

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

ENERGY COST ADJUSTMENT FACTOR

	EFFECTIVE DATES		<u>Change</u>
	<u>01-01-16</u>	<u>02-01-16</u>	
<u>COMPOSITE COSTS</u>			
Generation, Central Station & Other, ¢/mbtu	1,339.11	1,230.77	(108.34)
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	(9.942)	(11.270)	(1.328)
<u>Others - "G,P,F"</u>			
Energy Cost Adjustment, ¢/kWh	(9.942)	(11.270)	(1.328)
<u>Residential Customer with</u>			
400 KWH Consumption, \$/Bill	133.44	128.13	(5.31)
500 KWH Consumption, \$/Bill	165.99	159.35	(6.64)

Supersedes Sheet Effective:

January 1, 2016

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

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

Line

1 Effective Date February 1, 2016
2 Supercedes Factors January 1, 2016

GENERATION COMPONENT

<u>CENTRAL STATION</u>							<u>DG ENERGY COMPONENT</u>	
FUEL PRICES, ¢/mmbtu								
3	Industrial			0.00				
4	Diesel			1,230.77				
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))			1,230.77	25	WEIGHTED COMPOSITE DG ENERGY COST, ¢/kWh (Lines 23 x 24)	0.00000	
10	% Input to System kWh Mix			99.79	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	Weighted	29	Cost Less Base (Line 25 - 28)	0.00000	
	Fuel Type	Eff Factor	Centrl Stn +	Eff Factor	30	Loss Factor	1.095	
		mmbtu/kwh	Other		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))			13.74797				
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))			(10.23674)				
21	Revenue Tax Req Multiplier			1.0975				
22	CENTRAL STATION + OTHER GENERATION FACTOR, ¢/kWh (line (20 x 21))			(11.23482)				
					SUMMARY OF			
					TOTAL GENERATION FACTOR, ¢/kWh			
					33	CNTRL STN + OTHER (line 22)	-11.23482	
					34	DG (line 32)	0.00000	
					35	TOTAL GENERATION FACTOR, ¢/kWh (lines 33 + 34)	-11.23482	

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

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

<u>Line</u>		
1	Effective Date	February 1, 2016
2	Supersedes Factors	January 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))	0.04632
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))	0.02670
49	Loss Factor	1.095
50	Revenue Tax Req Multiplier	1.0975
51	PURCHASED ENERGY FACTOR, ¢/kWh (lines (48 x 49 x 50))	0.03209

<u>Line</u>	<u>SYSTEM COMPOSITE CALCULATIONS</u>	
52	GENERATION AND PURCHASED ENERGY FACTOR, ¢/kWh (lines (35 + 51))	(11.20273)
53	Adjustment, ¢/kWh	0.000
54	ECA Reconciliation Adjustment	(0.067)
55	ECA FACTOR, ¢/kWh (lines (52 + 53 + 54))	(11.270)

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

MONTH END FUEL OIL ESTIMATE

	<u>Barrels</u>	<u>MBTU</u>	<u>\$</u>
1/21/2016	4,046.52	23,186.58	311,223.24
Estimated Use	1,486.53	8,517.82	114,062.49
Estimated Received	5,500.00	31,515.00	371,254.03
Estimated Additional	-	-	-
Estimated End	<u>8,059.99</u>	<u>46,183.76</u>	<u>568,414.78</u>

Next Months Expense = \$ 70.5230 /bbl

FUEL OIL INVENTORY PRICE USED FOR FILING

<u>Type of Oil Burned</u>	<u>Price</u>		<u>Prices ¢/MBTU</u>
Diesel	\$ 70.5230	5.73 BTU/BBL	1230.77

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

Contract Prices effective January 1, 2016

<u>TYPE OF OIL BURNED</u>	<u>\$/BBL</u>	<u>¢/MBTU</u>
ULTRA LOW SULFUR DIESEL		
Tax *	1.8900	32.98
Ocean Transportation	1.8982	33.13
Storage	5.0579	88.27
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
February 2016

1. Amount to be refunded	(\$4,000)
2. Monthly amount (1/3 x Line 1)	(\$1,333)
3. Revenue Tax Divisor	0.91115
4. Total (Line 2 / Line 3)	(\$1,463)
5. Estimated Sales (February 2016)	2,169 mwh
6. Adjustment (Line 4 ÷ Line 5)	-0.067 ¢/kwh

**MAUI ELECTRIC COMPANY, LTD.
MOLOKAI DIVISION
2015 FUEL OIL ADJUSTMENT RECONCILIATION SUMMARY
(Thousand \$)**

<u>Line</u>	<u>Description</u>	Without Deadband 4th Quarter <u>YTD Total</u>	collectn by <u>company*</u>	Basis for Recon With Deadband 4th Quarter <u>YTD Total</u>	collectn by <u>company*</u>
Actual Costs					
1	Generation	\$5,140.6		\$5,140.6	
2	Distributed Generation	\$0.0		\$0.0	
3	Purch Power	<u>\$2.0</u>		<u>\$2.0</u>	
4	Total	\$5,142.6		\$5,142.6	
Fuel Filing Cost					
5	Generation	\$5,200.3		\$5,177.1	
6	Distributed Generation	\$0.0		\$0.0	
7	Purch Power	<u>\$2.0</u>		<u>\$2.0</u>	
8	Total	\$5,202.3		\$5,179.1	
Base Fuel Cost					
9	Generation	\$6,884.1		\$6,884.1	
10	Distributed Generation	\$0.0		\$0.0	
11	Purch Power	<u>\$2.0</u>		<u>\$2.0</u>	
12	Total	\$6,886.1		\$6,886.1	
13	FUEL - BASE COST (Line 8-12)	-\$1,683.7		-\$1,707.0	
14	ACTUAL FOA REVENUE LESS TAX	-\$1,721.3		-\$1,721.3	
15	FOA reconciliation adj for prior years	<u>-\$19.8</u>		<u>-\$19.8</u>	
16	ADJUSTED FOA LESS TAX	-\$1,701.5		-\$1,701.5	
17	FOA-(FUEL-BASE) (Line 16-13)	-\$17.8		\$5.5	
ADJUSTMENTS					
18	Current year FOA accrual reversal	\$5.7		\$5.7	
19	Other prior year FOA	\$0.0		\$0.0	
20	Other	<u>\$0.0</u>		<u>\$0.0</u>	
21	4th QUARTER FOA RECONCILIATION (Lines 17+18+19+20)	-\$12.1	Under	\$11.2	Over
22	3rd QUARTER YTD 2015 FOA Reconciliation Recognized in FOA Rates			<u>\$7.2</u>	Over
23	FOA Reconciliation to be Refunded February 2016 to April 2016 (Line 22- 21)			<u><u>-\$4.0</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.
MOLOKAI DIVISION
DEADBAND CALCULATION**

