



FILED

December 27, 2019

2019 DEC 27 P 3:55

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 Recovery Factor for January 2020

Maui Electric Company, Limited's ("Maui Electric" or "Company") January 2020 Energy Cost Recovery factor for our Maui Division is 16.751 cents per kilowatt-hour ("kWh"), an increase of 0.560 cents per kWh from last month. A residential customer consuming 500 kWh of electricity will be paying \$168.57, an increase of \$4.20 compared to rates effective December 1, 2019. The increase in the typical residential bill is due to the increase in the Energy Cost Recovery Factor (+\$2.80), the increase in the Public Benefit Fund Surcharge (+\$1.33), and the increase in the Green Infrastructure Fee (+\$0.08), partially offset by the decrease in the Purchase Power Adjustment (-\$0.01).

The Company's Maui Division fuel composite cost of generation, central station and other increased 13.65 cents per million BTU to 1,396.08 cents per million BTU. The composite cost of DG energy is 0.00 cents per kWh. The composite cost of purchased energy increased 2.528 cents per kWh to 19.466 cents per kWh.

The Energy Cost Recovery factor for our Lāna'i Division for January 2020 is 25.369 cents per kWh, a decrease of 1.080 cents per kWh from last month. A residential customer consuming 400 kWh of electricity will be paying \$173.69, a decrease of \$3.18 compared to rates effective December 1, 2019. The decrease in the typical residential bill is due to the decrease of the Energy Cost Recovery Factor (-\$4.32), partially offset by the increase in the Public Benefit Fund Surcharge (+\$1.06), and the increase in the Green Infrastructure Fee (+\$0.08).

The Company's Lāna'i Division fuel composite cost of generation, central station and other decreased 92.80 cents per million BTU to 2,044.07 cents per million BTU. The composite cost of DG energy is 0.00 cents per kWh. The composite cost of purchased energy is 30.00 cents per kWh.

The Energy Cost Recovery factor for our Moloka'i Division for January 2020 is 18.533 cents per kWh, an increase of 0.168 cents per kWh from last month. A residential customer consuming 400 kWh of electricity will be paying \$153.75, an increase of \$1.81 compared to rates effective December 1, 2019. The increase in the typical residential bill is due to the

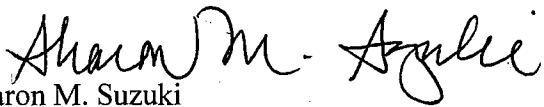
The Honorable Chair and Members
of the Hawai'i Public Utilities Commission
December 27, 2019
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increase of the Energy Cost Recovery Factor (+\$0.67), the increase in the Public Benefit Fund Surcharge (+\$1.06), and the increase in the Green Infrastructure Fee (+\$0.08).

The Company's Moloka'i Division fuel composite cost of generation, central station and other increased 14.27 cents per million BTU to 1,552.69 cents per million BTU. The composite cost of DG energy is 0.00 cents per kWh. The composite cost of purchased energy increased 0.66 cents per kWh to 22.46 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 January 1, 2020.

Sincerely,


Sharon M. Suzuki
President

Attachments

cc: Division of Consumer Advocacy

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

ENERGY COST RECOVERY FACTOR

	EFFECTIVE DATES		<u>Change</u>
	<u>12-01-19</u>	<u>01-01-20</u>	
<u>COMPOSITE COSTS</u>			
Generation, Central Station & Other, ¢/mbtu	1,538.42	1,552.69	14.27
DG Energy, ¢/kWh	0.00	0.00	0.00
Purchased Energy, ¢/kWh	21.80	22.46	0.66
<u>Residential Schedule "R"</u>			
Energy Cost Recovery, ¢/kWh	18.365	18.533	0.168
<u>Others - "G,P,F"</u>			
Energy Cost Recovery, ¢/kWh	18.365	18.533	0.168
<u>Residential Customer with</u>			
400 KWH Consumption, \$/Bill	151.94	153.75	1.81
500 KWH Consumption, \$/Bill	188.43	190.67	2.24

Supersedes Sheet Effective:

December 1, 2019

**MAUI ELECTRIC COMPANY, LTD.
MOLOKAI DIVISION
ENERGY COST RECOVERY (ECR) FILING**

ENERGY COST RECOVERY (ECR) FILING - January 1, 2020 (page 1 of 2)

