Oil Estimate**

<u><b>Kahului</b></u>	<u>Barrels</u>	<u>MBTU</u>	<u>(\$)</u>
10/15/2018	48,105.09	303,062.07	3,537,197.85
Estimated Use	20,242.42	127,527.24	1,414,605.36
Estimated Received	0.00	0.00	0.00
Estimated Additional	0.00	0.00	0.00
Estimated End	<u>27,862.67</u>	<u>175,534.83</u>	<u>2,122,592.49</u>

**Next month's expense (\$/bbl) = \$ 76.1805**

<u><b>Maalaea</b></u>	<u>Barrels</u>	<u>MBTU</u>	<u>(\$)</u>
10/15/2018	96,341.76	564,309.13	10,804,628.93
Estimated Use	55,926.19	327,580.28	5,804,830.85
Estimated Received	49,600.00	290,525.46	5,315,769.23
Estimated Additional	0.00	0.00	0.00
Estimated End	<u>90,015.57</u>	<u>527,254.31</u>	<u>10,315,567.31</u>

**Next month's expense (\$/bbl) = \$ 114.5976**

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

**Contract Prices effective October 1, 2018**

<u>TYPE OF OIL BURNED</u>	<u>\$/BBL</u>	<u>¢/MBTU</u>
<b>INDUSTRIAL</b>		
Tax *	4.3260	68.67
Ocean Transportation	1.7209	27.32
Land Transportation	0.0000	0.00
Storage	0.0000	0.00
Wharfage	0.3900	6.19
<b>DIESEL</b>		
Tax *	6.0998	104.09
Ocean Transportation	1.7209	29.37
Land Transportation	0.9782	16.69
Storage	2.8489	48.62
Wharfage	0.3900	6.66

\* 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	13.676
- Off Peak, ¢/kWh	12.841

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 2018:

On-peak,	10.109
Off-peak, ¢/kwh	8.916

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

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

On-Peak Rate =  $10.1090 \times 0.7 + 22.000 \times 0.3 = 13.676$

Off-Peak Rate =  $8.916 \text{ ¢/kwh} \times 0.7 + 22.000 \text{ ¢/kwh} \times 0.3 = 12.841 \text{ ¢/kwh}$

**MAUI ELECTRIC COMPANY, LTD.**  
**Maui Division**  
**ECA Reconciliation Adjustment**  
**November 2018**

1. Amount to be Refunded	(\$983,100)
2. Monthly amount (1 / 3 X Line 1)	(\$327,700)
3. Revenue Tax Divisor	0.91115
4. Total (Line 2 / Line 3)	(\$359,655)
5. Estimated Sales (November 2018)	83,317 mwh
6. Adjustment (Line 4 ÷ Line 5)	(0.432) ¢/kwh

**MAUI ELECTRIC COMPANY, LTD.  
MAUI DIVISION  
2018 FUEL OIL ADJUSTMENT RECONCILIATION SUMMARY  
(Thousand \$)**

<u>Line</u>	<u>W/O Deadband 3rd Quarter YTD Total</u>	<u>collection by company*</u>	<u>Basis for Recon With Deadband 3rd Quarter YTD Total</u>	<u>collection by company*</u>
ACTUAL COSTS:				
1	Generation		\$95,835.9	
2	Distributed Generation		\$6.9	
3	Purch Power		<u>\$38,146.0</u>	
4	TOTAL		\$133,988.8	
FUEL FILING COST				
5	Generation		\$95,935.2	
6	Distributed Generation		\$0.0	
7	Purch Power		<u>\$38,146.0</u>	
8	TOTAL		\$134,081.3	
BASE FUEL COST				
9	Generation		\$122,489.6	
10	Distributed Generation		\$6.3	
11	Purch Power		<u>\$39,866.8</u>	
12	TOTAL		\$162,362.7	
13	FUEL-BASE COST (Line 8-12)		-\$28,281.4	
14	ACTUAL FOA LESS TAX		-\$28,474.5	
15	FOA reconciliation adj for prior year		<u>-\$1,318.3</u>	
16	ADJUSTED FOA LESS TAX		-\$27,156.2	
17	FOA-(FUEL-BASE) (Line 16-13)	\$1,125.2 Over	\$1,369.4 Over	
ADJUSTMENTS				
18	Current year FOA accrual reversal		\$1,023.0	
19	Other prior year FOA		\$0.0	
20	Other		<u>\$0.0</u>	
21	3rd QUARTER FOA RECONCILIATION (Lines 17+18+19+20)	\$2,148.2 Over	\$2,392.4 Over	
22	2nd QUARTERLY YTD 2018 FOA Reconciliation Recognized in FOA Rates		<u>\$1,409.3</u> Over	
23	FOA Reconciliation to be Refunded November 2018 to January 2019 (Line 22- 21)		<u><u>-\$983.1</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, 2018 through August 22, 2018

