

State of Hawaii



Public Utilities Commission

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Form:	Hawaii PUC eFile Non-Docketed
Entity:	Maui Electric Company, Limited
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SHARON M. SUZUKI
President

June 28, 2016

The Honorable Chair and Members
of the Hawai'i Public Utilities Commission
Kekuanaoa Building, First Floor
465 South King Street
Honolulu, Hawai'i 96813

Dear Commissioners:

Subject: Maui Electric Energy Cost Adjustment Factor for July 2016

Maui Electric Company, Limited's ("Maui Electric" or "Company") July 2016 energy cost adjustment factor for our Maui Division is -7.334 cents per kilowatt-hour ("kWh"), an increase of 0.836 cents per kWh from last month. A residential customer consuming 500 kWh of electricity will be paying \$148.08, an increase of \$4.61 compared to rates effective June 1, 2016. The increase in the typical residential bill is due to the increase in the energy cost adjustment factor (+\$4.18), the increase in the Public Benefits Fund Surcharge (+\$0.56), the setting to zero of the Purchased Power Adjustment Clause rate (+\$0.04), and the decrease in the Green Infrastructure Fee (-\$0.17).

The Company's Maui Division fuel composite cost of generation, central station and other increased 114.17 cents per million BTU to 996.44 cents per million BTU. The composite cost of DG energy is 0.00 cents per kWh. The composite cost of purchased energy increased 0.173 cents per kWh to 18.955 cents per kWh.

The energy cost adjustment factor for our Lāna'i Division for July 2016 is -11.833 cents per kWh, an increase of 0.784 cents per kWh from last month. A residential customer consuming 400 kWh of electricity will be paying \$139.64, an increase of \$3.42 compared to rates effective June 1, 2016. The increase in the typical residential bill is due to the increase in the energy cost adjustment factor (+\$3.14), the increase in the Public Benefits Fund Surcharge (+\$0.45), and the decrease in the Green Infrastructure Fee (-\$0.17).

The Company's Lāna'i Division fuel composite cost of generation, central station and other increased 73.98 cents per million BTU to 1,606.96 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 July 2016 is -12.675 cents per kWh, an increase of 0.701 cents per kWh from last month. A residential customer consuming 400 kWh of electricity will be paying \$122.03, an increase of \$3.08 compared to rates effective June 1, 2016. The increase in the typical residential bill is due to the

The Honorable Chair and Members
of the Hawai'i Public Utilities Commission
June 28, 2016
Page 2

increase in the energy cost adjustment factor (+\$2.80), the increase in the Public Benefits Fund Surcharge (+\$0.45), and the decrease in the Green Infrastructure Fee (-\$0.17).

The Company's Moloka'i Division fuel composite cost of generation, central station and other increased 57.79 cents per million BTU to 1,102.77 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 July 1, 2016.

Sincerely,

/s/ Sharon M. Suzuki

Sharon M. Suzuki
President

Attachments

cc: Division of Consumer Advocacy

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

ENERGY COST ADJUSTMENT FACTOR

	EFFECTIVE DATES		
	<u>06/01/2016</u>	<u>07/01/2016</u>	
<u>COMPOSITE COSTS</u>			
Generation, Central Station & Other, ¢/mbtu	882.27	996.44	114.17
DG Energy, ¢/kWh	0.00	0.00	0.000
Purchased Energy, ¢/kWh	18.782	18.955	0.173
 <u>Residential Schedule "R"</u>			
Energy Cost Adjustment, ¢/kWh	(8.170)	(7.334)	0.836
 <u>Others - "G,H,P,F"</u>			
Energy Cost Adjustment, ¢/kWh	(8.170)	(7.334)	0.836
 <u>Residential Customer with</u>			
500 KWH Consumption, \$/Bill	143.47	148.08	4.61
600 KWH Consumption, \$/Bill	171.79	177.36	5.57

Supersedes Sheet Effective:

June 1, 2016

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

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

Line

1 Effective Date July 1, 2016
2 Supercedes Factors of June 1, 2016

GENERATION COMPONENT

CENTRAL STATION								
FUEL PRICES, ¢/mmbtu								
3	Industrial			518.84				
4	Diesel			1,164.77				
5	Other							
BTU MIX, %								
6	Industrial			26.06%				
7	Diesel			73.94%				
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))			996.44				
10	% Input to System kWh Mix			59.55%				
EFFICIENCY FACTOR, mmbtu/kWh								
	(A)	(B)	(C)	(D)				
			Percent of					
			Centrl Stn +					
			Other					
	<u>Fuel Type</u>	<u>Eff Factor</u>	<u>Other</u>	<u>Weighted</u>				
		<u>mmbtu/kwh</u>		<u>Eff Factor</u>				
11	Industrial	0.015126	18.57	0.002809				
12	Diesel	0.010026	81.43	0.008164				
13	Other	0.010951	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))]			0.010973				
15	WEIGHTED COMPOSITE CENTRAL STATION + OTHER GENERATION COST, ¢/kWh (lines (9 x 10 x 14))			6.51116				
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))			(10.75793)				
21	Revenue Tax Req Multiplier			1.0975				
22	CENTRAL STATION + OTHER GENERATION FACTOR, ¢/kWh (line (20 x 21))			(11.80683)				
					<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)		-
					26	BASE DG ENERGY COMP COST		0.000
					27	Base % Input to System kWh Mix		0.01
					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		1.063
					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)		(11.80683)
					34	DG (line 32)		-
					35	TOTAL GENERATION FACTOR, ¢/kWh (lines 33 + 34)		(11.80683)

