



February 26, 2019

FILED

2019 FEB 26 P 3: 31

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

PUBLIC UTILITIES
COMMISSION

Dear Commissioners:

Subject: Hawaiian Electric Energy Cost Recovery Factor for March 2019

Hawaiian Electric Company, Inc.'s ("Hawaiian Electric" or "Company") March 2019 Energy Cost Recovery Factor is 13.449 cents per kilowatt-hour ("kWh"), an increase of 1.405 cents per kWh from last month. A residential customer consuming 500 kWh of electricity will be paying \$154.51, an increase of \$7.20 compared to rates effective February 1, 2019. The increase in the residential typical bill is due to an increase in the Purchase Power Adjustment Clause rate (+\$0.17) and an increase in the Energy Cost Recovery Factor (+\$7.03).

The Company's fuel composite cost of major energy increased 216.17 cents per million BTU to 1,224.40 cents per million BTU. The Company's composite cost of minor energy decreased 4.048 cents per kWh to 14.113 cents per kWh. The composite cost of purchased energy increased 0.660 cents per kWh to 9.444 cents per kWh.

The attached sheets set forth the energy cost adjustment factor in cents per kWh for each rate schedule that is applicable for *pro rata* use beginning March 1, 2019.

Very truly yours,

Dean K. Matsuura
Director, Regulatory Rate Proceedings

Enclosures

cc: Division of Consumer Advocacy

Hawaiian Electric Company, Inc.
ENERGY COST RECOVERY FACTOR

	<u>Effective Dates</u>		<u>Change</u>
	<u>02/01/19</u>	<u>03/01/19</u>	
Composite Cost Of Major Energy, ¢/mmbtu	1,008.23	1,224.40	216.17
Composite Cost Of Minor Energy, ¢/kwh	18.161	14.113	(4.048)
Composite Cost Of Purchased Energy, ¢/kWh	8.784	9.444	0.660
 <u>Residential, Schedule "R"</u>			
Energy Cost Recovery, ¢/kWh	12.044	13.449	1.405
 <u>Others, Schedules "G,J,DS,P,F"</u>			
Energy Cost Recovery, ¢/kWh	12.044	13.449	1.405
 <u>Residential Customer with:</u>			
500 kWh Consumption, \$/bill	147.31	154.51	7.20
600 kWh Consumption, \$/bill	175.01	183.63	8.62

Supersedes Sheet Effective:

February 1, 2019

Hawaiian Electric Company, Inc.
ENERGY COST RECOVERY FILING

ENERGY COST RECOVERY (ECR) FILING - March 1, 2019 (page 1 of 2)