	<u>Notes</u>	<u>YTD</u>
<b><u>Industrial Fuel Oil</u></b>		
Industrial Fuel Oil Efficiency Factor (TY2012), BTU/kWh	f	15,126
Industrial Fuel Oil Deadband Definition, +/- BTU/kWh	d	<b>100</b>
Industrial Fuel Oil Portion of Recorded Sales, MWh	a	92,505
Industrial Fuel Oil Consumption (Recorded), MMBTU	b	1,418,993
Industrial Fuel Oil Efficiency Factor (Recorded), BTU/kWh	c = (b/a)*1000	15,340
Lower limit of Industrial Fuel Oil Deadband, BTU/kWh	e = f-d	15,026
Higher limit of Industrial Fuel Oil Deadband, BTU/kWh	g = f+d	15,226
Industrial Fuel Oil Efficiency Factor for cost-recovery, BTU/kWh	h = c, e, or g	<b>15,226</b>
<b><u>Diesel</u></b>		
Diesel Efficiency Factor (TY2012), BTU/kWh	f	10,026
Diesel Deadband Definition, +/- BTU/kWh	d	<b>100</b>
Diesel Portion of Recorded Sales, MWh	a	402,165
Diesel Consumption (Recorded), MMBTU	b	4,005,425
Diesel Efficiency Factor (Recorded), BTU/kWh	c = (b/a)*1000	9,960
Lower limit of Diesel Deadband, BTU/kWh	e = f-d	9,926
Higher limit of Diesel Deadband, BTU/kWh	g = f+d	10,126
Diesel Efficiency Factor for cost-recovery, BTU/kWh	h = c, e, or g	<b>9,960</b>

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

Determination of Efficiency Factor to use for Cost-Recovery Purposes

Period: August 23, 2018 through September 30, 2018

	<u>Notes</u>	<u>YTD</u>
<b><u>Industrial Fuel Oil</u></b>		
Industrial Fuel Oil Efficiency Factor (TY2018), BTU/kWh	f	15,892
Industrial Fuel Oil Deadband Definition, +/- BTU/kWh	d	<b>100</b>
Industrial Fuel Oil Portion of Recorded Sales, MWh	a	16,475
Industrial Fuel Oil Consumption (Recorded), MMBTU	b	258,025
Industrial Fuel Oil Efficiency Factor (Recorded), BTU/kWh	c = (b/a)*1000	15,661
Lower limit of Industrial Fuel Oil Deadband, BTU/kWh	e = f-d	15,792
Higher limit of Industrial Fuel Oil Deadband, BTU/kWh	g = f+d	15,992
Industrial Fuel Oil Efficiency Factor for cost-recovery, BTU/kWh	h = c, e, or g	<b>15,792</b>
<b><u>Diesel</u></b>		
Diesel Efficiency Factor (TY2018), BTU/kWh	f	9,950
Diesel Deadband Definition, +/- BTU/kWh	d	<b>100</b>
Diesel Portion of Recorded Sales, MWh	a	73,303
Diesel Consumption (Recorded), MMBTU	b	737,239
Diesel Efficiency Factor (Recorded), BTU/kWh	c = (b/a)*1000	10,057
Lower limit of Diesel Deadband, BTU/kWh	e = f-d	9,850
Higher limit of Diesel Deadband, BTU/kWh	g = f+d	10,050
Diesel Efficiency Factor for cost-recovery, BTU/kWh	h = c, e, or g	<b>10,050</b>