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

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

Line

1 Effective Date July 1, 2016
2 Supercedes Factors of June 1, 2016

<u>Line</u>	<u>PURCHASED ENERGY COMPONENT</u>		
	PURCHASED ENERGY PRICE, ¢/kWh		
36	HC&S - Regular Energy	- On Peak	19.100
37		- Off Peak	19.100
38			
39			
40	Kaheawa Wind I	- On Peak	13.469
41		- Off Peak	12.659
42	Kaheawa Wind II		24.562
43	Sempra Wind		21.227
44	Hydro & Other	- On Peak	11.653
45		- Off Peak	10.239
46	FIT		21.523
	PURCHASED ENERGY KWH MIX, %		
47	HC&S - Regular Energy	- On Peak	0.00%
48		- Off Peak	0.00%
49			
50			
51	Kaheawa Wind I	- On Peak	21.14%
52		- Off Peak	17.61%
53	Kaheawa Wind II	- On Peak	26.82%
54	Sempra Wind	- On Peak	32.44%
55	Hydro & Other	- On Peak	0.13%
56		- Off Peak	0.09%
57	FIT		1.77%
			<u>100.00%</u>
58	COMPOSITE COST OF PURCHASED ENERGY, ¢/kWh		18.955
	(Lines (36 x 49) + (37 x 50) + (38 x 51) + (39 x 52) + (40 x 53) + (41 x 54) + (42 x 55) + (43 x 54) + (44 x 55) + (45 x 56) + (46 x 57))		
59	% Input to System kWh Mix		40.45%
60	WEIGHTED COMPOSITE PURCHASED ENERGY COST, ¢/kWh (lines (58 x 59))		7.66730
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))		4.19681
65	Loss Factor		1.063
66	Revenue Tax Req Multiplier		1.0975
67	PURCHASED ENERGY FACTOR, ¢/kWh (lines (64 x 65 x 66))		4.89618

Line

SYSTEM COMPOSITE CALCULATIONS

68	GENERATION AND PURCHASED ENERGY FACTOR, ¢/kWh (lines (35 + 67))	(6.91065)
69	ADJUSTMENT, ¢/kWh	
70	ECA Reconciliation Adjustment	(0.423)
71	ECA FACTOR, ¢/kWh (lines (68 + 69 + 70))	(7.334)

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

Fuel Oil Inventory Prices for July 2016

<u>TYPE OF OIL BURNED</u>	<u>PRICES \$/BBL</u>	<u>CONVERSION FACTORS</u>	<u>PRICES ¢/MBTU</u>
INDUSTRIAL	32.6868	6.30 MBTU/BBL	518.84
DIESEL/ULSD	68.2558	5.86 MBTU/BBL	1,164.77

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

Month End Fuel Oil Estimate

<u>Kahului</u>	<u>Barrels</u>	<u>MBTU</u>	<u>(\$)</u>
6/21/2016	25,230.550	158,431.71	772,604.83
Estimated Use	7,524.273	47,181.23	220,880.06
Estimated Received	16,000.000	100,800.00	550,026.48
Estimated Additional	0.000	0.00	0.00
Estimated End	<u>33,706.277</u>	<u>212,050.47</u>	<u>1,101,751.25</u>

Next month's expense (\$/bbl) = \$ 32.6868

<u>Maalaea</u>	<u>Barrels</u>	<u>MBTU</u>	<u>(\$)</u>
6/21/2016	107,492.303	629,563.73	7,090,559.01
Estimated Use	19,787.144	115,889.86	1,198,810.04
Estimated Received	29,000.000	169,847.96	2,074,060.58
Estimated Additional	0.000	0.00	0.00
Estimated End	<u>116,705.159</u>	<u>683,521.83</u>	<u>7,965,809.56</u>

Next month's expense (\$/bbl) = \$ 68.2558

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

Contract Prices effective June 1, 2016

<u>TYPE OF OIL BURNED</u>	<u>\$/BBL</u>	<u>¢/MBTU</u>
INDUSTRIAL		
Tax *	2.3881	37.91
Ocean Transportation	1.9186	30.45
Land Transportation	0.0000	0.00
Storage	0.0000	0.00
Wharfage	0.2400	3.81
DIESEL		
Tax *	4.2228	72.06
Ocean Transportation	1.9186	32.74
Land Transportation	0.9168	15.64
Storage	2.0417	34.84
Wharfage	0.2400	4.10

* 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.
MAUI DIVISION**

PURCHASED POWER PRICE CALCULATIONS

<u>HC&S PRICE DETERMINATION:</u>	<u>Cost</u>
HC&S Regular Energy, ¢/kWh	19.100

<u>KAHEAWA WIND POWER ENERGY RATE:</u>	
Kaheawa Wind - On Peak, ¢/kWh	13.469
- Off Peak, ¢/kWh	12.659

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 2016:

On-peak, ¢/kwh	9.813
Off-peak, ¢/kwh	8.655

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

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

On-Peak Rate = $9.813 \text{ ¢/kwh} \times 0.7 + 22.000 \text{ ¢/kwh} \times 0.3 = 13.4691 \text{ ¢/kwh}$

Off-Peak Rate = $8.655 \text{ ¢/kwh} \times 0.7 + 22.000 \text{ ¢/kwh} \times 0.3 = 12.6585 \text{ ¢/kwh}$

MAUI ELECTRIC COMPANY, LTD.
Maui Division
ECA Reconciliation Adjustment
July 2016

1. Amount to be Refunded	(\$1,051,300)
2. Monthly amount (1 / 3 X Line 1)	(\$350,433)
3. Revenue Tax Divisor	0.91115
4. Total (Line 2 / Line 3)	(\$384,605)
5. Estimated Sales (July 2016)	90,920 mwh
6. Adjustment (Line 4 ÷ Line 5)	(0.423) ¢/kwh

**MAUI ELECTRIC COMPANY, LTD.
MAUI 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					(518,067)	(518,422)	480,292
January '16					(518,067)	(499,925)	(19,633)
February	200,100	(4)	(37,780)	237,880	(66,700)	(64,342)	153,905
March					(66,700)	(64,142)	89,763
April					(66,700)	(66,051)	23,712
May	1,051,300	(1)	23,058	1,028,242	(350,433)	(350,448)	701,506
June					(350,433)		
July					(350,433)		

