#### **ENERGY COST ADJUSTMENT FACTOR**

	EFFECTIV 01-01-16	'E DATES 02-01-16	Change
COMPOSITE COSTS Generation, Central Station & Other, ¢/mbtu DG Energy, ¢/kWh Purchased Energy, ¢/kWh	1,506.30 0.00 27.00	1,357.67 0.00 27.00	(148.63) 0.00 0.00
Residential Schedule "R"			
Energy Cost Adjustment, ¢/kWh	(12.957)	(14.236)	(1.279)
Others - "G,P,F"  Energy Cost Adjustment, ¢/kWh	(12.957)	(14.236)	(1.279)
Residential Customer with			
400 KWH Consumption, \$/Bill	135.62	130.51	(5.11)
500 KWH Consumption, \$/Bill	168.62	162.23	(6.39)

Supersedes Sheet Effective: January 1, 2016

#### **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 of January 1, 2016

#### **GENERATION COMPONENT**

	CENTRAL STATION			
	FUEL PRICES, ¢/mmbtu			
3	Industrial	0.00		
4	Diesel - Miki Basin	1,357.67		
5	Diesel - Manele Bay	0.00		
6	Other	0.00		
	BTU MIX, %	-	DG ENERGY COMPONENT	
7	Industrial	0.00%	25 COMPOSITE COST OF DG	
-	Diesel - Miki Basin	100.00%	ENERGY, ¢/kWh	0.000
	Diesel - Manele Bay <sup>1</sup>	0.00%	2.12.13.1, p	0.000
	Other	0.00%	26 % Input to System kWh Mix	0.00%
10	- Culei	100.00%	20 % input to System KWII WIIX	0.0076
		100.0070	27 WEIGHTED COMPOSITE DG ENERGY	
11	COMPOSITE COST OF GENERATION,		COST, ¢/kWh (Lines 25 x 26)	0.00000
	CENTRAL STATION + OTHER ¢/mmbtu	1,357.67	COST, WATT (Ellies 25 X 20)	0.00000
	(Lines $(3 \times 7) + (4 \times 8) + (5 \times 9) + (6 \times 10)$ )	The state of the s		
12	% Input to System kWh Mix	91.91%	28 BASE DG ENERGY COMP COST	0.000
	in mparto o jotom kramani	01.0170	29 Base % Input to System kWh Mix	0.00%
	EFFICIENCY FACTOR, mmbtu/kWh		30 WEIGHTED BASE DG ENERGY COST,	0.0070
	(A) (B) (C)	(D)	¢/kWh (Line 28 x 29)	0.00000
	Percent of	(-)	<i>γ</i> (===,	
	Eff Factor Centrl Stn +	Weighted	31 Cost Less Base (Line 27 - 30)	0.00000
	Fuel Type mmbtu/kwh Other	Eff Factor	32 Loss Factor	1.0510
13		0.000000	33 Revenue Tax Reg Multiplier	1.0975
14	Diesel 0.011151 100.00	0.011151	34 DG FACTOR,	
15	Other 0.011151 0.00	0.000000	¢/kWh (Line 31 x 32 x 33)	0.00000
	(Lines 13, 14, 15): Col(B) x Col(C) = Col	(D)		
16	Weighted Efficiency Factor, mmbtu/kWh			
	[lines 13(D) + 14(D) + 15(D)]	0.011151		
47	MEIGHTED COMPOSITE CENTRAL STAT	TION .		
17	WEIGHTED COMPOSITE CENTRAL STATE OTHER GEN COST, ¢/kWh	IION +		
	(lines (11 x 12 x 16))	13.91460		
18	BASE CENTRAL STATION + OTHER GEN	IFRATION		
10	COST, ¢/mmbtu	2.647.15		
19	Base % Input to Sys kWh Mix	89.65%		
	Efficiency Factor, mmbtu/kwh	0.011151		
	WEIGHTED BASE CENTRAL STATION +			
	OTHER GENERATION COST ¢/kWh			
	(lines (18 x 19 x 20))	26.46322		
			SUMMARY OF	
	COST LESS BASE (line(17 - 21))	(12.54862)	TOTAL GENERATION FACTOR, ¢/kWh	
	Revenue Tax Req Multiplier	1.0975		13.77211)
24	CENTRAL STATION + OTHER GENERAT		36 DG (line 34)	-
	FACTOR, ¢/kWh (line (22 x 23))	-13.77211	37 TOTAL GENERATION FACTOR,	10 770141
			¢/kWh (lines 35 + 36) (	13.77211)

<sup>&</sup>lt;sup>1</sup> The Manele CHP experienced a catastrophic fire on March 6, 2015. Its return to service is undetermined at this time.

