



FILED

November 28, 2018

2018 NOV 28 P 3: 34

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 December 2018

Maui Electric Company, Limited's ("Maui Electric" or "Company") December 2018 Energy Cost Adjustment factor for our Maui Division is -2.401 cents per kilowatt-hour ("kWh"), a decrease of 0.043 cents per kWh from last month. A residential customer consuming 500 kWh of electricity will be paying \$179.65, a decrease of \$0.22 compared to rates effective November 1, 2018. The decrease in the typical residential bill is due to the decrease in the Energy Cost Adjustment factor.

The Company's Maui Division fuel composite cost of generation, central station and other increased 11.10 cents per million BTU to 1,745.63 cents per million BTU. The composite cost of DG energy is 0.00 cents per kWh. The composite cost of purchased energy decreased 0.288 cents per kWh to 17.935 cents per kWh.

The Energy Cost Adjustment factor for our Lāna'i Division for December 2018 is -5.396 cents per kWh, an increase of 0.641 cents per kWh from last month. A residential customer consuming 400 kWh of electricity will be paying \$171.89, an increase of \$2.57 compared to rates effective November 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 56.16 cents per million BTU to 2,206.26 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.

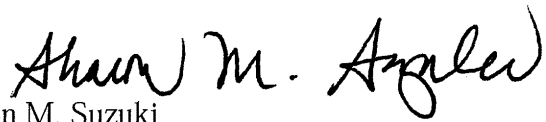
The Energy Cost Adjustment factor for our Moloka'i Division for December 2018 is -1.431 cents per kWh, an increase of 2.266 cents per kWh from last month. A residential customer consuming 400 kWh of electricity will be paying \$173.13, an increase of \$9.07 compared to rates effective November 1, 2018. The increase in the typical residential bill is due to the Energy Cost Adjustment factor.

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The Company's Moloka'i Division fuel composite cost of generation, central station and other increased 184.44 cents per million BTU to 2,039.71 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 December 1, 2018.

Sincerely,



Sharon M. Suzuki
President

Attachments

cc: Division of Consumer Advocacy

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

ENERGY COST ADJUSTMENT FACTOR

	EFFECTIVE DATES		<u>Change</u>
	<u>11-01-18</u>	<u>12-01-18</u>	
<u>COMPOSITE COSTS</u>			
Generation, Central Station & Other, ¢/mbtu	1,855.27	2,039.71	184.44
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 Adjustment, ¢/kWh	(3.697)	(1.431)	2.266
<u>Others - "G,P,F"</u>			
Energy Cost Adjustment, ¢/kWh	(3.697)	(1.431)	2.266
<u>Residential Customer with</u>			
400 KWH Consumption, \$/Bill	164.06	173.13	9.07
500 KWH Consumption, \$/Bill	204.26	215.59	11.33

Supersedes Sheet Effective:

November 1, 2018

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

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

<u>Line</u>		
1	Effective Date	December 1, 2018
2	Supersedes Factors	November 1, 2018

GENERATION COMPONENT

<u>CENTRAL STATION</u>						
FUEL PRICES, ¢/mmbtu						
3	Industrial					
4	Diesel				2,039.71	
5	Other				0.00	
BTU MIX, %						
6	Industrial				0.00	
7	Diesel				100.00	
8	Other				<u>0.00</u>	
					<u>100.00</u>	
9	COMPOSITE COST OF GENERATION, CENTRAL STATION + OTHER ¢/mmbtu (Lines (3 x 6) + (4 x 7) + (5 x 8))				2,039.71	
10	% Input to System kWh Mix				99.99	
EFFICIENCY FACTOR, mmbtu/kWh						
	(A)	(B)	(C)	(D)		
		Eff Factor	Percent of Centrl Stn + Other	Weighted Eff Factor		
	<u>Fuel Type</u>	<u>mmbtu/kwh</u>				
11	Industrial	0.000000	0.00	0.000000		
12	Diesel	0.011194	100.00	0.011194		
13	Other	0.011194	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)]				0.011194	
15	WEIGHTED COMPOSITE CENTRAL STATION + OTHER GENERATION COST, ¢/kWh (lines (9 x 10 x 14))				22.82973	
16	BASE CENTRAL STATION + OTHER GENERATION COST, ¢/mmbtu				2,144.57	
17	Base % Input to Sys kWh Mix				99.91	
18	Efficiency Factor, mmbtu/kwh				0.011194	
19	WEIGHTED BASE CENTRAL STATION + OTHER GENERATION COST ¢/kWh (lines (16 x 17 x 18))				23.98471	
20	COST LESS BASE (line(15 - 19))				(1.15498)	
21	Revenue Tax Req Multiplier				1.0975	
22	CENTRAL STATION + OTHER GENERATION FACTOR, ¢/kWh (line (20 x 21))				(1.26759)	
					<u>DG ENERGY COMPONENT</u>	
					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)	0.00000
					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	1.095
					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)	-1.26759
					34 DG (line 32)	0.00000
					35 TOTAL GENERATION FACTOR, ¢/kWh (lines 33 + 34)	-1.26759