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			
	06/01/16	07/01/16	06/01/16	07/01/16	Difference	
Base Rates	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 kWh per month	¢/kWh	9.3393	9.3393	32.69	32.69	0.00
Next 850 kWh 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
Total Base Charges				173.60	173.60	0.00
RBA Rate Adjustment	¢/kWh	1.4082	1.4082	7.04	7.04	0.00
PBF Surcharge	¢/kWh	0.4749	0.5865	2.37	2.93	0.56
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
Purchased Power Adjustment	¢/kWh	-0.0081	0.0000	-0.04	0.00	0.04
Energy Cost Adjustment	¢/kWh	-8.170	-7.334	-40.85	-36.67	4.18
Green Infrastructure Fee	\$	1.30	1.13	1.30	1.13	-0.17
Avg Residential Bill at 500 kwh				143.47	148.08	

Increase (Decrease -)	4.61
% Change	3.21%

	Rate		Charge (\$) at 600 Kwh			
	06/01/16	07/01/16	06/01/16	07/01/16	Difference	
Base Rates	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 kWh per month	¢/kWh	9.3393	9.3393	32.69	32.69	0.00
Next 850 kWh 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
Total Base Charges				208.20	208.20	0.00
RBA Rate Adjustment	¢/kWh	1.4082	1.4082	8.45	8.45	0.00
PBF Surcharge	¢/kWh	0.4749	0.5865	2.85	3.52	0.67
Renewable Energy Infrastructure Cost Recovery Provision	¢/kWh	0.0099	0.0099	0.06	0.06	0.00
SolarSaver Adjustment	¢/kWh	0.0000	0.0000	0.00	0.00	0.00
Purchased Power Adjustment	¢/kWh	-0.0081	0.0000	-0.05	0.00	0.05
Energy Cost Adjustment	¢/kWh	-8.170	-7.334	-49.02	-44.00	5.02
Green Infrastructure Fee	\$	1.30	1.13	1.30	1.13	-0.17
Avg Residential Bill at 600 kwh				171.79	177.36	

Increase (Decrease -)	5.57
% Change	3.24%

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

<u>EFFECTIVE DATE</u>	FUEL FACTOR CENTS / KWH		RESIDENTIAL BILL (\$)	
	<u>RESIDENTIAL & COMMERCIAL</u>		<u>@ 500 KWH</u>	<u>@ 600 KWH</u>
January 1, 2014	1.733		190.94	229.00
February 1, 2014	2.238		193.25	231.77
March 1, 2014	1.978		192.02	230.29
April 1, 2014	1.754		189.62	227.42
May 1, 2014	2.175		193.66	232.25
June 1, 2014	1.675		195.24	234.15
July 1, 2014	1.679		196.18	235.28
August 1, 2014	1.134		193.54	232.12
September 1, 2014	0.855		192.16	230.46
October 1, 2014	0.880		192.27	230.60
November 1, 2014	1.135		193.01	231.48
December 1, 2014	0.325		188.98	226.39
January 1, 2015	-0.702		183.85	220.24
February 1, 2015	-4.255		165.96	198.78
March 1, 2015	-7.740		148.62	177.96
April 1, 2015	-6.921		151.30	181.18
May 1, 2015	-6.092		157.06	188.10
June 8, 2015	-4.794		163.43	195.74
July 1, 2015	-4.336		164.44	196.93
August 1, 2015	-4.415		164.11	196.54
September 1, 2015	-5.820		157.12	188.14
October 1, 2015	-7.471		148.88	178.26
November 1, 2015	-8.651		141.57	169.49
December 1, 2015	-8.557		142.07	170.10
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

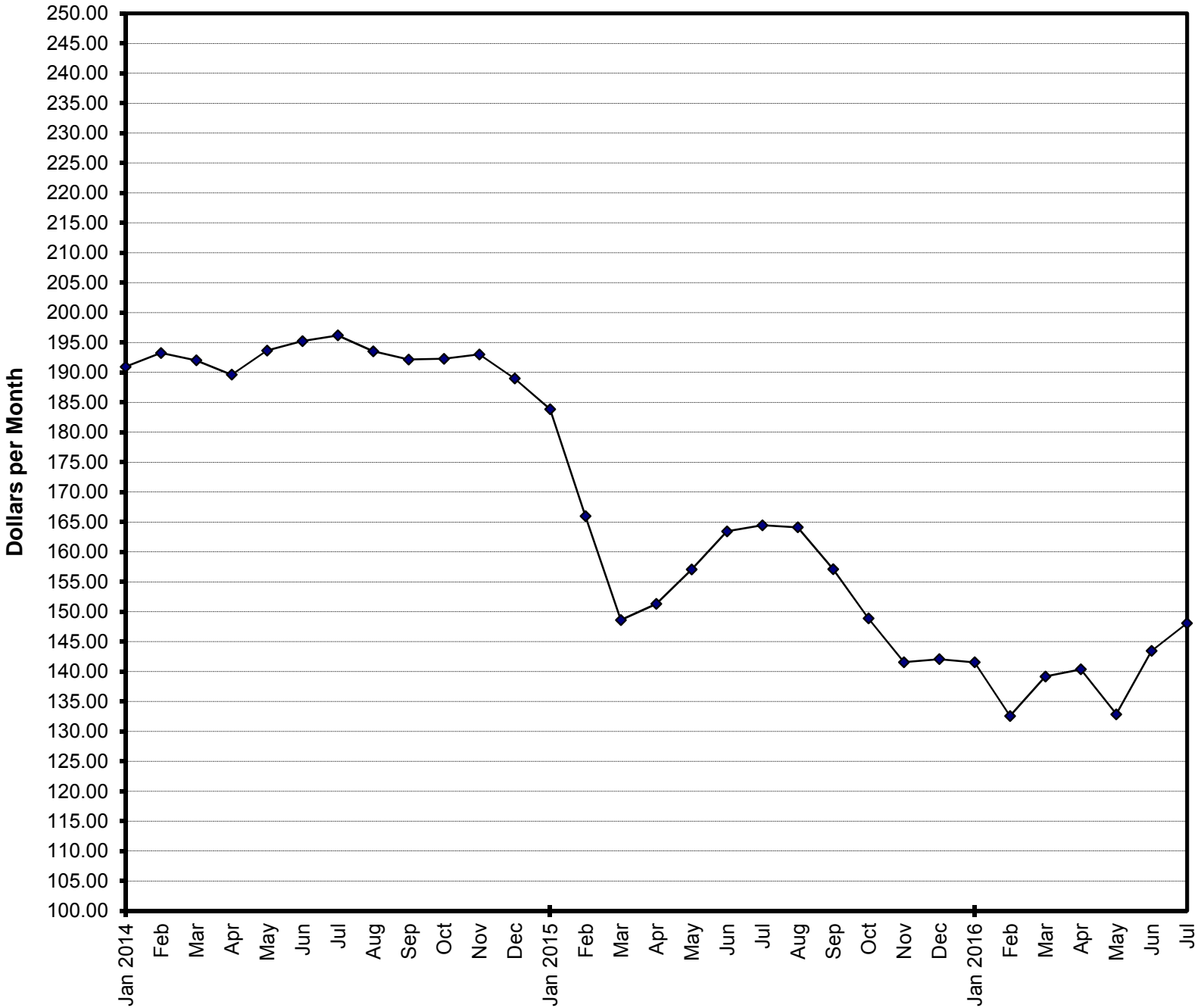
**MAUI ELECTRIC COMPANY, LTD. -- Maui Division
RESIDENTIAL SURCHARGE DATA**