Line		
1	Effective Date	- March 1, 2019
2	Supersedes Factor	- February 1, 2019

GENERATION COMPONENT

<u>MAJOR ENERGY COMPONENT</u>				<u>MINOR ENERGY COMPONENT</u>				
FUEL PRICES, ¢/mmbtu				Fuel Type	Gen Cost ¢/KWH	Percent of Minor Energy	Weighted Gen Cost ¢/KWH	
3	Honolulu		0.00	32a Airport DG	33.53	0.94%	0.3149	
4	Kahe		1,224.50	32b CIP-Biodiesel	0.00	0.00%	0.0000	
5	Waiau-Steam		1,224.18	32c CIP-Diesel	64.98	2.70%	1.7518	
6	(Future Use)		0.00	32d SGS - Biodiesel	22.97	31.13%	7.1508	
7	(Future Use)		0.00	32e SGS - ULSD	18.77	0.87%	0.1638	
8	(Future Use)		0.00	32f Waiau-Diesel	34.92	13.55%	4.7318	
9	Other		0	32g West Loch PV	0.00	50.81%	0.0000	
	BTU MIX, %			32h COMPOSITE COST OF MINOR ENERGY, ¢/kWh			14.113	
10	Honolulu		0.00	33 % Input to System kWh Mix			1.48	
11	Kahe		69.58	34 WTD COMP MINOR ENERGY COST, ¢/kWh (Lines 32f x 33)			0.20887	
12	Waiau-Steam		30.42	35 2017 TY Loss Factor			1.0490	
13	(Future Use)		0.00	36 WTD COMP MINOR ENERGY COST, ¢/kWh (Line 34 x 35)			0.21910	
14	(Future Use)		0.00	37 BASE MINOR ENERGY COMP COST			0.0000	
15	(Future Use)		0.00	38 Base % Input to System kWh Mix			0.0000	
16	Other		0.00	39 WTD BASE MINOR ENERGY COST, ¢/kWh (Line 37 x 38)			0.00000	
			100.00	40 2017 TY Loss Factor			1.0490	
17	COMPOSITE COST OF GENERATION, MAJOR ENERGY ¢/mmbtu		1,224.40	41 WTD COMP MINOR ENERGY COST, ¢/kWh (Line 39 x 40)			0.00000	
18	% Input to system kWh Mix		43.16	42 Cost Less Base (Line 36 - 41)			0.219105	
	EFFICIENCY FACTOR, mmbtu/kWh			43 Revenue Tax Adjustment (1 / (1-0.08885))			1.097514	
	(A)	(B)	(C)	(D)	44 MINOR ENERGY FACTOR, ¢/kWh (Line 42 x 43)			0.24047
			Percent of Centrl Stn + Other	Weighted Eff Factor				
19	LSFO	0.011165	100.00	0.011165				
20	(Future Use)	0.000000	0.00	0.000000				
21	(Future Use)	0.000000	0.00	0.000000				
22	Other	0.011165	0.00	0.000000				
	(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)]			0.011165				
24	WEIGHTED MAJOR ENERGY COST, ¢/kWh Sales (lines 17 x 18 x 23)			5.90016				
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)			5.90016				
30	Revenue Tax Adjustment (1 / (1-0.08885))			1.097514				
31	MAJOR ENERGY GENERATION FACTOR, ¢/KWH (Line 29 x 30)			6.47551				

SUMMARY OF TOTAL GENERATION FACTOR, ¢/kWh	
45 MAJOR ENERGY (line 31)	6.47551
46 MINOR ENERGY (line 44)	-
47 TOTAL GENERATION FACTOR, ¢/KWH (lines 45 + 46)	6.71598

Hawaiian Electric Company, Inc.
ENERGY COST RECOVERY FILING

ENERGY COST RECOVERY (ECR) FILING - March 1, 2019 (page 2 of 2)

Line		
1	Effective Date	- March 1, 2019
2	Supersedes Factor	- February 1, 2019

Line	PURCHASED ENERGY COMPONENT		
	PURCHASED ENERGY PRICE - FOSSIL - ¢/KWH		
48	PAR Hawaii	- On Peak	12.094
49	PAR Hawaii	- Off Peak	13.214
50	IES Downstream	- On Peak	12.094
51	IES Downstream	- Off Peak	13.214
52	Kalaeloa		12.665
53	AES-HI		3.318
	PURCHASED ENERGY PRICE - RENEWABLE - ¢/KWH		
54	HRRV	- On Peak	17.63
55		- Off Peak	17.13
56	HRRV	- On Peak (excess)	11.23
57		- Off Peak (excess)	6.74
58	Kawaiiloa		22.395
59	Kahuku Wind		21.013
60	Waianae Solar PV		14.500
61	As Available I		22.399
62	FIT		19.253
63	CBRE PV		15.000
64	(Future IPP)		0.000
65	(Future IPP)		0.000
66	(Future IPP)		0.000
67	(Future IPP)		0.000
	PURCHASED ENERGY KWH MIX - FOSSIL - %		
68	PAR Hawaii	- On Peak	0.23
69	PAR Hawaii	- Off Peak	0.17
70	IES Downstream	- On Peak	0.01
71	IES Downstream	- Off Peak	0.01
72	Kalaeloa		35.53
73	AES-HI		43.44
73a	Subtotal Fossil %		79.39
	PURCHASED ENERGY KWH MIX - RENEWABLE - %		
74	HRRV	- On Peak	7.07
75		- Off Peak	2.52
76	HRRV	- On Peak (excess)	0.00
77		- Off Peak (excess)	2.68
78	Kawaiiloa		2.03
79	Kahuku Wind		1.29
80	Waianae Solar PV		2.33
81	As Available I		0.70
82	FIT		1.70
83	CBRE PV		0.29
84	(Future IPP)		0.00
85	(Future IPP)		0.00
86	(Future IPP)		0.00
87	(Future IPP)		0.00
87a	Subtotal Renewable %		20.61
87b	Total Purchased Energy %		100.00
87c	Composite Cost of Purchased Energy, Fossil		7.55
87d	Composite Cost of Purchased Energy, Renewable		16.74
88	COMPOSITE COST OF PURCHASED ENERGY, ¢/KWH		9.444
89	% Input to System kWh Mix		55.36
90	WTD CMP PURCH ENRGY COST, ¢/KWH (lines 88 x 89)		5.22820
91	2017 TY Loss Factor		1.0490
92	WTD CMP PURCH ENRGY COST, ¢/KWH (lines 90 x 91)		5.48438
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)		5.48438
99	Revenue Tax Adjustment (1 / (1-0.08885))		1.097514
100	PURCHASED ENERGY FACTOR, ¢/KWH (lines 98 x 99)		6.01919