#### **ENERGY COST ADJUSTMENT (ECA) FILING**

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

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

Line	PURCHASED ENERGY COMPO	NENT
	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	8.09%
46	WEIGHTED COMP. PURCH, ENERGY	
	COST, ¢/kWh (lines (44 x 45))	2.18430
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))	(0.61020)
	Loss Factor	1.051
	Revenue Tax Req Multiplier	1.0975
53	PURCHASED ENERGY FACTOR, ¢/kWh (lines (50 x 51 x 52))	(0.70385)

#### Line SYSTEM COMPOSITE CALCULATIONS

54	GENERATION AND PURCHASED	ENERGY
	FACTOR, ¢/kWh	(14.47596)
	(lines (37 + 53))	
55	Adjustment, ¢/kWh	0.000
56	ECA Reconciliation Adjustment	0.240
57	ECA FACTOR, ¢/kWh	(14.236)
	(lines (54 + 55 + 56))	

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

#### MONTH END FUEL OIL ESTIMATE

Miki Basin - ULSD	Barrels	MBTU	\$
1/21/2016	4,651.81	26,654.88	372,063.10
Estimated Use	1,075.88	6,164.79	92,860.27
Estimated Received	1,142.86	6,548.59	87,892.56
Estimated Additional	7.5 6. 6. 6. 6. 6.	_	-
Estimated End	4,718.79	27,038.68	367,095.39

Next Month's Combined Miki Expense (\$/bbl) = \$ 77.7944 /bbl

Manele CHP	Barrels	MBTU	\$
1/21/2016	-	_	-
Estimated Use	-	-	_
Estimated Received	-	-	_
Estimated Additional	-0		
Estimated End			

Next Month's Manele Expense (\$/bbl) =

#### FUEL OIL INVENTORY PRICE USED FOR FILING

Type of Oil Burned	Price	Conversion Factor	Prices ¢/MBTU
Diesel - Miki Basin	\$ 77.7944	5.73 BTU/BBL	1,357.67
Diesel - Manele Bay	\$ -	5.73 BTU/BBL	_

#### Contract Prices effective January 1, 2016

TYPE OF OIL BURNED	\$/BBL	¢/MBTU
MIKI BASIN - ULTRA LOW	SULFUR DIESE	L (DYED)
Tax *	1.9320	33.72
Ocean Transportation	0.0000	0.00
Storage	0.0000	0.00
Wharfage	0.0000	0.00
MIKI BASIN - ULTRA LOW Tax * Ocean Transportation Storage Wharfage	1.9320 0.0000 0.0000 0.0000	33.72 0.00 0.00 0.00
MANELE BAY - ULTRA LO	W SULFUR DIE	SEL
Tax *	5.1877	90.54
Ocean Transportation	0.0000	0.00
Storage	0.0000	0.00
Wharfage	0.0000	0.00

<sup>\*</sup> 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

#### February 2016

2. Monthly amount (1 / 3 X Line 1) \$4,433	
3. Revenue Tax Divisor 0.91115	
4. Total (Line 2 / Line 3) \$4,865	
5. Estimated Sales (February 2016) 2,031 mg	٧h
6. Adjustment (Line 4 ÷ Line 5) 0.240 ¢/	cwh