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 (3.65%), DOCKET NO. 2006-0387 (2007 TEST YEAR)	
01/12/11 - 05/03/12	INTERIM RATE INCREASE 2010 TEST YEAR	2.44 PERCENT ON BASE
01/12/11 - 01/31/11	FIRM CAP SURCHARGE	0.081 PERCENT ON BASE
02/01/11 - 04/30/11	FIRM CAP SURCHARGE	0.0515 PERCENT ON BASE
02/01/11 - 02/28/11	IRP RECOVERY REFUND	-3.630 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	-0.339 PERCENT ON BASE
05/01/11 - 07/31/11	FIRM CAP SURCHARGE	-0.0180 PERCENT ON BASE
06/01/11	IRP RECOVERY REFUND	0.000 PERCENT ON BASE
08/01/11 - 10/31/11	FIRM CAP SURCHARGE	-0.0056 PERCENT ON BASE
11/01/11 - 01/31/12	FIRM CAP SURCHARGE	0.0047 PERCENT ON BASE
01/01/12 - 12/31/12	RESID. PBF SURCHARGE ADJUSTMENT	0.6766 CENTS/KWH
02/01/12 - 05/03/12	FIRM CAP SURCHARGE	0.0000 PERCENT ON BASE
04/01/12 - 04/30/12	SOLARSAVER ADJUSTMENT	-0.2392 CENTS/KWH
05/01/12 - 03/31/13	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
05/4/2012 - 07/31/13	FINAL RATE INCREASE (1.51%), DOCKET NO. 2009-0163 (2010 TEST YEAR)	
05/04/12 - 07/31/12	PURCHASED POWER ADJUSTMENT	0.1889 CENTS/KWH
06/1/2012 - 07/31/13	INTERIM RATE INCREASE 2012 TEST YEAR	4.14 PERCENT ON BASE
08/01/12 - 10/31/12	PURCHASED POWER ADJUSTMENT	0.1747 CENTS/KWH
11/1/2012 - 01/31/13	PURCHASED POWER ADJUSTMENT	0.1427 CENTS/KWH
01/01/13 - 06/30/13	RESID. PBF SURCHARGE ADJUSTMENT	0.7850 CENTS/KWH
02/01/13 - 04/30/13	PURCHASED POWER ADJUSTMENT	0.1530 CENTS/KWH
04/01/13 - 04/30/13	SOLARSAVER ADJUSTMENT	-0.2053 CENTS/KWH
05/01/13 - 03/31/14	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
05/01/13 - 07/31/13	PURCHASED POWER ADJUSTMENT	0.1530 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)	
08/01/13 - 08/31/13	PURCHASED POWER ADJUSTMENT	0.1892 CENTS/KWH
09/01/13 - 09/30/13	PURCHASED POWER ADJUSTMENT	0.1865 CENTS/KWH
10/01/13 - 10/31/13	PURCHASED POWER ADJUSTMENT	0.1877 CENTS/KWH
11/01/13 - 11/30/13	PURCHASED POWER ADJUSTMENT	0.0808 CENTS/KWH
12/01/13 - 12/31/13	PURCHASED POWER ADJUSTMENT	0.0861 CENTS/KWH
01/01/14 - 01/31/14	PURCHASED POWER ADJUSTMENT	0.0943 CENTS/KWH
02/01/14 - 02/28/14	PURCHASED POWER ADJUSTMENT	0.0514 CENTS/KWH
03/01/14 - 03/31/14	PURCHASED POWER ADJUSTMENT	0.0650 CENTS/KWH
04/01/14 - 04/30/14	PURCHASED POWER ADJUSTMENT	0.0560 CENTS/KWH
04/01/14 - 04/30/14	SOLARSAVER ADJUSTMENT	-0.2453 CENTS/KWH
05/01/14 - 03/31/15	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
05/01/14 - 06/30/14	PURCHASED POWER ADJUSTMENT	0.1957 CENTS/KWH
06/01/14 - 05/31/15	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	1.6239 CENTS/KWH
07/01/14 - 07/31/14	PURCHASED POWER ADJUSTMENT	0.1960 CENTS/KWH
07/01/14 - 11/30/14	RESID. PBF SURCHARGE ADJUSTMENT	1.0157 CENTS/KWH
08/01/14 - 08/31/14	PURCHASED POWER ADJUSTMENT	0.2145 CENTS/KWH
09/01/14 - 09/30/14	PURCHASED POWER ADJUSTMENT	0.2159 CENTS/KWH
10/01/14 - 10/31/14	PURCHASED POWER ADJUSTMENT	0.2149 CENTS/KWH
11/01/14 - 11/30/14	PURCHASED POWER ADJUSTMENT	0.1066 CENTS/KWH
12/01/14 - 12/31/14	PURCHASED POWER ADJUSTMENT	0.1108 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
01/01/15 - 01/31/15	PURCHASED POWER ADJUSTMENT	0.1117 CENTS/KWH
02/01/15 - 02/28/15	PURCHASED POWER ADJUSTMENT	0.0875 CENTS/KWH
03/01/15 - 03/31/15	PURCHASED POWER ADJUSTMENT	0.1036 CENTS/KWH
04/01/15 - 04/30/15	PURCHASED POWER ADJUSTMENT	0.0963 CENTS/KWH
04/01/15 - 04/30/15	SOLARSAVER ADJUSTMENT	-0.2744 CENTS/KWH
05/01/15 - 05/31/15	PURCHASED POWER ADJUSTMENT	0.1444 CENTS/KWH
05/01/15 - 03/31/16	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
06/01/15 - 06/30/15	PURCHASED POWER ADJUSTMENT	0.1453 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 - 07/31/15	PURCHASED POWER ADJUSTMENT	0.1482 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
08/01/15 - 08/31/15	PURCHASED POWER ADJUSTMENT	0.1613 CENTS/KWH
08/17/15 - 02/29/16	RENEWABLE ENERGY INFRASTRUCTURE COST RECOVERY PROVISION	0.0103 CENTS/KWH
09/01/15 - 09/30/15	PURCHASED POWER ADJUSTMENT	0.1573 CENTS/KWH
10/01/15 - 10/31/15	PURCHASED POWER ADJUSTMENT	0.1612 CENTS/KWH
11/01/15 - 11/30/15	PURCHASED POWER ADJUSTMENT	-0.1207 CENTS/KWH
12/01/15 - 12/31/15	PURCHASED POWER ADJUSTMENT	-0.1139 CENTS/KWH
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	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	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	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	1.4082 CENTS/KWH
07/01/16	PURCHASED POWER ADJUSTMENT	0.0000 CENTS/KWH
07/01/16	GREEN INFRASTRUCTURE FEE	1.13 DOLLARS/MONTH
07/01/16	RESID. PBF SURCHARGE ADJUSTMENT	0.5865 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 ELECTRIC COMPANY, LTD.
LANAI DIVISION**