Calculation of Monthly Fossil Fuel Cost Risk Sharing Component		
Baseline LSFO (Actual)		
101	LSFO \$, baseline month	\$44,129,782
102	LSFO mmbtu, baseline	3,300,499
103	Baseline LSFO, ¢/mmbtu	1337.06
Baseline Diesel (Actual)		
104	Diesel \$, baseline month	\$1,726,670
105	Diesel mmbtu, baseline	107,471
106	Baseline Diesel, ¢/mmbtu	1,606.64
Month LSFO		
107	LSFO mmbtu, budget	2,549,794
108	LSFO Cost, ¢/mmbtu	1,224.40
109	LSFO ECRC Fossil Cost	\$31,219,752
110	LSFO Base ECRC Recovery Target	\$34,092,383
111	LSFO differential	-\$2,872,632
Month Diesel		
112	Diesel mmbtu, budget	33,105
113	Diesel Cost, ¢/mmbtu	1,624.96
114	Diesel ECRC Fossil Cost	\$537,947
115	Diesel Base ECRC Recovery Target	\$531,881
116	Diesel differential	\$6,066
117	Total Fossil	-\$2,866,566
118	2% of above	-\$57,331
118A	Total Monthly Fossil Fuel Cost Risk Sharing, Prior Months in Year	-\$167,188
118B	Maximum Annual Cap (bi-directional)	\$2,500,000
118C	Applicable Monthly Fossil Fuel Cost Risk Sharing	-\$57,331
118D	Total Monthly Fossil Fuel Cost Risk Sharing, Including This Month	-\$224,519
119	Fossil Cost Risk Sharing before taxes	-\$57,331
120	Revenue Tax Adjustment	1.097514
121	Fossil Cost Risk Sharing w/revenue tax	-\$62,922
122	Forecasted Month MWh Sales	521,300
123	Fossil Fuel Cost Risk Sharing Component, ¢/kWh	0.0121

Derivation of Non-Adjustable Component:		
80A	Fuel Handling Exp, \$000	\$7,604.5
	Final Settlement, HECO-603, p1	
80B	Revenue Tax Adjustment	1.097514
80C	Non-Adj Revenues, \$000	\$8,346.0
80D	2017 TY Sales, MWh	6,660,200
	HECO-301, p1	
80E	Non-Adj Revenues, ¢/kWh	0.12531

Line	SYSTEM COMPOSITE		
124	GEN AND PURCHASED ENERGY FACTOR, ¢/kWh (lines 47 + 100)		12.7352
125	(Future Use) Adjustment, ¢/kWh		0.0000
126	ECR Reconciliation Adjustment		0.5760
127	Non-Adjustable Component (line 80E)		0.1253
128	Fossil Fuel Cost Risk Sharing Component (line 123)		0.0121
129	Monthly Energy Cost Recovery Factor (lines 124 + 125 + 126 + 127 + 128)		13.449

