



April 28, 2020

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

Dear Commissioners:

Subject: Hawaiian Electric Energy Cost Recovery Factor for May 2020

Hawaiian Electric Company, Inc.'s ("Hawaiian Electric" or "Company") May 2020 Energy Cost Recovery Factor is 11.735 cents per kilowatt-hour ("kWh"), a decrease of 1.336 cents per kWh from last month. A residential customer consuming 500 kWh of electricity will be paying \$148.21, a decrease of \$5.62 compared to rates effective April 1, 2020. The decrease in the residential typical bill is due to a decrease in the Energy Cost Recovery Factor (-\$6.68), and a decrease in the DSM Adjustment (-\$0.34), partially offset by an increase in the Purchase Power Adjustment Clause rate (+\$0.97), an increase in Demand Response Adjustment Clause rate (+\$0.11), and the termination of the Solar Saver Adjustment Credit (+\$0.32).

The Company's fuel composite cost of major energy decreased 99.46 cents per million BTU to 1,007.18 cents per million BTU. The Company's composite cost of minor energy decreased 3.914 cents per kWh to 13.440 cents per kWh. The composite cost of purchased energy decreased 0.857 cents per kWh to 8.342 cents per kWh.

The attached sheets set forth the energy cost recovery factor in cents per kWh for each rate schedule that is applicable for *pro rata* use beginning May 1, 2020.

Very truly yours,

/s/ Dean K. Matsuura

Dean K. Matsuura
Director, Regulatory Rate Proceedings

Attachments

cc: Division of Consumer Advocacy

Hawaiian Electric Company, Inc.
ENERGY COST RECOVERY FACTOR

	<u>Effective Dates</u>		<u>Change</u>
	<u>04/01/20</u>	<u>05/01/20</u>	
Composite Cost Of Major Energy, ¢/mmbtu	1,106.64	1,007.18	(99.46)
Composite Cost Of Minor Energy, ¢/kwh	17.354	13.440	(3.914)
Composite Cost Of Purchased Energy, ¢/kWh	9.199	8.342	(0.857)
 <u>Residential, Schedule "R"</u>			
Energy Cost Recovery, ¢/kWh	13.071	11.735	(1.336)
 <u>Others, Schedules "G,J,DS,P,F"</u>			
Energy Cost Recovery, ¢/kWh	13.071	11.735	(1.336)
 <u>Residential Customer with:</u>			
500 kWh Consumption, \$/bill	153.83	148.21	(5.62)
600 kWh Consumption, \$/bill	182.86	176.12	(6.74)

Supersedes Sheet Effective:

April 1, 2020

Hawaiian Electric Company, Inc.
ENERGY COST RECOVERY FILING

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

Line		
1	Effective Date	- May 1, 2020
2	Supercedes Factor	- April 1, 2020

GENERATION COMPONENT

MAJOR ENERGY COMPONENT				MINOR ENERGY COMPONENT			
				Fuel Type	Gen Cost \$/KWH	Percent of Minor Energy	Weighted Gen Cost \$/KWH
3	Honolulu		0.00	32a Airport DG	33.45	1.69%	0.5661
4	Kahe		1,007.18	32b CIP-Biodiesel	0.00	0.00%	0.0000
5	Waiau-Steam		1,007.18	32c CIP-Diesel	-10.68	-1.91%	0.2039
6	(Future Use)		0.00	32d SGS - Biodiesel	21.03	51.03%	10.7313
7	(Future Use)		0.00	32e SGS - ULSD	16.72	0.02%	0.0025
8	(Future Use)		0.00	32f Waiau-Diesel	30.60	6.33%	1.9364
9	Other		0	32g West Loch PV	0.00	42.84%	0.0000
	BTU MIX, %			32h COMPOSITE COST OF MINOR ENERGY, \$/kWh			13.440
10	Honolulu		0.00	33 % Input to System kWh Mix			1.95
11	Kahe		78.20				
12	Waiau-Steam		21.80	34 WTD COMP MINOR ENERGY COST, \$/kWh (Lines 32h x 33)			0.26208
13	(Future Use)		0.00	35 2017 TY Loss Factor			1.0490
14	(Future Use)		0.00	36 WTD COMP MINOR ENERGY COST, '\$/kWh (Line 34 x 35)			0.27492
15	(Future Use)		0.00				
16	Other		0.00	37 BASE MINOR ENERGY COMP COST			0.0000
			100.00	38 Base % Input to System kWh Mix			0.0000
17	COMPOSITE COST OF GENERATION, MAJOR ENERGY \$/mmbtu		1,007.18	39 WTD BASE MINOR ENERGY COST, \$/kWh (Line 37 x 38)			0.00000
18	% Input to system kWh Mix		44.00	40 2017 TY Loss Factor			1.0490
	EFFICIENCY FACTOR, mmbtu/kWh			41 WTD COMP MINOR ENERGY COST, '\$/kWh (Line 39 x 40)			0.00000
	(A) (B) (C) (D)			42 Cost Less Base (Line 36 - 41)			0.274922
				43 Revenue Tax Adjustment (1 / (1-0.08885))			1.097514
				44 MINOR ENERGY FACTOR, \$/kWh (Line 42 x 43)			0.30173
19	LSFO	0.011142	100.00				
20	(Future Use)	0.000000	0.00				
21	(Future Use)	0.000000	0.00				
22	Other	0.011142	0.00				
	(Lines 19 through 22): Col(B) x Col(C) = Col(D)						
23	Weighted Efficiency Factor, mmbtu/kWh [(lines 19(D) + 20(D) + 21(D) + 22(D))]		0.011142				
24	WEIGHTED MAJOR ENERGY COST, \$/kWh Sales (lines 17 x 18 x 23)		4.93768				
25	BASE MAJOR ENERGY COST, \$/mmbtu		0.00				
26	Base % Input to System kWh Mix		0.0000				
27	Efficiency Factor, Mbtu/kWh		0.000000				
28	WEIGHTED BASE MAJOR ENERGY COST \$/KWH Sales (lines 25 x 26 x 27)		0.00000				
29	Cost Less Base (Line 24 - 28)		4.93768				
30	Revenue Tax Adjustment (1 / (1-0.08885))		1.097514				
31	MAJOR ENERGY GENERATION FACTOR, \$/KWH (Line 29 x 30)		5.41917				