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

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

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

<u>Line</u>	<u>PURCHASED ENERGY COMPONENT</u>	
	PURCHASED ENERGY PRICE, ¢/kWh	
36	FIT	21.800
37		0.000
38	Sch Q	0.000
	PURCHASED ENERGY KWH MIX, %	
39	FIT	100.00
40		0.00
41	Sch Q	0.000
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))	
		0.00266
45	BASE PURCHASED ENERGY COMPOSITE COST, ¢/kWh	
		21.800
46	Base % Input to Sys kWh Mix	0.09
47	WEIGHTED BASE PURCHASED ENERGY COST, ¢/kWh (lines (45 x 46))	
		0.01962
48	COST LESS BASE (lines (44 - 47))	
		(0.01696)
49	Loss Factor	1.095
50	Revenue Tax Req Multiplier	1.0975
51	PURCHASED ENERGY FACTOR, ¢/kWh (lines (48 x 49 x 50))	
		(0.02038)

<u>Line</u>	<u>SYSTEM COMPOSITE CALCULATIONS</u>	
52	GENERATION AND PURCHASED ENERGY FACTOR, ¢/kWh (lines (35 + 51))	
		(1.28797)
53	Adjustment, ¢/kWh	0.000
54	ECA Reconciliation Adjustment	(0.143)
55	ECA FACTOR, ¢/kWh (lines (52 + 53 + 54))	
		(1.431)

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

MONTH END FUEL OIL ESTIMATE

	<u>Barrels</u>	<u>MBTU</u>	<u>\$</u>
11/19/2018	10,528.12	60,326.12	1,230,477.83
Estimated Use	-	-	-
Estimated Received	-	-	-
Estimated Additional	-	-	-
Estimated End	<u>10,528.12</u>	<u>60,326.12</u>	<u>1,230,477.83</u>

Next Months Expense = \$ 116.8754 /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	\$ 116.8754	5.73 BTU/BBL	2039.71

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

Contract Prices effective November 1, 2018

<u>TYPE OF OIL BURNED</u>	<u>\$/BBL</u>	<u>¢/MBTU</u>
ULTRA LOW SULFUR DIESEL		
Tax *	2.2244	38.82
Ocean Transportation	1.8529	32.34
Storage	4.8063	83.88
Wharfage	0.2900	5.06

* 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
ECA Reconciliation Adjustment

December 2018

1. Amount to be refunded	(\$9,100)
2. Monthly amount (1/3 x Line 1)	(\$3,033)
3. Revenue Tax Divisor	0.91115
4. Total (Line 2 / Line 3)	(\$3,329)
5. Estimated Sales (December 2018)	2,327 mwh
6. Adjustment (Line 4 ÷ Line 5)	-0.143 ¢/kwh

**MAUI ELECTRIC COMPANY, LTD.
MOLOKAI 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					(533)	(534)	528
January '18					(533)	(550)	(22)
February	10,400	(4)	-	10,400	(3,467)	(3,397)	6,981
March					(3,467)	(3,553)	3,428
April					(3,467)	(3,687)	(259)
May	4,000	(1)	(33)	4,033	(1,333)	(1,344)	2,430
June					(1,333)	(1,426)	1,004
July					(1,333)	(1,444)	(440)
August	15,400	(2)	(324)	15,724	(5,133)	(5,673)	9,611
September					(5,133)	(5,564)	4,047
October					(5,133)	(5,599)	(1,552)
November	9,100	(3)	(1,082)	10,182	(3,033)		
December					(3,033)		