Hawaiian Electric Company, Inc.
FUEL OIL INVENTORY PRICES FOR 03-01-19

	Honolulu	Kahe	Waiau
Average Low Sulfur Fuel Oil, ¢/Mbtu	1,224.18	1,224.18	1,224.18
Kahe Fuel Additive, ¢/Mbtu	-	0.32	-
Honolulu Trucking Cost, ¢/Mbtu	-	-	-
Low Sulfur Fuel Oil Prices Used For Filing, ¢/Mbtu	1,224.18	1,224.50	1,224.18

	Waiau	CIP Biodiesel	CIP Diesel
Average Diesel / Biodiesel Oil, ¢/Mbtu	1,737.07	-	1,363.31
Thruput Charges, ¢/Mbtu	-	-	0
Diesel / Biodiesel Oil Prices Used for Filing, ¢/Mbtu	1,737.07	-	1,363.31

	SGS ULSD	SGS Biodiesel
Average Diesel / Biodiesel Oil, ¢/Mbtu	2,000.71	2,478.67
Thruput Charges, ¢/Mbtu	-	-
Diesel / Biodiesel Oil Prices Used for Filing, ¢/Mbtu	2,000.71	2,478.67

	Honolulu	Kahe	Waiau
Average Low Sulfur Fuel Oil, \$/bbl	76.63	76.63	76.63
Kahe Fuel Additive, \$/bbl	-	0.02	-
Honolulu Trucking Cost, \$/bbl	-	-	-
Low Sulfur Fuel Oil Prices Used For Filing, \$/bbl	76.63	76.65	76.63

	Waiau	CIP Biodiesel	CIP Diesel
Average Diesel / Biodiesel Oil, \$/bbl	99.63	#DIV/0!	78.15
Thruput Charges, ¢/Mbtu	-	-	-
Diesel / Biodiesel Oil Prices Used for Filing, \$/bbl	99.63	#DIV/0!	78.15

	SGS ULSD	SGS Biodiesel
Average Diesel / Biodiesel Oil, \$/bbl	115.96	130.71
Thruput Charges, ¢/Mbtu	-	-
Diesel / Biodiesel Oil Prices Used for Filing, \$/bbl	115.96	130.71

Distributed Generation Fuel Prices Used for Filing, ¢/kWh			33.530
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FOAC March 2019

<u>LSFO</u>	BARRELS	MBTU	AMOUNT	AVE \$/MBTU
Per FOAC run	831,401	5,204,212.59	63,708,758.63	12.241767
Additional	-	-	-	-
Forecast Amt	831,401	5,204,212.59	63,708,758.63	12.241767
	-	6.20	-	ADD'L BBL
	5,204,213	831,401	6.2596	MBTU / BBL
	63,708,759	831,401	76.63	DOLLARS / BBL
<u>WAIU DIESEL</u>	25,919	148,656.67	2,582,267.71	17.370682
	2,582,268	25,919	99.63	DOLLARS / BBL
<u>CIP BIODIESEL</u>	-	0.00	-	-
	-	-	#DIV/0!	DOLLARS / BBL
<u>CIP DIESEL</u>	39,128	224,288.08	3,057,733.42	13.633062
	3,057,733	39,128	78.15	DOLLARS / BBL
<u>SGS ULSD</u>	426	2,469	49,399.63	20.00714025
	49,399.63	426	115.96	DOLLARS / BBL
<u>SGS BIODIESEL</u>	9,379	49,458.58	1,225,912.86	24.78665528
	1,225,913	9,379	130.71	DOLLARS / BBL
KAHE FUEL ADDITIVE *				
Additional	-	-	-	0.003194
Forecast Amt	-	-	-	0.003194
\$ / BBL =	-	-	0.02	DOLLARS / BBL
HONOLULU TRUCKING COST				
Per FOAC run	-	-	-	-
Additional	-	-	-	-
Forecast Amt	-	-	-	-
\$ / BBL =	-	-	-	DOLLARS / BBL

Hawaiian Electric Company, Inc.