**MAUI ELECTRIC COMPANY, LTD.  
MAUI DIVISION  
GENERATION FUEL FILING COST AND GENERATION BASE FUEL COST, WITHOUT and WITH DEADBAND  
2018**

	<u>Without Deadband</u> <u>Jan 1 - Sep 30</u>	<u>With Deadband - AS FILED</u> <u>Jan 1 - Sep 30</u>
<b><u>INDUSTRIAL</u></b>		
Industrial Portion of Recorded Sales , MWH	108,980	108,980
Industrial Sales Efficiency Factor (mmbtu/kwh)	0.015126	0.015226
Mmbtu adjusted for Sales Efficiency Factor	1,648,429	1,659,327
\$/mmbtu	<u>\$10.0805</u>	<u>\$10.0577</u>
TOTAL Industrial \$000s TO BE RECOVERED	\$16,616.9	\$16,689.1
<b><u>DIESEL FUEL FILING COST</u></b>		
Diesel Portion of Recorded Sales, MWH	475,468	475,468
Diesel Sales Efficiency Factor (mmbtu/kwh)	0.010026	0.009975
Mmbtu adjusted for Sales Efficiency Factor	4,767,040	4,742,791
\$/mmbtu	<u>\$16.6389</u>	<u>\$16.6573</u>
TOTAL DIESEL \$000s TO BE RECOVERED	\$79,318.3	\$79,002.0
TOTAL GENERATION FUEL FILING COST, \$000s	\$95,935.2	\$95,691.0
TOTAL GENERATION BASE FUEL COST , \$000s YTD	\$122,489.6	\$122,489.6
TOTAL GENERATION FUEL FILING COST, \$000s YTD	\$95,935.2	\$95,691.0
TOTAL GENERATION BASE FUEL COST, \$000s YTD	\$122,489.6	\$122,489.6

**MAUI ELECTRIC COMPANY, LTD.  
MAUI DIVISION  
2018 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 '17					(323,167)	(288,628)	393,068
January '18					(323,167)	(330,544)	62,524
February	994,600	(4)	69,895	924,705	(331,533)	(332,923)	654,306
March					(331,533)	(333,329)	320,977
April					(331,533)	(365,577)	(44,600)
May	250,200	(1)	(10,563)	260,763	(83,400)	(85,797)	130,366
June					(83,400)	(87,681)	42,685
July					(83,400)	(90,991)	(48,306)
August	1,159,100	(2)	(40,722)	1,199,822	(386,367)	(429,755)	721,761
September					(386,367)	(403,743)	318,018
October					(386,367)		
November	983,100	(3)	(68,355)	1,051,455	(327,700)		

## NOTES:

- Col(1): Quarterly FOA reconciliation amounts. (Refer to Attachment 5)  
A positive number is an over-collection. A negative number is an under-collection.
- Col(2): FOA reconciliation adjustment variance accumulated during the last three months, starting with the fourth prior month; the difference between the estimated recorded sales used to derive the \$/kwh adjustment and the actual recorded sales.  
(Col(5) - Col(4))
- Col(3): FOA reconciliation generated in the current quarter. The YTD FOA reconciliation difference minus the adjustment variance. Col(1) - Col(2)
- Col(4): Amount that the FOA reconciliation adjustment is trying to collect. (Col(1) \* 1/3)
- Col(5): Actual collected amount. (recorded sales \* \$/kwh adjustment/1.09751)
- Col(6): Cumulative balance of the FOA reconciliation (Previous balance + Col(3) + Col(5))