Determination of Efficiency Factor to use for Cost-Recovery Purposes

Period: January 1, 2015 through December 31, 2015

	<u>Notes</u>	<u>Jan 1 - Dec 31</u>
<u>Palaau Diesel</u>		
Palaau Diesel Efficiency Factor (TY2009), BTU/kWh	f	11,194
Palaau Diesel Deadband Definition, +/- BTU/kWh	d	50
Palaau Diesel Portion of Recorded Sales, MWh	a	28,676
Palaau Diesel Consumption (Recorded), MMBTU	b	317,303
Palaau Diesel Efficiency Factor (Recorded), BTU/kWh	c = (b/a)*1000	11,065
Lower limit of Palaau Diesel Deadband, BTU/kWh	e = f-d	11,144
Higher limit of Palaau Diesel Deadband, BTU/kWh	g = f+d	11,244
Palaau Diesel Efficiency Factor for cost-recovery, BTU/kWh	h = c, e, or g	11,144

MAUI ELECTRIC COMPANY, LTD.
MOLOKAI DIVISION
GENERATION FUEL FILING COST AND GENERATION BASE FUEL COST, WITHOUT and WITH DEADBAND
2015

	<u>Without Deadband</u>	<u>With Deadband - AS FILED</u>
	<u>Jan 1 - Dec 31</u>	<u>Jan 1 - Dec 31</u>
<u>DIESEL FUEL FILING COST</u>		
Diesel Portion of Recorded Sales, MWH	28,676	28,676
Diesel Sales Efficiency Factor (mmbtu/kwh)	0.011194	0.011144
Mmbtu adjusted for Sales Efficiency Factor	321,001	319,567
\$/mmbtu	<u>\$16.2003</u>	<u>\$16.2003</u>
TOTAL DIESEL \$000s TO BE RECOVERED	\$5,200.3	\$5,177.1
TOTAL GENERATION FUEL FILING COST, \$000s	\$5,200.3	\$5,177.1
TOTAL GENERATION BASE FUEL COST , \$000s YTD	\$6,884.1	\$6,884.1
TOTAL GENERATION FUEL FILING COST, \$000s YTD	\$5,200.3	\$5,177.1
TOTAL GENERATION BASE FUEL COST, \$000s YTD	\$6,884.1	\$6,884.1

**MAUI ELECTRIC COMPANY, LTD.
MOLOKAI DIVISION
2015 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)		
February	4,000	(4)	(55)	4,055	(1,333)		

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			
	01-01-16	02-01-16	01-01-16	02-01-16	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	1.5987	1.5987	6.39	6.39	0.00
PBF Surcharge	¢/kWh	0.4749	0.4749	1.90	1.90	0.00
Renewable Energy Infrastructure Cost Recovery Provision	¢/kWh	0.0103	0.0103	0.04	0.04	0.00
SolarSaver Adjustment	¢/kWh	0.0000	0.0000	0.00	0.00	0.00
Energy Cost Adjustment	¢/kWh	-9.942	-11.270	-39.77	-45.08	-5.31
Green Infrastructure Fee	\$	1.30	1.30	1.30	1.30	0.00
Avg Residential Bill at 400 kwh				133.44	128.13	

Increase (Decrease -)	-5.31
% Change	-3.98%

	Rate		Charge (\$) at 500 Kwh			
	01-01-16	02-01-16	01-01-16	02-01-16	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	1.5987	1.5987	7.99	7.99	0.00
PBF Surcharge	¢/kWh	0.4749	0.4749	2.37	2.37	0.00
Renewable Energy Infrastructure Cost Recovery Provision	¢/kWh	0.0103	0.0103	0.05	0.05	0.00
SolarSaver Adjustment	¢/kWh	0.0000	0.0000	0.00	0.00	0.00
Energy Cost Adjustment	¢/kWh	-9.942	-11.270	-49.71	-56.35	-6.64
Green Infrastructure Fee	\$	1.30	1.30	1.30	1.30	0.00
Avg Residential Bill at 500 kwh				165.99	159.35	

Increase (Decrease -)	-6.64
% Change	-4.00%

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

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

**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	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
06/01/15 - 06/07/15	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	0.0000 CENTS/KWH
06/08/15	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	1.5987 CENTS/KWH
07/01/15	RESID. PBF SURCHARGE ADJUSTMENT	0.4749 CENTS/KWH
07/01/15 - 12/31/15	GREEN INFRASTRUCTURE FEE	1.42 DOLLARS/MONTH
08/17/15	RENEWABLE ENERGY INFRASTRUCTURE COST RECOVERY PROVISION	0.0103 CENTS/KWH
01/01/16	GREEN INFRASTRUCTURE FEE	1.30 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.