CONTRACT PRICES EFFECTIVE 2-1-19

<u>TYPE OF OIL BURNED</u>	<u>\$/BBL</u>	<u>¢/MBTU</u>
LOW SULFUR FUEL OIL		
Tax *	4.7644	76.86
Ocean Transportation	0.0000	0.00
Land Transportation	0.0000	0.00
Storage	0.0000	0.00
Wharfage	0.0000	0.00
DIESEL		
Tax *	5.5490	94.70
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 *	5.9597	104.00
Ocean Transportation	0.0000	0.00
Land Transportation	0.0000	0.00
Storage	0.0000	0.00
Wharfage	0.0000	0.00
BIODIESEL		
Tax *	7.5006	142.92
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</u> <u>Biodiesel</u>	<u>Schofield</u> <u>Biodiesel</u>	<u>Schofield</u> <u>ULSD</u>		
(A)	\$	29.86	\$	24.79	\$	20.01 Estimated Distributed Generation Fuel Cost (\$/MBTU)
(B)		853		23,347		662 Estimated MBTU Consumption
(B1)		163		4,449		116 Estimated fuel consumption barrels
(C) = (A) x (B)		\$25,482		\$578,701		\$13,252 Estimated Distributed Generation Fuel Cost (\$)
(D)		76,000		2,519,117		70,604 Estimated Distributed Generation kWh
(E) = ((C) ÷ (D)) x 100		<u>33.530</u>		<u>22.970</u>		<u>18.770</u> ¢/kWh

Hawaiian Electric Company, Inc.
ECA RECONCILIATION ADJUSTMENT
March 2019

1.	Amount to be collected	\$	8,214,600
2.	Monthly Amount (Line 1 x 1/3)	\$	2,738,200
3.	Revenue Tax Divisor		0.91115
4.	Total (Line 2 / Line 3)	\$	3,005,213
5.	Estimated MWh Sales (March 2019)		521,300
6.	ECA Reconciliation Adjustment, ¢/kWh (Line 4 ÷ Line 5)		<u><u>0.576</u></u>

HAWAIIAN ELECTRIC COMPANY, INC.
2018 Cumulative Reconciliation Balance

	(1)		(2)	(3)	(4)	(5)	(6)
	YTD FOA		FOA Rec	FOA Rec	Try to	Actual	Month-end
<u>Month</u>	<u>Reconciliation</u>	<u>Qtr</u>	<u>Variance</u>	<u>Variance</u>	<u>Collect</u>	<u>Collect</u>	<u>Cumulative</u>
							<u>Balance</u>
November '18	(3,451,000)	(3)	46,479	(3,497,479)	1,150,333	1,163,303	(2,284,162)
December					1,150,333	1,102,163	(1,181,999)
January '19					1,150,333	589,892	(592,107)
February	(8,214,600)	(4)	(31,672)	(8,182,928)	2,738,200		
March					2,738,200		

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, 2017	-2.091	135.39	161.22
February 1, 2017	-1.863	142.81	170.13
March 1, 2017	-1.730	143.26	170.66
April 1, 2017	-1.608	143.43	170.86
May 1, 2017	-2.347	140.42	167.26
June 1, 2017	-2.215	141.89	169.01
July 1, 2017	-2.003	141.79	168.91
August 1, 2017	-2.180	140.14	166.92
September 1, 2017	-2.288	139.74	166.45
October 1, 2017	-2.216	139.91	166.65
November 1, 2017	-2.109	139.52	166.18
December 1, 2017	-1.629	141.82	168.96
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