SUMMARY OF TOTAL GENERATION FACTOR, \$/kWh	
45 MAJOR ENERGY (line 31)	5.41917
46 MINOR ENERGY (line 44)	- 0.30173
47 TOTAL GENERATION FACTOR, \$/KWH (lines 45 + 46)	- 5.72090

Hawaiian Electric Company, Inc.
ENERGY COST RECOVERY FILING

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

Line

1	Effective Date	- May 1, 2020
2	Supersedes Factor	- April 1, 2020

Line	PURCHASED ENERGY COMPONENT		
	PURCHASED ENERGY PRICE - FOSSIL - ¢/KWH		
48	PAR Hawaii	- On Peak	8.006
49	PAR Hawaii	- Off Peak	8.738
50	IES Downstream		0.000
51	Kalaeloa		6.308
52	AES-HI		3.384
53			
	PURCHASED ENERGY PRICE - RENEWABLE - ¢/KWH		
54	HRRV	- On Peak	17.95
55		- Off Peak	17.43
56	HRRV	- On Peak (excess)	11.43
57		- Off Peak (excess)	6.86
58	Kawailoa Wind		22.73
59	Kahuku Wind		21.33
60	Waianae Solar PV		14.50
61	As Available I		22.77
62	FIT		23.74
63	CBRE PV		15.00
64	Kawailoa PV		12.73
65	Lanikuhana PV		13.05
66	Waipio PV		12.18
67	Unused		0.00
	PURCHASED ENERGY KWH MIX - FOSSIL - %		
68	PAR Hawaii	- On Peak	0.20
69	PAR Hawaii	- Off Peak	0.14
70	IES Downstream		0.01
71	Kalaeloa		32.05
72	AES-HI		37.35
73			
73a	Subtotal Fossil %		69.75
	PURCHASED ENERGY KWH MIX - RENEWABLE - %		
74	HRRV	- On Peak	6.14
75		- Off Peak	2.58
76	HRRV	- On Peak (excess)	0.00
77		- Off Peak (excess)	2.61
78	Kawailoa Wind		3.68
79	Kahuku Wind		2.22
80	Waianae Solar PV		1.99
81	As Available I		0.69
82	FIT		2.20
83	CBRE PV		0.00
84	Kawailoa PV		3.64
85	Lanikuhana PV		1.09
86	Waipio PV		3.41
87	Unused		0.00
87a	Subtotal Renewable %		30.25
87b	Total Purchased Energy %		100.00
87c	Composite Cost of Purchased Energy, Fossil		4.75
87d	Composite Cost of Purchased Energy, Renewable		16.62
88	COMPOSITE COST OF PURCHASED ENERGY, ¢/KWH		8.342
89	% Input to System kWh Mix		54.05
90	WTD CMP PURCH ENRGY COST, ¢/KWH (lines 88 x 89)		4.50885
91	2017 TY Loss Factor		1.0490
92	WTD CMP PURCH ENRGY COST, ¢/KWH (lines 90 x 91)		4.72978
93	BASE PURCHASED ENERGY COMPOSITE COST, ¢/KWH		0.000
94	Base % Input to System kWh Mix		0.0000
95	WEIGHTED BASE PURCHASED ENERGY COST, ¢/KWH SALES (lines 93 x 94)		0.00000
96	2017 TY Loss Factor		1.049
97	WTD CMP PURCH ENRGY COST, ¢/KWH sales (lines 95 x 96)		0.00000
98	Cost Less Base (Line 92 - 97)		4.72978
99	Revenue Tax Adjustment (1 / (1-0.08885))		1.097514
100	PURCHASED ENERGY FACTOR, ¢/KWH (lines 98 x 99)		5.19100

Calculation of Monthly Fossil Fuel Cost Risk Sharing Component		
Baseline LSFO (Actual)		
101	LSFO \$, baseline month	\$43,537,044
102	LSFO mmbtu, baseline	3,600,297
103	Baseline LSFO, ¢/mmbtu	1209.26
Baseline Diesel (Actual)		
104	Diesel \$, baseline month	\$2,926,612
105	Diesel mmbtu, baseline	195,326
106	Baseline Diesel, ¢/mmbtu	1,498.32
Month LSFO		
107	LSFO mmbtu, budget	2,691,203
108	LSFO Cost, ¢/mmbtu	1,007.18
109	LSFO ECRC Fossil Cost	\$27,105,394
110	LSFO Base ECRC Recovery Target	\$32,543,715
111	LSFO differential	-\$5,438,321
Month Diesel		
112	Diesel mmbtu, budget	20,211
113	Diesel Cost, ¢/mmbtu	1,132.21
114	Diesel ECRC Fossil Cost	\$228,831
115	Diesel Base ECRC Recovery Target	\$302,826
116	Diesel differential	-\$73,994
117	Total Fossil	-\$5,512,315
118	2% of above	-\$110,246
118A	Total Monthly Fossil Fuel Cost Risk Sharing, Prior Months in Year	\$3,124
118B	Maximum Annual Cap (bi-directional)	\$2,500,000
118C	Applicable Monthly Fossil Fuel Cost Risk Sharing	-\$110,246
118D	Total Monthly Fossil Fuel Cost Risk Sharing, Including This Month	-\$107,122
119	Fossil Cost Risk Sharing before taxes	-\$110,246
120	Revenue Tax Adjustment	1.097514
121	Fossil Cost Risk Sharing w/revenue tax	-\$120,997
122	Forecasted Month MWh Sales	437,605
123	Fossil Fuel Cost Risk Sharing Component, ¢/kWh	0.0276
Derivation of Non-Adjustable Component:		
80A	Fuel Handling Exp, \$000 Final Settlement, HECO-603, p1	\$7,604.5
80B	Revenue Tax Adjustment	1.097514
80C	Non-Adj Revenues, \$000	\$8,346.0
80D	2017 TY Sales, MWh HECO-301, p1	6,660,200
80E	Non-Adj Revenues, ¢/kWh	0.12531
Line SYSTEM COMPOSITE		
124	GEN AND PURCHASED ENERGY FACTOR, ¢/kWh (lines 47 + 100)	10.9119
125	(Future Use) Adjustment, ¢/kWh	0.0000
126	ECR Reconciliation Adjustment	0.6700
127	Non-Adjustable Component (line 80E)	0.1253
128	Fossil Fuel Cost Risk Sharing Component (line 123)	0.0276
129	Monthly Energy Cost Recovery Factor (lines 124 + 125 + 126 + 127 + 128)	11.735