ENERGY COST ADJUSTMENT FACTOR

	EFFECTIVE DATES		<u>Change</u>
	<u>06-01-16</u>	<u>07-01-16</u>	
<u>COMPOSITE COSTS</u>			
Generation, Central Station & Other, ¢/mbtu	1,532.98	1,606.96	73.98
DG Energy, ¢/kWh	0.00	0.00	0.00
Purchased Energy, ¢/kWh	27.00	27.00	0.00
<u>Residential Schedule "R"</u>			
Energy Cost Adjustment, ¢/kWh	(12.617)	(11.833)	0.784
<u>Others - "G,P,F"</u>			
Energy Cost Adjustment, ¢/kWh	(12.617)	(11.833)	0.784
<u>Residential Customer with</u>			
400 KWH Consumption, \$/Bill	136.22	139.64	3.42
500 KWH Consumption, \$/Bill	169.37	173.68	4.31

Supersedes Sheet Effective:

June 1, 2016

MAUI ELECTRIC COMPANY, LTD.
LANAI DIVISION

ENERGY COST ADJUSTMENT (ECA) FILING

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

Line

- 1 Effective Date July 1, 2016
- 2 Supercedes Factors of June 1, 2016

GENERATION COMPONENT

<u>CENTRAL STATION</u>					
FUEL PRICES, ¢/mmbtu					
3	Industrial			0.00	
4	Diesel - Miki Basin			1,606.96	
5	Diesel - Manele Bay			0.00	
6	Other			0.00	
BTU MIX, %					
7	Industrial			0.00%	
8	Diesel - Miki Basin			100.00%	
9	Diesel - Manele Bay ¹			0.00%	
10	Other			0.00%	
				100.00%	
11	COMPOSITE COST OF GENERATION, CENTRAL STATION + OTHER ¢/mmbtu			1,606.96	
	(Lines (3 x 7) + (4 x 8) + (5 x 9) + (6 x 10))				
12	% Input to System kWh Mix			91.25%	
EFFICIENCY FACTOR, mmbtu/kWh					
	(A)	(B)	(C)	(D)	
			Percent of		
			Centrl Stn +	Weighted	
	<u>Fuel Type</u>	<u>Eff Factor</u>	<u>Other</u>	<u>Eff Factor</u>	
		<u>mmbtu/kwh</u>			
13	Industrial	0.000000	0.00	0.000000	
14	Diesel	0.011151	100.00	0.011151	
15	Other	0.011151	0.00	0.000000	
	(Lines 13, 14, 15): Col(B) x Col(C) = Col(D)				
16	Weighted Efficiency Factor, mmbtu/kWh			0.011151	
	[lines 13(D) + 14(D) + 15(D)]				
17	WEIGHTED COMPOSITE CENTRAL STATION + OTHER GEN COST, ¢/kWh			16.35128	
	(lines (11 x 12 x 16))				
18	BASE CENTRAL STATION + OTHER GENERATION COST, ¢/mmbtu			2,647.15	
19	Base % Input to Sys kWh Mix			89.65%	
20	Efficiency Factor, mmbtu/kwh			0.011151	
21	WEIGHTED BASE CENTRAL STATION + OTHER GENERATION COST ¢/kWh			26.46322	
	(lines (18 x 19 x 20))				
22	COST LESS BASE (line(17 - 21))			(10.11194)	
23	Revenue Tax Req Multiplier			1.0975	
24	CENTRAL STATION + OTHER GENERATION FACTOR, ¢/kWh (line (22 x 23))			-11.09785	
				<u>DG ENERGY COMPONENT</u>	
				25	COMPOSITE COST OF DG ENERGY, ¢/kWh
					0.000
				26	% Input to System kWh Mix
					0.00%
				27	WEIGHTED COMPOSITE DG ENERGY COST, ¢/kWh (Lines 25 x 26)
					0.00000
				28	BASE DG ENERGY COMP COST
					0.000
				29	Base % Input to System kWh Mix
					0.00%
				30	WEIGHTED BASE DG ENERGY COST, ¢/kWh (Line 28 x 29)
					0.00000
				31	Cost Less Base (Line 27 - 30)
					0.00000
				32	Loss Factor
					1.0510
				33	Revenue Tax Req Multiplier
					1.0975
				34	DG FACTOR, ¢/kWh (Line 31 x 32 x 33)
					0.00000
				SUMMARY OF	
				TOTAL GENERATION FACTOR, ¢/kWh	