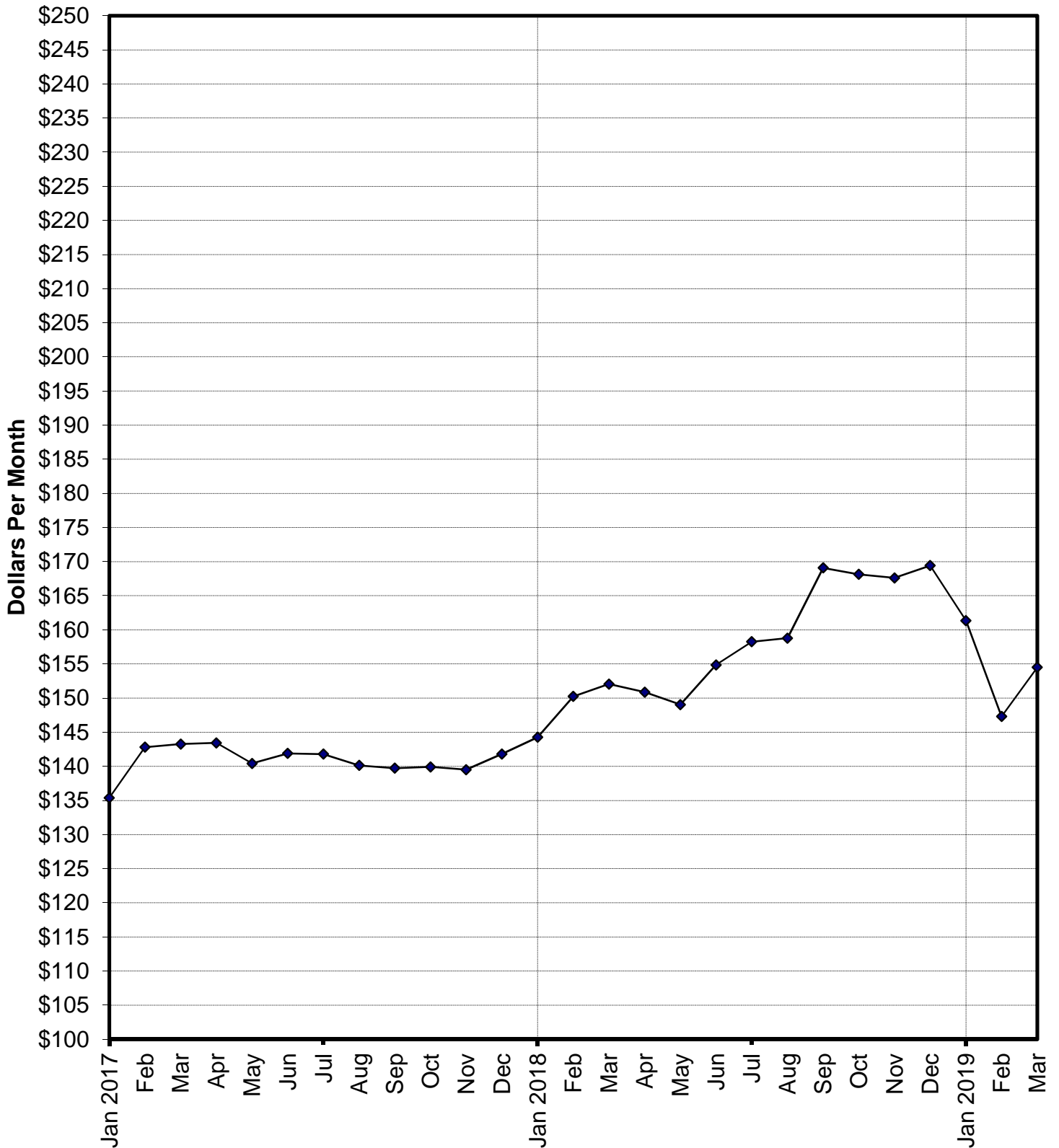
Hawaiian Electric Company, Inc.
RESIDENTIAL SURCHARGE DATA