Hawaiian Electric Company, Inc.
FUEL OIL INVENTORY PRICES FOR May 1, 2020

	<u>Honolulu</u>	<u>Kahe</u>	<u>Waiau</u>
Average Low Sulfur Fuel Oil, ¢/Mbtu	1,005.88	1,005.88	1,005.88
Fuel Additive, ¢/Mbtu	-	1.30	1.30
Honolulu Trucking Cost, ¢/Mbtu	-	-	-
Low Sulfur Fuel Oil Prices Used For Filing, ¢/Mbtu	1,005.88	1,007.18	1,007.18
	<u>Waiau</u>	<u>CIP Biodiesel</u>	<u>CIP Diesel</u>
Average Diesel / Biodiesel Oil, ¢/Mbtu	1,136.10	-	1,090.94
Thruput Charges, ¢/Mbtu	-	-	0
Diesel / Biodiesel Oil Prices Used for Filing, ¢/Mbtu	1,136.10	-	1,090.94
	<u>SGS ULSD</u>	<u>SGS Biodiesel</u>	
Average Diesel / Biodiesel Oil, ¢/Mbtu	2,000.71	2,503.12	
Thruput Charges, ¢/Mbtu	-	-	
Diesel / Biodiesel Oil Prices Used for Filing, ¢/Mbtu	2,000.71	2,503.12	
	<u>Honolulu</u>	<u>Kahe</u>	<u>Waiau</u>
Average Low Sulfur Fuel Oil, \$/bbl	62.75	62.75	62.75
Fuel Additive, \$/bbl	-	0.08	0.08
Honolulu Trucking Cost, \$/bbl	-	-	-
Low Sulfur Fuel Oil Prices Used For Filing, \$/bbl	62.75	62.83	62.83
	<u>Waiau</u>	<u>CIP Biodiesel</u>	<u>CIP Diesel</u>
Average Diesel / Biodiesel Oil, \$/bbl	65.69	-	62.22
Thruput Charges, ¢/Mbtu	-	-	-
Diesel / Biodiesel Oil Prices Used for Filing, \$/bbl	65.69	-	62.22
	<u>SGS ULSD</u>	<u>SGS Biodiesel</u>	
Average Diesel / Biodiesel Oil, \$/bbl	115.96	132.85	
Thruput Charges, ¢/Mbtu	-	-	
Diesel / Biodiesel Oil Prices Used for Filing, \$/bbl	115.96	132.85	
Distributed Generation Fuel Prices Used for Filing, ¢/kWh			33.450

FOAC May 2020

<u>LSFO</u>	BARRELS	MBTU	AMOUNT	AVE \$/MBTU
Per FOAC run	730,444	4,556,761	45,835,778	10.058850
Additional	-	-	-	-
Forecast Amt	730,444	4,556,761	45,835,778	10.058850
	-	6.20	-	ADD'L BBL
	4,556,761	730,444	6.2383	MBTU / BBL
	45,835,778	730,444	62.75	DOLLARS / BBL
<u>WAI AU DIESEL</u>	15,477	89,494	1,016,733	11.360950
	1,016,733	15,477	65.69	DOLLARS / BBL
<u>CIP BIODIESEL</u>	-	-	-	-
	-	-	-	DOLLARS / BBL
<u>CIP DIESEL</u>	53,553	305,435	3,332,105	10.909389
	3,332,105	53,553	62.22	DOLLARS / BBL
<u>SGS ULSD</u>	426	2,469	49,400	20.007140
	49,399.63	426	115.96	DOLLARS / BBL
<u>SGS BIODIESEL</u>	7,789	41,339	1,034,768	25.0312365
	1,034,768	7,789	132.85	DOLLARS / BBL
FUEL ADDITIVE				0.013019
Additional				
Forecast Amt	-	-		0.013019
\$ / BBL =	-	-	0.08	DOLLARS / BBL
HONOLULU TRUCKING COST				
Per FOAC run	-	-	-	-
Additional				
Forecast Amt	-	-	-	-
\$ / BBL =	-	-	-	DOLLARS / BBL

Hawaiian Electric Company, Inc.