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		
		11-01-18	12-01-18	11-01-18	12-01-18	Difference
Base Rates	effective date:	08/01/13	08/01/13			
Base Fuel/Energy Charge	¢/kWh	26.3468	26.3468	105.39	105.39	0.00
Non-fuel Fuel Energy Charge						
First 250 kWhr per month	¢/kWh	11.4278	11.4278	28.57	28.57	0.00
Next 500 kWhr per month	¢/kWh	14.0778	14.0778	21.12	21.12	0.00
Customer Charge	\$	8.50	8.50	8.50	8.50	0.00
Total Base Charges				163.58	163.58	0.00
IRP Refund	% on base	0.000	0.000	0.00	0.00	0.00
Revenue Balancing Rate Adjustment	¢/kWh	0.3183	0.3183	1.27	1.27	0.00
PBF Surcharge	¢/kWh	0.4658	0.4658	1.86	1.86	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
Interim Rate Increase (Test Year 2018)	% on base	6.68	6.68	10.93	10.93	0.00
Energy Cost Adjustment	¢/kWh	-3.697	-1.431	-14.79	-5.72	9.07
Green Infrastructure Fee	\$	1.21	1.21	1.21	1.21	0.00
Avg Residential Bill at 400 kwh				164.06	173.13	

Increase (Decrease -)	9.07
% Change	5.53%

	Rate			Charge (\$) at 500 Kwh		
		11-01-18	12-01-18	11-01-18	12-01-18	Difference
Base Rates	effective date:	08/01/13	08/01/13			
Base Fuel/Energy Charge	¢/kWh	26.3468	26.3468	131.73	131.73	0.00
Non-fuel Fuel Energy Charge						
First 250 kWhr per month	¢/kWh	11.4278	11.4278	28.57	28.57	0.00
Next 500 kWhr per month	¢/kWh	14.0778	14.0778	35.19	35.19	0.00
Customer Charge	\$	8.50	8.50	8.50	8.50	0.00
Total Base Charges				203.99	203.99	0.00
IRP Refund	% on base	0.000	0.000	0.00	0.00	0.00
Revenue Balancing Rate Adjustment	¢/kWh	0.3183	0.3183	1.59	1.59	0.00
PBF Surcharge	¢/kWh	0.4658	0.4658	2.33	2.33	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
Interim Rate Increase (Test Year 2018)	% on base	6.68	6.68	13.63	13.63	0.00
Energy Cost Adjustment	¢/kWh	-3.697	-1.431	-18.49	-7.16	11.33
Green Infrastructure Fee	\$	1.21	1.21	1.21	1.21	0.00
Avg Residential Bill at 500 kwh				204.26	215.59	

Increase (Decrease -)	11.33
% Change	5.55%

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

<u>EFFECTIVE DATE</u>	<u>FUEL FACTOR CENTS / KWH</u>		<u>RESIDENTIAL BILL (\$)</u>	
	<u>RESIDENTIAL & COMMERCIAL</u>		<u>@ 400 KWH</u>	<u>@ 500 KWH</u>
January 1, 2016	-9.942		133.44	165.99
February 1, 2016	-11.270		128.13	159.35
March 1, 2016	-12.649		122.61	152.45
April 1, 2016	-13.391		118.92	147.82
May 1, 2016	-13.226		120.31	149.57
June 1, 2016	-13.376		118.95	147.87
July 1, 2016	-12.675		122.03	151.76
August 1, 2016	-9.906		133.11	165.61
September 1, 2016	-9.794		133.55	166.17
October 1, 2016	-11.131		128.21	159.48
November 1, 2016	-9.970		132.85	165.29
December 1, 2016	-9.244		135.75	168.92
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

**MAUI ELECTRIC COMPANY, LTD. -- Molokai Division
RESIDENTIAL SURCHARGE DATA**

EFFECTIVE DATE	DESCRIPTION OF SURCHARGE	RATE
06/01/11	IRP RECOVERY REFUND	0.000 PERCENT ON BASE
08/01/13	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
08/17/17	RENEWABLE ENERGY INFRASTRUCTURE COST RECOVERY PROVISION	0.0000 CENTS/KWH
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	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
06/01/18 - 08/22/18	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	1.8954 CENTS/KWH
07/01/18	RESID. PBF SURCHARGE ADJUSTMENT	0.4658 CENTS/KWH
07/01/18	GREEN INFRASTRUCTURE FEE	1.21 DOLLARS/MONTH
08/23/18	INTERIM RATE INCREASE 2018 TEST YEAR	6.68 PERCENT ON BASE
08/23/18	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	0.3183 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.