EFFECTIVE DATE	DESCRIPTION OF SURCHARGE	RATE
09/01/12 - 8/31/2018	FINAL RATE INCREASE (TY2011) 3.39% EFFECTIVE 09/01/12, DOCKET NO. 2010-0080	
2/1/2013	REFUND OF 2011 INTERIM RATE INCREASE	0.00 PERCENT ON BASE
01/1/2016 - 01/31/2016	PURCHASED POWER ADJUSTMENT CLAUSE	2.8642 CENTS/KWH
12/17/2015 - 02/29/2016	RENEWABLE ENERGY INFRASTRUCTURE COST RECOVERY PROVISION	0.0204 CENTS/KWH
01/01/2016 - 06/30/2016	GREEN INFRASTRUCTURE FEE	1.3000 DOLLARS/MONTH
02/1/2016 - 02/29/2016	PURCHASED POWER ADJUSTMENT CLAUSE	3.3809 CENTS/KWH
03/1/2016 - 03/31/2016	PURCHASED POWER ADJUSTMENT CLAUSE	3.3578 CENTS/KWH
3/1/2016 - 05/14/2016	RENEWABLE ENERGY INFRASTRUCTURE COST RECOVERY PROVISION	0.0204 CENTS/KWH
04/1/2016 - 04/30/2016	SOLAR SAVER ADJUSTMENT	-0.1223 CENTS/KWH
04/1/2016 - 04/30/2016	PURCHASED POWER ADJUSTMENT CLAUSE	3.3834 CENTS/KWH
4/1/2016 - 3/31/2017	RESIDENTIAL DSM ADJUSTMENT	0.0811 CENTS/KWH
5/1/2016 - 3/31/2017	SOLAR SAVER ADJUSTMENT	0.00 CENTS/KWH
05/1/2016 - 05/31/2016	PURCHASED POWER ADJUSTMENT CLAUSE	3.6989 CENTS/KWH
5/15/2016	RENEWABLE ENERGY INFRASTRUCTURE COST RECOVERY PROVISION	0.0000 CENTS/KWH
06/1/2016 - 06/30/2016	PURCHASED POWER ADJUSTMENT CLAUSE	3.7373 CENTS/KWH
6/1/2016 - 5/31/2017	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	2.1098 CENTS/KWH
07/1/2016 - 07/31/2016	PURCHASED POWER ADJUSTMENT CLAUSE	3.6808 CENTS/KWH
7/1/2016 - 12/31/2016	GREEN INFRASTRUCTURE FEE	1.1300 DOLLARS/MONTH
7/1/2016 - 6/30/2017	RESID. PBF SURCHARGE ADJUSTMENT	0.5865 CENTS/KWH
08/1/2016 - 08/31/2016	PURCHASED POWER ADJUSTMENT CLAUSE	3.2621 CENTS/KWH
09/1/2016 - 09/30/2016	PURCHASED POWER ADJUSTMENT CLAUSE	3.2827 CENTS/KWH
10/1/2016 - 10/31/2016	PURCHASED POWER ADJUSTMENT CLAUSE	3.2576 CENTS/KWH
11/1/2016 - 11/30/2016	PURCHASED POWER ADJUSTMENT CLAUSE	3.1959 CENTS/KWH
12/1/2016 - 12/31/2016	PURCHASED POWER ADJUSTMENT CLAUSE	3.1815 CENTS/KWH
01/1/2017 - 01/31/2017	PURCHASED POWER ADJUSTMENT CLAUSE	2.2812 CENTS/KWH
1/01/2017 - 06/30/2017	GREEN INFRASTRUCTURE FEE	1.2700 DOLLARS/MONTH
02/1/2017 - 02/28/2017	PURCHASED POWER ADJUSTMENT CLAUSE	3.5384 CENTS/KWH
03/1/2017 - 03/31/2017	PURCHASED POWER ADJUSTMENT CLAUSE	3.4937 CENTS/KWH
04/1/2017 - 04/30/2017	PURCHASED POWER ADJUSTMENT CLAUSE	3.5276 CENTS/KWH
4/1/2017 - 02/15/2018	RESIDENTIAL DSM ADJUSTMENT	0.0774 CENTS/KWH
4/1/2017 - 4/30/2017	SOLAR SAVER ADJUSTMENT	-0.1187 CENTS/KWH
5/1/2017-3/31/2018	SOLAR SAVER ADJUSTMENT	0.0000 CENTS/KWH
05/1/2017 - 05/31/2017	PURCHASED POWER ADJUSTMENT CLAUSE	3.5484 CENTS/KWH
06/1/2017 - 06/30/2017	PURCHASED POWER ADJUSTMENT CLAUSE	3.5894 CENTS/KWH