CONTRACT PRICES EFFECTIVE 4-1-20

<u>TYPE OF OIL BURNED</u>	<u>\$/BBL</u>	<u>¢/MBTU</u>
LOW SULFUR FUEL OIL		
Tax *	3.1811	51.31
Ocean Transportation	0.0000	0.00
Land Transportation	0.0000	0.00
Storage	0.0000	0.00
Wharfage	0.0000	0.00
DIESEL		
Tax *	3.9333	67.13
Ocean Transportation	0.0000	0.00
Land Transportation	0.0000	0.00
Storage	0.0000	0.00
Wharfage	0.0000	0.00
ULTRA LOW SULFUR DIESEL		
Tax *	4.0968	71.49
Ocean Transportation	0.0000	0.00
Land Transportation	0.0000	0.00
Storage	0.0000	0.00
Wharfage	0.0000	0.00
BIODIESEL		
Tax *	5.8800	112.04
Ocean Transportation	0.0000	0.00
Land 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, Federal Oil Spill Recovery Fee, and Environmental Response, Energy and FS 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.

HAWAIIAN ELECTRIC COMPANY, INC.
DETERMINATION OF DISTRIBUTED GENERATION EXPENSE

<u>Line No.</u>		<u>Airport DG Biodiesel</u>	<u>Schofield Biodiesel</u>	<u>Schofield ULSD</u>			
(A)	\$	32.77	\$	25.03	\$	20.01	Estimated Distributed Generation Fuel Cost (\$/MBTU)
(B)		1845		45,780		14	Estimated MBTU Consumption
(B1)		352		8,723		2	Estimated fuel consumption barrels
(C) = (A) x (B)		\$60,457		\$1,145,940		\$271	Estimated Distributed Generation Fuel Cost (\$)
(D)		180,714		5,449,093		1,621	Estimated Distributed Generation kWh
(E) = ((C) ÷ (D)) x 100		<u>33.450</u>		<u>21.030</u>		<u>16.720</u>	¢/kWh

Hawaiian Electric Company, Inc.
ECA RECONCILIATION ADJUSTMENT
May 2020

1.	Amount to be collected	\$	8,014,600
2.	Monthly Amount (Line 1 x 1/3)	\$	2,671,533
3.	Revenue Tax Divisor		0.91115
4.	Total (Line 2 / Line 3)	\$	2,932,046
5.	Estimated MWh Sales (May 2020)		437,605
6.	ECA Reconciliation Adjustment, ¢/kWh (Line 4 ÷ Line 5)		<u><u>0.670</u></u>

Hawaiian Electric Company, Inc.
FUEL OIL ADJUSTMENT RECONCILIATION SUMMARY
March 2020
(Thousand \$)

<u>Line</u>	<u>Description</u>	Info Only		Basis for Recon	
		W/O DeadBand March 2020 Cumulative YTD Total	collectn by company*	W/ DeadBand March 2020 Cumulative YTD Total	collectn by company*
ACTUAL COSTS:					
1	Generation / Major Fuels	\$105,951.2		\$105,951.2	
2	Distributed Generation / Minor Fuels	\$12,201.0		\$12,201.0	
3	Purch Power	\$71,515.6		\$71,515.6	
4	TOTAL	\$189,667.8		\$189,667.8	
FUEL FILING COST					
5	Generation / Major Fuels	\$106,237.6		\$105,932.5	
6	Distributed Generation / Minor Fuels	\$12,201.0		\$12,201.0	
7	Purch Power	\$71,515.6		\$71,515.6	
8	TOTAL	\$189,954.2		\$189,649.0	
BASE FUEL COST					
9	Generation / Major Fuels	\$0.0		\$0.0	
10	Distributed Generation / Minor Fuels	\$0.0		\$0.0	
11	Purch Power	\$0.0		\$0.0	
12	TOTAL	\$0.0		\$0.0	
13	FUEL-BASE COST (Line 8-12)	\$189,954.2		\$189,649.0	
14	ACTUAL FOA LESS TAX	\$194,315.1		\$194,315.1	
15	Less: FOA reconciliation adj for prior year	\$11,020.5		\$11,020.5	
15A	Less: Non-Adjustable Component Revenues Less Tax	\$1,708.1		\$1,708.1	
16	ADJUSTED FOA LESS TAX	\$181,586.5		\$181,586.5	
17	FOA-(FUEL-BASE) (Line 16-13)	-\$8,367.6	under	-\$8,062.5	under
ADJUSTMENTS:					
18	Current year FOA accrual reversal	\$0.0		\$0.0	
19	SGS test fuel removal	\$0.0		\$0.0	
20	Other	\$0.0		\$0.0	
21	QUARTERLY FOA RECONCILIATION (Line 17+18+19+20)	-\$8,367.6	under	-\$8,062.5	under
21A	YTD Fossil Fuel Cost Risk Sharing Adjustment	\$47.9		\$47.9	
21B	QUARTERLY FOA RECON w/Fossil Risk Adj (Line 21+Line 21A)	-\$8,319.7		-\$8,014.6	

* Over means an over-collection by the company.
Under means an under-collection by the company.

Hawaiian Electric Company, Inc.
DEADBAND CALCULATION
2020

FOR PERIOD: JANUARY 1, 2020 TO MARCH 2020

	Notes	YTD
<u>Low Sulfur Fuel Oil (LSFO)</u>		
LSFO Efficiency Factor, BTU/kWh*	f	11,142
LSFO Deadband Definition, +/- BTU/kWh	d	125
LSFO Portion of Recorded Sales, kWh	a	770,386,724
LSFO Consumption (Recorded), MMBTU	b	8,559,377
LSFO Efficiency Factor (Recorded), BTU/kWh	c = (b/a)*1000	11,110
Lower limit of LSFO Deadband, BTU/kWh	e = f-d	11,017
Higher limit of LSFO Deadband, BTU/kWh	g = f+d	11,267
LSFO Efficiency Factor for cost-recovery, BTU/kWh	h = c, e or g	11,110
Recorded BTU/kWh vs. Deadband		Neutral

* YTD Efficiency Factor is actual YTD & projected to the end of the year weighted by calendar days in the year