Line

1 Effective Date January 1, 2020
2 Supercedes Factors December 1, 2019

GENERATION COMPONENT

CENTRAL STATION						DG ENERGY COMPONENT	
FUEL PRICES, ¢/mmbtu							
3	Industrial		0.00				
4	Diesel		1,552.69				
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))		1,552.69	25	WEIGHTED COMPOSITE DG ENERGY COST, ¢/kWh (Lines 23 x 24)	0.00000	
10	% Input to System kWh Mix		99.77	26	BASE DG ENERGY COMP COST	0.000	
EFFICIENCY FACTOR, mmbtu/kWh							
	(A)	(B)	(C)	(D)	27	Base % Input to System kWh Mix	0.00
			Percent of		28	WEIGHTED BASE DG ENERGY COST, ¢/kWh (Line 26 x 27)	0.00000
		Eff Factor	Centrl Stn +	Weighted	29	Cost Less Base (Line 25 - 28)	0.00000
	Fuel Type	mmbtu/kwh	Other	Eff Factor	30	Loss Factor	1.098
11	Industrial	0.000000	0.00	0.000000	31	Revenue Tax Req Multiplier	1.0975
12	Diesel	0.011127	100.00	0.011127	32	DG FACTOR, ¢/kWh (Line 29 x 30 x 31)	0.00000
13	Other	0.011127	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)]		0.011127				
15	WEIGHTED COMPOSITE CENTRAL STATION + OTHER GENERATION COST, ¢/kWh (lines (9 x 10 x 14))		17.23723				
16	BASE CENTRAL STATION + OTHER GENERATION COST, ¢/mmbtu		0.00				
17	Base % Input to Sys kWh Mix		0.00				
18	Efficiency Factor, mmbtu/kwh		0.011127				
19	WEIGHTED BASE CENTRAL STATION + OTHER GENERATION COST ¢/kWh (lines (16 x 17 x 18))		0.00000				
20	COST LESS BASE (line(15 - 19))		17.23723				
21	Revenue Tax Req Multiplier		1.0975				
22	CENTRAL STATION + OTHER GENERATION FACTOR, ¢/kWh (line (20 x 21))		18.91786				
					SUMMARY OF		
					TOTAL GENERATION FACTOR, ¢/kWh		
					33	CNTRL STN + OTHER (line 22)	18.91786
					34	DG (line 32)	0.00000
					35	TOTAL GENERATION FACTOR, ¢/kWh (lines 33 + 34)	18.91786

**MAUI ELECTRIC COMPANY, LTD.
MOLOKAI DIVISION
ENERGY COST RECOVERY (ECR) FILING**

ENERGY COST RECOVERY (ECR) FILING - January 1, 2020 (page 2 of 2)

Line

1 Effective Date January 1, 2020
2 Supercedes Factors December 1, 2019

Line	PURCHASED ENERGY COMPONENT	
	PURCHASED ENERGY PRICE, ¢/kWh - Fossil	
	PURCHASED ENERGY PRICE, ¢/kWh - Renewable	
36	Unused	0.000
37	CBRE	22.500
38	FIT	21.800
39		
40	Sch Q	0.000
	PURCHASED ENERGY KWH MIX, % - Fossil	
	PURCHASED ENERGY KWH MIX, % - Renewable	
41	Unused	0.00%
42	CBRE	93.88%
43	FIT	6.12%
44		
45	Sch Q	0.00%
45A	Fossil Purch. Energy %	0.00%
45B	Renewable Purch. Energy %	100.00%
45C	Comp. Cost, Fossil Purch. Energy, ¢/kWh	N/A
45D	Comp. Cost, Renewable Purch. Energy, ¢/kWh	22.457
46	COMPOSITE COST OF PURCHASED ENERGY, ¢/kWh (Lines (36 x 41) + (37 x 42) + (38 x 43) + (39 x 44))	22.457
47	% Input to System kWh Mix	0.23
48	WEIGHTED COMPOSITE PURCHASED ENERGY COST, ¢/kWh (lines (46 x 47))	0.05140
49	BASE PURCHASED ENERGY COMPOSITE COST, ¢/kWh	0.000
50	Base % Input to Sys kWh Mix	0.00
51	WEIGHTED BASE PURCHASED ENERGY COST, ¢/kWh (lines (49 x 50))	0.00000
52	COST LESS BASE (lines (48 - 51))	0.05140
53	Loss Factor	1.098
54	Revenue Tax Req Multiplier	1.0975
55	PURCHASED ENERGY FACTOR, ¢/kWh (lines (52 x 53 x 54))	0.06194