6/1/2017 - 2/15/2018	REVENUE BALANCING ACCOUNT RATE ADJUSTMENT	2.2291 CENTS/KWH
7/1/2017 - 12/31/2017	GREEN INFRASTRUCTURE FEE	1.1800 DOLLARS/MONTH
7/1/2017 - 7/31/2017	PURCHASED POWER ADJUSTMENT CLAUSE	3.5388 CENTS/KWH
7/1/2017 - 6/30/2018	RESID. PBF SURCHARGE ADJUSTMENT	0.4244 CENTS/KWH
8/1/2017 - 8/31/2017	PURCHASED POWER ADJUSTMENT CLAUSE	3.3840 CENTS/KWH
9/1/2017 - 9/30/2017	PURCHASED POWER ADJUSTMENT CLAUSE	3.4128 CENTS/KWH
10/1/2017 - 10/31/2017	PURCHASED POWER ADJUSTMENT CLAUSE	3.3748 CENTS/KWH
11/1/2017 - 11/30/2017	PURCHASED POWER ADJUSTMENT CLAUSE	3.1890 CENTS/KWH
12/1/2017 - 12/31/2017	PURCHASED POWER ADJUSTMENT CLAUSE	3.1709 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 -04/12/2018	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	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	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	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	GREEN INFRASTRUCTURE FEE	1.35 DOLLARS/MONTH
2/1/2019	RESIDENTIAL DSM ADJUSTMENT	0.0000 CENTS/KWH
2/1/2019 - 2/28/2019	PURCHASED POWER ADJUSTMENT CLAUSE	2.3209 CENTS/KWH
3/1/2019	PURCHASED POWER ADJUSTMENT CLAUSE	2.3532 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			
	2/1/2019	3/1/2019	2/1/2019	3/1/2019	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	2.3209	2.3532	11.60	11.77	0.17
RBA Rate Adjustment	¢/kWh	1.0350	1.0350	5.18	5.18	0.00
DSM Adjustment	¢/kWh	0.0000	0.0000	0.00	0.00	0.00
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	0.4658	0.4658	2.33	2.33	0.00
Renewable Energy Infrastructure Cost Recovery Provision	¢/kWh	-	-	0.00	0.00	0.00
SolarSaver Adjustment	¢/kWh	0.0000	0.0000	0.00	0.00	0.00
Energy Cost Recovery	¢/kWh	12.044	13.449	60.22	67.25	7.03
Green Infrastructure Fee	\$	1.35	1.35	1.35	1.35	0.00
Avg Residential Bill at 500 kWh				147.31	154.51	

Increase / (Decrease -)	7.20
% Change	4.89%

	Rate		Charge (\$) at 600 kWh			
	2/1/2019	3/1/2019	2/1/2019	3/1/2019	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	2.3209	2.3532	13.93	14.12	0.19
RBA Rate Adjustment	¢/kWh	1.0350	1.0350	6.21	6.21	0.00
DSM Adjustment	¢/kWh	0.0000	0.0000	0.00	0.00	0.00
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	0.4658	0.4658	2.79	2.79	0.00
Renewable Energy Infrastructure Cost Recovery Provision	¢/kWh	-	-	0.00	0.00	0.00
SolarSaver Adjustment	¢/kWh	0.0000	0.0000	0.00	0.00	0.00
Energy Cost Recovery	¢/kWh	12.044	13.449	72.26	80.69	8.43
Green Infrastructure Fee	\$	1.35	1.35	1.35	1.35	0.00
Avg Residential Bill at 600 kWh				175.01	183.63	

Increase / (Decrease -)	8.62
% Change	4.93%