HAWAIIAN ELECTRIC COMPANY, INC.
FUEL FILING COST AND BASE FUEL COST, MAJOR FUELS, WITHOUT and WITH DEADBAND
March 2020 Year-to-Date

	Without Deadband	With Deadband AS FILED
<u>FUEL FILING COST, MAJOR FUELS</u>	<u>Jan 1-Mar 31</u>	<u>Jan 1-Mar 31</u>
LSFO Portion of Recorded Sales , MWH	770,386,724	770,386,724
LSFO Sales Efficiency Factor (mmbtu/kwh)	0.011142	0.011110
Mmbtu adjusted for Sales Efficiency Factor	8,583,648,879	8,558,996,504
\$/mmbtu	<u>\$12.3767</u>	<u>\$12.3767</u>
TOTAL LSFO \$ TO BE RECOVERED	\$106,237,570	\$105,932,454
<u>BASE FUEL COST, MAJOR FUELS</u>		
TOTAL BASE FUEL COST	\$0	\$0
TOTAL FUEL FILING COST, MAJOR FUELS \$ YTD	\$106,237,570	\$105,932,454
TOTAL BASE FUEL COST, MAJOR FUELS YTD	\$0	\$0

Hawaiian Electric Company, Inc.
 Fuel Oil Adjustment Reconciliation

Fossil Fuel Cost Risk Sharing Mechanism and Non-Adjustable Component, March 2020

LSFO Fossil Fuel Cost Risk Sharing

		Jan-20, Baseline	YTD
A	MMBtu	3,600,297 mmbtu	8,559,377 mmbtu
B	\$ cost, actuals	\$43,537,044	\$105,951,183
C = B / A (Jan Column)	Jan 2020 baseline \$/MMBtu	12.092626	12.092626
D	LSFO Gen kWh		803,338,153
E	Total kWh, Gen, Purch Pwr, DG		1,559,891,982
F	Sales kWh		1,495,994,821
G = (D / E) x F	LSFO kWh-sales		770,431,370
H	Target Heat Rate		11,142
I	Recovery heat rate		11,110
J = B/A (YTD Column)	Actual Cost \$/MMBtu		12.378376
K = C x H x G / 1,000,000	Base Cost Recovery w/Target Heat Rate		\$103,804,873
L = I x J x G / 1,000,000	Fuel Filing Cost Recovery		\$105,952,613
M = 2% x (L-K)	LSFO Cost Risk Sharing		\$42,955

Diesel Fossil Fuel Cost Risk Sharing (w/o target heat rate)

AA	MMBtu	195,326 mmbtu	671,813 mmbtu
BB	Fuel Filing Cost Recovery (no heat rate)	\$2,926,612	\$10,315,624
CC = BB/AA (Jan Column)	Jan 2020 baseline \$/MMBtu	14.983249	14.983249
DD = AA x CC	Base Cost Recovery		\$10,065,945
EE = (BB - DD) x 2%	Diesel Cost Risk Sharing		\$4,994

FF = M + EE, up to ±\$2.5MM **Total Fossil Fuel Cost Risk Sharing Adjustment, subject to ±\$2.5MM cap** **\$47,948**

Non-Adjustable Component

AAA = F	YTD kWh		1,495,994,821
BBB	Non-Adjustable Component, c/kWh		0.12531
CCC = AAA x BBB	Non-Adjustable Component Revenues w/tax		\$1,874,631
DDD = CCC / (1/(1-.08885))	Non-Adjustable Component Revenues less tax		\$1,708,070

HAWAIIAN ELECTRIC COMPANY, INC.
2020 Cumulative Reconciliation Balance

	(1)		(2)	(3)	(4)	(5)	(6)
<u>Month</u>	<u>YTD FOA Reconciliation</u>	<u>Qtr</u>	<u>FOA Rec Adjust Variance</u>	<u>FOA Rec Less Variance</u>	<u>Try to Collect</u>	<u>Actual Collect</u>	<u>Month-end Cumulative Balance</u>
November '19	(6,720,985)	(3)	294,091	(7,015,076)	2,240,328	2,353,575	(4,284,761)
December					2,240,328	2,361,239	(1,923,522)
January '20					2,240,328	2,306,195	382,673
February	(13,170,400)	(4)	316,801	(13,487,201)	4,390,133	4,094,101	(9,010,426)
March					4,390,133	4,306,396	(4,704,030)
April					4,390,133		
May	(8,014,600)	(1)	(313,903)	(7,700,697)	2,671,533		

NOTES:

- Col(1): Quarterly FOA reconciliation amounts. (Refer to Attachment 4)
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))

Hawaiian Electric Company, Inc.
ENERGY COST RECOVERY FACTOR DATA

<u>EFFECTIVE DATE</u>	ENERGY COST FACTOR CENTS / KWH <u>RESIDENTIAL & COMMERCIAL</u>	RESIDENTIAL BILL (\$)	
		<u>@ 500 KWH</u>	<u>@ 600 KWH</u>
January 1, 2018	-1.145	144.26	171.84
February 1, 2018	-0.261	150.24	179.01
March 1, 2018	-0.389	152.06	181.14
April 1, 2018	-0.483	152.06	181.14
May 1, 2018	0.923	149.05	177.53
June 1, 2018	1.529	154.86	184.50
July 1, 2018	1.204	158.27	188.61
August 1, 2018	0.802	158.79	189.22
September 1, 2018	4.201	169.09	201.16
October 1, 2018	4.008	168.13	200.01
November 1, 2018	5.151	167.62	199.40
December 1, 2018	5.553	169.64	201.82
January 1, 2019	14.095	161.36	191.85
February 1, 2019	12.044	147.31	175.01
March 1, 2019	13.449	154.51	183.63
April 1, 2019	14.338	158.42	188.34
May 1, 2019	14.721	163.56	194.50
June 1, 2019	15.199	163.47	194.39
July 1, 2019	14.545	160.95	191.42
August 1, 2019	14.297	160.45	190.82
September 1, 2019	13.240	155.11	184.42
October 1, 2019	12.951	153.64	182.65
November 1, 2019	12.778	150.18	178.51
December 1, 2019	12.409	148.41	176.37
January 1, 2020	13.629	155.97	185.42
February 1, 2020	14.648	161.90	192.54
March 1, 2020	14.349	160.64	191.02
April 1, 2020	13.071	153.83	182.86
May 1, 2020	11.735	148.21	176.12