Line	Calculation of Monthly Fossil Fuel Cost Risk Sharing Component	
	Baseline Diesel	
56	Diesel \$, baseline month	\$401,775
57	Diesel mmbtu, baseline	25,876
58	Baseline Diesel, ¢/mmbtu	1,552.69
	Month Diesel	
59	Diesel mmbtu, budget	25,876
60	Diesel Cost, ¢/mmbtu	1,552.69
61	Diesel ECRC Fossil Cost	\$401,775
62	Diesel Base ECRC Recovery Target	\$401,775
63	Diesel differential	\$0
64	Total Fossil	\$0
65	2% of above	\$0
66	Total Monthly Fossil Fuel Cost Risk Sharing, Prior Months in Year	\$0
67	Maximum Annual Cap (bi-directional)	\$31,500
68	Number of Days in year from implementation	366
69	Fossil Risk % Proration (based on 366 day year)	100.00%
70	Maximum Annual Cap (bi-directional) prorated	\$31,500
71	Applicable Monthly Fossil Fuel Cost Risk Sharing	\$0
72	Total Monthly Fossil Fuel Cost Risk Sharing, Including This Month	\$0
73	Fossil Cost Risk Sharing before taxes	\$0
74	Revenue Tax Adjustment	1.097514
75	Fossil Cost Risk Sharing w/revenue tax	\$0
76	Forecasted Month MWh Sales	2,374
77	Fossil Fuel Cost Risk Sharing Component, ¢/kWh	0.0000

Line	SYSTEM COMPOSITE CALCULATIONS	
78	GENERATION AND PURCHASED ENERGY FACTOR, ¢/kWh (lines (35 + 55))	18.97980
79	Adjustment, ¢/kWh	0.000
80	Fossil Fuel Cost Risk Sharing Component	0.000
81	ECR Reconciliation Adjustment	(0.447)
82	ECR FACTOR, ¢/kWh (lines (78 + 79 + 80 + 81))	18.533

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

MONTH END FUEL OIL ESTIMATE

	<u>Barrels</u>	<u>MBTU</u>	<u>\$</u>
12/17/2019	4,609.95	26,415.03	421,037.03
Estimated Use	2,028.45	11,623.02	178,811.32
Estimated Received	4,700.00	26,931.00	405,603.42
Estimated Additional	-	-	-
Estimated End	<u>7,281.50</u>	<u>41,723.01</u>	<u>647,829.13</u>

Next Months Expense = \$ 88.9692 /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	\$ 88.9692	5.73 BTU/BBL	1552.69

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

Contract Prices effective December 1, 2019

<u>TYPE OF OIL BURNED</u>	<u>\$/BBL</u>	<u>¢/MBTU</u>
ULTRA LOW SULFUR DIESEL		
Tax *	4.8871	0.8528
Ocean Transportation	1.7087	29.82
Storage	5.0658	88.41
Wharfage	0.4000	6.98

* Tax includes HGET, Hawaii Use Tax, Liquid Fuel Tax, LUST tax, Environmental Response Tax, Customs Duty Fee, Federal Oil Spill Recovery Fee, and Federal Excise Tax.

Note: Since these components are not accounted for separately in inventory, contract prices for the current month are being provided. Contract prices are considered accurate pending actual delivery of the fuel.

Reference: Decision and Order No. 16134, Docket No. 96-0040.