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

	,····	Without Deadband 4th Quarter	collectn by	Basis for Recon With Deadband 4th Quarter	collectn by
Line		YTD Total	company*	YTD Total	company*
	ACTUAL COSTS:				
1	Generation	\$4,865.3		\$4,865.3	
2	Distributed Generation	\$0.0		\$0.0	
3	Purch Power	\$576.2		\$576.2	
4	TOTAL	\$5,441.5		\$5,441.5	
	FUEL FILING COST (1)				
5	Generation	\$4,868.9		\$4,866.7	
6	Distributed Generation	\$0.0		\$0.0	
7	Purch Power	\$576.2		\$576.2	
8	TOTAL	\$5,445.1		\$5,442.9	
	BASE FUEL COST				
9	Generation	\$6,991.1		\$6,991.1	
10	Distributed Generation	\$0.0		\$0.0	
11	Purch Power	\$599.2		\$599.2	
12	TOTAL	\$7,590.4		\$7,590.4	
13	FUEL-BASE COST (Line 8-12)	-\$2,145.3		-\$2,147.4	
14	ACTUAL FOA LESS TAX	- <mark>\$2,13</mark> 8.3		-\$2,138.3	
15	FOA reconciliation adj for prior year	\$20.6		\$20.6	
16	ADJUSTED FOA LESS TAX	-\$2,158.9		-\$2,158.9	
17	FOA-(FUEL-BASE) (Line 16-13)	-\$13.6	Under	-\$11.5	Under
	ADJUSTMENTS				
18	Current year FOA accrual reversal	\$27.6		\$27.6	
19	Other prior year FOA	\$0.0		\$0.0	
20	Other	\$0.0		\$0.0	
21	4th QUARTER FOA RECONCILIATION (Lines 17+18+19+20)	\$14.0	Over	\$16.1	Over
22	3rd QUARTER YTD 2015 FOA Reconciliation Recognized in F	OA Rates		\$29.4	Over
23	FOA Reconciliation to be Refunded February 2016 to April 201	6 (Line 22- 21)		\$13.3	To Be Collected

<sup>\*</sup> Over means an over-collection by the company. Under means an under-collection by the company.

## MAUI ELECTRIC COMPANY, LTD. LANAI DIVISION DEADBAND CALCULATION

Determination of Efficiency Factor to use for Cost-Recovery Purposes Period: January 1, 2015 through December 31, 2015

	Notes	<u>Jan 1 - Dec 31</u>
Diesel	W	
Diesel Efficiency Factor (TY2009), BTU/kWh	f	11,151
Diesel Deadband Definition, +/- BTU/kWh	d	50
Diesel Portion of Recorded Sales, MWh	а	23,779
Diesel Consumption (Recorded), MMBTU	b	265,039
Diesel Efficiency Factor (Recorded), BTU/kWh	c = (b/a)*1000	11,146
Lower limit of Diesel Deadband, BTU/kWh	e = f-d	11,101
Higher limit of Diesel Deadband, BTU/kWh	g = f+d	11,201
Diesel Efficiency Factor for cost-recovery, BTU/kWh	h = c, e, or g	11,146

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

	Without Deadband	With Deadband - AS FILED
	Jan 1 - Dec 31	Jan 1 - Dec 31
Diesel Portion of Recorded Sales, MWH	23,779	23,779
Diesel Sales Efficiency Factor (mmbtu/kwh)	0.011151	0.011146
Mmbtu adjusted for Sales Efficiency Factor	265,161	265,042
\$/mmbtu	<u>\$18.3622</u>	<u>\$18.3622</u>
TOTAL DIESEL \$000s TO BE RECOVERED	\$4,868.9	\$4,866.7
TOTAL GENERATION FUEL FILING COST, \$000s	\$4,868.9	\$4,866.7
TOTAL GENERATION BASE FUEL COST, \$000s YTD	\$6,991.1	\$6,991.1
TOTAL OFNEDATION FUEL FULING COOT \$000 VTD	<b>*</b> 4.000.0	04.000 7
TOTAL GENERATION FUEL FILING COST, \$000s YTD	\$4,868.9	\$4,866.7
TOTAL GENERATION BASE FUEL COST, \$000s YTD	\$6,991.1	\$6,991.1

## MAUI ELECTRIC COMPANY, LTD. LANAI DIVISION 2015 Cumulative Reconciliation Balance

	(1)	(2) FOA Rec	(3) FOA Rec	(4)	(5)	(6) Month-end
	YTD FOA	Adjust	Less	Try to	Actual	Cumulative
<u>Month</u>	Reconciliation Qtr	Variance	Variance	Collect	Collect	Balance
December '15	5			(2,067)	(2,151)	1,855
January '16				(2,067)		
February	(13,300) (4)	(208)	(13,092)	4,433		
NOTES:						
Col(1):	Quarterly FOA rec					
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)			conciliation			
Col(4):				(1) * 1/3)		
Col(5):	Col(5): Actual collected amount. (recorded sales * \$/kwh adjustment/1.09751)					
Col(6):	Cumulative balance	e of the FO	A reconciliation	n (Previous b	alance + Col	(3) + Col(5))