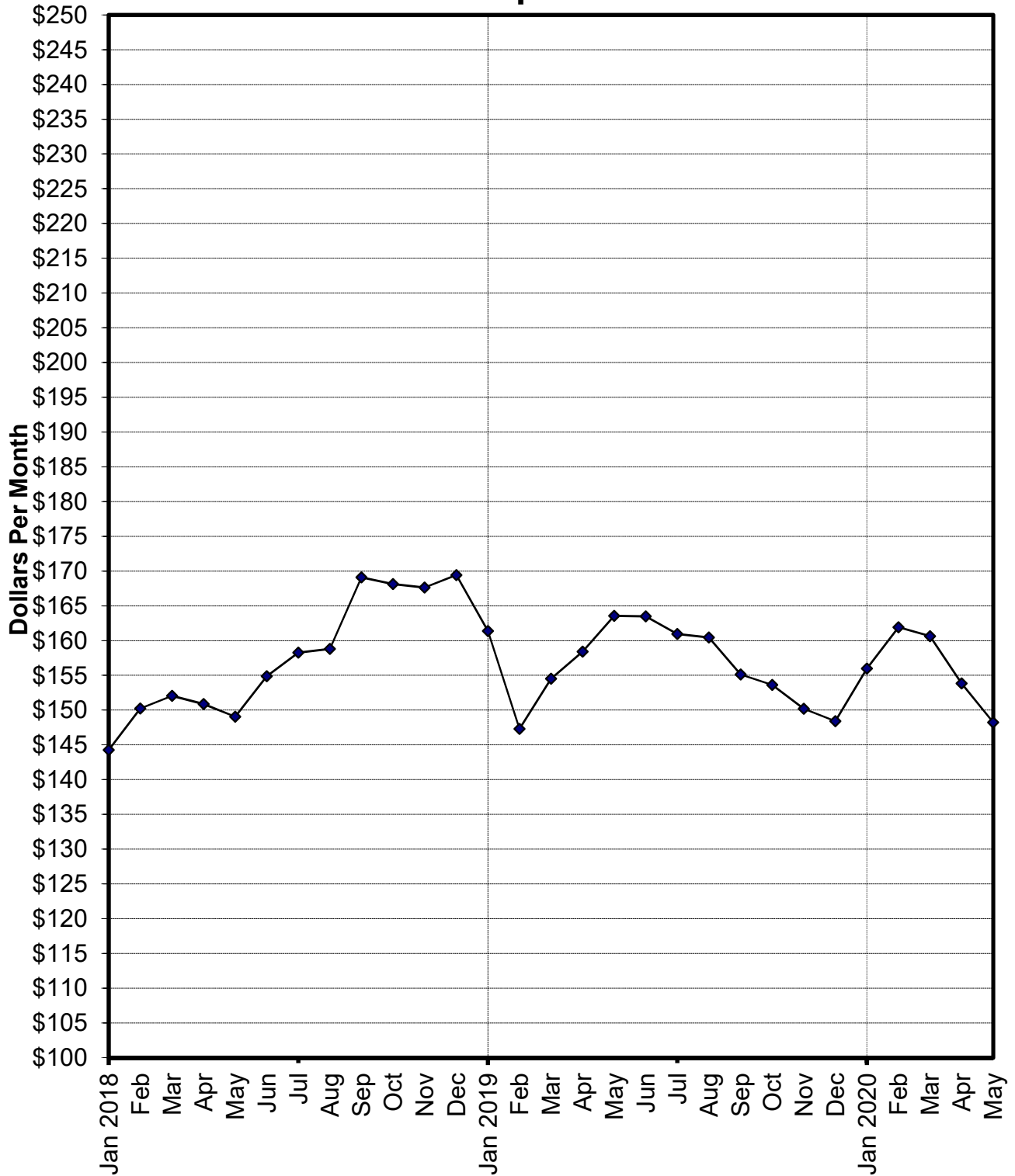
**Hawaiian Electric Company, Inc.
RESIDENTIAL SURCHARGE DATA**