**Maui Electric Company, Ltd.  
Maui Division  
Calculations of the Average Residential Customer Bill**

	Rate		Charge (\$) at 500 Kwh		
	10/01/18	11/01/18	10/01/18	11/01/18	Difference
<b>Base Rates</b>					
effective date:	08/01/13	08/01/13			
Base Fuel/Energy Charge ¢/kWh	23.0016	23.0016	115.01	115.01	0.00
Non-fuel Fuel Energy Charge First 350 kWhr per month ¢/kWh	9.3393	9.3393	32.69	32.69	0.00
Next 850 kWhr per month ¢/kWh	11.5993	11.5993	17.40	17.40	0.00
Customer Charge \$	8.50	8.50	8.50	8.50	0.00
<b>Total Base Charges</b>			173.60	173.60	0.00
<b>RBA Rate Adjustment</b> ¢/kWh	0.3183	0.3183	1.59	1.59	0.00
<b>PBF Surcharge</b> ¢/kWh	0.4658	0.4658	2.33	2.33	0.00
<b>SolarSaver Adjustment</b> ¢/kWh	0.0000	0.0000	0.00	0.00	0.00
<b>Interim Rate Increase (Test Year 2018)</b> % on Base	7.42	7.42	12.88	12.88	0.00
<b>Purchased Power Adjustment</b> ¢/kWh	-0.0602	0.0108	-0.30	0.05	0.35
<b>Energy Cost Adjustment</b> ¢/kWh	-3.282	-2.358	-16.41	-11.79	4.62
<b>Green Infrastructure Fee</b> \$	1.21	1.21	1.21	1.21	0.00
<b>Avg Residential Bill at 500 kwh</b>			174.90	179.87	
			Increase (Decrease -)		4.97
			% Change		2.84%

	Rate		Charge (\$) at 600 Kwh		
	10/01/18	11/01/18	10/01/18	11/01/18	Difference
<b>Base Rates</b>					
effective date:	08/01/13	08/01/13			
Base Fuel/Energy Charge ¢/kWh	23.0016	23.0016	138.01	138.01	0.00
Non-fuel Fuel Energy Charge First 350 kWhr per month ¢/kWh	9.3393	9.3393	32.69	32.69	0.00
Next 850 kWhr per month ¢/kWh	11.5993	11.5993	29.00	29.00	0.00
Customer Charge \$	8.50	8.50	8.50	8.50	0.00
<b>Total Base Charges</b>			208.20	208.20	0.00
<b>RBA Rate Adjustment</b> ¢/kWh	0.3183	0.3183	1.91	1.91	0.00
<b>PBF Surcharge</b> ¢/kWh	0.4658	0.4658	2.79	2.79	0.00
<b>Renewable Energy Infrastructure Cost Recovery Provision</b> ¢/kWh	0.0000	0.0000	0.00	0.00	0.00
<b>SolarSaver Adjustment</b> ¢/kWh	0.0000	0.0000	0.00	0.00	0.00
<b>Interim Rate Increase (Test Year 2018)</b> % on Base	7.42	7.42	15.45	15.45	0.00
<b>Purchased Power Adjustment</b> ¢/kWh	-0.0602	0.0108	-0.36	0.06	0.42
<b>Energy Cost Adjustment</b> ¢/kWh	-3.282	-2.358	-19.69	-14.15	5.54
<b>Green Infrastructure Fee</b> \$	1.21	1.21	1.21	1.21	0.00
<b>Avg Residential Bill at 600 kwh</b>			209.51	215.47	
			Increase (Decrease -)		5.96
			% Change		2.84%



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

<u>EFFECTIVE DATE</u>	<u>FUEL FACTOR CENTS / KWH</u>		<u>RESIDENTIAL BILL (\$)</u>	
	<u>RESIDENTIAL &amp; COMMERCIAL</u>		<u>@ 500 KWH</u>	<u>@ 600 KWH</u>
January 1, 2016	-8.649		141.54	169.48
February 1, 2016	-10.511		132.58	158.73
March 1, 2016	-9.196		139.17	166.62
April 1, 2016	-8.768		140.37	168.08
May 1, 2016	-10.483		132.89	159.10
June 1, 2016	-8.170		143.47	171.79
July 1, 2016	-7.334		148.08	177.36
August 1, 2016	-6.973		149.89	179.52
September 1, 2016	-7.866		145.42	174.16
October 1, 2016	-8.162		143.94	172.39
November 1, 2016	-9.782		135.84	162.67
December 1, 2016	-9.069		139.41	166.95
January 1, 2017	-7.659		146.59	175.55
February 1, 2017	-8.247		143.65	172.02
March 1, 2017	-7.314		148.32	177.61
April 1, 2017	-5.770		155.35	186.05
May 1, 2017	-7.998		144.79	173.38
June 1, 2017	-5.191		159.61	191.16
July 1, 2017	-5.635		157.32	188.42
August 1, 2017	-7.867		145.30	174.01
September 1, 2017	-9.278		138.19	165.47
October 1, 2017	-7.391		147.64	176.80
November 1, 2017	-5.305		158.18	189.46
December 1, 2017	-7.839		145.51	174.26
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