				35	CNTRL STN + OTHER (line 24)
					(11.09785)
				36	DG (line 34)
					-
				37	TOTAL GENERATION FACTOR, ¢/kWh (lines 35 + 36)
					(11.09785)

¹ The Manele CHP experienced a catastrophic fire on March 6, 2015. Its return to service is undetermined at this time.

MAUI ELECTRIC COMPANY, LTD.
LANAI DIVISION

ENERGY COST ADJUSTMENT (ECA) FILING

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

Line

1 Effective Date July 1, 2016
2 Supercedes Factors of June 1, 2016

<u>Line</u>	<u>PURCHASED ENERGY COMPONENT</u>	
	PURCHASED ENERGY PRICE, ¢/kWh	
38	LANAI SOLAR RESEARCH - On Peak	27.000
39	- Off Peak	27.000
40	Sch Q	0.000
	PURCHASED ENERGY KWH MIX, %	
41	LANAI SOLAR RESEARCH - On Peak	100.00%
42	- Off Peak	0.00%
43	Sch Q	0.00%
44	COMPOSITE COST OF PURCHASED ENERGY, ¢/kWh (Lines (38 x 41) + (39 x 42) + (40 x 43))	27.000
45	% Input to System kWh Mix	8.75%
46	WEIGHTED COMP. PURCH. ENERGY COST, ¢/kWh (lines (44 x 45))	2.36250
47	BASE PURCHASED ENERGY COMPOSITE COST, ¢/kWh	27.000
48	Base % Input to Sys kWh Mix	10.35
49	WEIGHTED BASE PURCHASED ENERGY COST, ¢/kWh (lines (47 x 48))	2.79450
50	COST LESS BASE(lines (46 - 49))	(0.43200)
51	Loss Factor	1.051
52	Revenue Tax Req Multiplier	1.0975
53	PURCHASED ENERGY FACTOR, ¢/kWh (lines (50 x 51 x 52))	(0.49830)

Line SYSTEM COMPOSITE CALCULATIONS

54 GENERATION AND PURCHASED ENERGY FACTOR, ¢/kWh (11.59615)
(lines (37 + 53))
55 Adjustment, ¢/kWh 0.000
56 ECA Reconciliation Adjustment (0.237)
57 ECA FACTOR, ¢/kWh (11.833)
(lines (54 + 55 + 56))

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

MONTH END FUEL OIL ESTIMATE

<u>Miki Basin - ULSD</u>	<u>Barrels</u>	<u>MBTU</u>	<u>\$</u>
6/21/2016	2,982.48	17,089.62	271,314.10
Estimated Use	1,327.29	7,605.37	116,588.83
Estimated Received	2,142.86	12,278.59	195,229.97
Estimated Additional	264.43	1,515.16	24,113.92
Estimated End	4,062.48	23,278.00	374,069.16

Next Month's Combined Miki Expense (\$/bbl) = \$ 92.0790 /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 - Miki Basin	\$ 92.0790	5.73 BTU/BBL	1,606.96

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

Contract Prices effective June 1, 2016

<u>TYPE OF OIL BURNED</u>	<u>\$/BBL</u>	<u>¢/MBTU</u>
---------------------------	---------------	---------------

MIKI BASIN - ULTRA LOW SULFUR DIESEL (DYED)

Tax *	1.5120	26.39
Ocean Transportation	0.0000	0.00
Storage	0.0000	0.00
Wharfage	0.0000	0.00

MIKI BASIN - ULTRA LOW SULFUR DIESEL

Tax *	1.5120	26.39
Ocean Transportation	0.0000	0.00
Storage	0.0000	0.00
Wharfage	0.0000	0.00

* 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.
Lanai Division
ECA Reconciliation Adjustment

July 2016

1. Amount to be refunded	(\$14,900)
2. Monthly amount (1 / 3 X Line 1)	(\$4,967)
3. Revenue Tax Divisor	0.91115
4. Total (Line 2 / Line 3)	(\$5,451)
5. Estimated Sales (July 2016)	2,301 mwh
6. Adjustment (Line 4 ÷ Line 5)	-0.237 ¢/kwh

