



SHARON M. SUZUKI
President

FILED

November 28, 2016

2016 NOV 28 P 3:54

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 2016

Maui Electric Company, Limited's ("Maui Electric" or "Company") December 2016 energy cost adjustment factor for our Maui Division is -9.069 cents per kilowatt-hour ("kWh"), an increase of 0.713 cents per kWh from last month. A residential customer consuming 500 kWh of electricity will be paying \$139.41, an increase of \$3.57 compared to rates effective November 1, 2016.

The Company's Maui Division fuel composite cost of generation, central station and other increased 96.30 cents per million BTU to 1,200.31 cents per million BTU. The composite cost of DG energy is 0.00 cents per kWh. The composite cost of purchased energy decreased 0.244 cents per kWh to 13.116 cents per kWh.

The energy cost adjustment factor for our Lāna'i Division for December 2016 is -11.160 cents per kWh, an increase of 1.435 cents per kWh from last month. A residential customer consuming 400 kWh of electricity will be paying \$142.33, an increase of \$5.74 compared to rates effective November 1, 2016.

The Company's Lāna'i Division fuel composite cost of generation, central station and other increased 127.21 cents per million BTU to 1,674.34 cents per million BTU. The composite cost of DG energy is 0.00 cents per kWh. The composite cost of purchased energy is 27.000 cents per kWh.

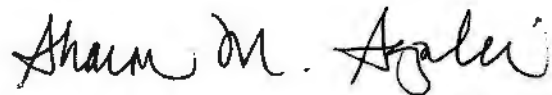
The energy cost adjustment factor for our Moloka'i Division for December 2016 is -9.244 cents per kWh, an increase of 0.726 cents per kWh from last month. A residential customer consuming 400 kWh of electricity will be paying \$135.75, an increase of \$2.90 compared to rates effective November 1, 2016.

The Company's Moloka'i Division fuel composite cost of generation, central station and other increased 59.26 cents per million BTU to 1,354.23 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 Honorable Chair and Members
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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, 2016.

Sincerely,

A handwritten signature in black ink, appearing to read "Sharon M. Suzuki". The signature is fluid and cursive, with the first name "Sharon" being the most prominent.

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>11-01-16</u>	<u>12-01-16</u>	
<u>COMPOSITE COSTS</u>			
Generation, Central Station & Other, ¢/mbtu	1,294.97	1,354.23	59.26
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	(9.970)	(9.244)	0.726
<u>Others - "G,P,F"</u>			
Energy Cost Adjustment, ¢/kWh	(9.970)	(9.244)	0.726
<u>Residential Customer with</u>			
400 KWH Consumption, \$/Bill	132.85	135.75	2.90
500 KWH Consumption, \$/Bill	165.29	168.92	3.63

Supersedes Sheet Effective:

November 1, 2016

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

ENERGY COST ADJUSTMENT (ECA) FILING - December 1, 2016 (page 1 of 2)

Line

1 Effective Date December 1, 2016
2 Supercedes Factors November 1, 2016

GENERATION COMPONENT

<u>CENTRAL STATION</u>						
FUEL PRICES, ¢/mmbtu						
3	Industrial				0.00	
4	Diesel				1,354.23	
5	Other				0.00	
BTU MIX, %						
6	Industrial				0.00	
7	Diesel				100.00	
8	Other				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))				1,354.23	
10	% Input to System kWh Mix				99.79	
EFFICIENCY FACTOR, mmbtu/kWh						
	(A)	(B)	(C)	(D)		
		Eff Factor	Centrl Stn +	Weighted		
	<u>Fuel Type</u>	<u>mmbtu/kwh</u>	<u>Other</u>	<u>Eff Factor</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))				15.12701	
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))				(8.85770)	
21	Revenue Tax Req Multiplier				1.0975	
22	CENTRAL STATION + OTHER GENERATION FACTOR, ¢/kWh (line (20 x 21))				(9.72133)	
<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)				-9.72133	
34	DG (line 32)				0.00000	
35	TOTAL GENERATION FACTOR, ¢/kWh (lines 33 + 34)				-9.72133	

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

ENERGY COST ADJUSTMENT (ECA) FILING - December 1, 2016 (page 2 of 2)

<u>Line</u>		
1	Effective Date	December 1, 2016
2	Supercedes Factors	November 1, 2016

<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	0.21
44	WEIGHTED COMPOSITE PURCHASED ENERGY COST, ¢/kWh (lines (42 x 43))	0.04637
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))	0.02675
49	Loss Factor	1.095
50	Revenue Tax Req Multiplier	1.0975
51	PURCHASED ENERGY FACTOR, ¢/kWh (lines (48 x 49 x 50))	0.03215

<u>Line</u>	<u>SYSTEM COMPOSITE CALCULATIONS</u>	
52	GENERATION AND PURCHASED ENERGY FACTOR, ¢/kWh (lines (35 + 51))	(9.68918)
53	Adjustment, ¢/kWh	0.000
54	ECA Reconciliation Adjustment	0.445
55	ECA FACTOR, ¢/kWh (lines (52 + 53 + 54))	(9.244)