**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>
04/01/13 - 04/30/13	SOLARSAVER ADJUSTMENT	-0.2053 CENTS/KWH
<b>08/01/13</b>	<b>FINAL RATE INCREASE (1.25%), DOCKET NO. 2011-0092 (2012 TEST YEAR)</b>	
01/01/16 - 01/31/16	PURCHASED POWER ADJUSTMENT	-0.1055 CENTS/KWH
01/01/16 - 06/30/16	GREEN INFRASTRUCTURE FEE	1.30 DOLLARS/MONTH
02/01/16 - 02/29/16	PURCHASED POWER ADJUSTMENT	-0.0338 CENTS/KWH
03/01/16 - 03/31/16	PURCHASED POWER ADJUSTMENT	-0.0325 CENTS/KWH
03/01/16 - 02/28/17	RENEWABLE ENERGY INFRASTRUCTURE COST RECOVERY PROVISION	0.0099 CENTS/KWH
04/01/16 - 04/30/16	PURCHASED POWER ADJUSTMENT	-0.0355 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
05/01/16 - 05/31/16	PURCHASED POWER ADJUSTMENT	0.0000 CENTS/KWH
06/01/16 - 06/30/16	PURCHASED POWER ADJUSTMENT	-0.0081 CENTS/KWH
06/01/16 - 05/31/17	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	1.4082 CENTS/KWH
07/01/16 - 04/30/17	PURCHASED POWER ADJUSTMENT	0.0000 CENTS/KWH
07/01/16 - 12/31/16	GREEN INFRASTRUCTURE FEE	1.13 DOLLARS/MONTH
07/01/16 - 06/30/17	RESID. PBF SURCHARGE ADJUSTMENT	0.5865 CENTS/KWH
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 - 3/31/18	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
05/01/17 - 05/31/17	PURCHASED POWER ADJUSTMENT	-0.0224 CENTS/KWH
06/01/17 - 06/30/17	PURCHASED POWER ADJUSTMENT	-0.0218 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
07/01/17 - 07/31/17	PURCHASED POWER ADJUSTMENT	-0.0202 CENTS/KWH
07/01/17 - 06/30/18	RESID. PBF SURCHARGE ADJUSTMENT	0.4244 CENTS/KWH
08/01/17 - 08/31/17	PURCHASED POWER ADJUSTMENT	-0.0286 CENTS/KWH
<b>08/17/17</b>	<b>RENEWABLE ENERGY INFRASTRUCTURE COST RECOVERY PROVISION</b>	<b>0.0000 CENTS/KWH</b>
09/01/17 - 09/30/17	PURCHASED POWER ADJUSTMENT	-0.0307 CENTS/KWH
10/01/17 - 10/31/17	PURCHASED POWER ADJUSTMENT	-0.0275 CENTS/KWH
11/01/17 - 11/30/17	PURCHASED POWER ADJUSTMENT	-0.0058 CENTS/KWH
12/01/17 - 12/31/17	PURCHASED POWER ADJUSTMENT	-0.0054 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
<b>05/01/18</b>	<b>SOLARSAVER ADJUSTMENT</b>	<b>0.0000 CENTS/KWH</b>
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
<b>07/01/18</b>	<b>RESID. PBF SURCHARGE ADJUSTMENT</b>	<b>0.4658 CENTS/KWH</b>
<b>07/01/18</b>	<b>GREEN INFRASTRUCTURE FEE</b>	<b>1.21 DOLLARS/MONTH</b>
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
<b>08/23/18</b>	<b>INTERIM RATE INCREASE 2018 TEST YEAR</b>	<b>7.42 PERCENT ON BASE</b>
<b>08/23/18</b>	<b>REVENUE BALANCING ACCOUNT RATE ADJUSTMENT</b>	<b>0.3183 CENTS/KWH</b>
10/01/18 - 10/31/18	PURCHASED POWER ADJUSTMENT	-0.0602 CENTS/KWH
<b>11/01/18</b>	<b>PURCHASED POWER ADJUSTMENT</b>	<b>0.0108 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**