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

Base Rates
Base Fuel/Energy Charge
Non-fuel Fuel Energy Charge
First 250 kWhr per month
Next 500 kWhr per month
Customer Charge
Total Base Charges
IRP Refund
Revenue Balancing Rate Adjustment
PBF Surcharge
Renewable Energy Infrastructure Cost
Recovery Provision
SolarSaver Adjustment
Energy Cost Adjustment
Green Infrastructure Fee
Avg Residential Bill at 400 kwh

Rate			
	01-01-16	02-01-16	
effective date:	08/01/13	08/01/13	
¢/kWh	32.2668	32.2668	
¢/kWh	9.1240	9.1240	
¢/kWh	11.6240	11.6240	
\$	8.50	8.50	
% on base	0.0000	0.0000	
¢/kWh	1.5987	1.5987	
¢/kWh	0.4749	0.4749	
¢/kWh	0.0103	0.0103	
¢/kWh	0.0000	0.0000	
¢/kWh	-12.957	-14.236	
\$	1.30	1.30	

Charge (\$) at 400 Kwh			
01-01-16	02-01-16	Difference	
129.07	129.07	0.00	
22.81	22.81	0.00	
17.44	17.44	0.00	
8.50	8.50	0.00	
177.82	177.82	0.00	
0.00	0.00	0.00	
6.39	6.39	0.00	
1.90	1.90	0.00	
0.04	0.04	0.00	
0.00	0.00	0.00	
-51.83	-56.94	-5.11	
1.30	1.30	0.00	
135.62	130.51		

Increase (Decrease -) % Change

-5.11 -3.77%

Base Rates
Base Fuel/Energy Charge
Non-fuel Fuel Energy Charge
First 250 kWhr per month
Next 500 kWhr per month
Customer Charge
<b>Total Base Charges</b>
IRP Refund
Revenue Balancing Rate Adjustment
PBF Surcharge
Renewable Energy Infrastructure Cost
Recovery Provision
SolarSaver Adjustment
Energy Cost Adjustment
Green Infrastructure Fee
Avg Residential Bill at 500 kwh

Rate			
	01-01-16	02-01-16	
effective date:	08/01/13	08/01/13	
¢/kWh	32.2668	32.2668	
¢/kWh	9.1240	9.1240	
¢/kWh	11.6240	11.6240	
\$	8.50	8.50	
% on base	0.0000	0.0000	
¢/kWh	1.5987	1.5987	
¢/kWh	0.4749	0.4749	
¢/kWh	0.0103	0.0103	
¢/kWh	0.0000	0.0000	
¢/kWh	-12.957	-14.236	
\$	1.30	1.30	

Charge (\$) at 500 Kwh			
01-01-16	02-01-16	Difference	
161.33	161.33	0.00	
22.81	22.81	0.00	
29.06 8.50	29.06 8.50	0.00	
221.70	221.70	0.00	
0.00	0.00	0.00	
7.99	7.99	0.00	
2.37	2.37	0.00	
0.05	0.05	0.00	
0.00	0.00	0.00	
-64.79	-71.18	-6.39	
1.30	1.30	0.00	
168.62	162.23		

Increase (Decrease -) % Change -6.39 -3.79%

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

FUEL FACTOR CENTS / KWH

RESIDENTIAL & RESIDENTIAL BILL (\$)

COMMERCIAL @ 400 KWH @ 500 KWH

<b>EFFECTIVE DATE</b>	COMMERCIAL	@ 400 KWH	@ 500 KWH
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

### 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 (20		
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	INTERIM RATE INCREASE 2010 TEST YEAR IRP RECOVERY REFUND IRP RECOVERY REFUND SOLARSAVER ADJUSTMENT SOLARSAVER ADJUSTMENT IRP RECOVERY REFUND IRP RECOVERY REFUND RESID. PBF SURCHARGE ADJUSTMENT SOLARSAVER ADJUSTMENT	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 (20	10 TEST YE	EAR)
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		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 (2	012 TEST Y	EAR)
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		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

<sup>~</sup> Surcharges currently in effect are in bold.

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