EFFECTIVE DATE	DESCRIPTION OF SURCHARGE	RATE
5/15/2016 - 2/29/2020	RENEWABLE ENERGY INFRASTRUCTURE COST RECOVERY PROVISION	0.0000 CENTS/KWH
1/1/2018 - 1/31/2018	PURCHASED POWER ADJUSTMENT CLAUSE	3.1422 CENTS/KWH
1/1/2018 - 6/30/2018	GREEN INFRASTRUCTURE FEE	1.3400 DOLLARS/MONTH
2/1/2018 - 2/28/2018	PURCHASED POWER ADJUSTMENT CLAUSE	3.4536 CENTS/KWH
2/16/2018 - 04/12/018	INTERIM RATE INCREASE 2017 TEST YEAR	8.8700 PERCENT ON BASE
2/16/2018 - 5/31/2018	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	0.7116 CENTS/KWH
2/16/2018 - 3/31/2018	RESIDENTIAL DSM ADJUSTMENT	0.0000 CENTS/KWH
3/1/2018 - 3/31/2018	PURCHASED POWER ADJUSTMENT CLAUSE	3.4266 CENTS/KWH
4/1/2018 - 4/30/2018	PURCHASED POWER ADJUSTMENT CLAUSE	3.4413 CENTS/KWH
4/1/2018 - 4/30/2018	SOLAR SAVER ADJUSTMENT	-0.1063 CENTS/KWH
4/1/2018 - 7/31/2018	RESIDENTIAL DSM ADJUSTMENT	-0.0513 CENTS/KWH
4/13/2018 - 8/31/2018	INTERIM RATE INCREASE 2017 TEST YEAR	5.8900 PERCENT ON BASE
5/1/2018 - 3/31/19	SOLAR SAVER ADJUSTMENT	0.0000 CENTS/KWH
5/1/2018 - 5/31/2018	PURCHASED POWER ADJUSTMENT CLAUSE	2.2718 CENTS/KWH
6/1/2018 - 6/30/2018	PURCHASED POWER ADJUSTMENT CLAUSE	2.5042 CENTS/KWH
6/1/2018 - 5/31/2019	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	1.0350 CENTS/KWH
7/1/2018 - 12/31/2018	GREEN INFRASTRUCTURE FEE	1.2100 DOLLARS/MONTH
7/1/2018 - 6/30/2019	RESID. PBF SURCHARGE ADJUSTMENT	0.4658 CENTS/KWH
7/1/2018 - 7/31/2018	PURCHASED POWER ADJUSTMENT CLAUSE	3.4959 CENTS/KWH
8/1/2018 - 8/31/2018	PURCHASED POWER ADJUSTMENT CLAUSE	3.9557 CENTS/KWH
8/1/2018 - 10/31/2018	RESIDENTIAL DSM ADJUSTMENT	-0.0064 CENTS/KWH
9/1/2018 - 9/30/2018	PURCHASED POWER ADJUSTMENT CLAUSE	4.3234 CENTS/KWH
9/1/2018	INTERIM RATE INCREASE 2017 TEST YEAR	0.0000 PERCENT ON BASE
9/1/2018	FINAL RATE INCREASE (TY2017) -0.039% EFFECTIVE 09/01/18, DOCKET NO. 2016-0328	
10/1/2018 - 10/31/2018	PURCHASED POWER ADJUSTMENT CLAUSE	4.3252 CENTS/KWH
11/1/2018 - 11/1/2018	PURCHASED POWER ADJUSTMENT CLAUSE	3.0539 CENTS/KWH
11/1/2018 - 1/31/2019	RESIDENTIAL DSM ADJUSTMENT	0.0203 CENTS/KWH
12/1/2018 - 12/31/2018	PURCHASED POWER ADJUSTMENT CLAUSE	3.0553 CENTS/KWH
1/1/2019 - 1/31/2019	PURCHASED POWER ADJUSTMENT CLAUSE	3.0574 CENTS/KWH
1/1/2019 - 6/30/2019	GREEN INFRASTRUCTURE FEE	1.3500 DOLLARS/MONTH
2/1/2019 - 4/30/2019	RESIDENTIAL DSM ADJUSTMENT	0.0000 CENTS/KWH
2/1/2019 - 2/28/2019	PURCHASED POWER ADJUSTMENT CLAUSE	2.3209 CENTS/KWH
3/1/2019 - 3/31/2019	PURCHASED POWER ADJUSTMENT CLAUSE	2.3532 CENTS/KWH
4/1/2019 - 4/30/2019	PURCHASED POWER ADJUSTMENT CLAUSE	2.3341 CENTS/KWH
4/1/2019 - 4/30/2019	SOLAR SAVER ADJUSTMENT	-0.0857 CENTS/KWH
5/1/2019 - 5/31/2019	PURCHASED POWER ADJUSTMENT CLAUSE	2.8780 CENTS/KWH
5/1/2019 - 3/31/2020	SOLAR SAVER ADJUSTMENT	0.0000 CENTS/KWH
5/1/2019 - 7/31/2019	RESIDENTIAL DSM ADJUSTMENT	0.0133 CENTS/KWH
6/1/2019 - 6/30/2019	PURCHASED POWER ADJUSTMENT CLAUSE	2.4806 CENTS/KWH
6/1/2019	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	0.9376 CENTS/KWH
7/1/2019 - 7/31/2019	PURCHASED POWER ADJUSTMENT CLAUSE	2.6543 CENTS/KWH
7/1/2019	GREEN INFRASTRUCTURE FEE	1.17 DOLLARS/MONTH
7/1/2019 - 12/31/2019	RESID. PBF SURCHARGE ADJUSTMENT	0.4658 CENTS/KWH
8/1/2019 - 8/31/2019	PURCHASED POWER ADJUSTMENT CLAUSE	2.8165 CENTS/KWH
8/1/2019 - 1/31/2020	RESIDENTIAL DSM ADJUSTMENT	0.0000 CENTS/KWH
9/1/2019 - 9/30/2019	PURCHASED POWER ADJUSTMENT CLAUSE	2.8061 CENTS/KWH
10/1/2019-10/31/2019	PURCHASED POWER ADJUSTMENT CLAUSE	2.8008 CENTS/KWH
11/1/2019 - 11/30/2019	PURCHASED POWER ADJUSTMENT CLAUSE	2.2849 CENTS/KWH
11/1/2019 - 1/31/2020	RESIDENTIAL DEMAND RESPONSE ADJUSTMENT CLAUSE (DRAC)	0.0000 CENTS/KWH
12/1/2019 - 12/31/2019	PURCHASED POWER ADJUSTMENT CLAUSE	2.2980 CENTS/KWH
1/1/2020 - 1/31/2020	PURCHASED POWER ADJUSTMENT CLAUSE	0.0000 CENTS/KWH
1/1/2020	RESID. PBF SURCHARGE ADJUSTMENT	0.7437 CENTS/KWH
1/1/2020	GREEN INFRASTRUCTURE FEE	1.25 DOLLARS/MONTH
2/1/2020-4/30/2020	RESIDENTIAL DEMAND RESPONSE ADJUSTMENT CLAUSE (DRAC)	-0.0116 CENTS/KWH
2/1/2020-4/30/2020	RESIDENTIAL DSM ADJUSTMENT	0.0651 CENTS/KWH
2/1/2020 - 2/29/2020	PURCHASED POWER ADJUSTMENT CLAUSE	2.4197 CENTS/KWH
3/1/2020 - 3/31/2020	PURCHASED POWER ADJUSTMENT CLAUSE	2.4281 CENTS/KWH
3/1/2020	RENEWABLE ENERGY INFRASTRUCTURE COST RECOVERY PROVISION	0.0384 CENTS/KWH
4/1/2020 - 4/30/2020	PURCHASED POWER ADJUSTMENT CLAUSE	2.4087 CENTS/KWH
4/1/2020 - 4/30/2020	SOLAR SAVER ADJUSTMENT	-0.0630 CENTS/KWH
5/1/2020	SOLAR SAVER ADJUSTMENT	0.0000 CENTS/KWH
5/1/2020	PURCHASED POWER ADJUSTMENT CLAUSE	2.6029 CENTS/KWH
5/1/2020	RESIDENTIAL DEMAND RESPONSE ADJUSTMENT CLAUSE (DRAC)	0.0096 CENTS/KWH
5/1/2020	RESIDENTIAL DSM ADJUSTMENT	-0.0011 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.