**MAUI ELECTRIC COMPANY, LTD.
LANAI 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					(2,067)	(2,151)	1,855
January '16					(2,067)	(2,194)	(339)
February	(13,300)	(4)	(208)	(13,092)	4,433	4,591	(8,840)
March					4,433	4,930	(3,910)
April					4,433	5,061	1,151
May	14,900	(1)	528	14,372	(4,967)	(5,627)	9,896
June					(4,967)		
July					(4,967)		

NOTES:

- Col(1): Quarterly FOA reconciliation amounts. (Refer to Attachment 13)
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.
Lanai Division
Calculations of the Average Residential Customer Bill

	Rate		Charge (\$) at 400 Kwh			
	06-01-16	07-01-16	06-01-16	07-01-16	Difference	
Base Rates	effective date:	08/01/13	08/01/13			
Base Fuel/Energy Charge	¢/kWh	32.2668	32.2668	129.07	129.07	0.00
Non-fuel Fuel Energy Charge						
First 250 kWhr per month	¢/kWh	9.1240	9.1240	22.81	22.81	0.00
Next 500 kWhr per month	¢/kWh	11.6240	11.6240	17.44	17.44	0.00
Customer Charge	\$	8.50	8.50	8.50	8.50	0.00
Total Base Charges				177.82	177.82	0.00
IRP Refund	% on base	0.0000	0.0000	0.00	0.00	0.00
Revenue Balancing Rate Adjustment	¢/kWh	1.4082	1.4082	5.63	5.63	0.00
PBF Surcharge	¢/kWh	0.4749	0.5865	1.90	2.35	0.45
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	-12.617	-11.833	-50.47	-47.33	3.14
Green Infrastructure Fee	\$	1.30	1.13	1.30	1.13	-0.17
Avg Residential Bill at 400 kwh				136.22	139.64	

Increase (Decrease -)	3.42
% Change	2.51%

	Rate		Charge (\$) at 500 Kwh			
	06-01-16	07-01-16	06-01-16	07-01-16	Difference	
Base Rates	effective date:	08/01/13	08/01/13			
Base Fuel/Energy Charge	¢/kWh	32.2668	32.2668	161.33	161.33	0.00
Non-fuel Fuel Energy Charge						
First 250 kWhr per month	¢/kWh	9.1240	9.1240	22.81	22.81	0.00
Next 500 kWhr per month	¢/kWh	11.6240	11.6240	29.06	29.06	0.00
Customer Charge	\$	8.50	8.50	8.50	8.50	0.00
Total Base Charges				221.70	221.70	0.00
IRP Refund	% on base	0.0000	0.0000	0.00	0.00	0.00
Revenue Balancing Rate Adjustment	¢/kWh	1.4082	1.4082	7.04	7.04	0.00
PBF Surcharge	¢/kWh	0.4749	0.5865	2.37	2.93	0.56
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	-12.617	-11.833	-63.09	-59.17	3.92
Green Infrastructure Fee	\$	1.30	1.13	1.30	1.13	-0.17
Avg Residential Bill at 500 kwh				169.37	173.68	

Increase (Decrease -)	4.31
% Change	2.54%

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

<u>EFFECTIVE DATE</u>	FUEL FACTOR CENTS / KWH		RESIDENTIAL BILL (\$)
	<u>RESIDENTIAL & COMMERCIAL</u>	<u>RESIDENTIAL BILL (\$) @ 400 KWH @ 500 KWH</u>	
January 1, 2014	0.693	187.14	233.37
February 1, 2014	1.420	190.05	237.00
March 1, 2014	1.370	189.85	236.75
April 1, 2014	1.854	190.81	237.94
May 1, 2014	-1.036	180.23	224.72
June 1, 2014	0.013	187.69	234.05
July 1, 2014	0.208	189.21	235.94
August 1, 2014	-0.179	187.66	234.00
September 1, 2014	-0.244	187.40	233.68
October 1, 2014	-3.591	174.02	216.94
November 1, 2014	-1.766	181.32	226.07
December 1, 2014	-3.365	175.18	218.07
January 1, 2015	-4.698	169.85	211.41
February 1, 2015	-7.361	159.20	198.09
March 1, 2015	-8.793	153.47	190.93
April 1, 2015	-6.831	160.22	199.37
May 1, 2015	-9.750	149.64	186.15
June 8, 2015	-8.842	153.16	190.56
July 1, 2015	-7.314	158.27	196.91
August 1, 2015	-8.457	153.70	191.19
September 1, 2015	-10.465	145.71	181.20
October 1, 2015	-12.259	138.53	172.23
November 1, 2015	-12.177	138.86	172.64
December 1, 2015	-11.304	142.35	177.01
January 1, 2016	-12.957	135.62	168.62
February 1, 2016	-14.236	130.51	162.23
March 1, 2016	-15.833	124.12	154.24
April 1, 2016	-15.204	125.90	156.47
May 1, 2016	-13.856	132.03	164.13
June 1, 2016	-12.617	136.22	169.37
July 1, 2016	-11.833	139.64	173.68

**MAUI ELECTRIC COMPANY, LTD. -- Lanai 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 (3.65%), DOCKET NO. 2006-0387 (2007 TEST YEAR)	
01/12/11 - 05/03/12	INTERIM RATE INCREASE 2010 TEST YEAR	2.68 PERCENT ON BASE
02/01/11 - 02/28/11	IRP RECOVERY REFUND	-4.332 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	-0.356 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 - 07/31/13	FINAL RATE INCREASE (1.51%), DOCKET NO. 2009-0163 (2010 TEST YEAR)	
6/1/2012 - 07/31/13	INTERIM RATE INCREASE 2012 TEST YEAR	4.02 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	-0.2053 CENTS/KWH
05/01/13 - 03/31/14	SOLARSAVER ADJUSTMENT	0.0000 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	1.3000 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.