MAUI ELECTRIC COMPANY, LTD.
Molokai Division
ECR Reconciliation Adjustment

January 2020

1. Amount to be refunded	(\$29,000)
2. Monthly amount (1/3 x Line 1)	(\$9,667)
3. Revenue Tax Divisor	0.91115
4. Total (Line 2 / Line 3)	(\$10,610)
5. Estimated Sales (January 2020)	2,374 mwh
6. Adjustment (Line 4 ÷ Line 5)	-0.447 ¢/kwh

**MAUI ELECTRIC COMPANY, LTD.
MOLOKAI DIVISION
2019 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 '18					(3,033)	(3,133)	2,348
January '19					(3,033)	(3,259)	(911)
February	(8,800)	(4)	(682)	(8,118)	2,933	2,637	(6,392)
March					2,933	2,879	(3,513)
April					2,933	2,976	(537)
May	(4,000)	(1)	(576)	(3,424)	1,333	1,340	(2,621)
June					1,333	1,450	(1,171)
July					1,333	1,381	210
August	42,700	(2)	167	42,533	(14,233)	(15,411)	27,332
September					(14,233)	(15,604)	11,728
October					(14,233)	(14,999)	(3,271)
November	29,000	(3)	(2,501)	31,501	(9,667)	(10,031)	18,199
December '19					(9,667)		
January '20					(9,667)		

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		
	12-01-19	01-01-20	12-01-19	01-01-20	Difference
Base Rates	effective date:	09/01/19	09/01/19		
Base Fuel/Energy Charge	¢/kWh	0.0000	0.0000	0.00	0.00
Non-fuel Energy Charge					
First 250 kWh per month	¢/kWh	14.0459	14.0459	35.11	35.11
Next 500 kWh per month	¢/kWh	16.6959	16.6959	25.04	25.04
Customer Charge	\$	11.50	11.50	11.50	11.50
Total Base Charges			71.65	71.65	0.00
IRP Refund	% on base	0.000	0.000	0.00	0.00
Revenue Balancing Rate Adjustment	¢/kWh	0.8716	0.8716	3.49	3.49
PBF Surcharge	¢/kWh	0.4775	0.7437	1.91	2.97
Renewable Energy Infrastructure Cost Recovery Provision	¢/kWh	0.0000	0.0000	0.00	0.00
SolarSaver Adjustment	¢/kWh	0.0000	0.0000	0.00	0.00
Refund of 2018 Interim	% on base	0.00	0.00	0.00	0.00
Purchased Power Adjustment	¢/kWh	0.0655	0.0648	0.26	0.26
Energy Cost Recovery	¢/kWh	18.365	18.533	73.46	74.13
Green Infrastructure Fee	\$	1.17	1.25	1.17	1.25
Avg Residential Bill at 400 kwh			151.94	153.75	

Increase (Decrease -)	1.81
% Change	1.19%

	Rate		Charge (\$) at 500 Kwh		
	12-01-19	01-01-20	12-01-19	01-01-20	Difference
Base Rates	effective date:	09/01/19	09/01/19		
Base Fuel/Energy Charge	¢/kWh	0.0000	0.0000	0.00	0.00
Non-fuel Energy Charge					
First 250 kWh per month	¢/kWh	14.0459	14.0459	35.11	35.11
Next 500 kWh per month	¢/kWh	16.6959	16.6959	41.74	41.74
Customer Charge	\$	11.50	11.50	11.50	11.50
Total Base Charges			88.35	88.35	0.00
IRP Refund	% on base	0.000	0.000	0.00	0.00
Revenue Balancing Rate Adjustment	¢/kWh	0.8716	0.8716	4.36	4.36
PBF Surcharge	¢/kWh	0.4775	0.7437	2.39	3.72
Renewable Energy Infrastructure Cost Recovery Provision	¢/kWh	0.0000	0.0000	0.00	0.00
SolarSaver Adjustment	¢/kWh	0.0000	0.0000	0.00	0.00
Refund of 2018 Interim	% on base	0.00	0.00	0.00	0.00
Purchased Power Adjustment	¢/kWh	0.0655	0.0648	0.33	0.32
Energy Cost Recovery	¢/kWh	18.365	18.533	91.83	92.67
Green Infrastructure Fee	\$	1.17	1.25	1.17	1.25
Avg Residential Bill at 500 kwh			188.43	190.67	