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

MONTH END FUEL OIL ESTIMATE

	<u>Barrels</u>	<u>MBTU</u>	<u>\$</u>
11/21/2016	8,751.95	50,148.69	674,241.16
Estimated Use	1,438.81	8,244.38	106,762.15
Estimated Received	-	-	-
Estimated Additional	-	-	-
Estimated End	<u>7,313.14</u>	<u>41,904.31</u>	<u>567,479.01</u>

Next Months Expense = \$ 77.5972 /bbl

FUEL OIL INVENTORY PRICE USED FOR FILING

<u>Type of Oil Burned</u>	<u>Price</u>	<u>Prices ¢/MBTU</u>
Diesel	\$ 77.5972 5.73 BTU/BBL	1354.23

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

Contract Prices effective November 1, 2016

<u>TYPE OF OIL BURNED</u>	<u>\$/BBL</u>	<u>¢/MBTU</u>
ULTRA LOW SULFUR DIESEL		
Tax *	1.4700	25.65
Ocean Transportation	2.0203	35.26
Storage	4.7171	82.32
Wharfage	0.2500	4.36

* Tax includes HGET, Hawaii Use Tax, Liquid Fuel Tax, LUST tax and Environmental Response 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 2016

1. Amount to be Collected	\$27,900
2. Monthly amount (1/3 x Line 1)	\$9,300
3. Revenue Tax Divisor	0.91115
4. Total (Line 2 / Line 3)	\$10,207
5. Estimated Sales (December 2016)	2,296 mwh
6. Adjustment (Line 4 ÷ Line 5)	0.445 ¢/kwh

**MAUI ELECTRIC COMPANY, LTD.
MOLOKAI DIVISION
2016 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 '15					(1,433)	(1,450)	1,370
January '16					(1,433)	(1,417)	(47)
February	4,000	(4)	(55)	4,055	(1,333)	(1,321)	2,687
March					(1,333)	(1,326)	1,361
April					(1,333)	(1,381)	(20)
May	(5,900)	(1)	35	(5,935)	1,967	1,994	(3,961)
June					1,967	2,099	(1,862)
July					1,967	2,103	241
August	(11,400)	(2)	111	(11,511)	3,800	4,201	(7,069)
September					3,800	3,753	(3,316)
October					3,800	3,955	639
November	(27,900)	(3)	490	(28,390)	9,300		
December					9,300		

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			
	11-01-16	12-01-16	11-01-16	12-01-16	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	¢/kWh	11.4278	11.4278	28.57	28.57	0.00
First 250 kWh per month	¢/kWh	14.0778	14.0778	21.12	21.12	0.00
Next 500 kWh 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	1.4082	1.4082	5.63	5.63	0.00
PBF Surcharge	¢/kWh	0.5865	0.5865	2.35	2.35	0.00
Renewable Energy Infrastructure Cost Recovery Provision	¢/kWh	0.0099	0.0099	0.04	0.04	0.00
SolarSaver Adjustment	¢/kWh	0.0000	0.0000	0.00	0.00	0.00
Energy Cost Adjustment	¢/kWh	-9.970	-9.244	-39.88	-36.98	2.90
Green Infrastructure Fee	\$	1.13	1.13	1.13	1.13	0.00
Avg Residential Bill at 400 kwh				132.85	135.75	

Increase (Decrease -) 2.90
% Change 2.18%

	Rate		Charge (\$) at 500 Kwh			
	11-01-16	12-01-16	11-01-16	12-01-16	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	¢/kWh	11.4278	11.4278	28.57	28.57	0.00
First 250 kWh per month	¢/kWh	14.0778	14.0778	35.19	35.19	0.00
Next 500 kWh 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	1.4082	1.4082	7.04	7.04	0.00
PBF Surcharge	¢/kWh	0.5865	0.5865	2.93	2.93	0.00
Renewable Energy Infrastructure Cost Recovery Provision	¢/kWh	0.0099	0.0099	0.05	0.05	0.00
SolarSaver Adjustment	¢/kWh	0.0000	0.0000	0.00	0.00	0.00
Energy Cost Adjustment	¢/kWh	-9.970	-9.244	-49.85	-46.22	3.63
Green Infrastructure Fee	\$	1.13	1.13	1.13	1.13	0.00
Avg Residential Bill at 500 kwh				165.29	168.92	