Hawaiian Electric Company, Inc. Residential Bill at 500 KWH/Month Consumption



Hawaiian Electric Company, Inc.
CALCULATIONS OF THE AVERAGE RESIDENTIAL CUSTOMER BILL

	Rate		Charge (\$) at 500 kWh			
	4/1/2020	5/1/2020	4/1/2020	5/1/2020	Difference	
Base Rates	effective date:	01/01/19	01/01/19			
Base Fuel/Energy Charge	¢/kWh	-	-	0.00	0.00	0.00
Non-fuel Fuel Energy Charge						
First 350 kWhr per month	¢/kWh	10.6812	10.6812	37.38	37.38	0.00
Next 850 kWhr per month	¢/kWh	11.8347	11.8347	17.75	17.75	0.00
Customer Charge	\$	11.50	11.50	11.50	11.50	0.00
Total Base Charges				66.63	66.63	0.00
Purchase Power Adjustment	¢/kWh	2.4087	2.6029	12.04	13.01	0.97
RBA Rate Adjustment	¢/kWh	0.9376	0.9376	4.69	4.69	0.00
DSM Adjustment	¢/kWh	0.0651	-0.0011	0.33	-0.01	-0.34
Demand Response Adjustment Clause	¢/kWh	-0.0116	0.0096	-0.06	0.05	0.11
Interim Rate Increase (TY 2017)	% on base	0.000%	0.000%	0.00	0.00	0.00
Refund of 2011 Interim	% on base	0.000%	0.000%	0.00	0.00	0.00
PBF Surcharge	¢/kWh	0.7437	0.7437	3.72	3.72	0.00
Renewable Energy Infrastructure Cost						
Recovery Provision	¢/kWh	0.0384	0.0384	0.19	0.19	0.00
SolarSaver Adjustment	¢/kWh	-0.0630	0.0000	-0.32	0.00	0.32
Energy Cost Recovery	¢/kWh	13.071	11.735	65.36	58.68	-6.68
Green Infrastructure Fee	\$	1.25	1.25	1.25	1.25	0.00
Avg Residential Bill at 500 kWh				153.83	148.21	
						Increase / (Decrease -)
						% Change
						-5.62
						-3.65%

	Rate		Charge (\$) at 600 kWh			
	4/1/2020	5/1/2020	4/1/2020	5/1/2020	Difference	
Base Rates	effective date:	01/01/19	01/01/19			
Base Fuel/Energy Charge	¢/kWh	-	-	0.00	0.00	0.00
Non-fuel Fuel Energy Charge						
First 350 kWhr per month	¢/kWh	10.6812	10.6812	37.38	37.38	0.00
Next 850 kWhr per month	¢/kWh	11.8347	11.8347	29.59	29.59	0.00
Customer Charge	\$	11.50	11.50	11.50	11.50	0.00
Total Base Charges				78.47	78.47	0.00
Purchase Power Adjustment	¢/kWh	2.4087	2.6029	14.45	15.62	1.17
RBA Rate Adjustment	¢/kWh	0.9376	0.9376	5.63	5.63	0.00
DSM Adjustment	¢/kWh	0.0651	-0.0011	0.39	-0.01	-0.40
Demand Response Adjustment Clause	¢/kWh	-0.0116	0.0096	-0.07	0.06	0.13
Interim Rate Increase (TY 2017)	% on base	0.000%	0.000%	0.00	0.00	0.00
Refund of 2011 Interim	% on base	0.000%	0.000%	0.00	0.00	0.00
PBF Surcharge	¢/kWh	0.7437	0.7437	4.46	4.46	0.00
Renewable Energy Infrastructure Cost						
Recovery Provision	¢/kWh	0.0384	0.0384	0.23	0.23	0.00
SolarSaver Adjustment	¢/kWh	-0.0630	0.0000	-0.38	0.00	0.38
Energy Cost Recovery	¢/kWh	13.071	11.735	78.43	70.41	-8.02
Green Infrastructure Fee	\$	1.25	1.25	1.25	1.25	0.00
Avg Residential Bill at 600 kWh				182.86	176.12	
						Increase / (Decrease -)
						% Change
						-6.74
						-3.69%

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