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

ENERGY COST ADJUSTMENT FACTOR

	EFFECTIVE DATES		<u>Change</u>
	<u>06-01-16</u>	<u>07-01-16</u>	
<u>COMPOSITE COSTS</u>			
Generation, Central Station & Other, ¢/mbtu	1,044.98	1,102.77	57.79
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	(13.376)	(12.675)	0.701
<u>Others - "G,P,F"</u>			
Energy Cost Adjustment, ¢/kWh	(13.376)	(12.675)	0.701
<u>Residential Customer with</u>			
400 KWH Consumption, \$/Bill	118.95	122.03	3.08
500 KWH Consumption, \$/Bill	147.87	151.76	3.89

Supersedes Sheet Effective:

June 1, 2016

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

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

Line

1 Effective Date July 1, 2016
2 Supercedes Factors June 1, 2016

GENERATION COMPONENT

<u>CENTRAL STATION</u>							<u>DG ENERGY COMPONENT</u>		
FUEL PRICES, ¢/mmbtu									
3	Industrial			0.00					
4	Diesel			1,102.77					
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))			1,102.77	25	WEIGHTED COMPOSITE DG ENERGY COST, ¢/kWh (Lines 23 x 24)		0.00000	
10	% Input to System kWh Mix			99.76	26	BASE DG ENERGY COMP COST		0.000	
EFFICIENCY FACTOR, mmbtu/kWh						27	Base % Input to System kWh Mix		0.00
	(A)	(B)	(C)	(D)	28	WEIGHTED BASE DG ENERGY COST, ¢/kWh (Line 26 x 27)		0.00000	
			Percent of		29	Cost Less Base (Line 25 - 28)		0.00000	
	Fuel Type	Eff Factor	Centrl Stn +	Weighted	30	Loss Factor		1.095	
		mmbtu/kwh	Other	Eff Factor	31	Revenue Tax Req Multiplier		1.0975	
11	Industrial	0.000000	0.00	0.000000	32	DG FACTOR, ¢/kWh (Line 29 x 30 x 31)		0.00000	
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))			12.31524					
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))			(11.66947)					
21	Revenue Tax Req Multiplier			1.0975					
22	CENTRAL STATION + OTHER GENERATION FACTOR, ¢/kWh (line (20 x 21))			(12.80724)					
					SUMMARY OF				
					TOTAL GENERATION FACTOR, ¢/kWh				
					33	CNTRL STN + OTHER (line 22)		-12.80724	
					34	DG (line 32)		0.00000	
					35	TOTAL GENERATION FACTOR, ¢/kWh (lines 33 + 34)		-12.80724	

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

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

Line

1 Effective Date July 1, 2016
2 Supercedes Factors June 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	0.24
44	WEIGHTED COMPOSITE PURCHASED ENERGY COST, ¢/kWh (lines (42 x 43))	0.05150
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))	0.03188
49	Loss Factor	1.095
50	Revenue Tax Req Multiplier	1.0975
51	PURCHASED ENERGY FACTOR, ¢/kWh (lines (48 x 49 x 50))	0.03831

Line

SYSTEM COMPOSITE CALCULATIONS

52 GENERATION AND PURCHASED ENERGY FACTOR, ¢/kWh (12.76893)
(lines (35 + 51))

53 Adjustment, ¢/kWh 0.000

54 ECA Reconciliation Adjustment 0.094

55 ECA FACTOR, ¢/kWh (12.675)
(lines (52 + 53 + 54))

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

MONTH END FUEL OIL ESTIMATE

	<u>Barrels</u>	<u>MBTU</u>	<u>\$</u>
6/21/2016	7,779.40	44,575.99	487,523.63
Estimated Use	1,222.52	7,005.04	73,201.56
Estimated Received	-	-	-
Estimated Additional	-	-	-
Estimated End	<u>6,556.88</u>	<u>37,570.95</u>	<u>414,322.07</u>

Next Months Expense = \$ 63.1889 /bbl

FUEL OIL INVENTORY PRICE USED FOR FILING

<u>Type of Oil Burned</u>	<u>Price</u>		<u>Prices ¢/MBTU</u>
Diesel	\$ 63.1889	5.73 BTU/BBL	1102.77

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

Contract Prices effective June 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	1.9186	33.48
Storage	4.7171	82.32
Wharfage	0.2400	4.19

* 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

July 2016

1. Amount to be Collected	\$5,900
2. Monthly amount (1/3 x Line 1)	\$1,967
3. Revenue Tax Divisor	0.91115
4. Total (Line 2 / Line 3)	\$2,159
5. Estimated Sales (July 2016)	2,286 mwh
6. Adjustment (Line 4 ÷ Line 5)	0.094 ¢/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		
July					1,967		

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			
	06-01-16	07-01-16	06-01-16	07-01-16	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						
First 250 kWh per month	¢/kWh	11.4278	11.4278	28.57	28.57	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	0.4749	0.5865	1.90	2.35	0.45
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	-13.376	-12.675	-53.50	-50.70	2.80
Green Infrastructure Fee	\$	1.30	1.13	1.30	1.13	-0.17
Avg Residential Bill at 400 kwh				118.95	122.03	
				Increase (Decrease -)		3.08
				% Change		2.59%

	Rate		Charge (\$) at 500 Kwh			
	06-01-16	07-01-16	06-01-16	07-01-16	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						
First 250 kWh per month	¢/kWh	11.4278	11.4278	28.57	28.57	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	0.4749	0.5865	2.37	2.93	0.56
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	-13.376	-12.675	-66.88	-63.38	3.50
Green Infrastructure Fee	\$	1.30	1.13	1.30	1.13	-0.17
Avg Residential Bill at 500 kwh				147.87	151.76	
				Increase (Decrease -)		3.89
				% Change		2.63%

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

<u>EFFECTIVE DATE</u>	FUEL FACTOR CENTS / KWH		RESIDENTIAL BILL (\$)	
	<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

**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.