Increase (Decrease -) 3.63
% Change 2.20%

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

<u>EFFECTIVE DATE</u>	<u>FUEL FACTOR</u> <u>CENTS / KWH</u>		<u>RESIDENTIAL BILL (\$)</u>	
	<u>RESIDENTIAL & COMMERCIAL</u>		<u>@ 400 KWH</u>	<u>@ 500 KWH</u>
January 1, 2014	3.885		185.67	231.62
February 1, 2014	4.590		188.49	235.14
March 1, 2014	4.652		188.74	235.45
April 1, 2014	4.585		187.49	233.89
May 1, 2014	4.690		188.89	235.64
June 1, 2014	4.779		192.52	240.17
July 1, 2014	5.145		194.72	242.92
August 1, 2014	4.697		192.93	240.68
September 1, 2014	-2.835		162.80	203.01
October 1, 2014	1.864		181.60	226.51
November 1, 2014	2.683		184.87	230.61
December 1, 2014	1.266		179.46	223.52
January 1, 2015	-0.141		173.84	216.48
February 1, 2015	-3.412		160.75	200.13
March 1, 2015	-6.056		150.18	186.91
April 1, 2015	-6.122		148.81	185.21
May 1, 2015	-6.727		147.49	183.55
June 8, 2015	-7.453		144.48	179.79
July 1, 2015	-6.185		148.55	184.84
August 1, 2015	-5.864		149.83	186.45
September 1, 2015	-5.935		149.59	186.14
October 1, 2015	-9.896		133.75	166.34
November 1, 2015	-10.149		132.73	165.07
December 1, 2015	-9.676		134.63	167.44
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

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

EFFECTIVE DATE	DESCRIPTION OF SURCHARGE	RATE
01/01/11 - 12/31/11	RESID. PBF SURCHARGE ADJUSTMENT	0.5944 CENTS/KWH
01/12/11 - 05/03/12	FINAL RATE INCREASE (3.66%), DOCKET NO. 2006-0387 (2007 TEST YEAR)	
01/12/11 - 05/03/12	INTERIM RATE INCREASE 2010 TEST YEAR	2.38 PERCENT ON BASE
02/01/11 - 02/28/11	IRP RECOVERY REFUND	-3.472 PERCENT ON BASE
03/01/11 - 04/30/11	IRP RECOVERY REFUND	0.000 PERCENT ON BASE
04/01/11 - 04/30/11	SOLARSAVER ADJUSTMENT	-0.0888 CENTS/KWH
05/01/11 - 03/31/12	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
05/01/11 - 05/31/11	IRP RECOVERY REFUND	-0.204 PERCENT ON BASE
06/01/11	IRP RECOVERY REFUND	0.000 PERCENT ON BASE
01/01/12 - 12/31/12	RESID. PBF SURCHARGE ADJUSTMENT	0.6766 CENTS/KWH
04/01/12 - 04/30/12	SOLARSAVER ADJUSTMENT	-0.2392 CENTS/KWH
05/01/12 - 03/31/13	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
5/4/2012 - 7/31/13	FINAL RATE INCREASE (1.51%), DOCKET NO. 2009-0163 (2010 TEST YEAR)	
6/1/2012 - 7/31/13	INTERIM RATE INCREASE 2012 TEST YEAR	4.11 PERCENT ON BASE
01/01/13 - 06/30/13	RESID. PBF SURCHARGE ADJUSTMENT	0.7850 CENTS/KWH
04/01/13 - 04/30/13	SOLARSAVER ADJUSTMENT	-0.205 CENTS/KWH
05/01/13 - 03/31/14	SOLARSAVER ADJUSTMENT	0.000 CENTS/KWH
06/01/13 - 05/31/14	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	0.8071 CENTS/KWH
07/01/13 - 06/30/14	RESID. PBF SURCHARGE ADJUSTMENT	0.8312 CENTS/KWH
08/01/13	FINAL RATE INCREASE (1.25%), DOCKET NO. 2011-0092 (2012 TEST YEAR)	
04/01/14 - 04/30/14	SOLARSAVER ADJUSTMENT	-0.2453 CENTS/KWH
05/01/14 - 03/31/15	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
06/01/14 - 05/31/15	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	1.6239 CENTS/KWH
07/01/14 - 11/30/14	RESID. PBF SURCHARGE ADJUSTMENT	1.0157 CENTS/KWH
12/01/14 - 06/30/15	RESID. PBF SURCHARGE ADJUSTMENT	0.7583 CENTS/KWH
12/01/14 - 06/30/15	GREEN INFRASTRUCTURE FEE	1.29 DOLLARS/MONTH
04/01/15 - 04/30/15	SOLARSAVER ADJUSTMENT	-0.2744 CENTS/KWH
05/01/15 - 03/31/16	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
06/01/15 - 06/07/15	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	0.0000 CENTS/KWH
06/08/15 - 05/31/16	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	1.5987 CENTS/KWH
07/01/15 - 06/30/16	RESID. PBF SURCHARGE ADJUSTMENT	0.4749 CENTS/KWH
07/01/15 - 12/31/15	GREEN INFRASTRUCTURE FEE	1.42 DOLLARS/MONTH
08/17/15 - 02/29/16	RENEWABLE ENERGY INFRASTRUCTURE COST RECOVERY PROVISION	0.0103 CENTS/KWH
01/01/16 - 06/30/16	GREEN INFRASTRUCTURE FEE	1.30 DOLLARS/MONTH
03/01/16	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	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
06/01/16	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	1.4082 CENTS/KWH
07/01/16	RESID. PBF SURCHARGE ADJUSTMENT	0.5865 CENTS/KWH
07/01/16	GREEN INFRASTRUCTURE FEE	1.13 DOLLARS/MONTH

~ Surcharges currently in effect are in bold.

~ Base charges include customer charge, demand charge, energy charge, power factor adjustment, voltage discount and minimum charge.