Increase (Decrease -)	2.24
% Change	1.19%

**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, 2018	-6.300	147.68	183.78
February 1, 2018	-6.275	147.78	183.90
March 1, 2018	-4.937	153.13	190.59
April 1, 2018	-5.975	148.47	184.76
May 1, 2018	-5.031	152.76	190.12
June 1, 2018	-3.490	160.24	199.48
July 1, 2018	-1.354	168.81	210.24
August 1, 2018	-4.992	154.26	192.05
September 1, 2018	-3.443	165.08	205.53
October 1, 2018	-4.054	162.63	202.48
November 1, 2018	-3.697	164.06	204.26
December 1, 2018	-1.431	173.13	215.59
January 1, 2019	-3.771	163.91	204.03
February 1, 2019	-7.208	150.16	186.85
March 1, 2019	-4.872	159.50	198.53
April 1, 2019	-5.034	158.51	197.29
May 1, 2019	-3.503	164.98	205.37
June 1, 2019	5.096	166.63	206.77
July 1, 2019	3.171	161.65	200.57
August 1, 2019	2.259	155.00	192.25
September 1, 2019	19.349	152.49	189.11
October 1, 2019	19.071	151.51	187.89
November 1, 2019	20.907	162.13	201.16
December 1, 2019	18.365	151.94	188.43
January 1, 2020	18.533	153.75	190.67

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

EFFECTIVE DATE	DESCRIPTION OF SURCHARGE	RATE
06/01/11	IRP RECOVERY REFUND	0.000 PERCENT ON BASE
08/17/17	RENEWABLE ENERGY INFRASTRUCTURE COST RECOVERY PROVISION	0.0000 CENTS/KWH
07/01/17 - 06/30/18	RESID. PBF SURCHARGE ADJUSTMENT	0.4244 CENTS/KWH
01/01/18 - 06/30/18	GREEN INFRASTRUCTURE FEE	1.34 DOLLARS/MONTH
04/01/18 - 04/30/18	SOLARSAVER ADJUSTMENT	1.3400 CENTS/KWH
05/01/18 - 03/31/19	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
06/01/18 - 08/22/18	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	1.8954 CENTS/KWH
07/01/18 - 06/30/19	RESID. PBF SURCHARGE ADJUSTMENT	0.4658 CENTS/KWH
07/01/18 - 12/31/18	GREEN INFRASTRUCTURE FEE	1.21 DOLLARS/MONTH
08/23/18 - 05/31/19	INTERIM RATE INCREASE 2018 TEST YEAR	6.68 PERCENT ON BASE
08/23/18 - 05/31/19	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	0.3183 CENTS/KWH
01/01/19 / 06/30/19	GREEN INFRASTRUCTURE FEE	1.35 DOLLARS/MONTH
04/01/19 - 04/30/19	SOLARSAVER ADJUSTMENT	-0.0855 CENTS/KWH
05/01/19	SOLARSAVER ADJUSTMENT	0.0000 CENTS/KWH
06/01/19	FINAL RATE INCREASE (3.74%), DOCKET NO. 2017-0150 (2018 TEST YEAR)	
06/01/19 - 06/30/19	REFUND OF INTERIM RATE INCREASE 2018 TEST YEAR	-2.00 PERCENT ON BASE
06/01/19	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	0.8716 CENTS/KWH
07/01/19 - 12/31/19	RESID. PBF SURCHARGE ADJUSTMENT	0.4775 CENTS/KWH
07/01/19 - 12/31/19	GREEN INFRASTRUCTURE FEE	1.17 DOLLARS/MONTH
08/01/19 - 08/31/19	PURCHASED POWER ADJUSTMENT	-0.7518 CENTS/KWH
09/01/19 - 09/30/19	PURCHASED POWER ADJUSTMENT	-0.7820 CENTS/KWH
10/01/19 - 10/31/19	PURCHASED POWER ADJUSTMENT	-0.7475 CENTS/KWH
11/01/19 - 11/30/19	PURCHASED POWER ADJUSTMENT	0.0692 CENTS/KWH
12/01/19 - 12/31/19	PURCHASED POWER ADJUSTMENT	0.0655 CENTS/KWH
01/01/20	PURCHASED POWER ADJUSTMENT	0.0648 CENTS/KWH
01/01/20	RESID. PBF SURCHARGE ADJUSTMENT	0.7437 CENTS/KWH
01/01/20	GREEN INFRASTRUCTURE FEE	1.25 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.